

Status of Real-time PPP based on EUREF & IGS Resources and RTCM Standards

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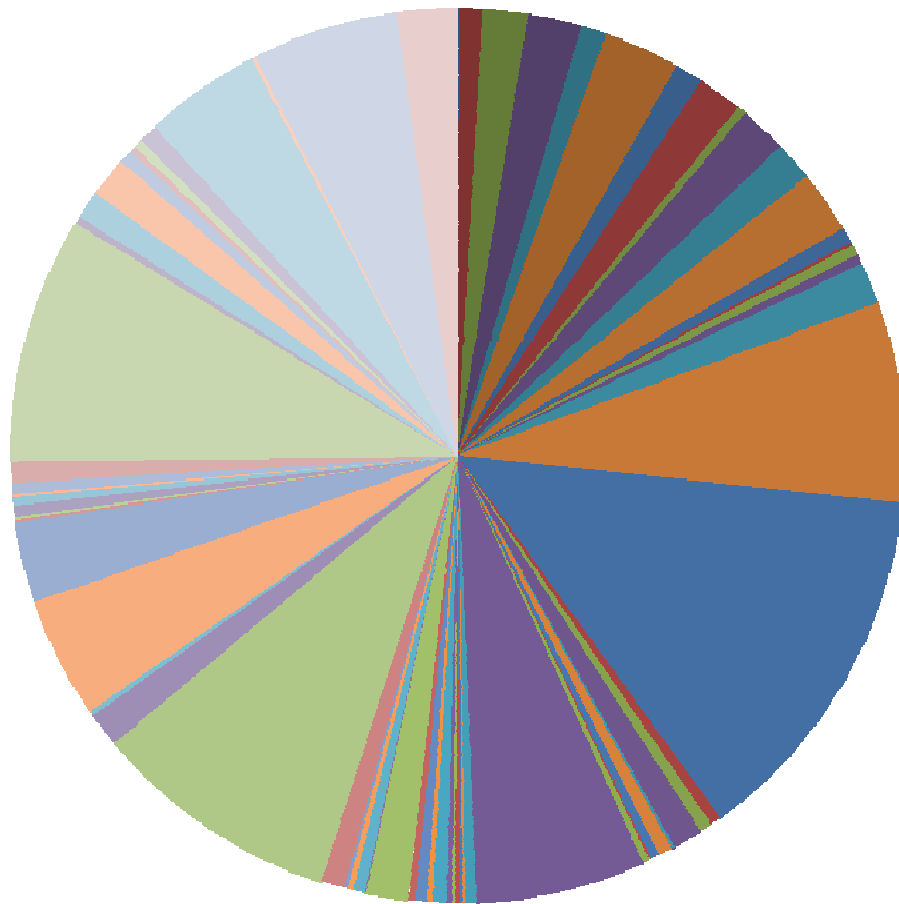
EUREF & IGS:

Enabling Access to Reference Frame in Real-time

- Past:
Providing coordinates and RINEX files from EPN sites for
 - Coordinate estimation in post processing
- Today:
Disseminating EPN & IGS observations streams and streams carrying orbit/clock correctors for
 - Real-time Precise Point Positioning
 - Network RTK

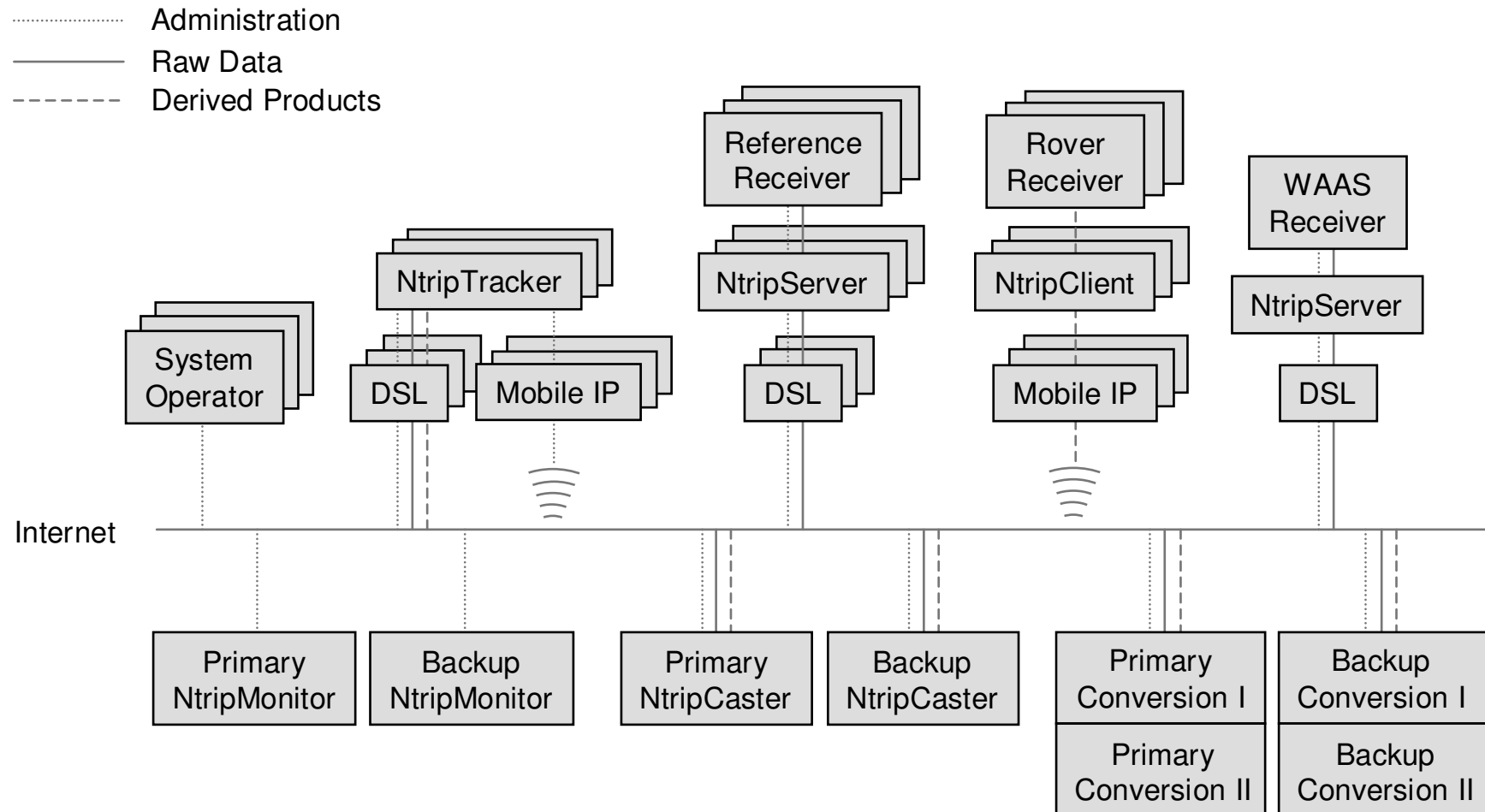
Usage of Realtime GNSS Resources from EUREF & IGS Disseminated via NTRIP

68 Countries from latest
1000 User registrations
Status March 25, 2010



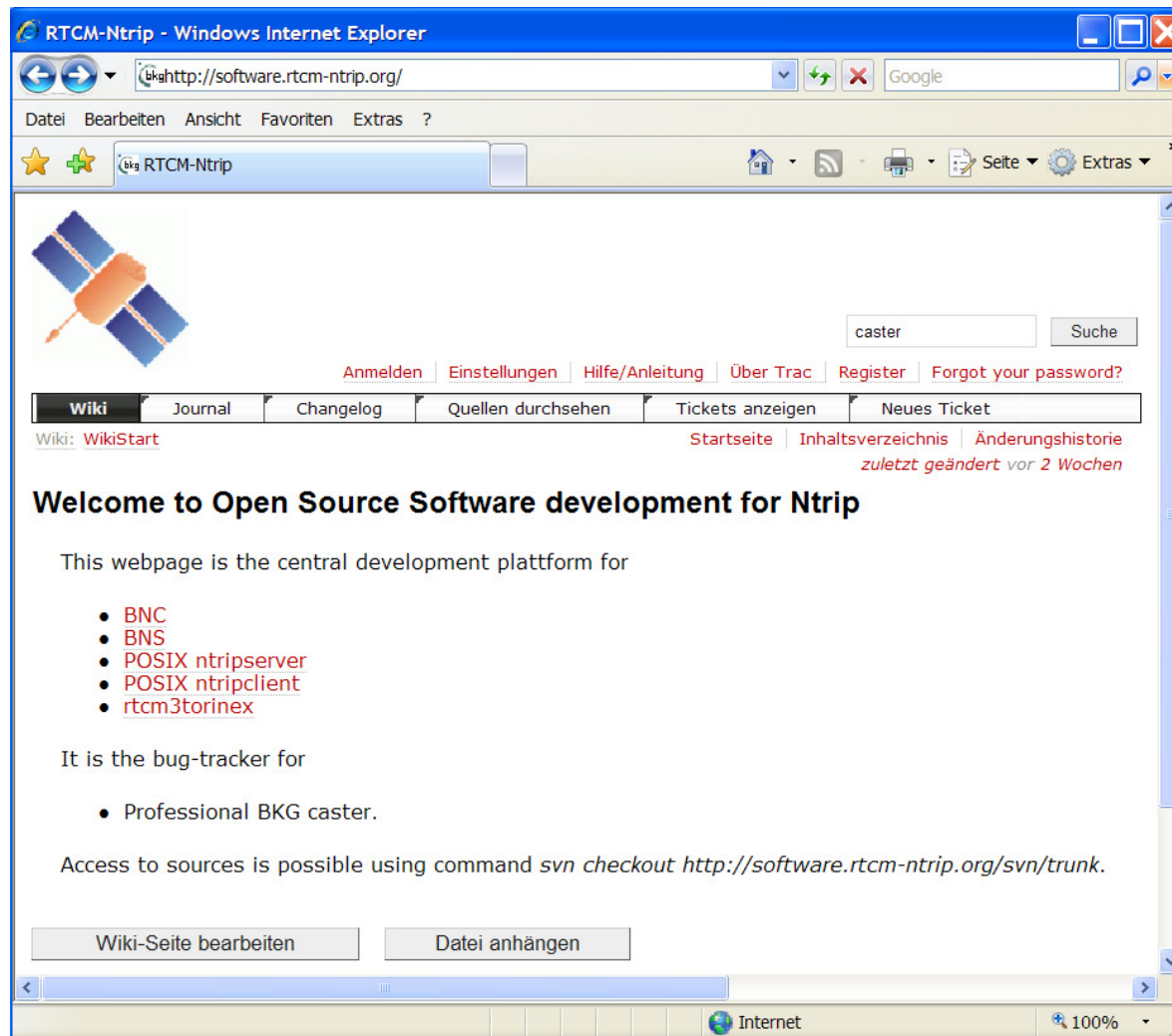
Albania	Argentina	Australia	Austria	Belgium	Brazil	Bulgaria	Canada
Chile	China	Croatia	Czech Republic	Denmark	Ecuador	Egypt	Estonia
Finland	France	Germany	Greece	Hong Kong	Hungary	Iceland	India
Indonesia	Iraq	Ireland	Italy	Japan	Kazakhstan	Kenya	Latvia
Lothian	Macedonia	Malaysia	Mexico	Moldova	Morocco	Netherlands	New Caledonia
New Zealand	Nigeria	Northern Ireland	Norway	Poland	Portugal	Puerto Rico	Romania
Russia	Saudia Arabia	Serbia	Singapore	Slovakia	Slovenia	South Africa	South Korea
Spain	Sri Lanka	Sweden	Switzerland	Taiwan	Thailand	Turkey	Ukraine
United Kingdom	Uruguay	USA	Venezuela				

Real-time EUREF & IGS Service Provision Structure



https://software.rtcn-ntrip.org

- Open Source software development for Ntrip available via „Subversion“
- Concerns BNC, BNS, POSIX ntripclient/server, Standard NtripCaster
- Bugtracker, also for Professional NtripCaster



Wicki Server

Hypertext system
for Ntrip software

BKG Ntrip Client (BNC) v2.1

BKG Ntrip Client (BNC) Version 2.0

File Help

Observations RINEX Ephemeris Broadcast Corrections Feed Engine Serial Output Outages Miscellaneous **PPP Client**

Mountpoint: FFMJ1

Options: ☒ Static ☒ Use phase obs ☒ Estimate tropo ☒ Use GLONASS

Ref. coordinates: 4053455.817 X 617729.7434 Y 4869395.7728 Z

NMEA File (full path): c:\temp\rinex\nmea.txt Port:

Coordinates from Precise Point Positioning (PPP).

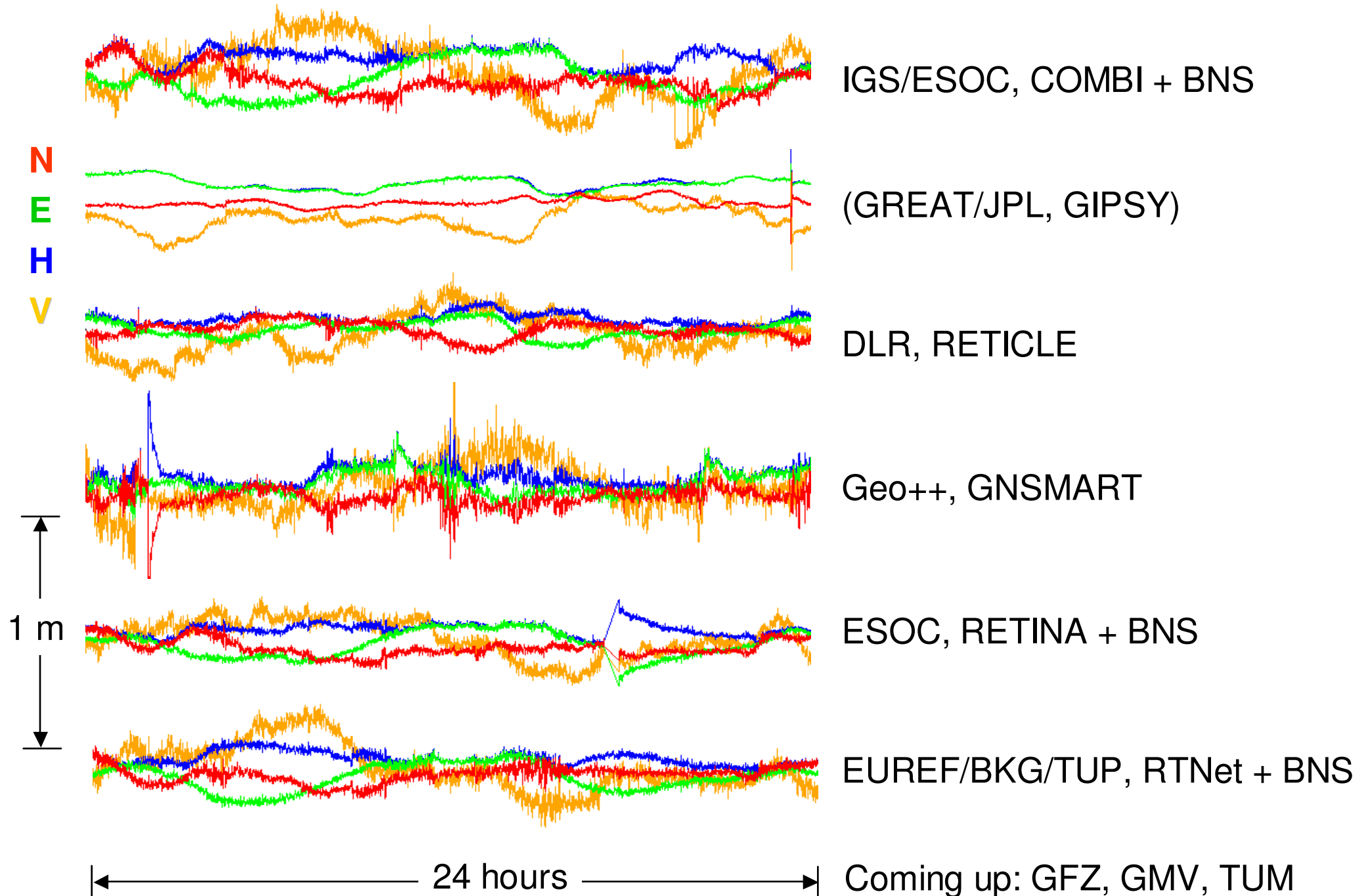
	Streams: resource loader / mountpoint	decoder	lat	long	nmea	ntrip	bytes
1	www.igs-ip.net:2101/CLK11	RTCM_3.0	50.00	10.00	no	2	35.6 kB
2	www.igs-ip.net:2101/FFMJ1	RTCM_3.0	50.09	8.66	no	2	32.779 kB
3	www.igs-ip.net:2101/RTCM3EPH	RTCM_3	50.09	8.66	no	2	30.429 kB

Log Throughput Latency **Static PPP**

5.10 m
Start 16:01:44
0.00 m
16:02 16:03
-5.10 m

Add Stream Delete Stream Start Stop Help=Shift+F1

Real-time PPP Monitoring of RTIGS ACs using BNC





ERROR: undefined
OFFENDING COMMAND: '~
STACK: