Land Survey Office

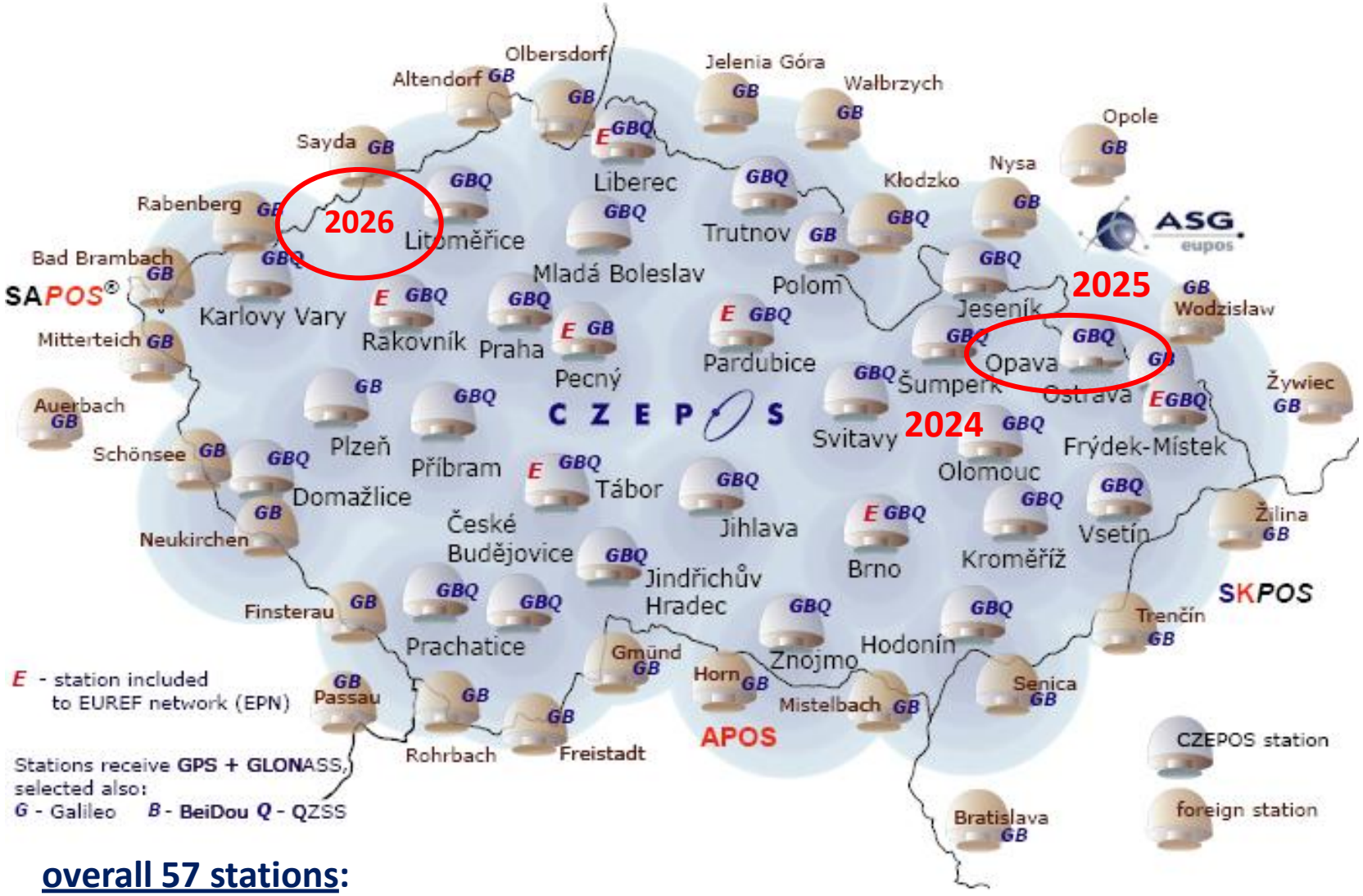
CZEPOS

EUPOS 2026

Jan Řezníček

7. - 8. 10. 2026, Warsaw

Administration of CZEPOS network



- real-time services
- post-processing products

- precise positioning

- precise navigation

overall 57 stations:

- 30 Czech stations (+ 1 new planned: Chomutov)
- 27 neighboring stations

CZEPOS

CZEPOS users

2026-10
users: 3430
precise agriculture: 474
global \ nationwide networks: 1 \ 3
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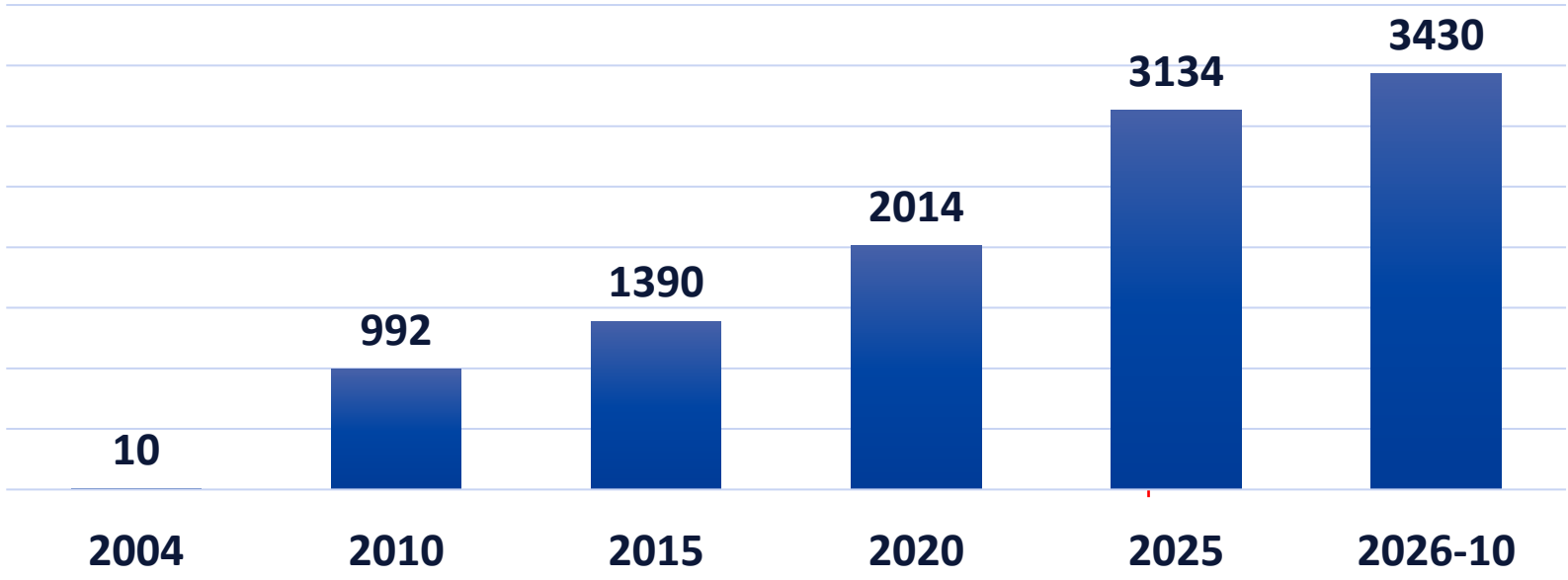
active users: 66 % ~ about 2286



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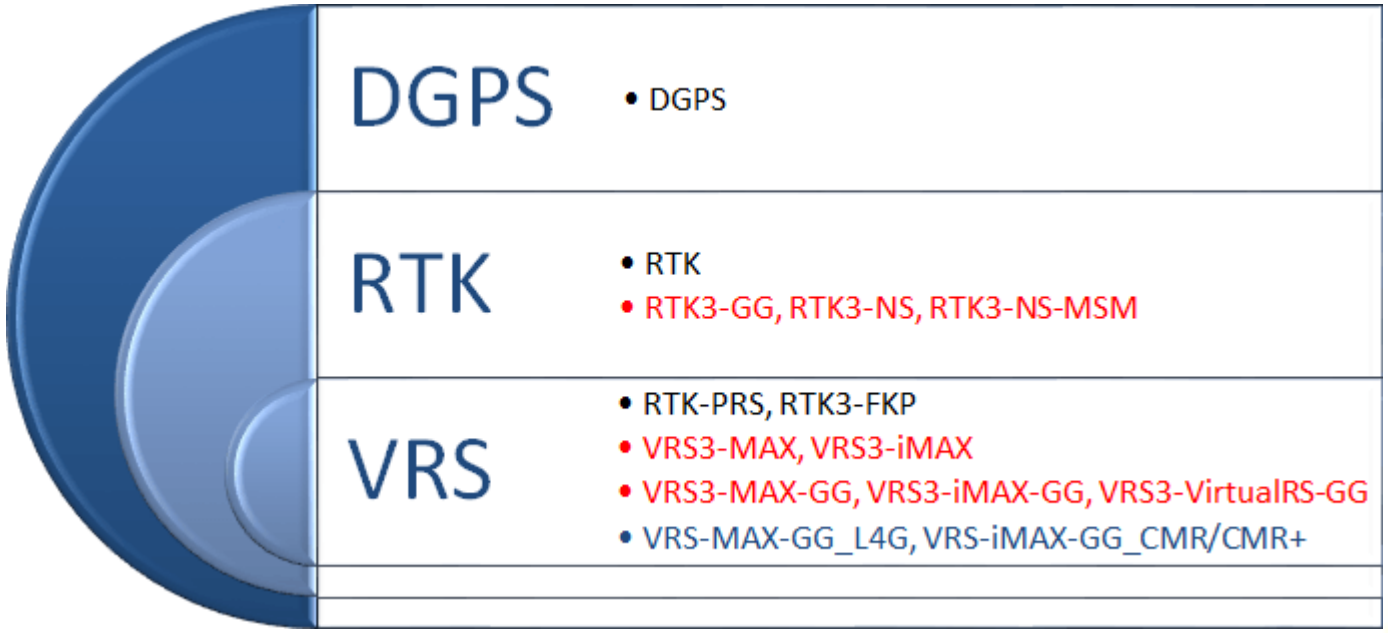
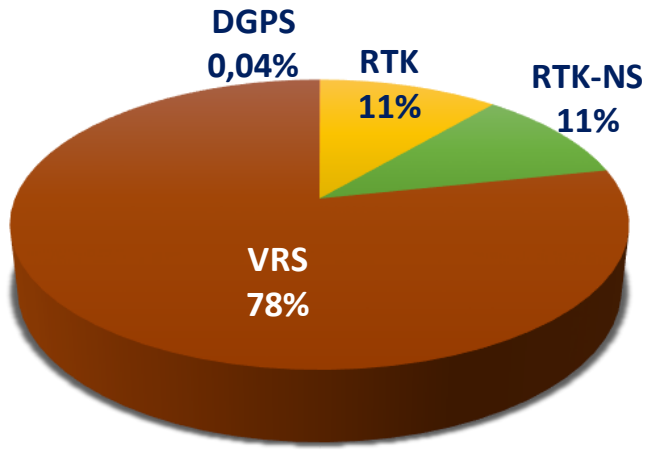
Categories of real time services



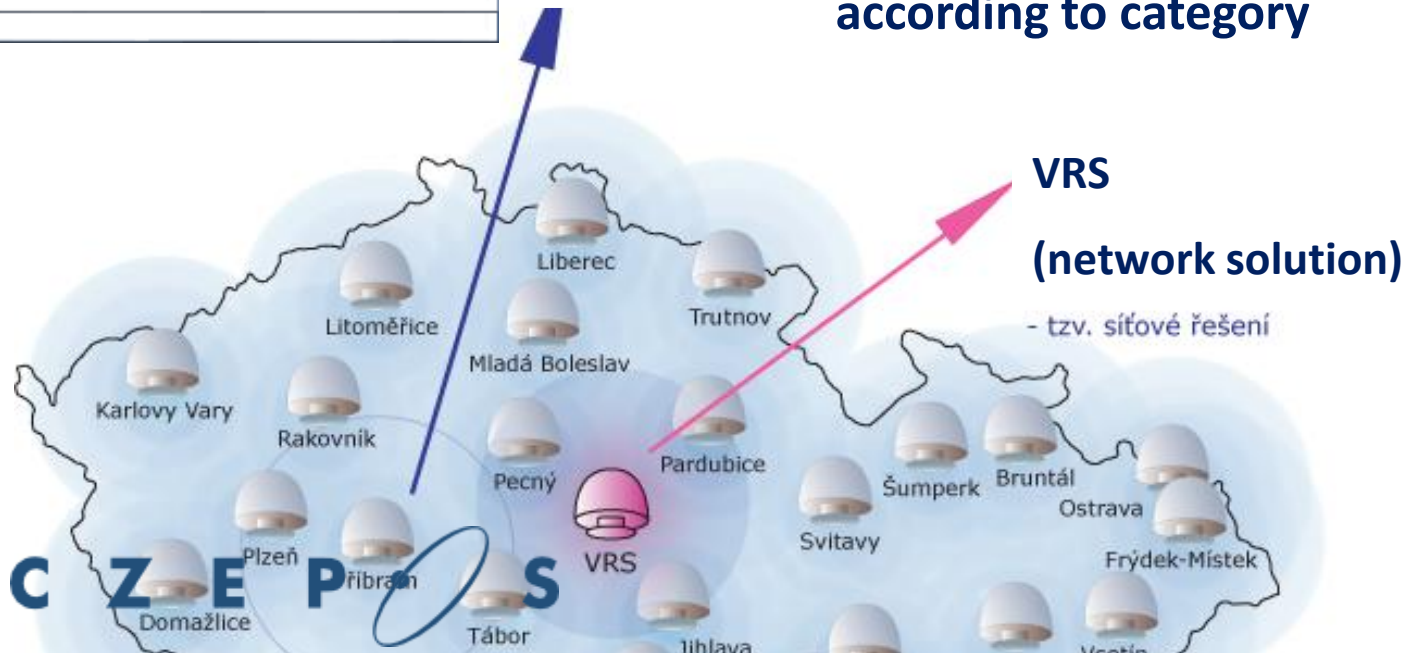


use of services by users according to category

DGPS: dm accuracy
- data from selected station

RTK: cm accuracy
- data from selected station
- data from nearest station

VRS: cm accuracy
- data from virtual reference station



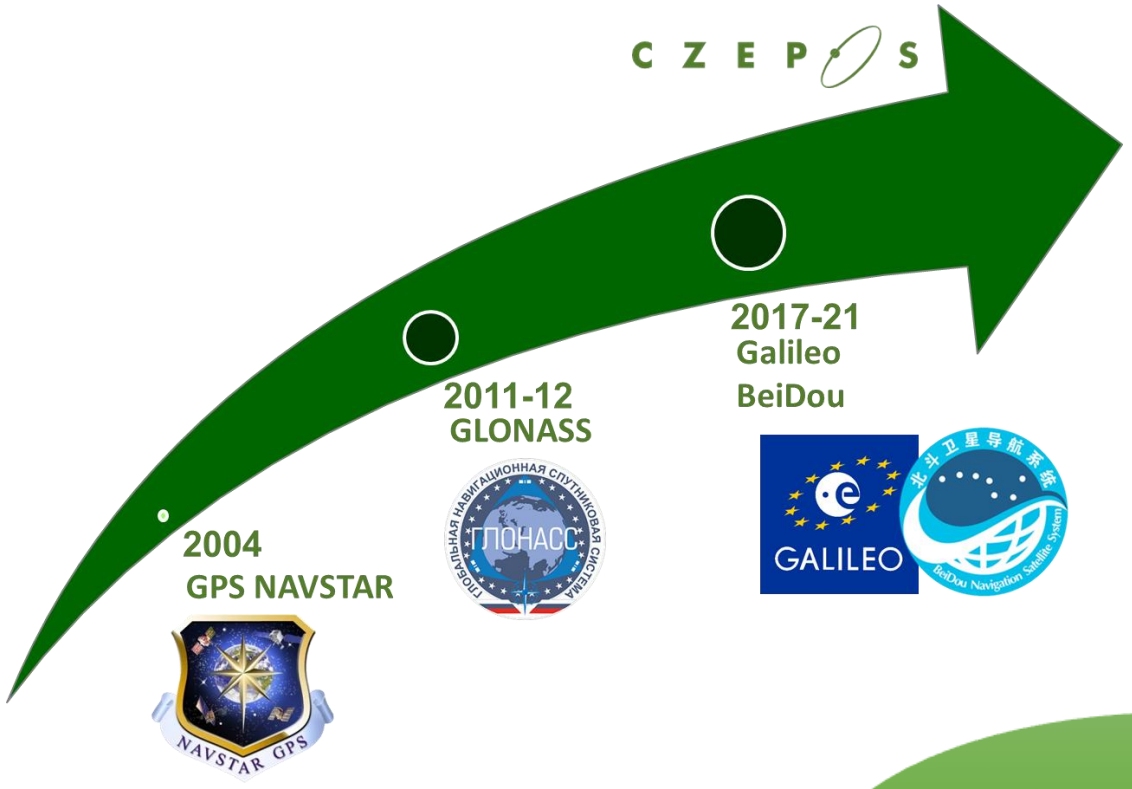
HW CZEPOS – upgrade in last years

Leica GR30 receivers

- since 2018-2019

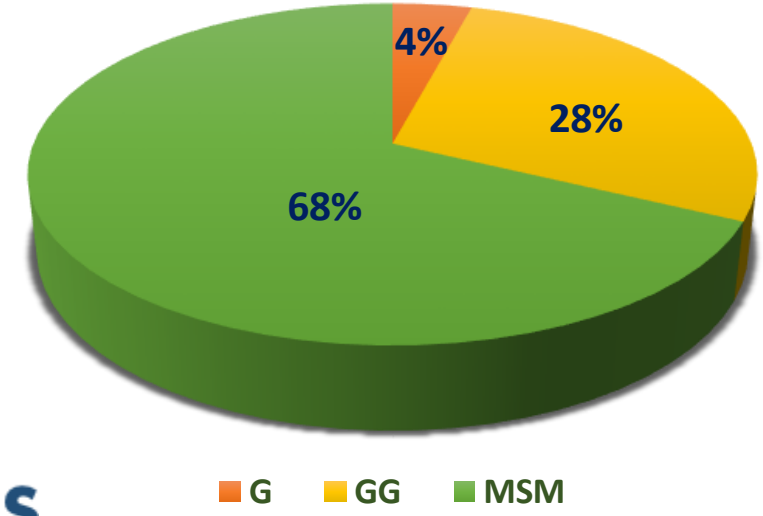
Leica AR25 antennas

- since 2012



compatibility of CZEPOS services with GNSS

use of services by users according to GNSS signals

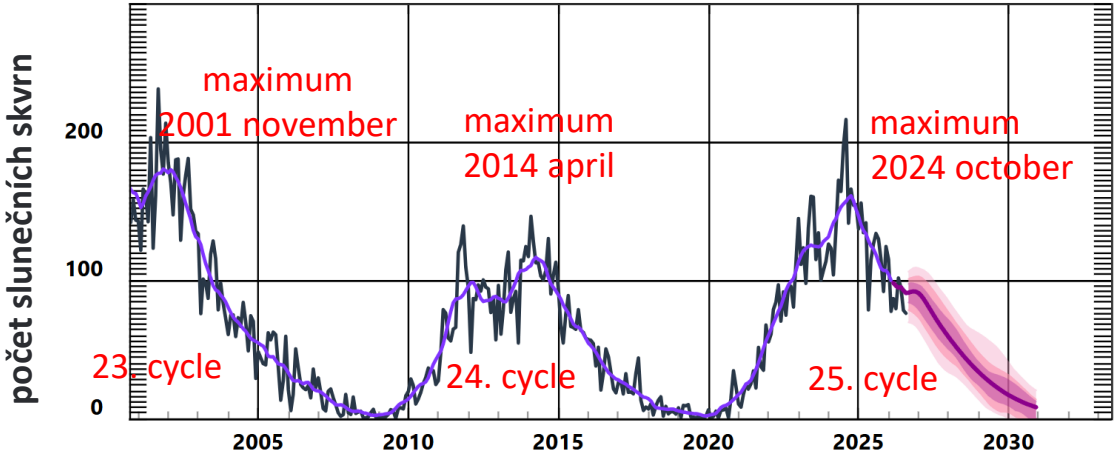


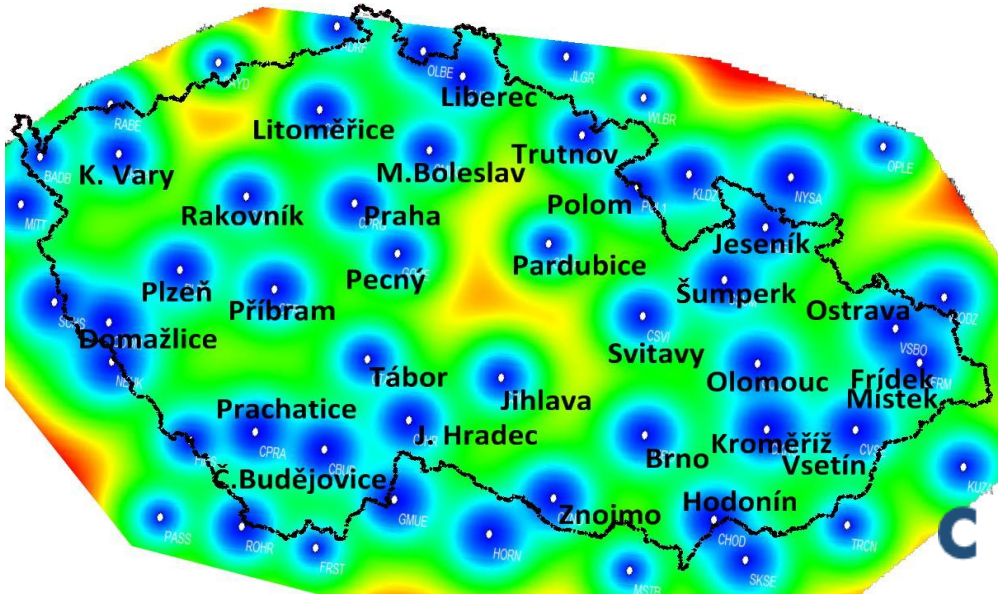
C Z E P S

CZEPOS – software update

since 2025-02-01 software update: Spider v 7.10
- resistance to solar activity
- new signals (BeiDou III)

2026: waitied for Spider v 8 (released on September)

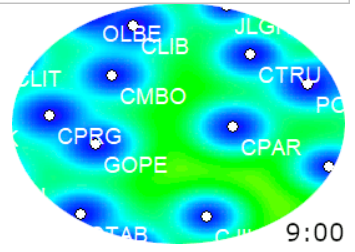




Tracking

General	GPS	GLONASS	GALILEO	BEIDOU	QZSS

Satellite systems							
GPS	Active	L1	L1C	L2P(Y)	L2C	L5	
GLONASS	Active	L1	L2P	L2C	L3		
GALILEO	Active	E1	E5a	E5b	AltBOC	E6	
BEIDOU	Active	B1I	B1C	B2a	B2b	B2I	B3I
QZSS	Active	L1	L1C		L2C	L5	
NavIC	Not active					L5	
SBAS	Active	Track sat. syst.:	Automatic				



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CZEPOS prices

Hourly prices	regardles num. of devices
real time services - category RTK & VRS	60 Kč \ 2,30 €
post-processing (RINEX data 1s)	50 Kč \ 1,92 €
Annual / Monthly prices	**per 1 device**
real time services - category RTK & VRS - 12 months	10000 Kč \ 385 €
real time services - category RTK & VRS - 1 month	1000 Kč \ 38,5 €

since 2023: prices implemented in legislative
(„land surveying“ decree 31/1995 Coll.)

free of charge for state administration

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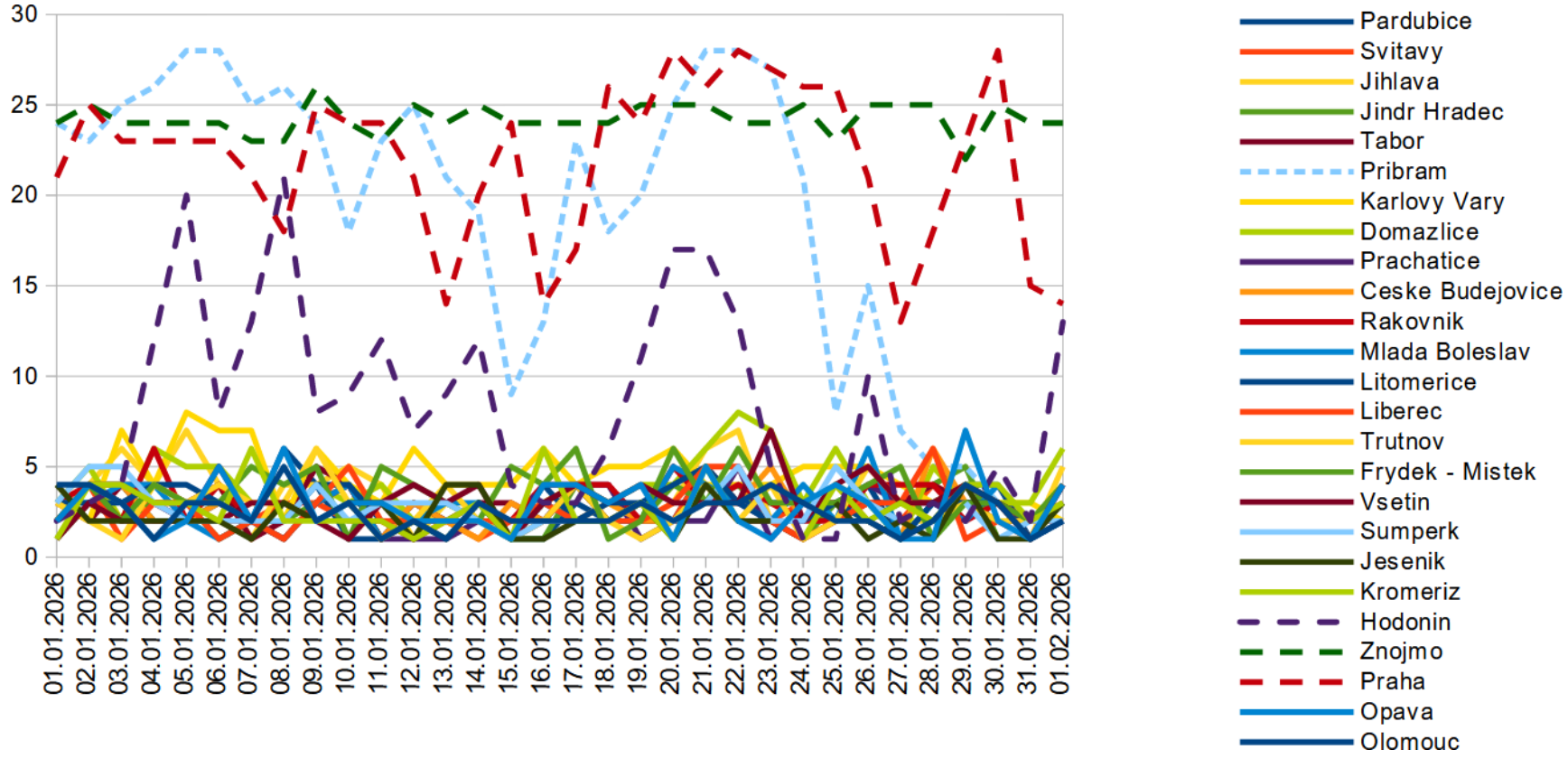
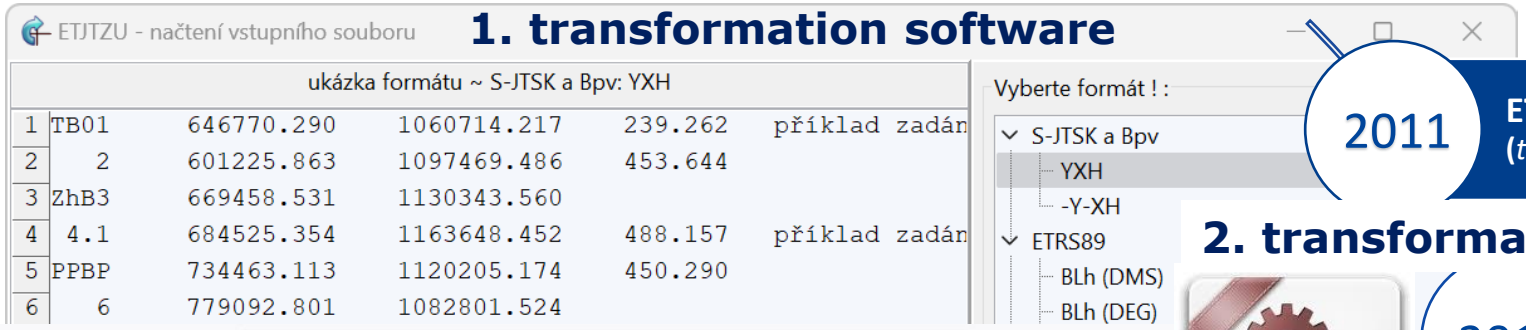
CZEPOS interference detection

- cooperation with Czech Telecommunication Office,
- intentional GNSS signal jamming / spoofing has not yet been detected in CZEPOS



CRS transformation

1. transformation software



2011 — **ETRS89 (ETRF2000) <-> S-JTSK**
(table_yx_3_v1005, CR-2005_v1005)

2. transformation library

2013 — **+ transformation to EVRS (EVRF2007);**
INSPIRE *ETRS89-LAEA, ETRS89-LCC, ETRS89-TM33 and ETRS89-TM34*

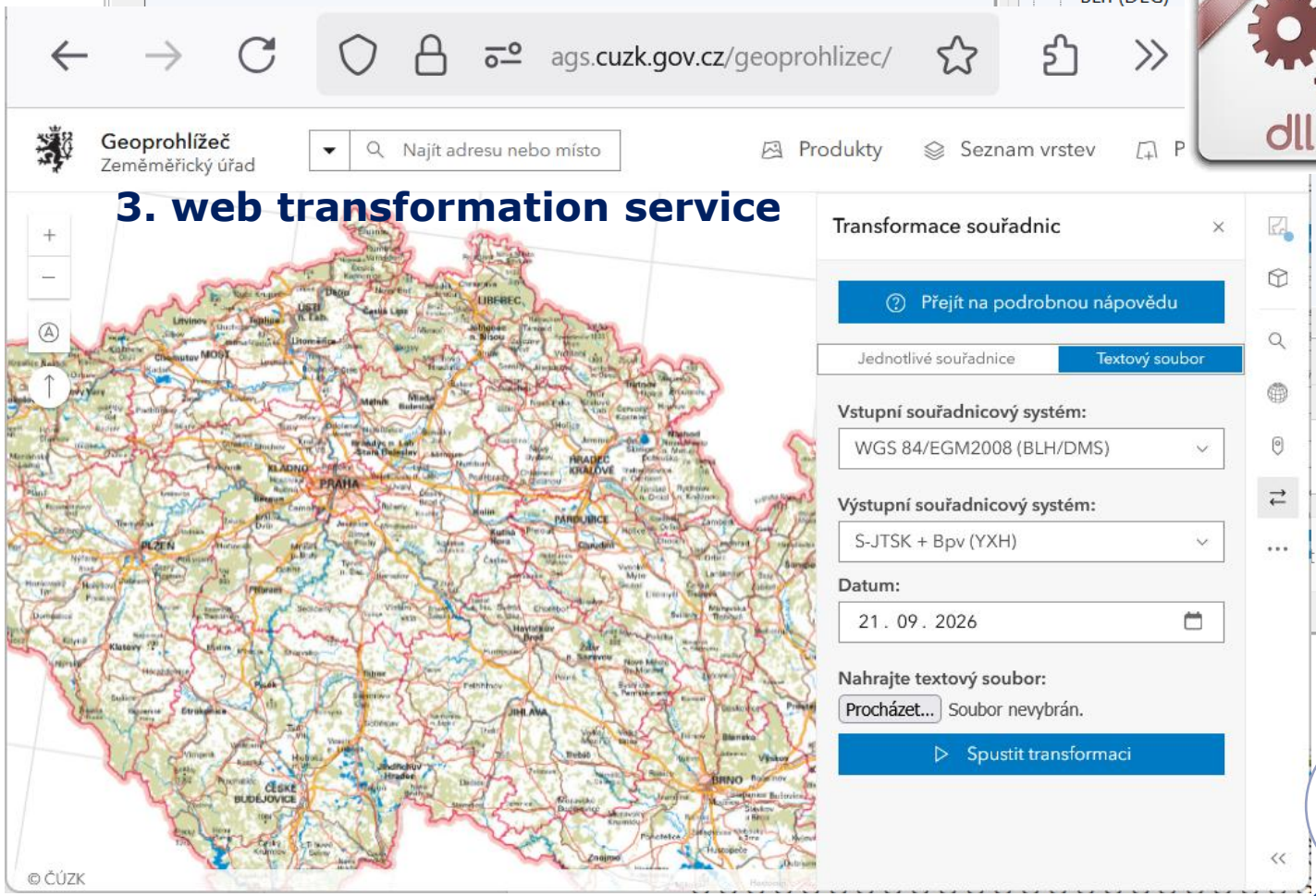
2017 — **new transformation table**
(verze table_yx_3_v1710)

2019 — **+ transformation to *WGS84* and its projections**
(WGS87-UTM33 a 34 a WGS84-Pseudo-Mercator)

2023 — **+ transformation to *WGS84-LCC*,**
EGM 2008 *(WGS84-EGM2008)*

2024 — **+ transformation to EGM 96 (*WGS84-EGM96*)**

3. web transformation service



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Office

Thank you for your attention

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