

FROM BHS-77 TO EVRS: LATVIA EXAMPLE

***EUREF 2014 symposium- Vilnius, 5th of June
2014***

Latvian Geospatial Information Agency
Presented by Ivars Aleksejenko

Legal documents

Changes in Geospatial information law and Regulation issued by the Cabinet of Ministers for geodesists

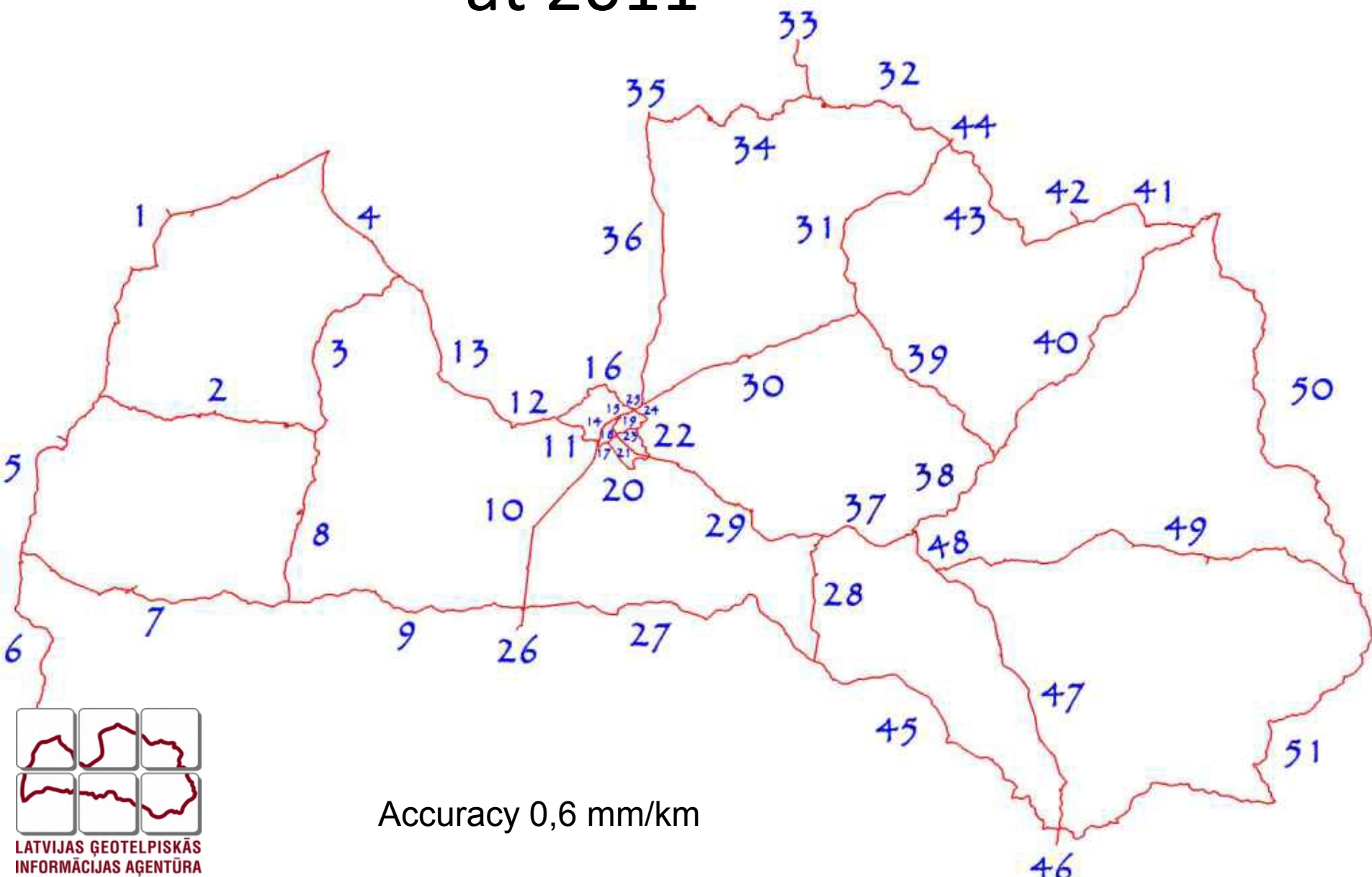
Official normal height system in Latvia is EVRF2007 realization for Latvia Latvian height system 2000.0;

Estimate data 1 of August

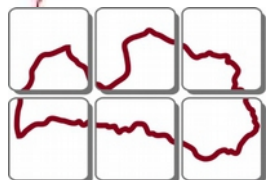
Modern geodetic network is synergy of geodetic quantities-coordinates, height and gravity values in one single benchmark (point).

Accuracy of each quantity must allow to produce all kind of geodetic, cadastral and civil engineering works from geodetic network.

Finished 1st order levelling network at 2011



Accuracy 0,6 mm/km

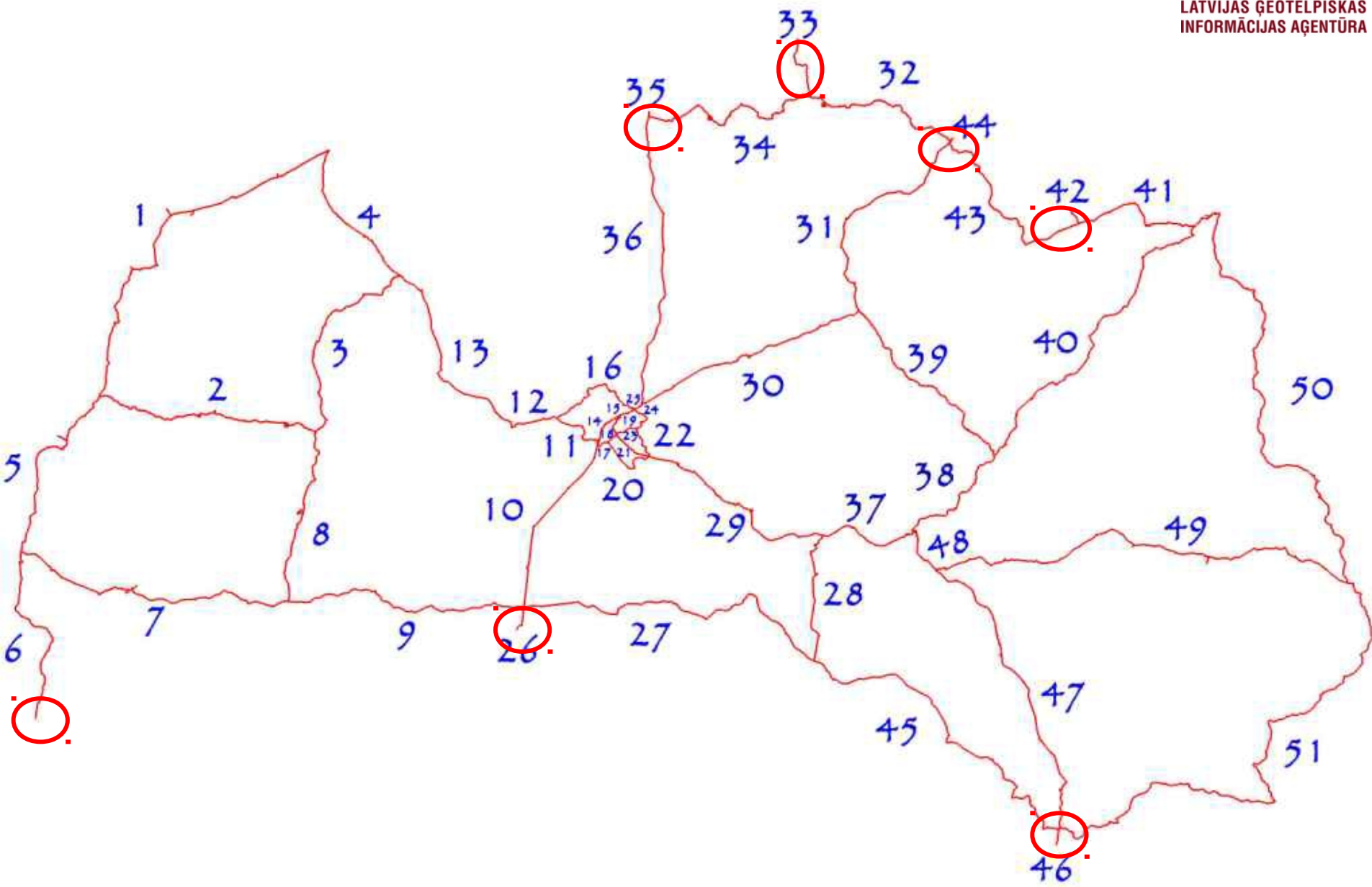


LATVIJAS ĢEOTELPISKĀS
INFORMĀCIJAS AĢENTŪRA

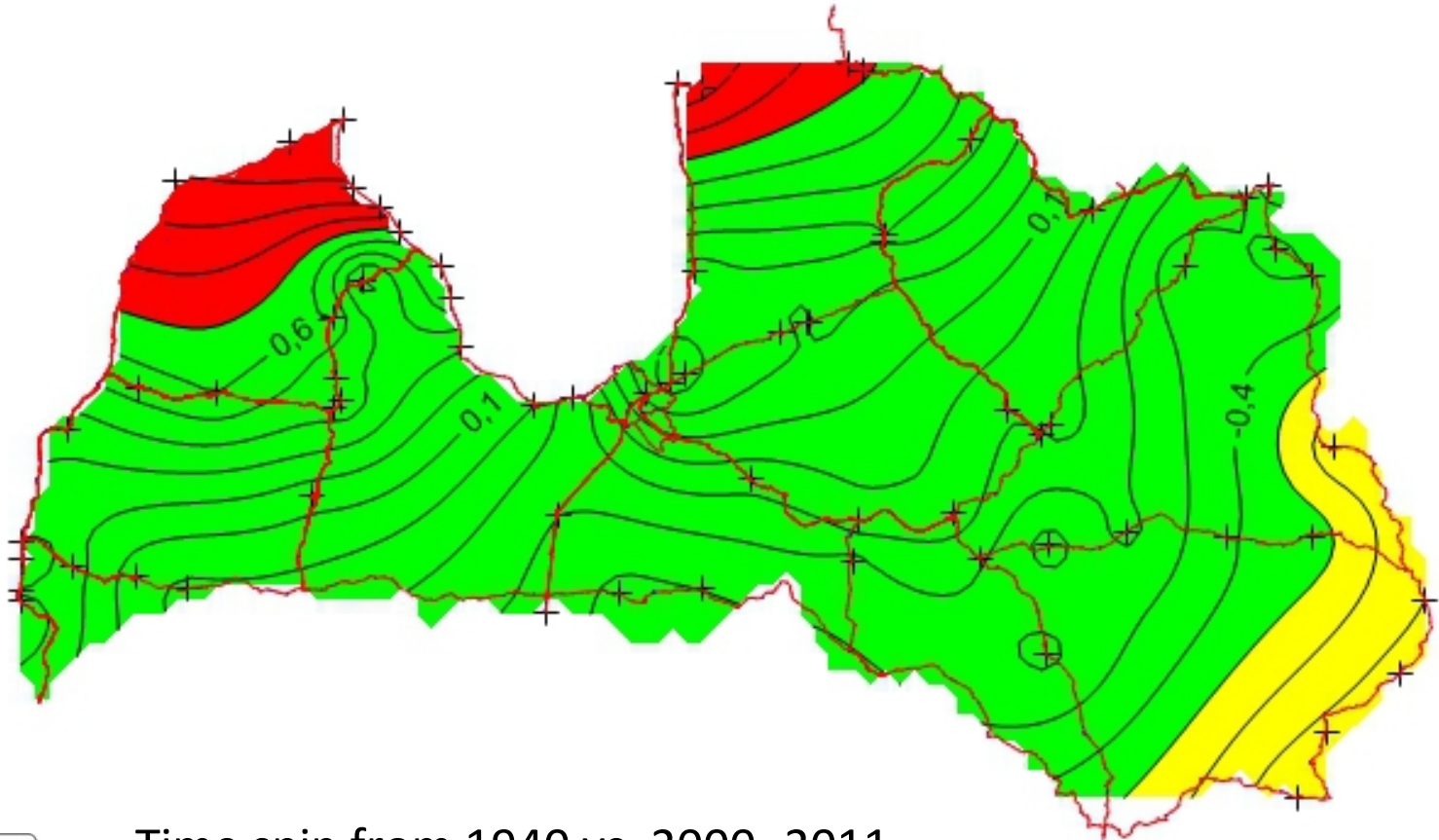
Connections with Lithuania and Estonia



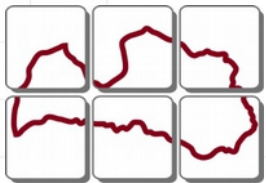
LATVIJAS ĢEOTELPISKĀS
INFORMĀCIJAS AĢENTŪRA



Empirical land uplift model for Latvia (new data vs. first levelling)



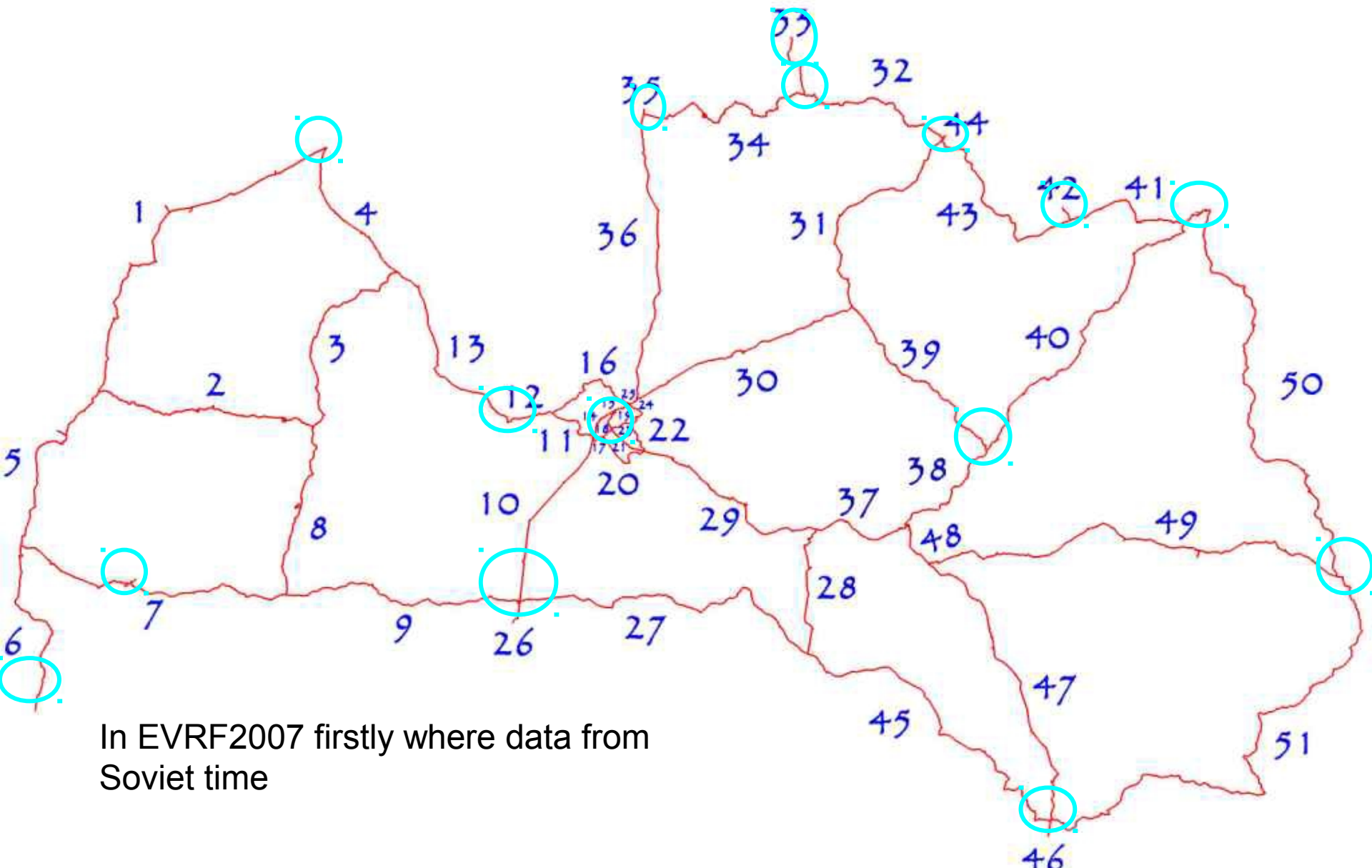
Time spin from 1940 vs. 2000- 2011



LATVIJAS ĢEOTELPISKĀS
INFORMĀCIJAS AĢENTŪRA

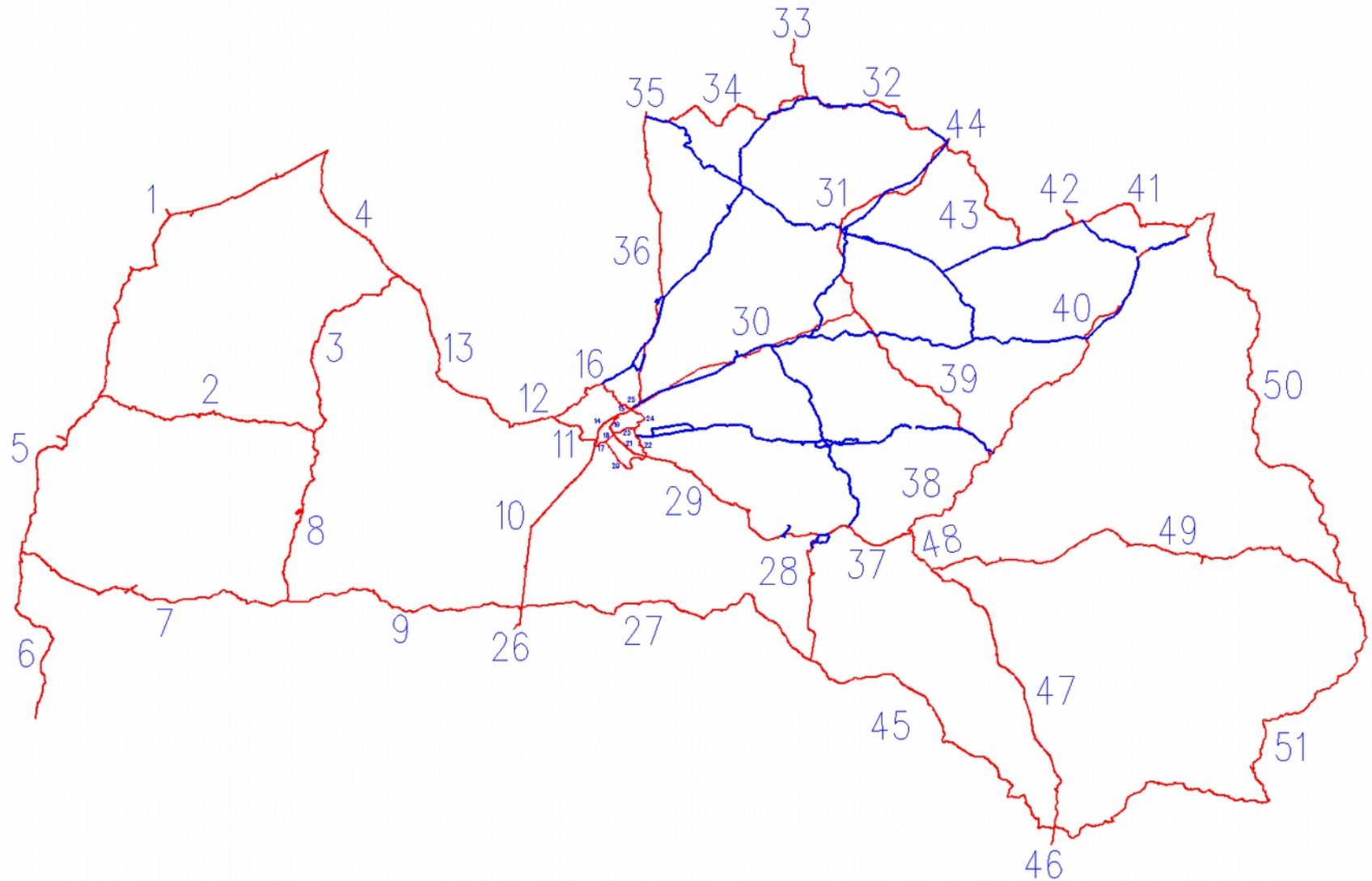
Vilnius 05.06.2014

In November of 2011 submit levelling data to EVRS computation center in BKG. Chose 16 fixed points for EVRS realization in Latvia

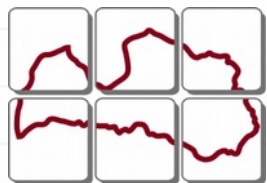
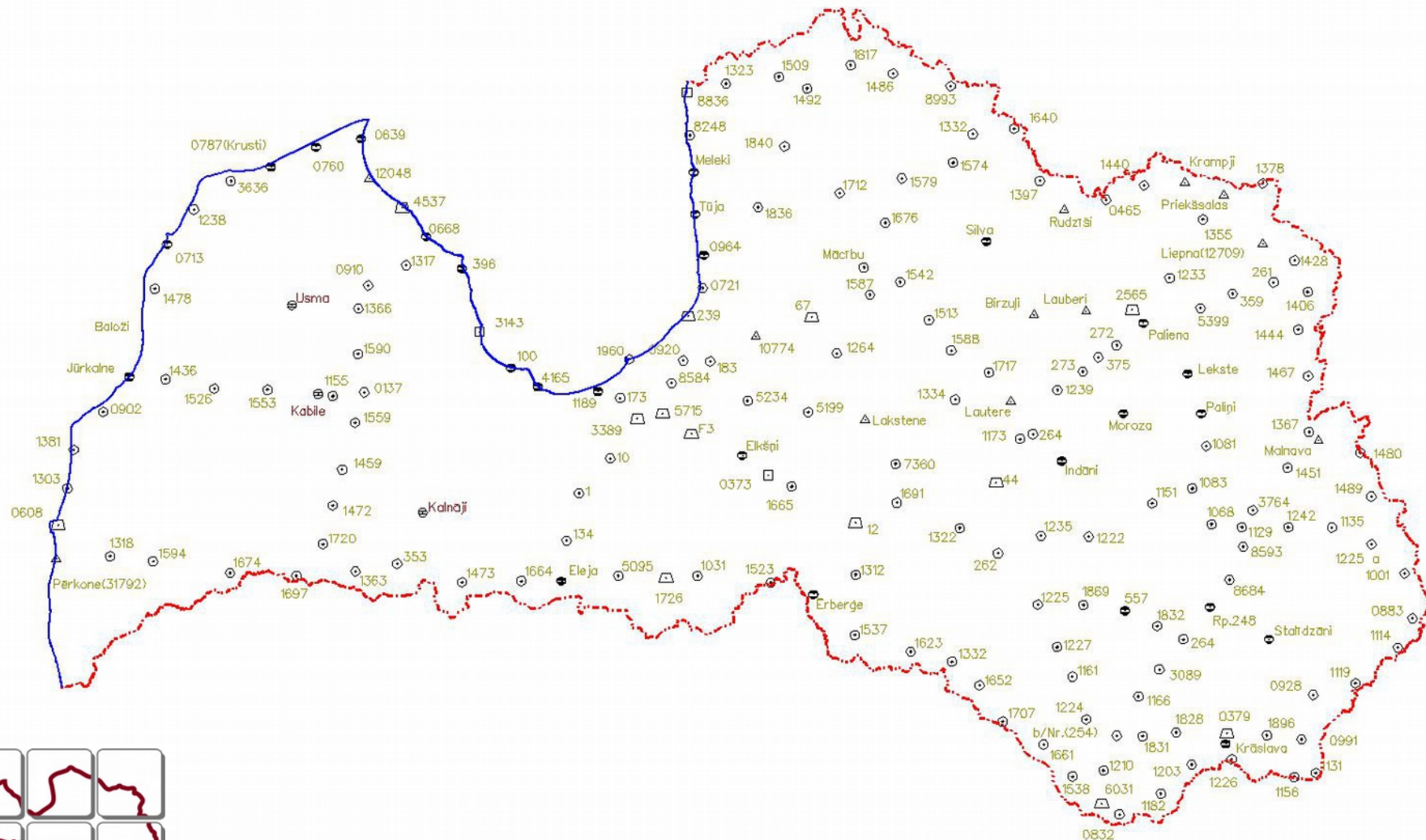


In EVRF2007 firstly where data from Soviet time

2nd order levelling network for transmission of EVRS



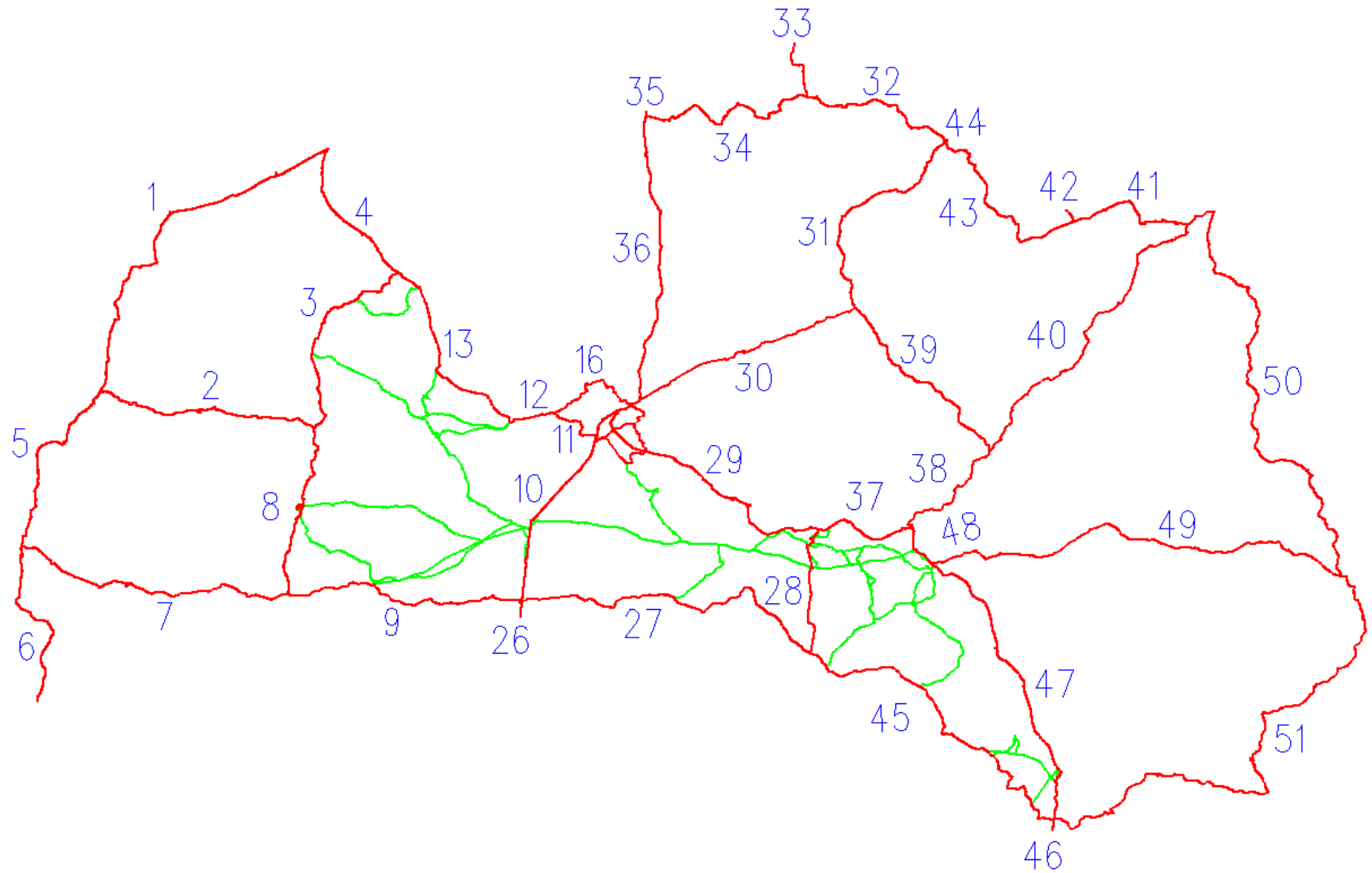
GNSS coordinates on the 1 and 2 order levelling benchmarks (from 2010)



**LATVIJAS ĢEOTELPISKĀS
INFORMĀCIJAS AĢENTŪRA**

Vilnius 05.06.2014

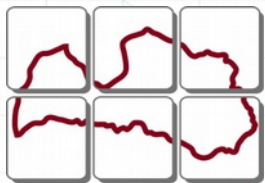
2nd order levelling network for transmission EVRS to local networks



Distribution of heights values

- *State network database;*
- *Latvian permanent base station system;*
- *Second order levelling network;*
- *Quasigeoid model;*
- *Geodetic calculator in web (input LKS-92 TM and BHS-77);*
- *High detail topographic (scale 1:500) information system data transformation program;*
- *Tide gauges are connected to second order network;*
- *Web map application for fast and not geodetic accuracy height data check by one mouse click.*

Dēkojame uŖ Jūsų dēmesj !



**LATVIJAS ĢEOTĒPISKĀS
INFORMĀCIJAS AĢENTŪRA**

Ivars.aleksejenko@lgia.gov.lv

mob. 26165678

Vilnius 05.06.2014