



# ***The Current State and Prospects of the Positioning & Timing and Navigation System in Ukraine***

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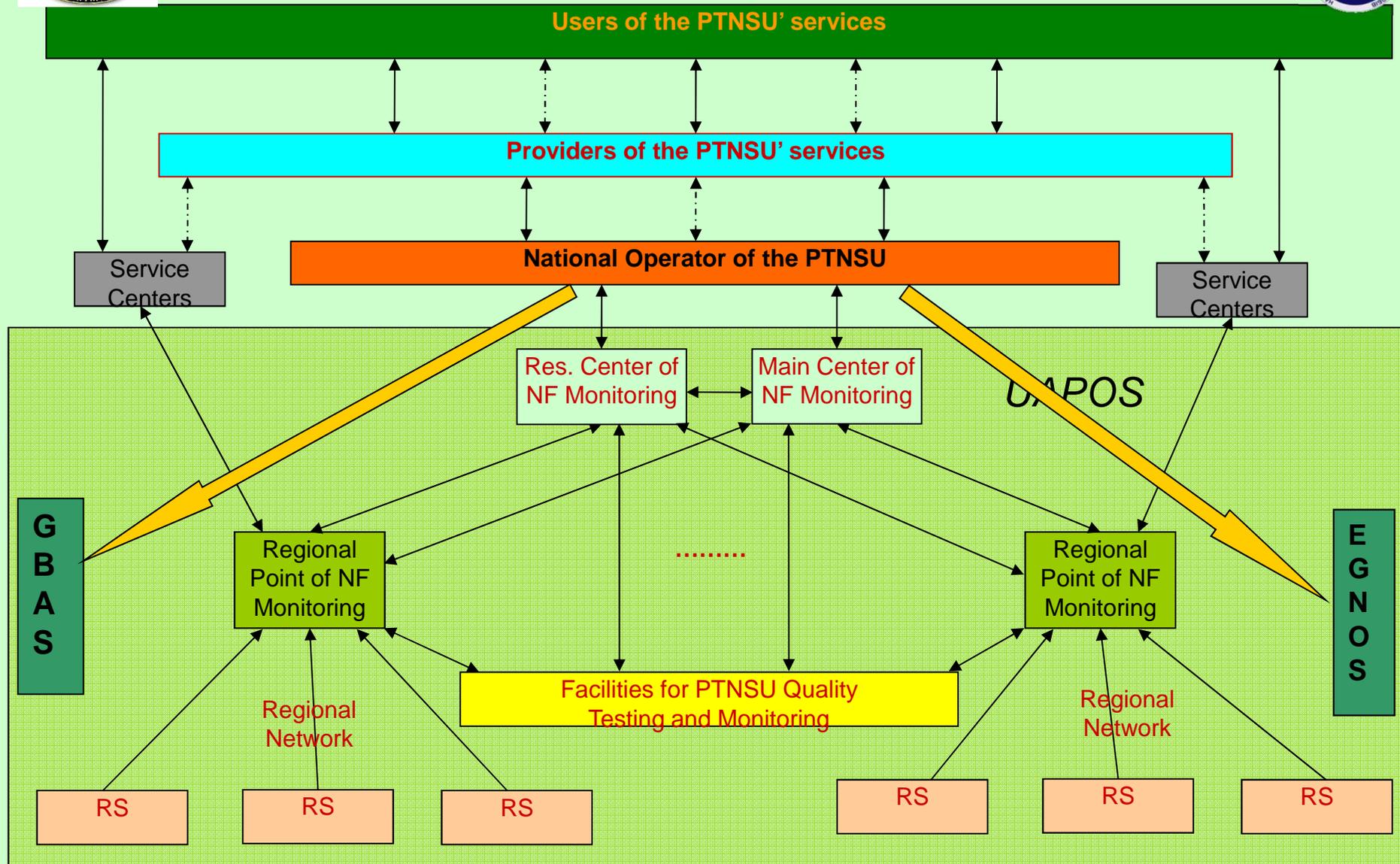
## ***Positioning & Timing and Navigation System of Ukraine***

The State Positioning & Timing and Navigation System of Ukraine (PTNSU) is aimed:

- to monitor the quality of radio-navigation fields of GPS, GLONASS, GALLILEO and other GNSS;
- to serve as an augmentation system for all GNSS and to provide customers with differential corrections;
- to monitor the quality of SBAS and GBAS services which are active in Ukraine.

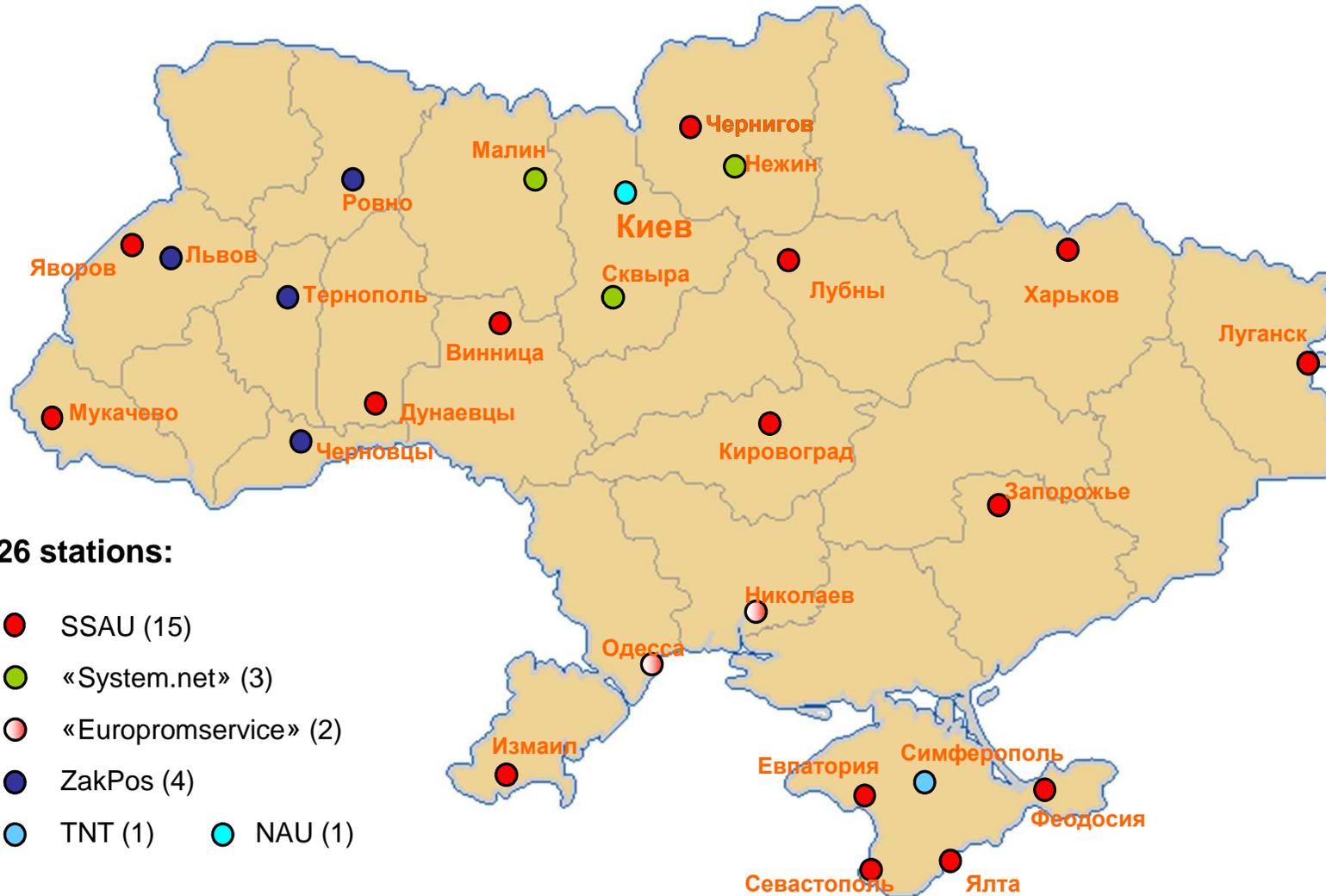


# PTNSU as a Regional Element of Galileo





# Positioning & Timing and Navigation System of Ukraine (in 2013)



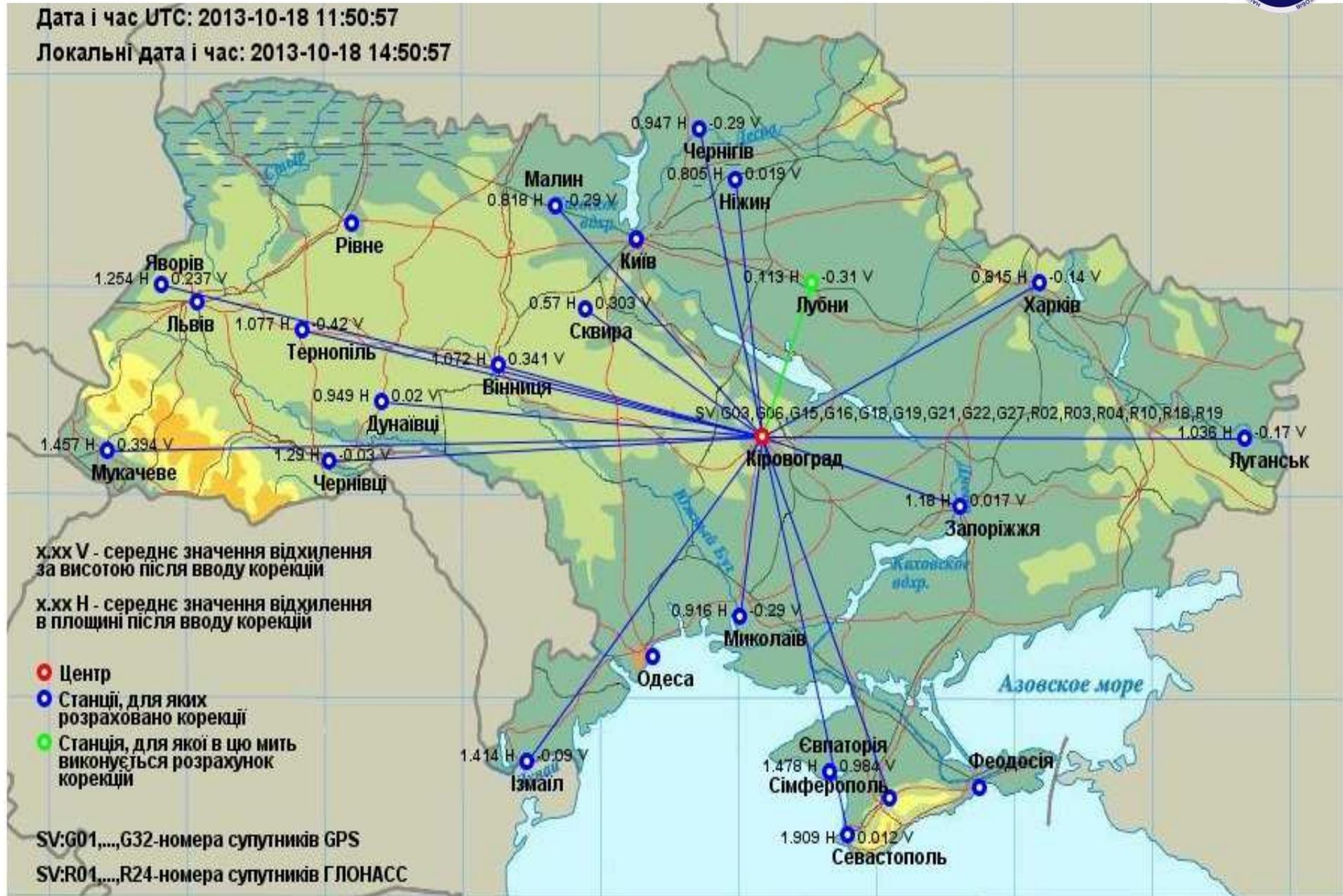


# Broadcasting of the wide area differential corrections PTNSU (in 2013)



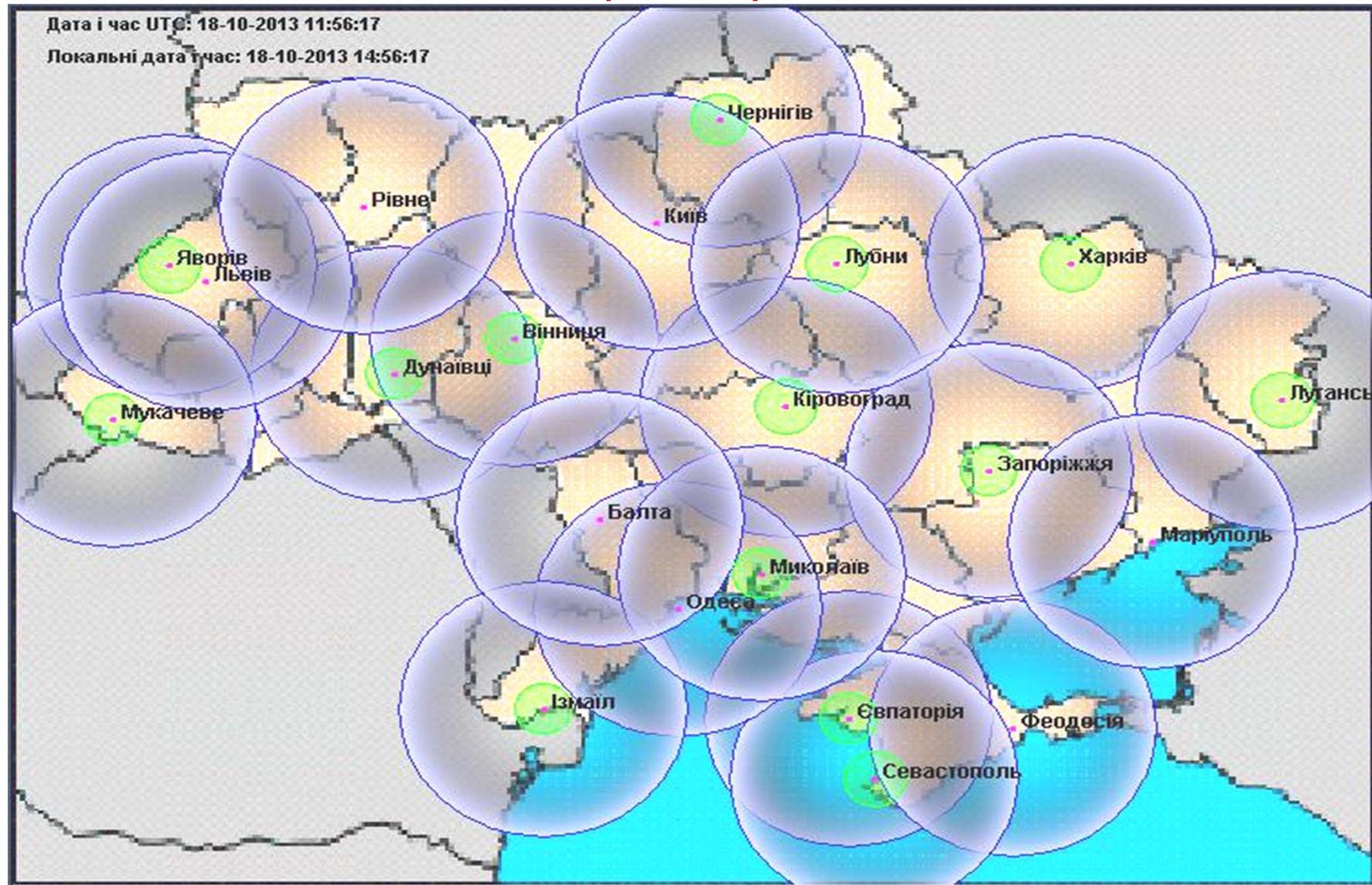
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## Broadcasting of PTNSU differential corrections for zones (in 2013)





# Positioning & Timing and Navigation System for Transportation

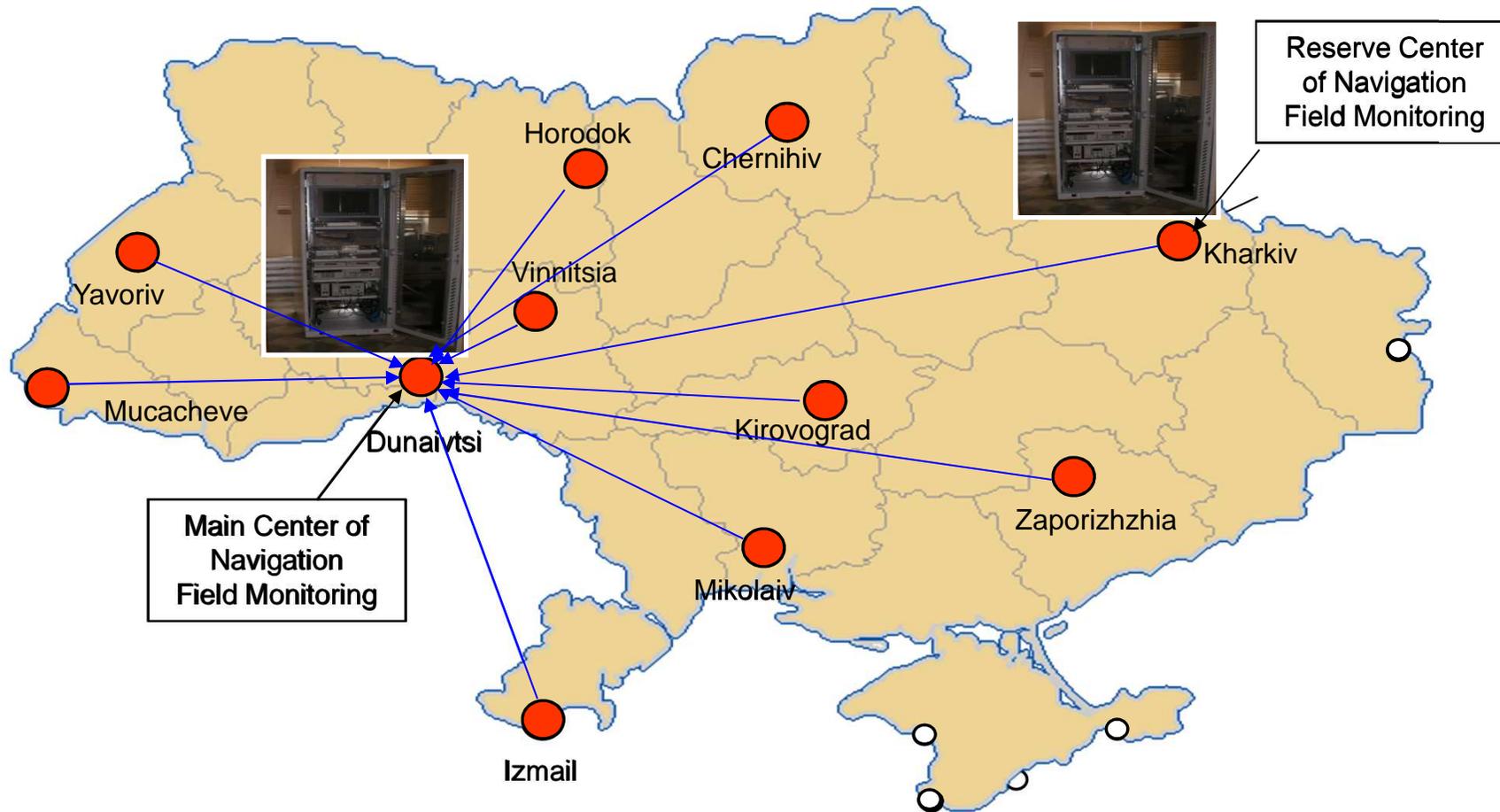


## Транспортные коридоры Украины





# Positioning & Timing and Navigation System of Ukraine (present)





**Joined National GNSS Network (JNGN) =  
120 GNSS Reference Stations of  
(SSAU + NASU + System.Solutions) networks**



We have 1-2 cm precision in RTK there where the JNGN is available!

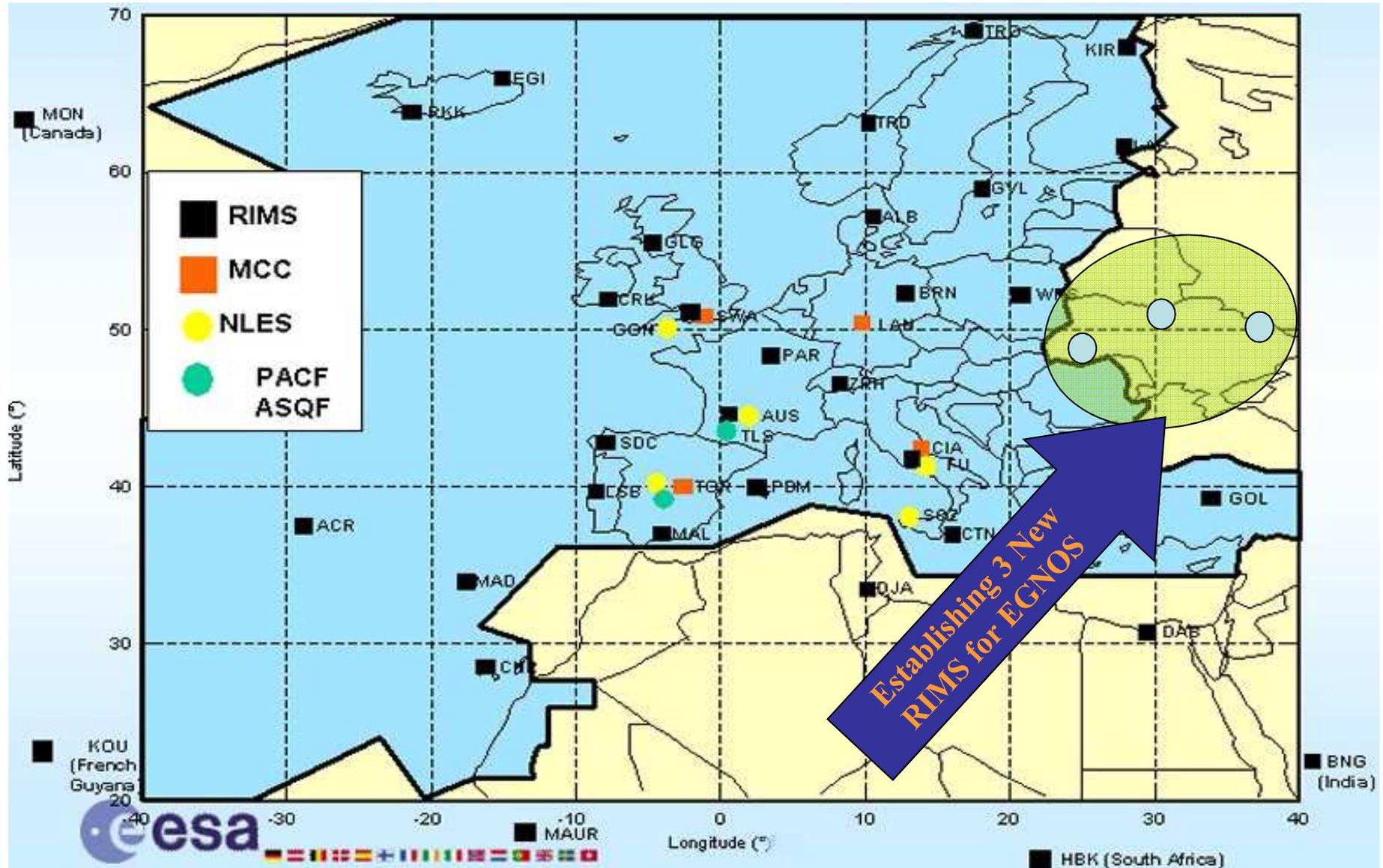


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# ***Ukraine's EGNOS and Galileo activities***

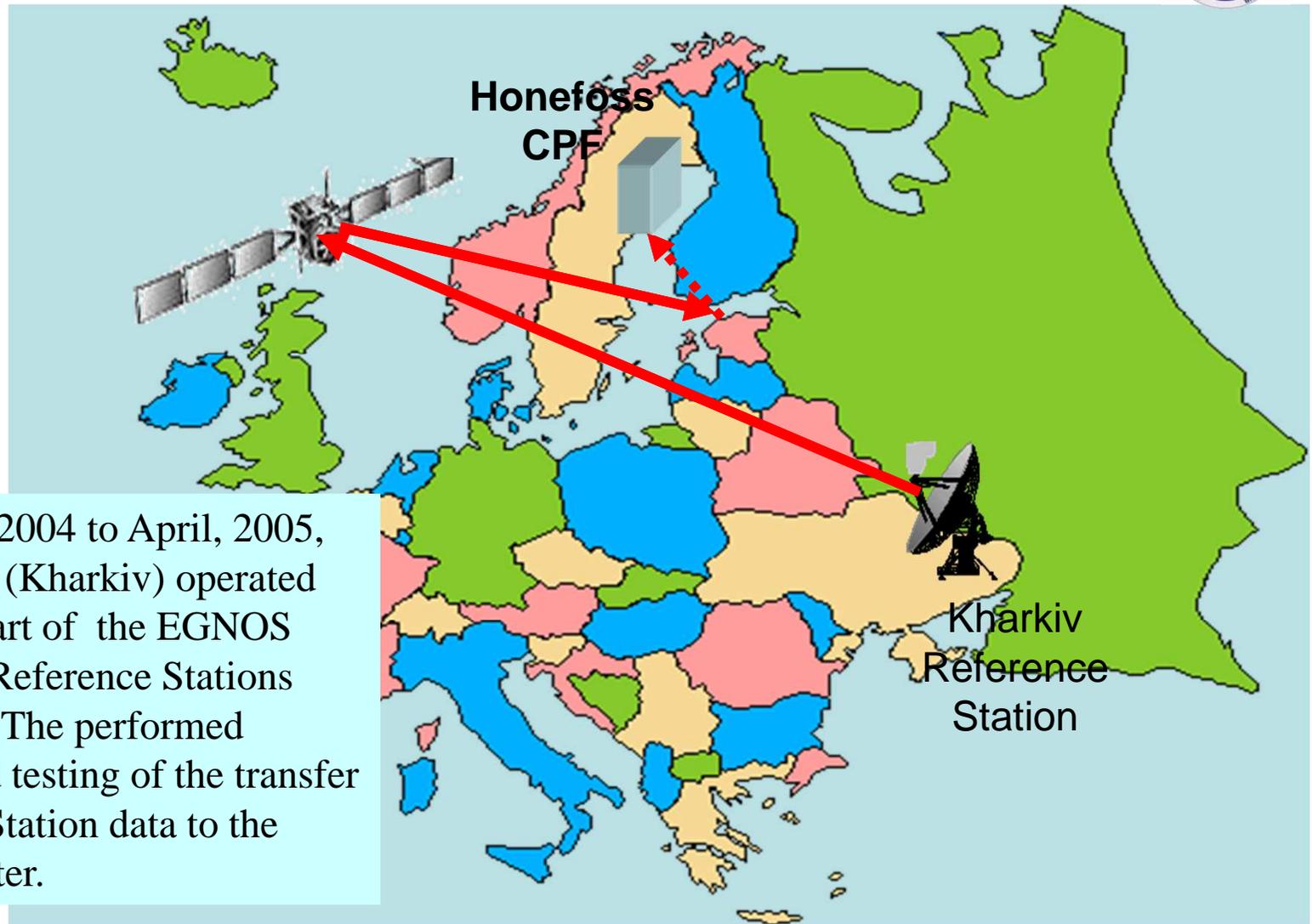


# Our Proposals to Expand EGNOS to Ukraine's territory





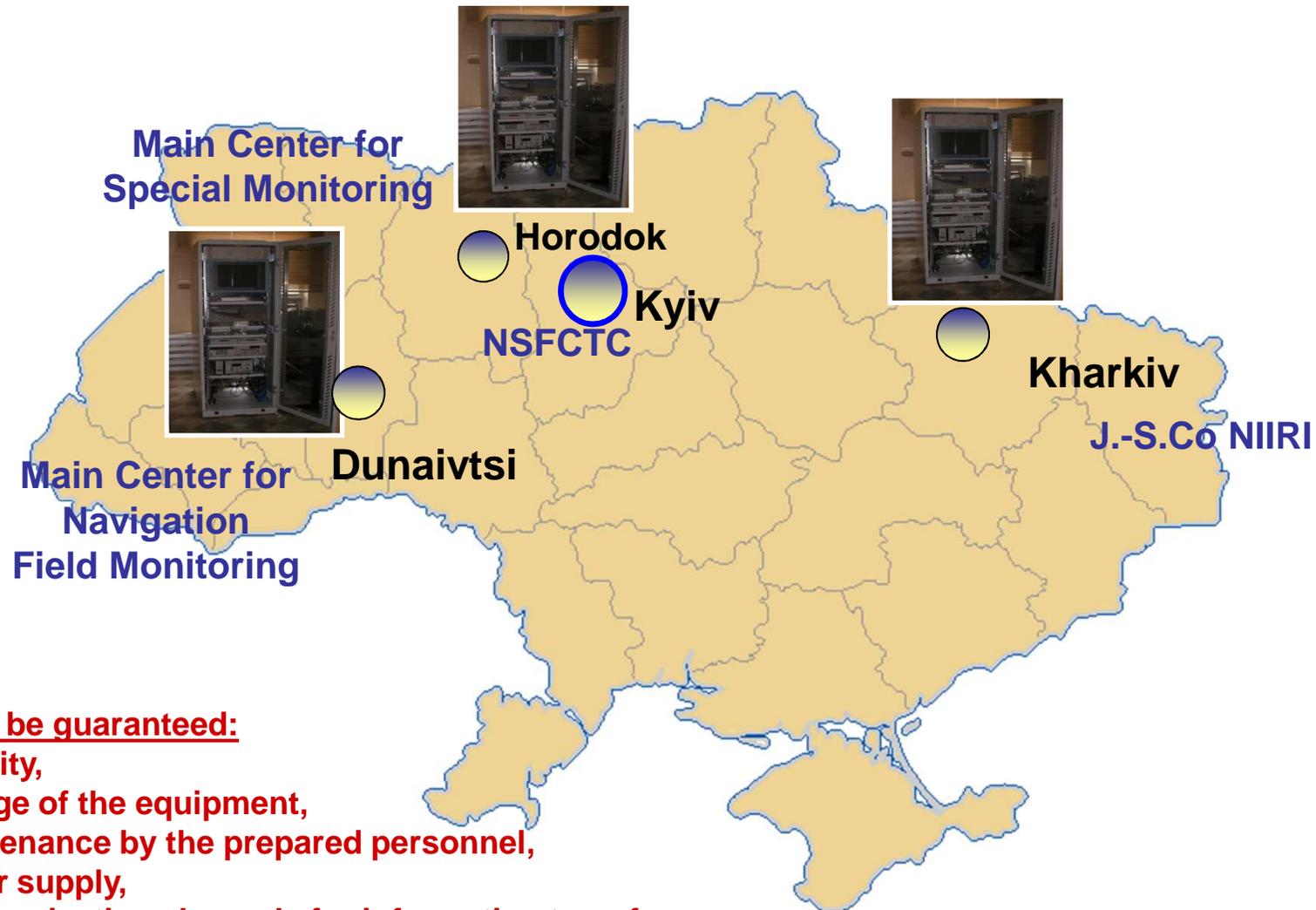
## ***Feasibility test on Joining Ukraine to EGNOS (Participation of Kharkiv RS in EGNOS SYSTEM TEST BED)***



From September, 2004 to April, 2005, Reference Station (Kharkiv) operated continuously as part of the EGNOS System Test Bed Reference Stations Ground Network. The performed activities included testing of the transfer of the Reference Station data to the ESTB system center.



## **Technical Pads of National Space Facilities Control and Test Center for RIMS EGNOS stations deploying**



### **What will be guaranteed:**

- security,
- storage of the equipment,
- maintenance by the prepared personnel,
- power supply,
- communication channels for information transfer,
- other necessary conditions

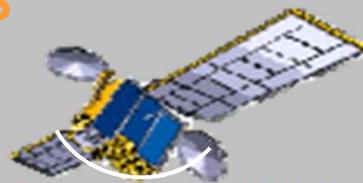


GPS

GLONASS

GALILEO

EGNOS



## Regional Navigation and Information System



System of high-precision positioning



System of transportation monitoring



***Thank you for  
your attention!***

