EUREF-IP Topics & Issues

- BNC: New Version 1.5
- 15min High-rate RINEX
- Real-time Orbit and clock corrections
 - BNS: New tool (under GPL?)
 - RTCM: New v3 messages
- Qt-based mobile RTNet for PDA
- Real-time IGS
- Real-time Galileo GGSP ?

BNC Version 1.5

- Handle ephemeris from
 - RTCM Version 3.x streams
 - RTIGS streams
- Upgrade to Qt Version 4.3.2
- Optional RINEX v3 output
- SBAS support
- Monitor stream failure/recovery, latency, completeness
- Fixed problems with PRN 32 and Trimble 4000SSI

BNC Version 1.5

Proxy General	RINEX Observations	RINEX Ephemeris	Synchronize	ed Observa	ations	Monitor
Observation rate	1 Hz 💌					
Failure threshold	0 min 🗘					
Recovery threshold	0 mín 🗘	Pause 🗹				
Script (full path)	c:\temp\up2oper					
Performance log	1 min 💌					
	mountpoint	decoder	lat	long	nmea	bytes
1 www.euref-ip.net:	2101/AUT10	RTCM_3.0	40.57	23.00	no	30./61 kb
1 www.euref-ip.net: 2 www.euref-ip.net:	2101/AUT10 2101/BOGI0	RTCM_3.0 RTCM_2.1	40.57 52.48	23.00 21.04	no no	30.761 kb 114.571 kb
1 www.euref-ip.net: 2 www.euref-ip.net:	2101/AUT10 2101/BOGI0	RTCM_3.0 RTCM_2.1	40.57 52.48	23.00 21.04	no no	30.761 kb 114.571 kb
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1 www.euref-ip.net: 2 www.euref-ip.net: 2 www.euref-ip.net: 08-03-31 07:36:51 = 08-03-31 07:36:53 G 08-03-31 07:36:53 G 08-03-31 07:37:47 B 08-03-31 07:37:47 A 08-03-31 07:38:47 A	2101/AUT10 2101/BOGI0 ====================================	RTCM_3.0 RTCM_2.1 ert BNC ===================================	40.57 52.48 52.48 2.56, 53 e 2, 51 epocl 2.32, 60 e 1.94, 60 e	23.00 21.04 pochs spochs spochs	no	30.761 kb 114.571 kb

Completeness of 968 Hourly High-rate RINEX Files, EPN Streams, 29 March 2008

		=	100.0	%:	836
>=	99.9	<	100.0	%:	23
>=	99.8	<	99.9	%:	28
>=	99.7	<	99.8	%:	10
>=	99.6	<	99.7	%:	3
>=	99.5	<	99.6	%:	0
>=	99.0	<	99.5	%:	11
>=	90.0	<	99.0	%:	33
>=	50.0	<	90.0	%:	11
		<	50.0	%:	13

Real-time Clock & Orbit Corrections



<u>BNS</u>

(a) Calculate differences between BRDC and IGU orbits in radial, along track and out-of-plane components

(b) Model orbit differences through polynomials of low degree

(c) Provide model-based estimations of corrections for BRDC orbits

(d) Calculate differences between BRDC clocks and improved IGU clocks (IGU clocks + computed corrections)

(e) Model clock differences (details to be defined)

(f) Provide model-based estimation of corrections for BRDC clocks

Encoder Convert model-based corrections for BRDC clocks and orbits into RTCM v3 messages

Mobile RTNet for PDA



Decoder Decode RTCM v3 messages into plain ASCII format

PPP in Vendor products



Decoder Decode RTCM v3 messages into plain ASCII format

EUREF-IP Project

- Routine operation replaced pilot project
- How to present/publish work on orbit & clock corrections?