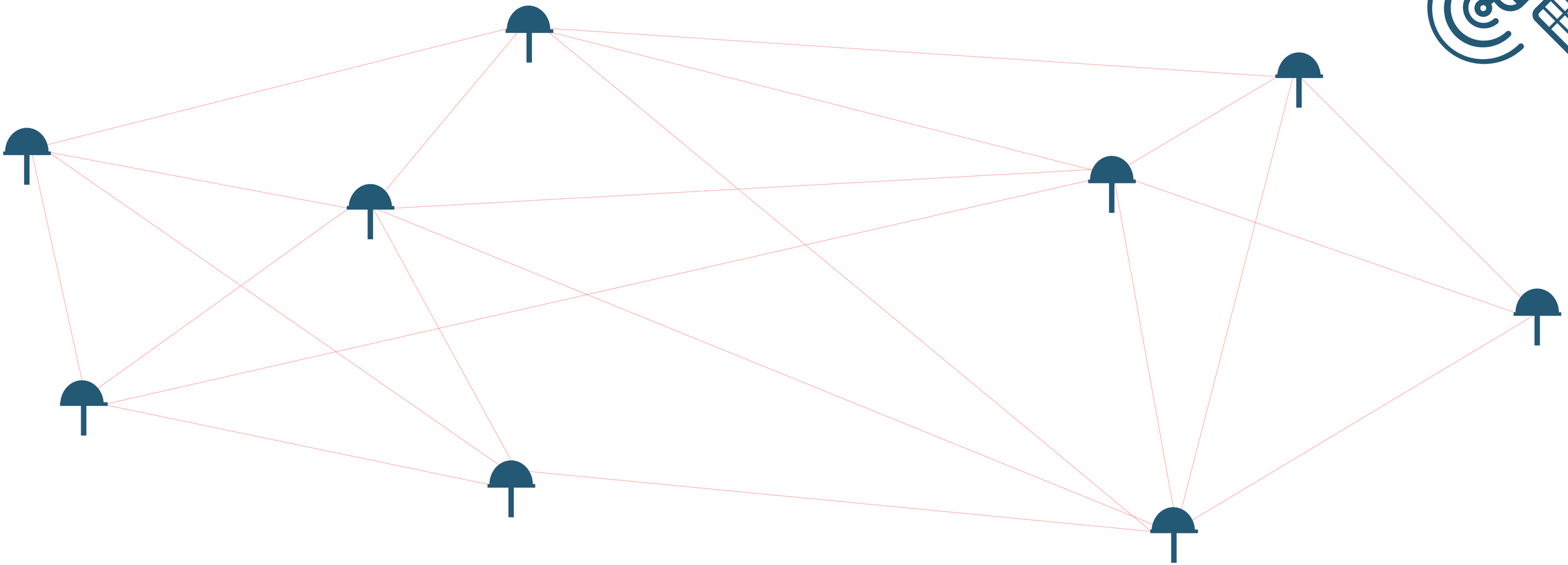
ECC – EUREF DENSIFICATION STATUS AND NEWS



Tóth, Sándor – Kenyeres, Ambrus – Magyar, Bálint
Satellite Geodetic Observatory, Lechner Non-profit Kft.

10th EUPOS® Technical Meeting
Skopje, 24/10/2024

EPND – Status

Objective:

To obtain a dense station coordinate and velocity solutions expressed in a well-defined reference frame.

Main input:

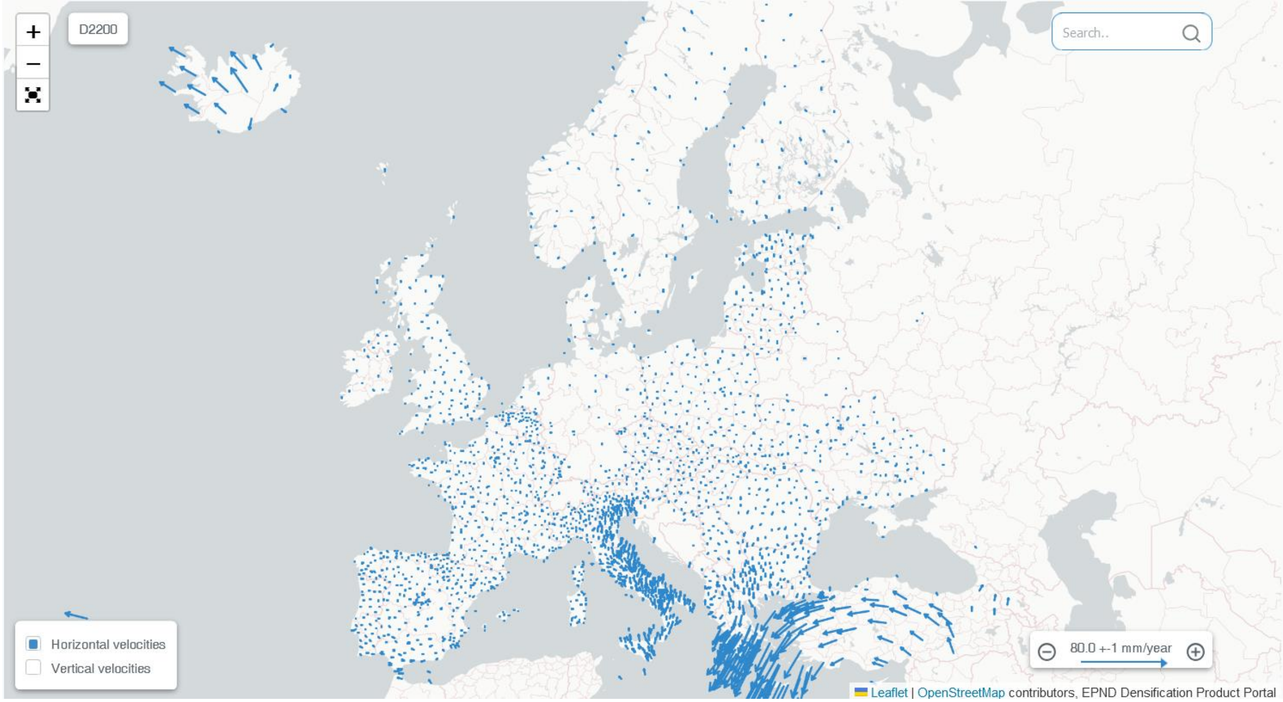
already processed national/regional coordinate products in SINEX format

Last products:

1-2 solution(s) per year

Last one includes data up to 2200 GPSw

Regular operation stopped due to release of IGS20



https://epnd.sgo-penc.hu/

IGS20

ITRS, IGS realisations

ITRS frames	IGS frames	Validity [GPS w]	Introduced [yyyy.mm.dd]
ITRF88	-	0512 – 0586	1989.11.01
ITRF89	-	0587 – 0620	1991.04.01
ITRF90	-	0621 – 0664	1991.12.01
ITRF91	-	0665 – 0729	1992.10.01
ITRF92	ITRF92	0730 – 0781	1994.01.02
ITRF93	ITRF93	0782 – 0859	1995.01.01
ITRF94	ITRF94	0860 – 0946	1996.06.30
ITRF94	ITRF96	0947 – 1020	1998.03.01
ITRF94	ITRF97	1021 – 1064	1999.08.01
ITRF97	IGS97	1065 – 1142	2000.06.04
ITRF2000	IGS00	1143 – 1252	2001.12.02
ITRF2000	IGb00	1253 – 1399	2004.01.11
ITRF2005	IGS05	1400 – 1631	2006.11.05
ITRF2008	IGS08	1632 – 1708	2011.04.17
ITRF2008	IGb08	1709 – 1933	2012.10.07
ITRF2014	IGS14	1934 – 2105	2017.01.29
ITRF2014	IGb14	2106 – 2237	2020.05.17
ITRF2020	**IGS20**	**2238 –**	**2022.11.27**

IGS20 related GNSS processing options for EPN and EPND ACs

Processing options	
Refernce frame	*IGS20*
Antenna model	*igs20.atx (type mean)*
GNSS observations	*GPS, GLONASS, Galileo*
Orbits and ERPs for final solutions	*Consistent 3 GNSS (e.g., CODE, GFZ)*
Troposphere modelling	*VMF3*
Antenna misalignment from north	*corrected*
Missing system-specific receiver antenna corrections	*GNSS observations not used in analysis*
Ocean tide loading model	*FES2014b*
Atmospheric tidal loading	*not recommended*
Product filenames	*long (new IGS convention)*

EPND – Data availability

Repro-3:

done and data uploaded: *GKU, SGO*

status of other ACs: ? (Excepted completion time?)

Data upload changes:

address: *kgo.gnssnet.hu*

port: *22000*

protocol: *sftp/ssh*

user&pw: provided on request (information email sent to ACs)

Benchmark test:

1 week of processed data could be sent to Tomasz Liwosz and Ambrus Kenyeres

Thank you!

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