

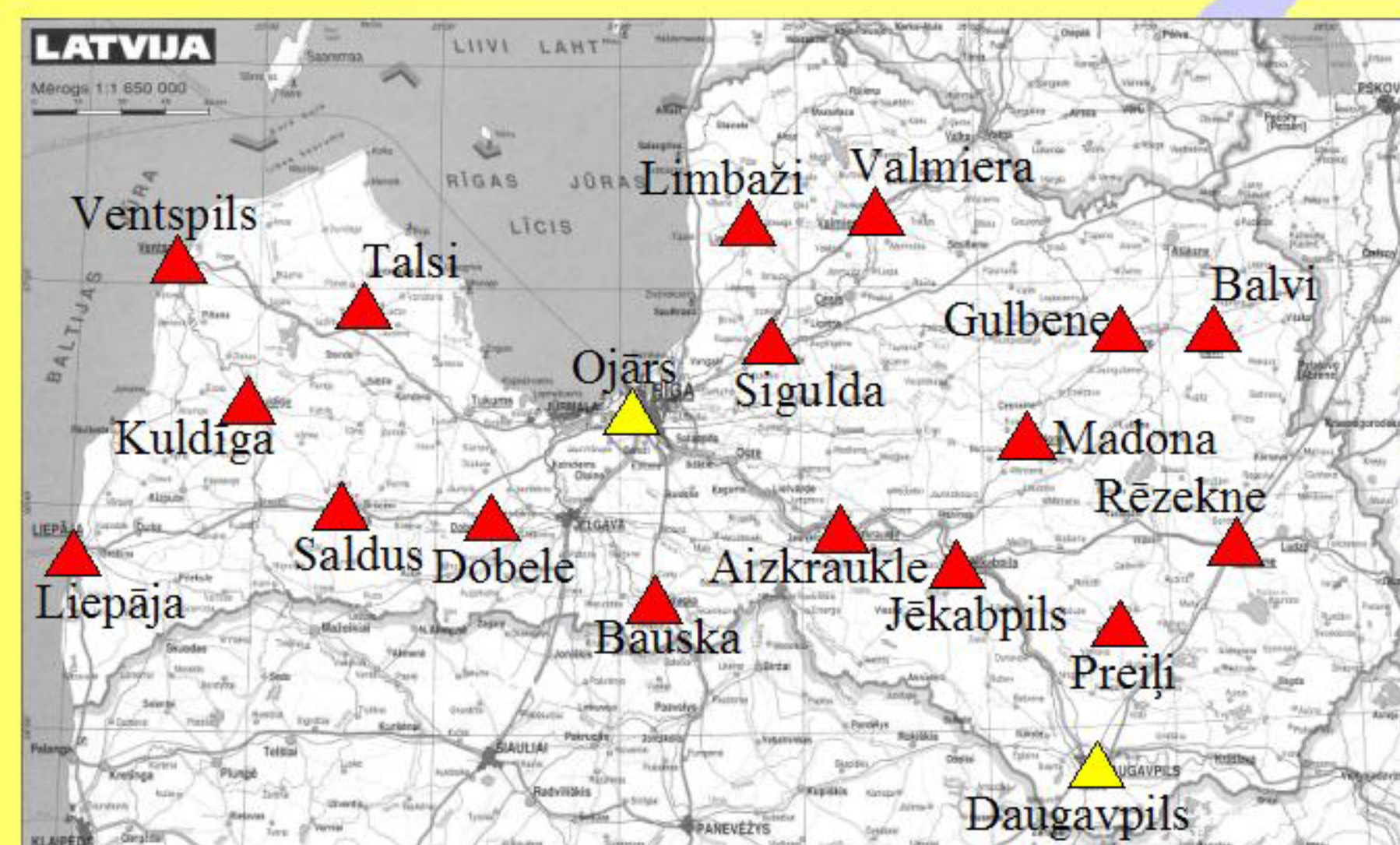


EUREF 2006
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GPS reference station network of Latvia

LatPOS

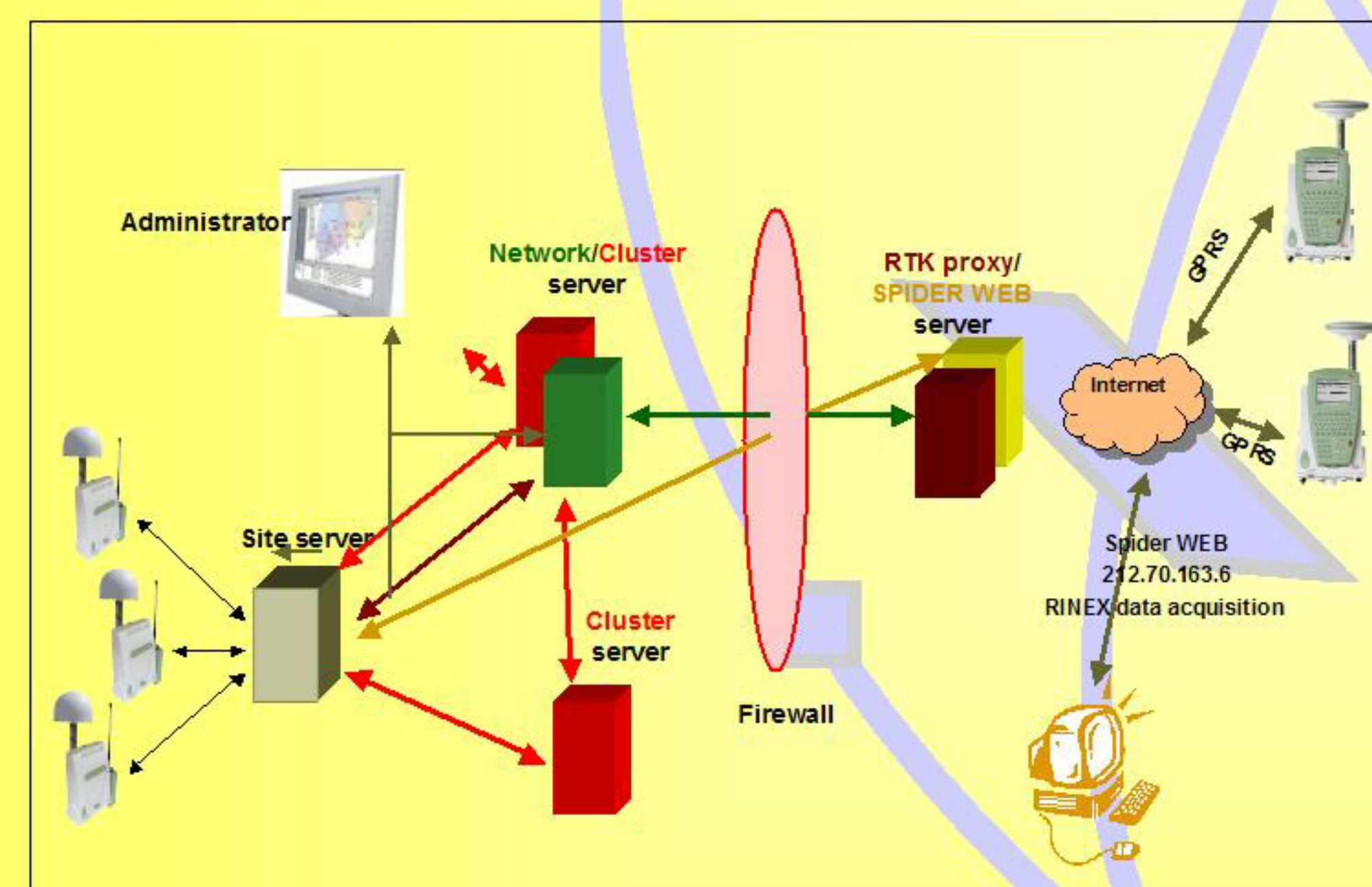
LatPOS



GPS reference station network of Latvia (sensors: ▲ Leica ▲ Trimble)

Data processing centre for all the stations is located in O. Vācieša Street 43, in Rīga. As a result of the reorganization of the State Land Service, Latvian Geospatial Information Agency is established. The Agency has taken over geodetic and mapping functions from the State Land Service. Thus manager for LatPOS since January 1, 2006 is Latvian Geospatial Information Agency.

At the end of 2005, 19 base stations were installed in total in Latvia. They are spread throughout the whole territory of Latvia, so that even coverage in the whole territory is ensured in the whole territory of the country.



Components of the LatPOS network – 18(+1) reference stations and 4 servers

On March 31, 2004 in Tallinn, commission of Baltic Council of Ministers adopted conceptual decision to create common GPS reference network *BaltPOS* for Baltic States, where it is planned that Estonia will have **13**, Latvia — **14** and Lithuania — **13** base stations. During the meeting, also technical specification for stations was determined.

After the adoption of the conceptual decision of commission of Baltic Council of Ministers, Latvia started the realization of this project. To this moment, 2 base stations were in operation in Latvia – in *Ojars* (Riga) and in *Daugavpils*.

On April 13, 2005, State Land Service concluded contract with AS Leica Geosystems concerning installation and putting into operation of base stations. In the framework of contract, 16 base stations were installed – in Bauska, Jēkabpils, Rēzekne, Gulbene, Valmiera, Ainaži, Sigulda, Saldus, Liepāja, Kuldīga, Ventspils, Talsi, Dobele, Madona, Balvi, Limbaži and Preiļi.

System LatPOS receives data from USA Global Positioning System NAVSTAR. Stationary GPS base stations receive L1 C/A code, L1/L2 carrier phases, Doppler data. When frequencies L2C and L5 will be operated, receiving of also these signals and storing of data will be ensured.

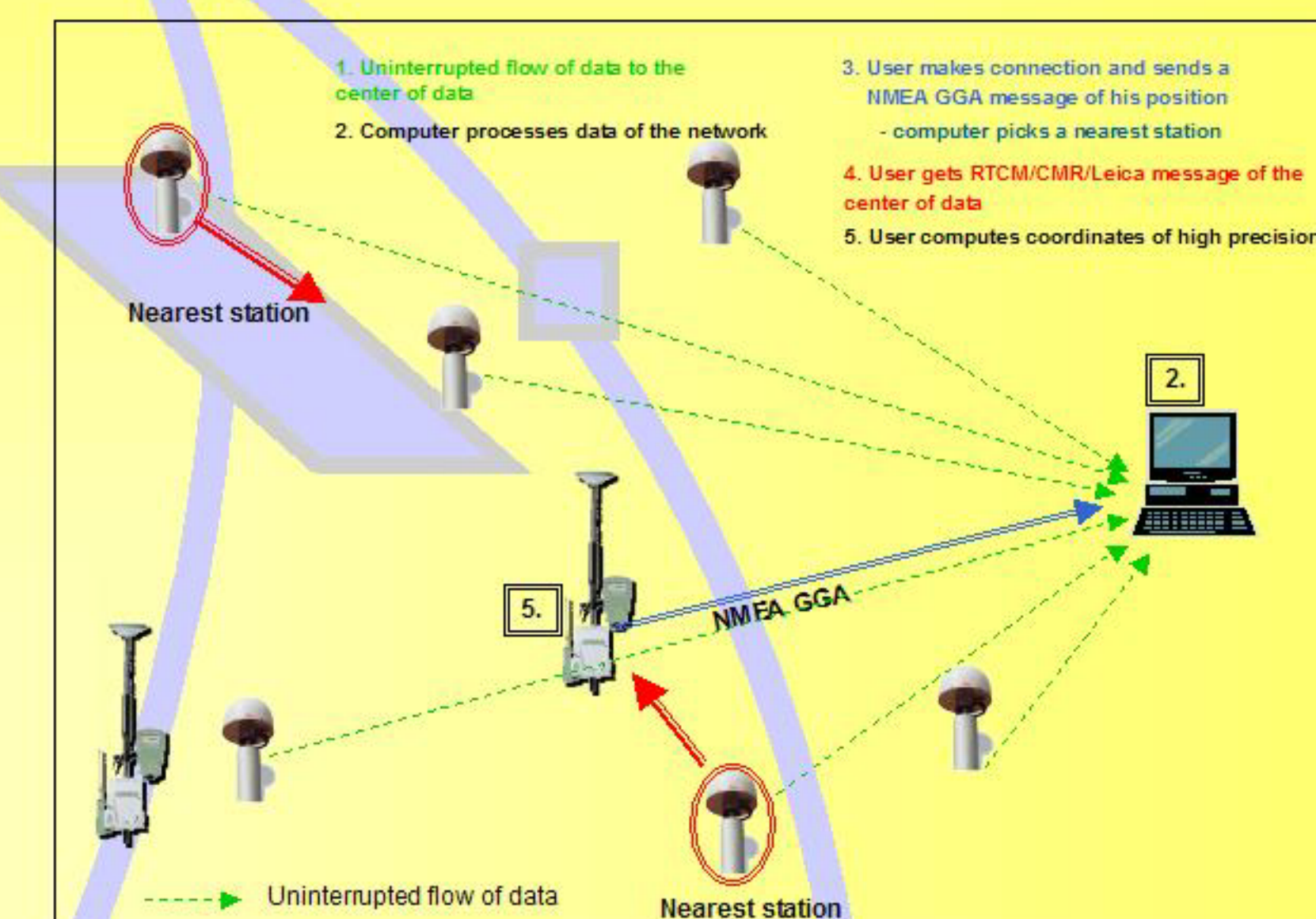
Antenas of sensors are installed on roofs of buildings with stable constructions. Antenas are installed in locations, with clear sky visibility.

Site server downloads data from sensors to network server for the generation of real time correction every second from all the GPS base stations.

Once an hour, 15 minutes after a full hour, site server is downloading data for post - processing. Data distribution server ensures WEB application, FTP and real time access.

Base stations are operating round a clock, 7 days a week. Receivers are working in multioperational mode and discontinuing of operations is not provided.

LatPos GPS receivers store Coarse Acquisition (C/A) code, L1/L2 phase offset and Doppler effect data in RINEX data format.



Product of LatPOS – nearest station

Real Time Kinematic (RTK) products offered by LatPOS, when Internet is available:

PRODUCT:

1. The nearest station:

- *NsRTCM2021v23imax* (RTCM 20,21 V2.3)

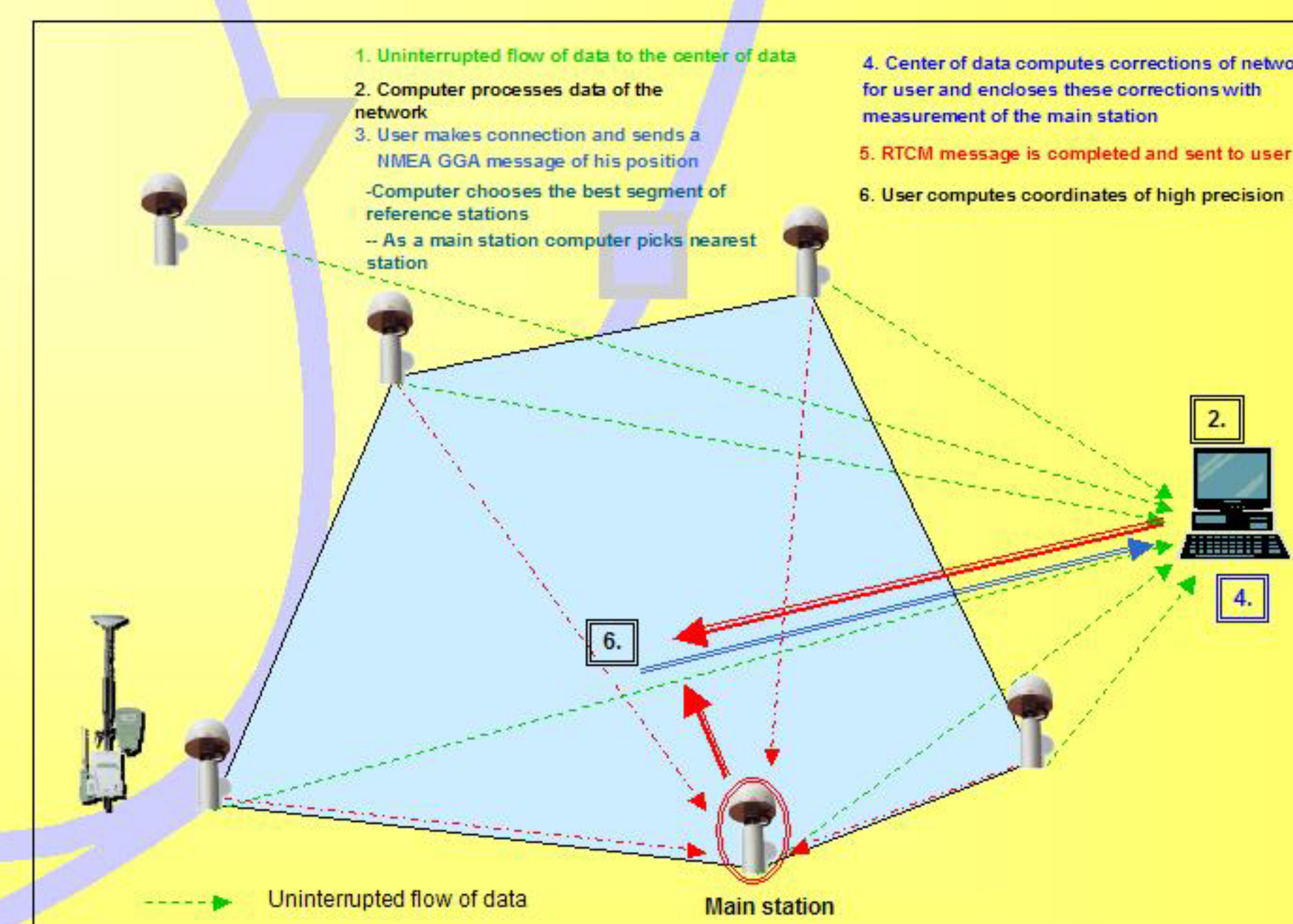
2. Automatic cell:

- *AcRTCMv3i-max* (RTCM 3.0 Network version)

AVAILABLE CONNECTIONS:

1. GPRS connection

2. GSM direct dial in number



Product of LatPOS – Automatic cell

Manager of LatPOS is Department of Geodesy of Latvian Geospatial Information Agency.

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