

Ministry of Justice of Georgia National Agency of Public Registry (NAPR)

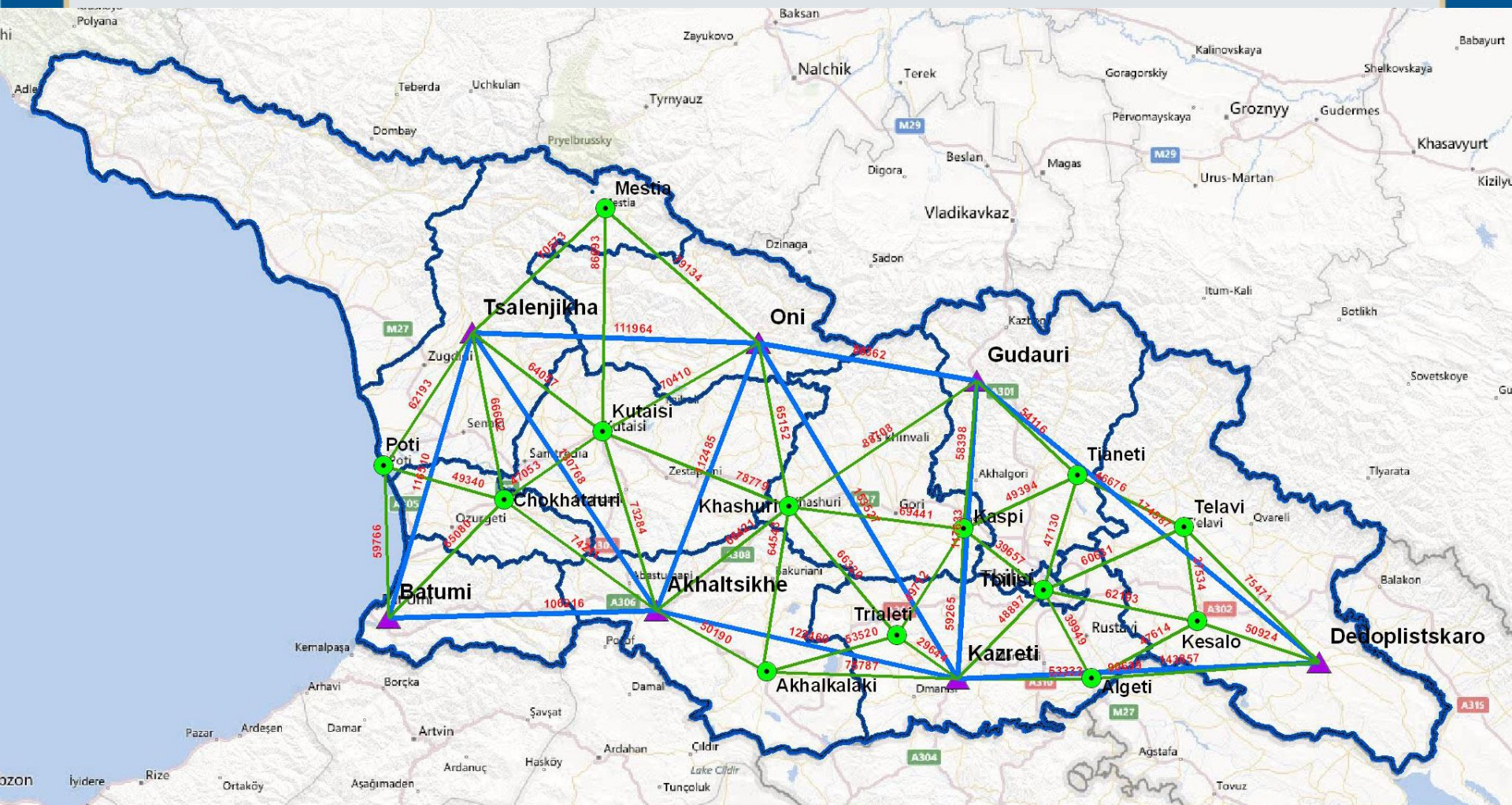


Head of Geodesy and Cartography Division
Galaktion Hahubia



NATIONAL AGENCY
OF PUBLIC REGISTRY

20 A&B-class stations



NATIONAL AGENCY
OF PUBLIC REGISTRY

7 A-class stations



NATIONAL AGENCY
OF PUBLIC REGISTRY

13 B-class stations



Antenna and Receiver



2 Leica LEIAT504

17 Leica GNSS AR25 with individual calibration

2 Leica 500RS

13 Leica GRX1200+ 4 Leica GR10

Antenna IGS Name

Phase Center Offset(East, North, Up)

LEIAR25.R3 LEIT

L1 0.0002 0.0001 0.1617

L2 0.0002 -0.0006 0.1588

LEIAR25.R4 LEIT

L1 0.0006 0.0010 0.1583

L2 0.0001 0.0001 0.1540



■ 1 Trimble GNSS R8

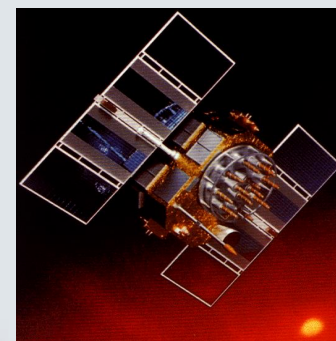
■ 1 Trimble GPS NETRS



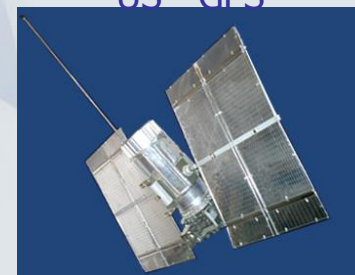
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GNSS signals

- Navstar/GPS – USA all
- GLONASS – Russia 15
- Galileo – EU (in a futures) 14



US - GPS



Russia - GLONASS

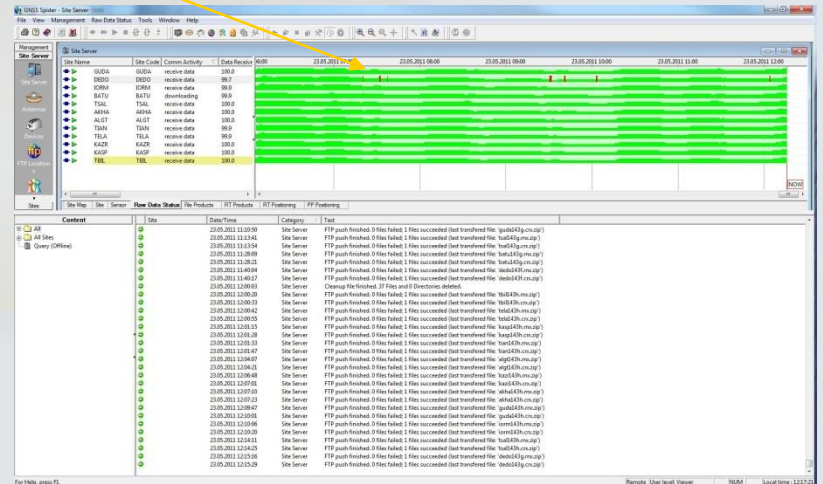
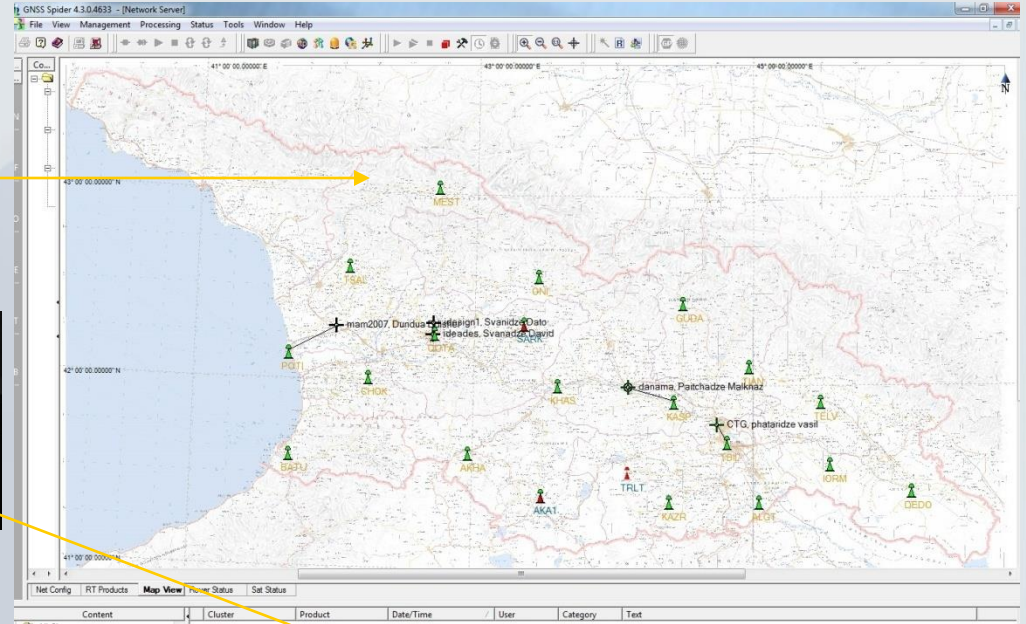
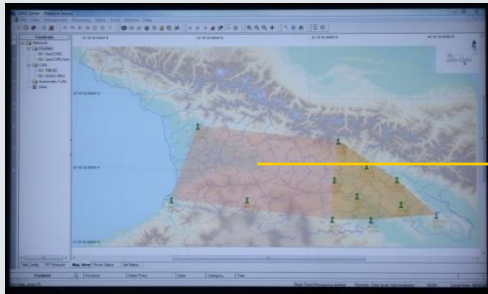


EU - Galileo



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Control Center GNSS Spider 4.3



- RINEX 30 sec all time
- RINEX 5 sec 1 year
- RINEX 1 sec 6 month

GeoCORS services

- Positioning services:

- Positioning in Real-Time

- Positioning via Rinex file download from SpiderWeb server

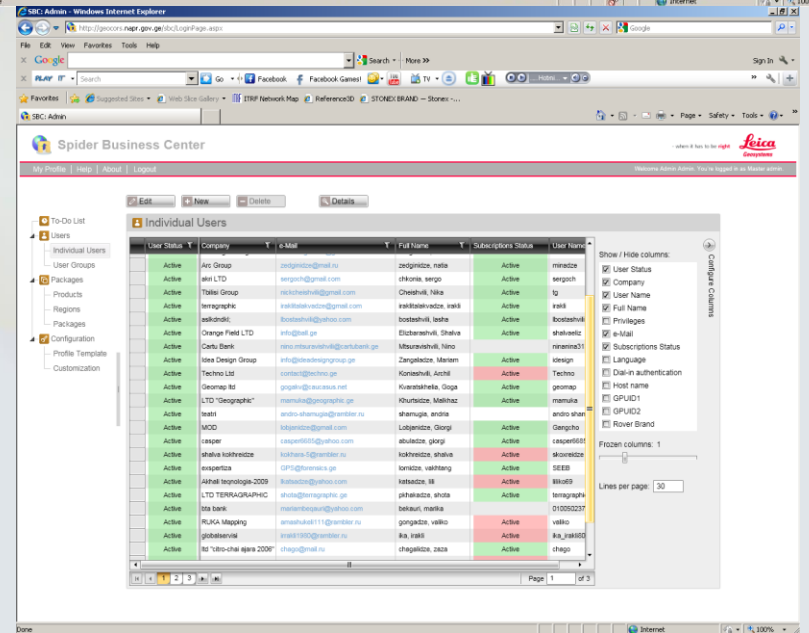
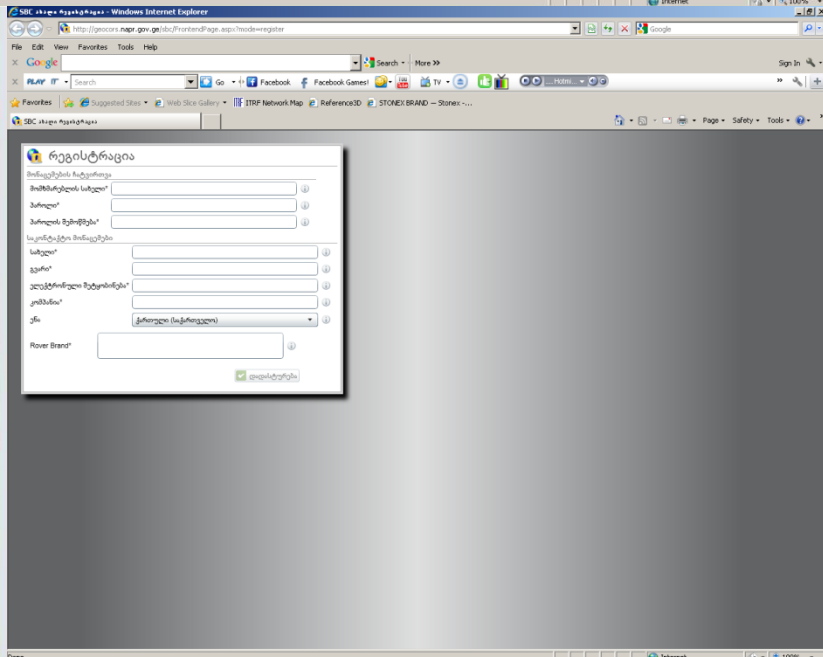
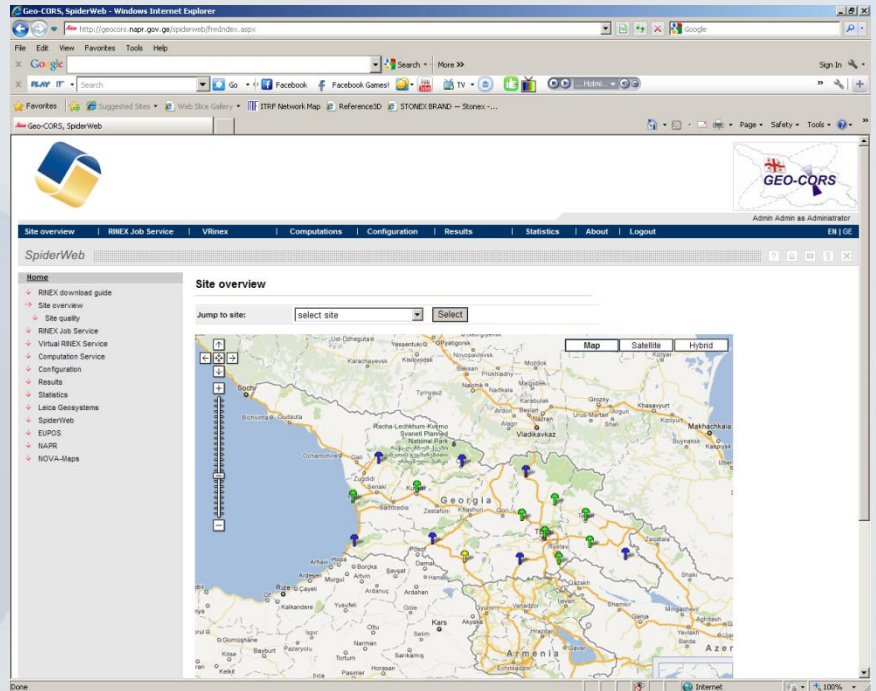
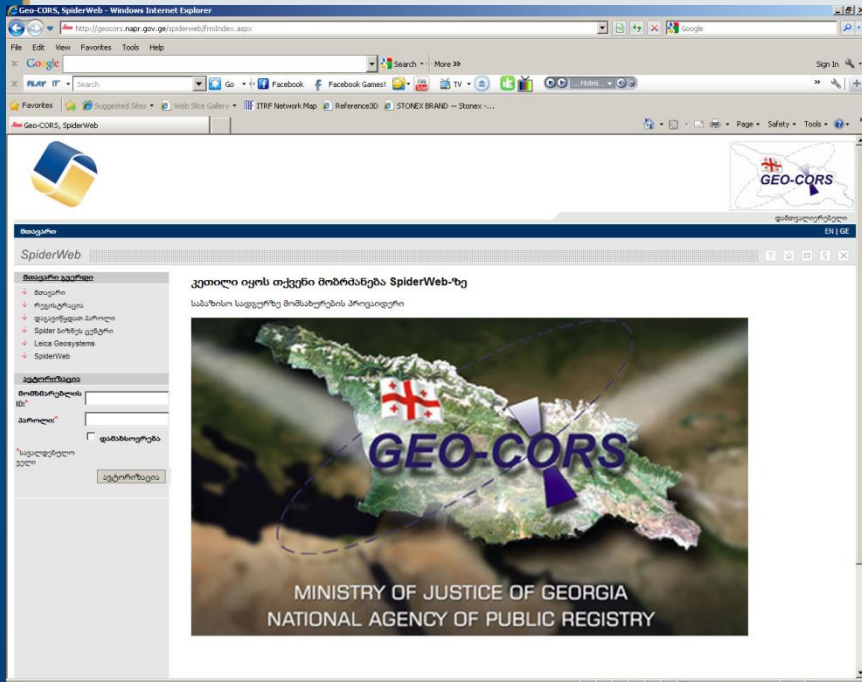
- Automatic computation in SpiderWeb server

- Business center

- Registration



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New Likes

- Sofio Cercvadze
17 hours ago
- Natasha Charkviani
19 hours ago
- Toka Kucidze
19 hours ago

Bugs Smelly
on Monday

Insights

your Posts Talking About This Reach

Invite Friends

- David Kapanadze [Invite](#)
- Giorgi Gangcho Lobzhamidze [Invite](#)
- Gela Mgeladze [Invite](#)
- Mikheil Abashvili [Invite](#)

Geo-CORS

413 likes · 91 talking about this

Community & Government - Add A Category

- 2 St. Nikoloz Str., Tbilisi, GE.
- 577 62 03 33
- Tuesday 10:00 am - 7:00 pm

About

415

Ads Manager

Now
2013
Started

Status

Photo / Video

Offer, Event +

How has your day been?

Promote

Post

See Your Ad



Libra - Gold Coin
Basis Price

Promote Y

Geo-CO₂S
Thursday

5 წლისა და უფროსი ბავშვებისთვის დამზადებულია ინტერაქტიული სავარჯიშოები



5 Zones for scales
1 500.....1 5 000 scale factor 1

Unit	Constraint	Share
------	------------	-------

Geo CORP, Akopi Jafaridze, Giorgi Khachidze and Akaki Matsushvili like this.



62 people saw this post.

Prüfung:

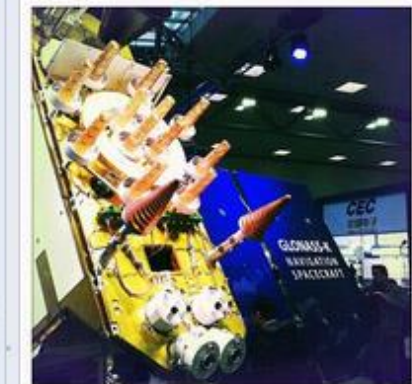
Geo-CORS
Handy 40

GPS-გლობალური პოზიციონირების სისტემა (ინგლ. The Global Positioning System, შუიკლენიონ GPS) — ამ-ის გლობალური სანავიგაციო სისტემების სისტემა. იგი ვაჭყყის სანავიგაციო პოზიციონირების სისტემების, წარმოადგენს და აშშ-ის სანავიგაციო სისტემა.

Like See All

-  **Global Positioning System**
Internet
-  **GPS Car Rental**
Transport/Flight
-  **GLONASS**
Internet
-  **Galileo (satellite navigation)**
Internet
-  **გაზ. პარამეტრები**
Government Official

GLONASS - (Russian: ГЛОНАСС; IPA: [ɡlɐˈnas] - Глобальная Навигационная Спутниковая Система), also known as Globalnaya Navigatsionnaya Sputnikovaya Sistema or Global Navigation Satellite System, is a radio-based satellite navigation system oper... [See More](#)



Like · Comment · Share

Ⓢ Abapd Jafndvll Bona Uris.

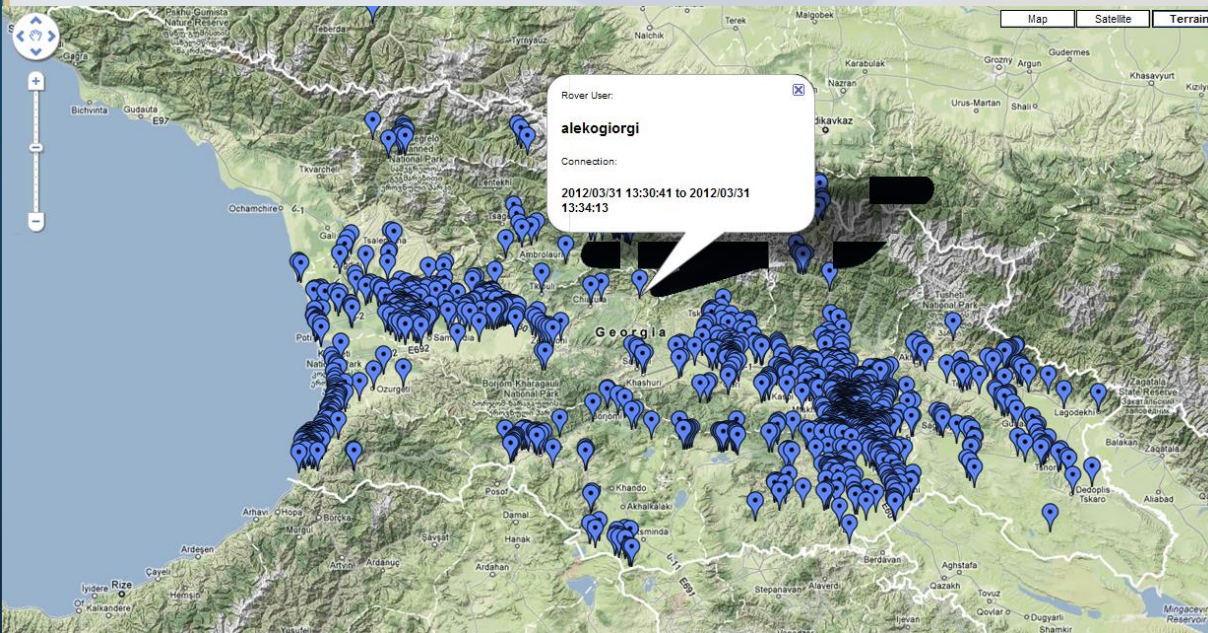
 Write a comment...



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Summary by Month

Month	Authorised Connections	Authorised Connections (%)	Unauthorised Connections	Unauthorised Connections (%)	Total Connection Time (hrs)	Average Connection Time (min)
2012.1	1,053	2.5	0	0.0	211.65	12.1
2012.2	1,286	3.1	0	0.0	289.86	13.5
2012.3	1,602	3.9	0	0.0	436.51	16.3
2012.4	2,474	6.0	0	0.0	584.16	14.2
2012.5	3,078	7.4	0	0.0	771.40	15.0
2012.6	3,452	8.3	0	0.0	844.51	14.7
2012.7	3,630	8.8	0	0.0	1,007.62	16.7
2012.8	2,862	6.9	0	0.0	842.38	17.7
2012.9	3,558	8.6	0	0.0	1,021.76	17.2
2012.10	2,796	6.7	0	0.0	837.01	18.0
2012.11	2,728	6.6	0	0.0	739.08	16.3
2012.12	2,843	6.9	0	0.0	671.35	14.2
2013.1	1,910	4.6	0	0.0	383.15	12.0
2013.2	3,627	8.8	0	0.0	772.65	12.8
2013.3	4,528	10.9	0	0.0	952.65	12.6



Summary

First Connection:	2012/01/01 12:24:26.00
Last Connection:	2013/03/28 12:16:03.00
Authorised Connections:	41,427
Unauthorised Connections:	0
Connections shown in map:	3,993
Customers:	71
Products:	12
Skipped Records:	51
Total Connection Time:	10,365.7 hrs
Average Connection Time:	15.0 min



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GNSS Spider - [Local Network Server]

File View Management Processing Tools Window Help

Management Local Network Server

User-ID: zura Rover User Name: janashvili zura Connection: 13.05.12

Local Network Server

FTP Locations

Operators

Events

Transformations

Business Center

Search Images Videos Maps News Shopping Gmail More

George Lobjanidze

Google 41.728392 41.734994(zura)

Map Photos

2000 ft 500 m

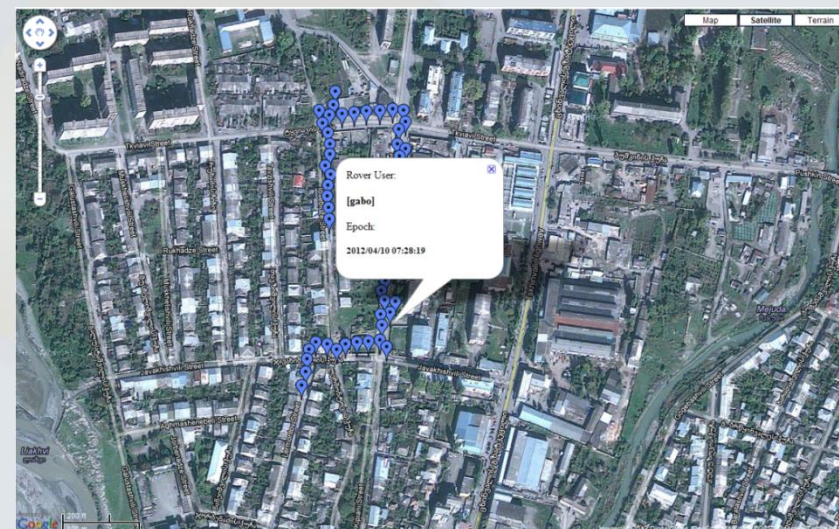
Net Config RT Products Map View Rover Status Sat Status

Content	Product	Date/Time	User	Category	Text
All		13.05.2012 19:00:30	Spider Server	Network Server	Ephemeris updated on RTK server. Satellite: R19, IODE: 9, Time: 05-13-2012 15:15:15.
All Clusters		13.05.2012 19:06:27	ClusterServer	Cluster	Cluster GeoCORS: Broadcast Ephemeris missing for SV G2 in network processing
All Products		13.05.2012 19:06:52	Spider Server	Network Server	Ephemeris updated on RTK server. Satellite: G02, IODE: 86, Time: 05-13-2012 16:00:00.
Query (Offline)		13.05.2012 19:06:52	ClusterServer	Cluster	Cluster GeoCORS: Broadcast Ephemeris available for SV G2 in network processing

Done

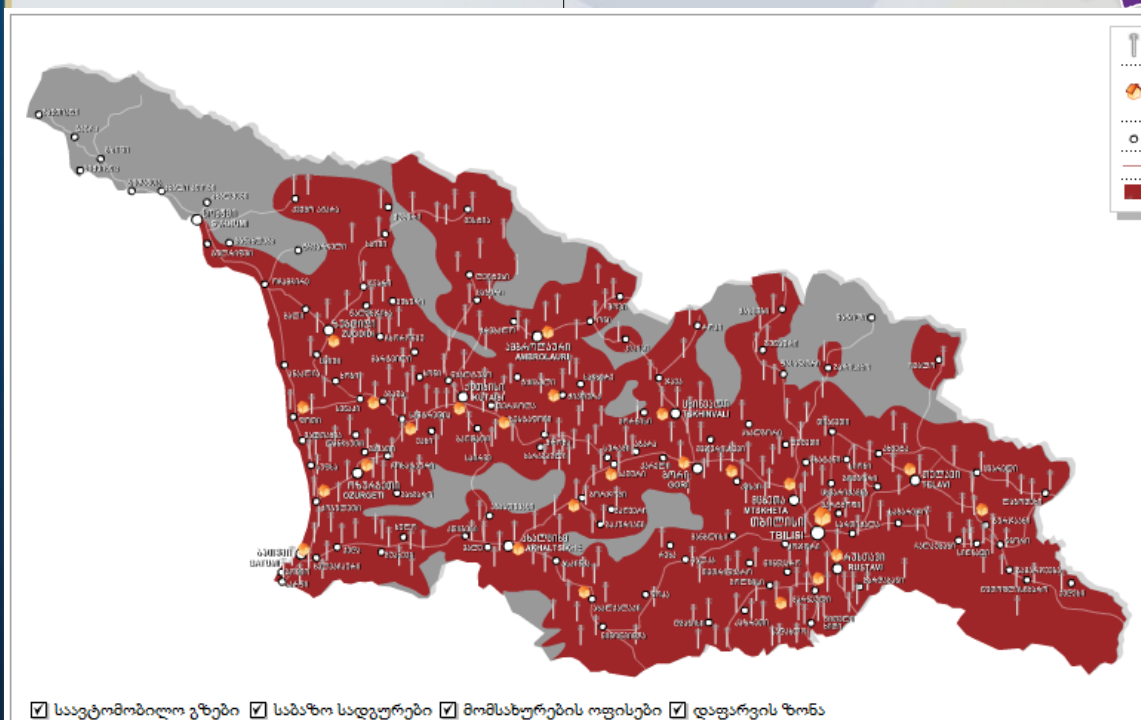
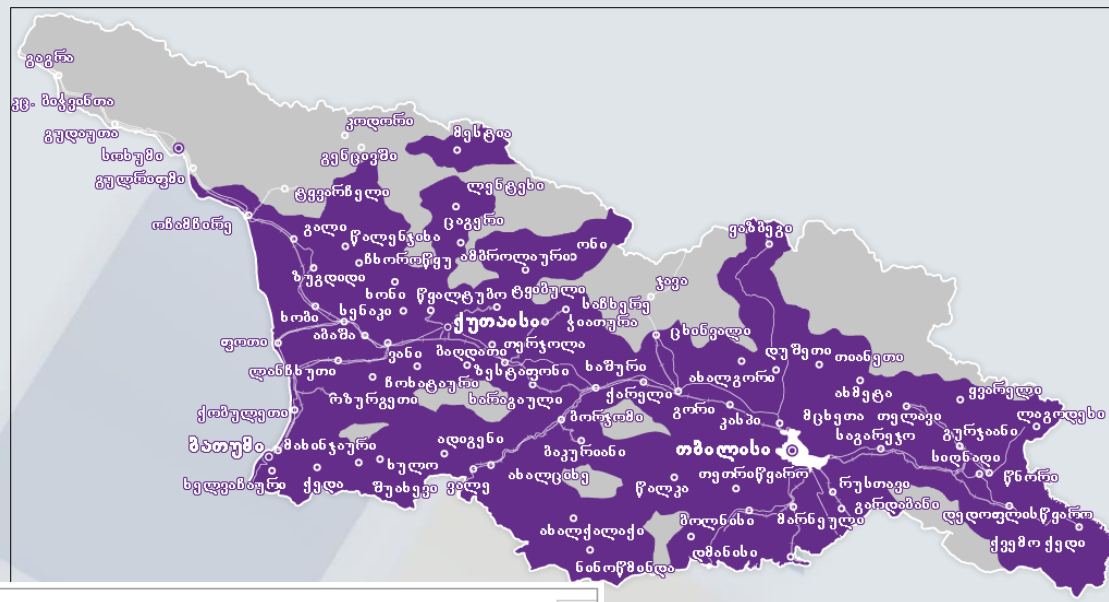
Real-Time Processing started Local User level: Administrator Local time: 19:07:14

Start GNSS Spider - ... GNSS Spider - ... Ipswitch What... C:\gaga \\10.100.100.... Leica SpiderQC New GNSS Spid... Administrator: ... 7:07 PM



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GSM coverage



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Station DataBase



Login

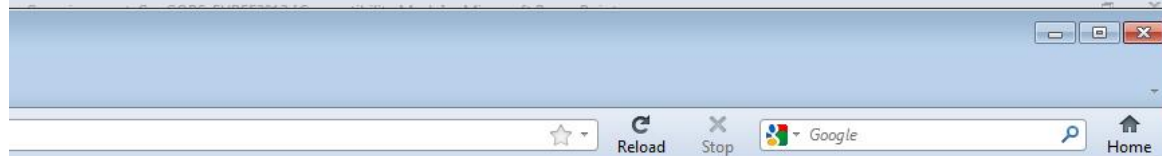
User Name:* Admin

Password:* ••••••••

☐ Remember me

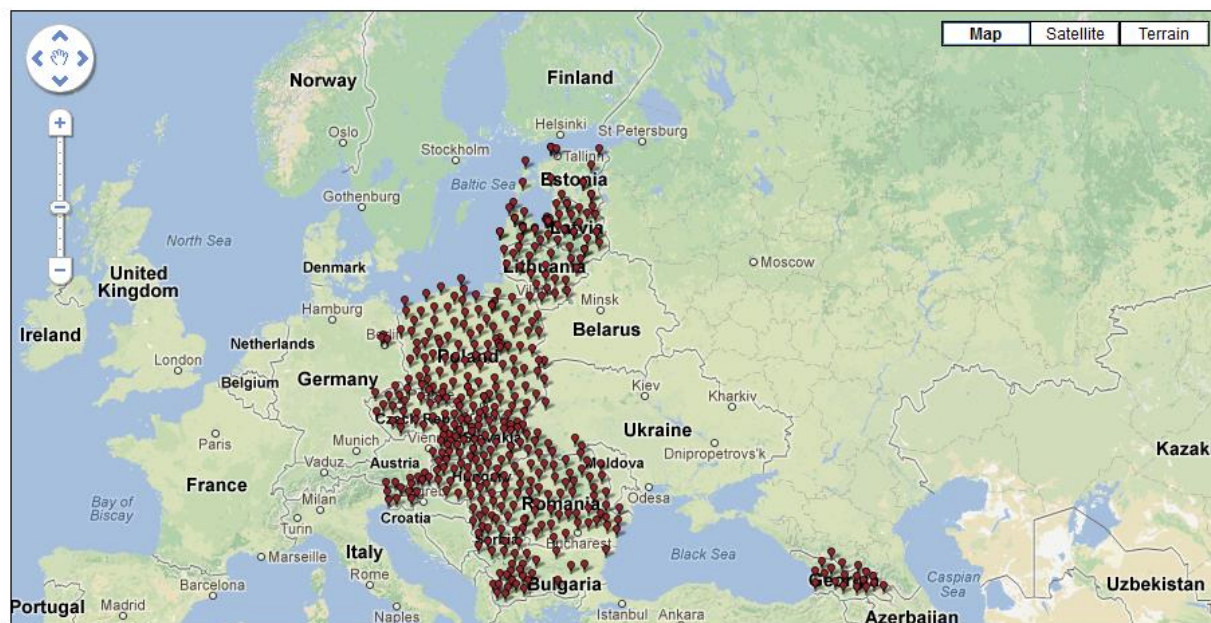
*Required field

Login



Station DataBase

Map of EUPOS Reference Stations

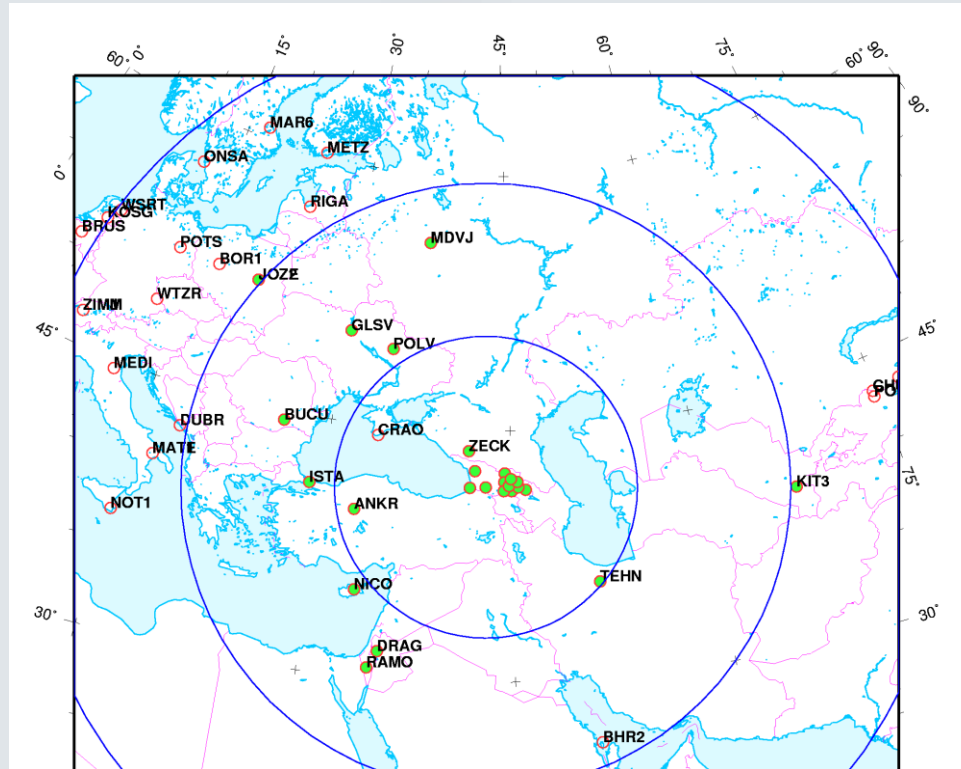


- **Creation of new reference frame “CEONET”**
- **Establishment of new modern geoid model for Georgia**



Georgia Continuously Operating Reference Stations

Coordinates Computation Report by IGN author DPR/SGN/PMT/sb



Results

1. **Georgia CORS IGS08 ep. 2011.353 Coordinates (use today)**
2. **Georgia CORS ETRF2000 ep. 2011.353 Coordinates**

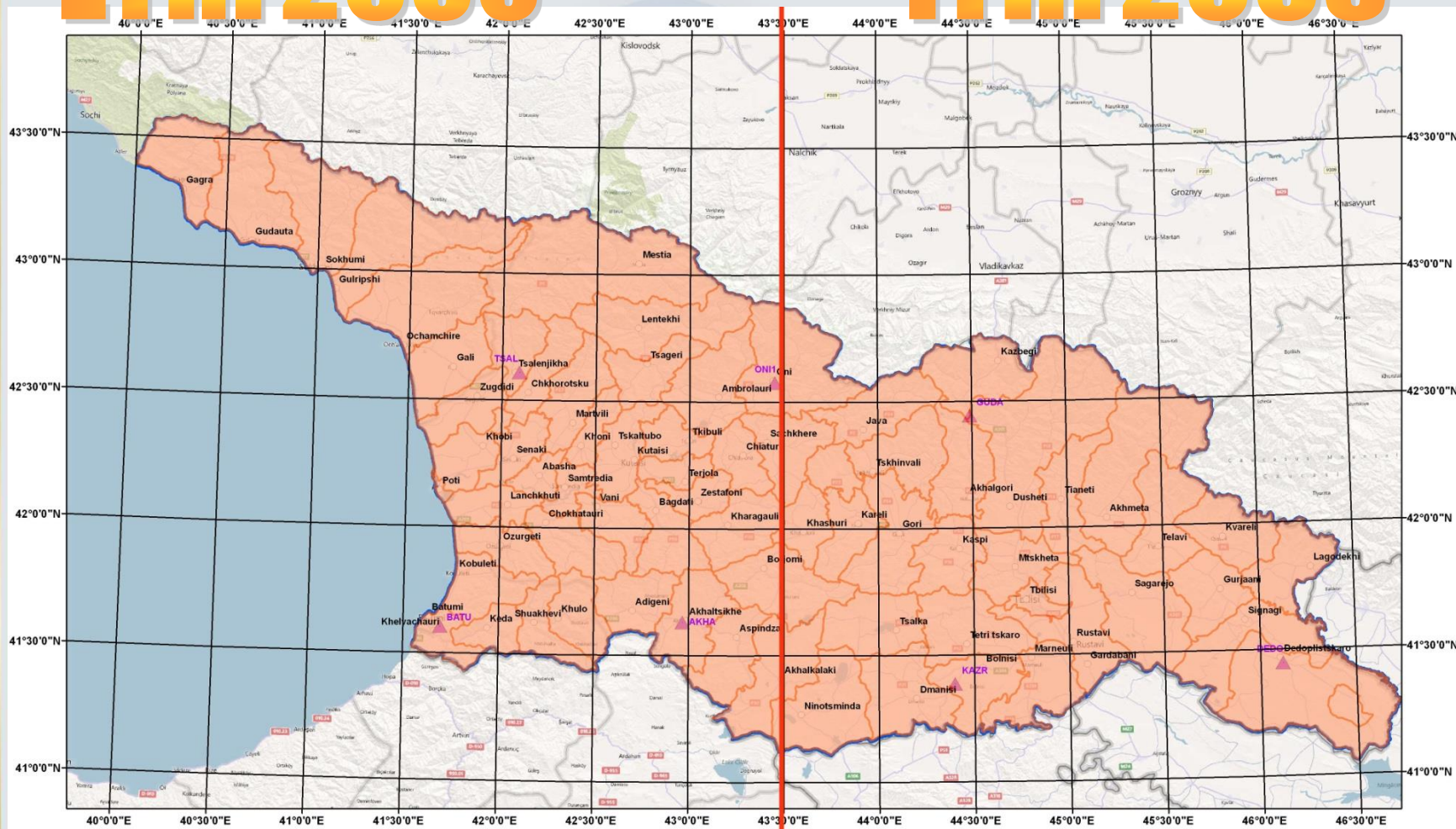


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GEONET12TM

ETRF2000

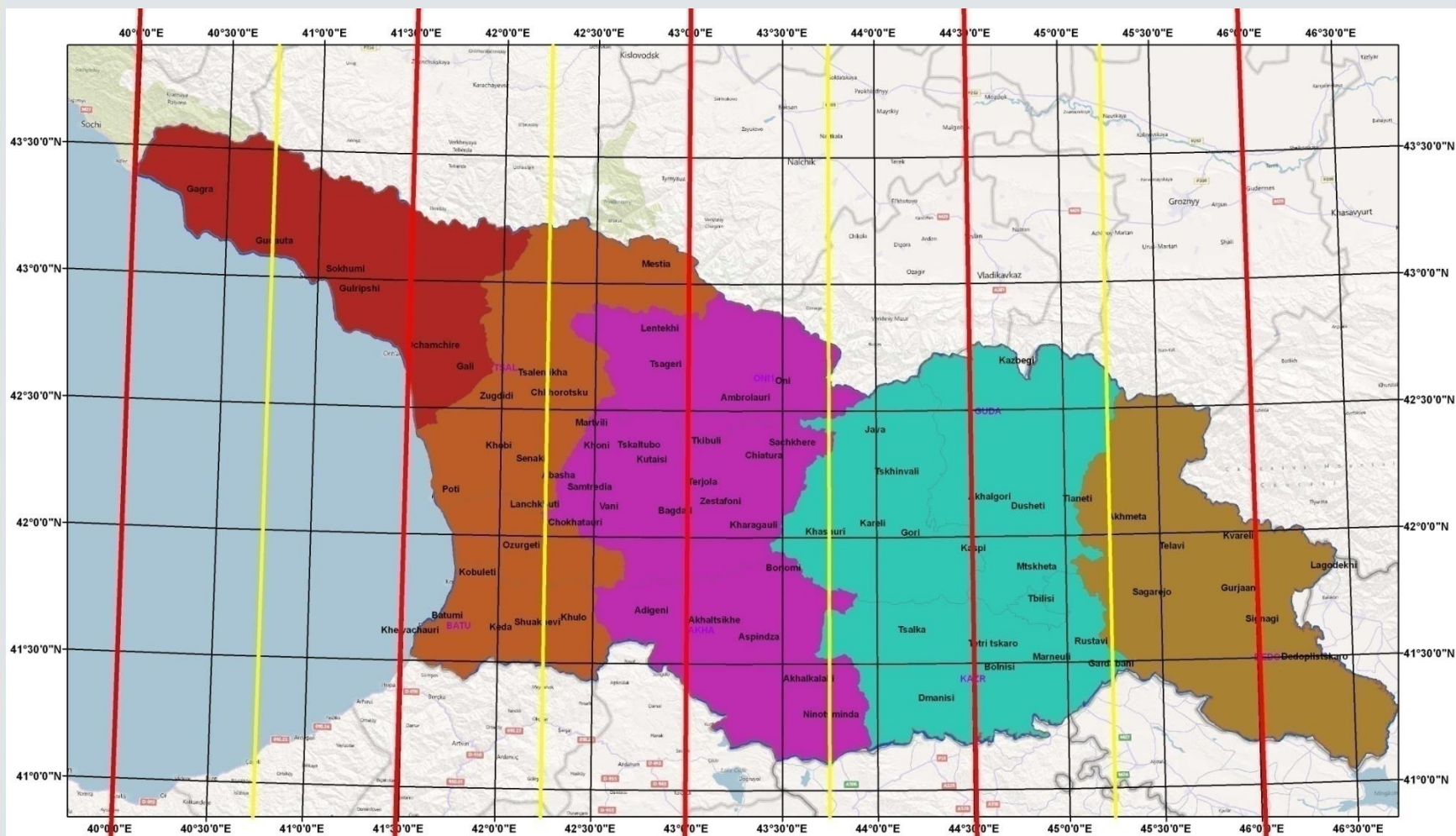
ITRF2008



Central meridian 43,5 degrees
1:10 000.....1:1 000 000— scale factor 0,9996



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40

41,5

43

44,5

46

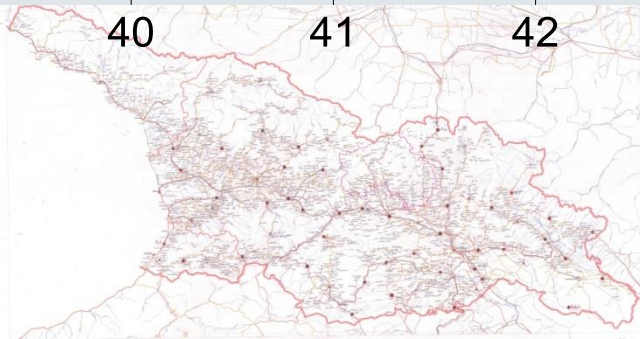
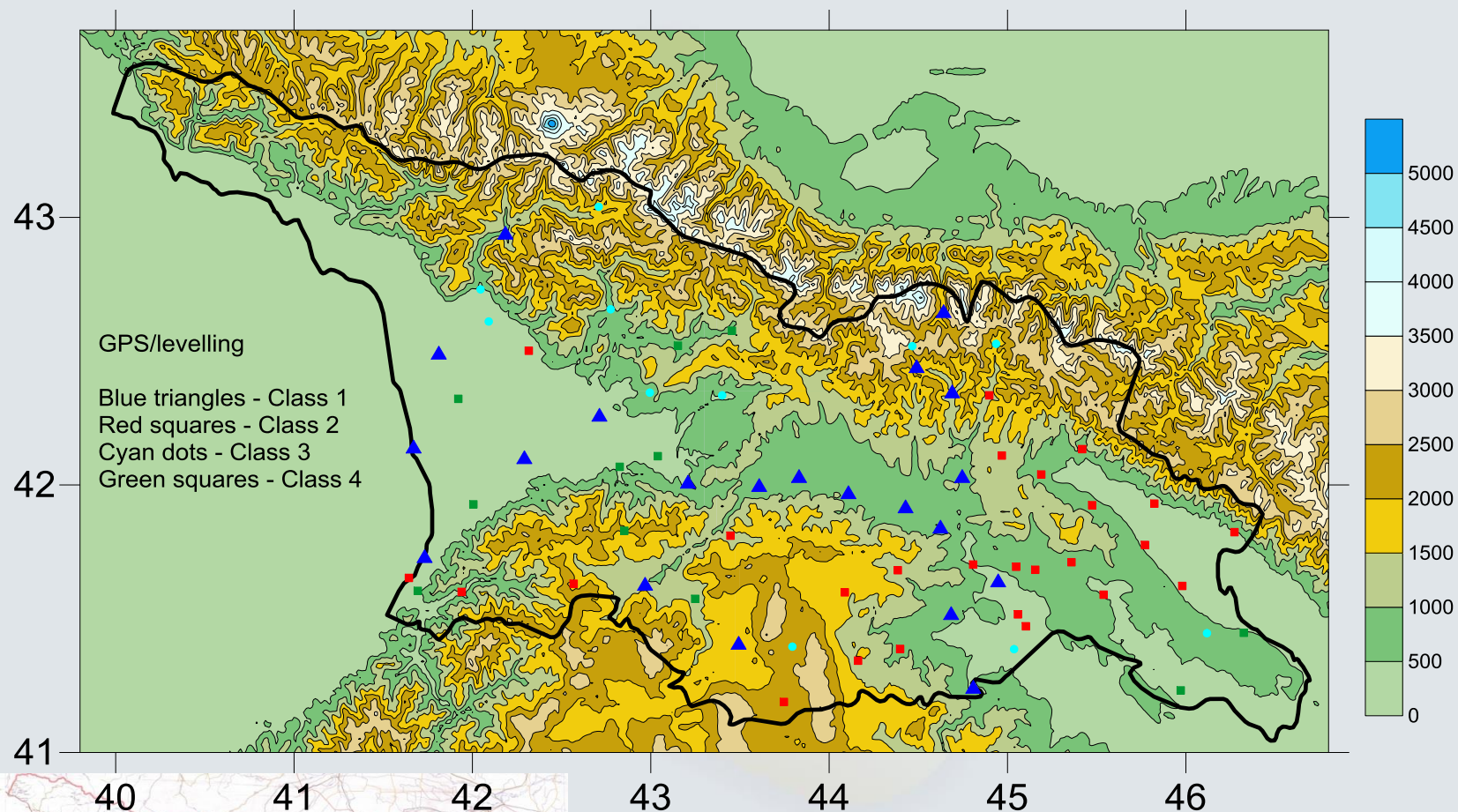
5 Zones for scales

1:500.....1:5000 scale factor 1



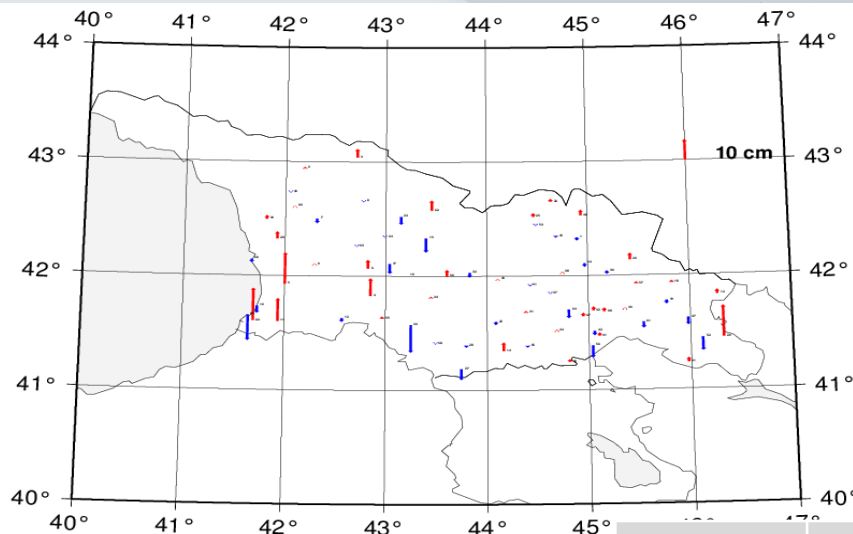
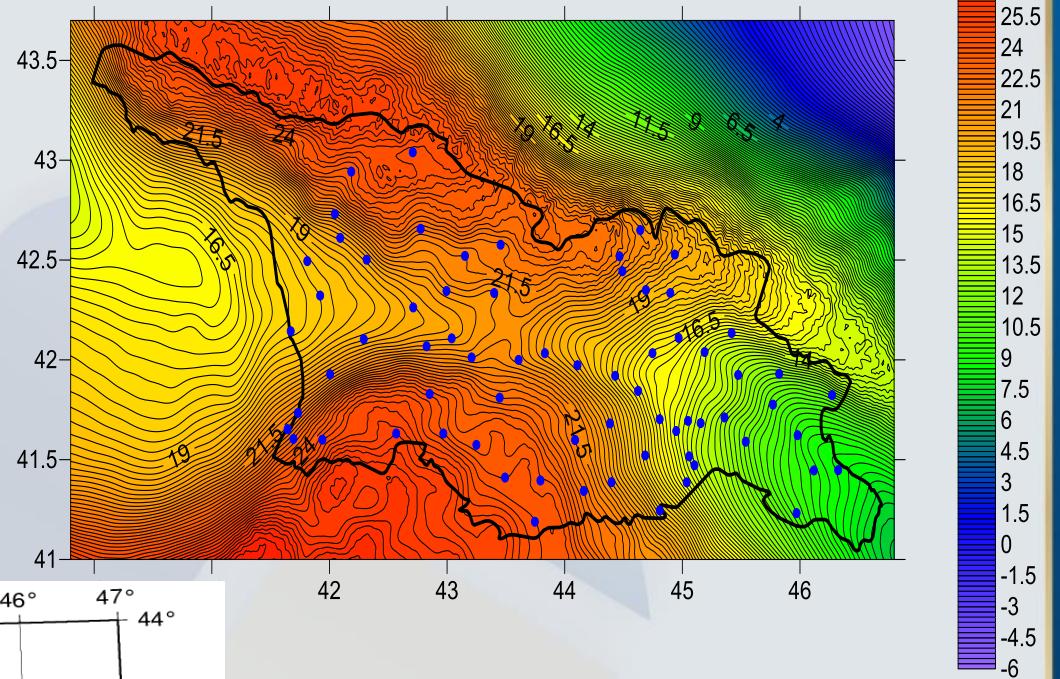
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69 GPS/levelling observed stations



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Geoquasigeoid2012



#	Min	Max	Mean	StdErr	RMS
69	-0.135	0.157	0.003	0.050	0.050



INSPIRE

Annex I

- **Coordinate reference systems**
- **Geographical grid systems**

- Geographical names
- Administrative units
- Addresses
- Cadastral parcels
- Transport networks
- Hydrography
- Protected sites

Annex II

- Elevation
- Land cover
- Orthoimagery
- Geology

Annex III

- Statistical units
- Buildings
- Soil
- Land use
- Human health and safety
- Utilities and government service
- Environmental monitoring facilities
- Production and industrial facilities
- Agricultural and aquaculture facilities
- Population distribution - demography

- Area management/restriction / regulation zones & reporting units
- Natural risk zones
- Atmospheric conditions
- Meteorological geographical features
- Oceanographic geographical features
- Sea regions
- Bio-geographical regions
- Habitats and biotopes
- Species distribution
- Energy resources
- Mineral resources



Rehabilitation and creation of new height benchmarks for the leveling network



I class

II class



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Gravimetric work

New gravimetric map



Old gravimetric map



Absolute Gravity for ties



Relative Gravity for expanding local regions where airborne shows significant mismatch with existing terrestrial



Part of the EPN

ORGANISATION	NETWORK & DATA	PRODUCTS & SERVICES	DOCUMENTATION	NEWS, EVENTS & LINKS
Creation, Management, Structure, Relation to IGS, Projects	Station list, Maps, Tracking status, Data access, Proposed stations, Station log submission, Station picture submission	Data analysis, Weekly EPN solutions, Coordinates, Position time series, Tropospheric delays, ETR S89/ITRS transformation, Satellite Orbit & Clock Correction Streams	Formats, Guidelines, Equipment & calibration, Papers, FAQ	News, Mails, Calendar, Workshops, FTP server, Site map, Web history, Links

[NETWORK & DATA](#) > **MAPS**

Interactive map

Legend

Station status (active, inactive, former) ▾

Active Inactive Former

Locate station on map

- Select a station - ▾

Station criteria selection

Receiver manufacturer:

AOA ASHTECH JAVAD ▾

Antenna manufacturer:

3S NAVIGATION AOA ▾

Satellite system:

GPS GLONASS GALILEO ▾

Status:

ACTIVE INACTIVE FORMER ▾

Data:

DAILY HOURLY REAL-TIME ▾

hold down CTRL for multiple selection

Update map

Map ▾

Google 200 km 200 mi

Map Data - Terms of Use



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Thank You for your Attention !!!



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