

BNC

BKG Ntrip Client (BNC) Version 1.5

File Help

Proxy host Proxy port

Wait for full epoch

ASCII output file (full path)

Port for output Observations (binary) Ephemeris (ascii)

RINEX directory RINEX v3 ☐

RINEX script (full path)

File interval RINEX Ephemeris Sampling

RINEX skeleton extension Append files ☐

Ephemeris directory RINEX v3 ☐

Mountpoints

	mountpoint	decoder	lat	long	nmea	bytes
1	www.igs-ip.net:2101/FFMJ2	RTCM_3.0	50.09	8.66	no	0 byte(s)

Log (full path)

Add Mountpoints Delete Mountpoints Start Stop Help=Shift+F1

EUREF TWG Fall Meeting, 29-30 Nov 07, Saint Mande, France

BNC

- RINEX v3
- Support of SBAS
- Support of Broadcast ephemeris
- Qt 4.3.2
- Tests by UNSW & OmniSTAR
- Binaries for Linux, Windows, Solaris, Mac
- RPMs for various Linux distributions

EUREF-IP & Broadcast Ephemeris

- Streams carrying observations contain ephemeris only „on change“
- Setting up separate streams providing only ephemeris with a repetition rate of a few seconds – no observations
- Mixing ephemeris from selected set of EPN+IGS stations to form one single ephemeris stream that contains all PRNs

15min High-rate RINEX

- Real-time support from
 - 90 IGS stations
 - 80 EUREF stations
- NRT 1sec RINEX batches from
 - 50 IGS stations
 - 80 EUREF stations
- Need agreed archiving policy

Clock Corrections

- RTNet
- GPS + GLONASS
- Europe, ~25 stations
- RTCM v3 standard for orbit & clock transport under development

NTRIP v2

- Full http compatibility
- Optional: UDP
 - RTSP/RTP friendly operator list
- Documentation to make NTRIP v2 an „RTCM Recommended Standard“ available by Feb 08

NTRIP v2 Friendly Operators

Operator	Country	City	Device	NTRIP v2	NTRIP v2	NTRIP v1	Thanks to
				TCP/IP	RTSP/RTP	TCP/IP	
Vodafone	Germany	Frankfurt	Falcom	GPRS: yes	GPRS: no	GPRS: yes	A. Stuerze
				UMTS: yes	UMTS: no	UMTS: yes	
T-Mobile	Germany	Frankfurt	Falcom	GPRS: yes	GPRS: yes	GPRS: yes	A. Stuerze
				UMTS: yes	UMTS: yes	UMTS: yes	
E plus	Germany	Frankfurt	Falcom				A. Stuerze
O ²	Germany	Frankfurt	Falcom				A. Stuerze
SFR	France	Paris	VMC	GPRS: yes	GPRS: no	GPRS: yes	G. Weber
				UMTS: yes	UMTS: no	UMTS: yes	
Orange	France	Paris	VMC	GPRS: yes	GPRS: no	GPRS: yes	G. Weber
				UMTS: yes	UMTS: no	UMTS: yes	
Bouygues	France	Paris	VMC	GPRS: yes	GPRS: no	GPRS: yes	G. Weber
Telecom				UMTS: yes	UMTS: no	UMTS: yes	
	Australia	Sydney					T. Yan
	Australia	Sydney					T. Yan
	Australia	Sydney					T. Yan

RTCM v3

- Trimble keeps RT27 stream format confidential because of product piracy
- Leica follows for policy reason, saying they already provide whatever is needed
- Geodesy using modern receivers is in trouble with there own tools dealing with raw data, e.g. teqc and rtigs

Real-time IGS

- Letter from Chair to Governing Board
 - Suggestion: accept all proposals
 - No detailed proposal evaluation
- Need response from Governing Board to go ahead
- Many details still unclear

Source	Country	Tracking Station	Data File Center	Data Relay Center	Analysis Center	Associate AC	AC Coordinator	Network Management	User
BKG	Germany	X (12)	X	X	X			X	
GA	Australia	X (24)	X	X	X			X	X
Omnistar	Australia							X	X
UNSW	Australia			X				X	X
IPS	Australia								X
Melbourne U	Australia							X	X
Victoria GPSNet	Australia			X				X	X
RMIT	Australia								X
DUT	The Netherlands	X (3)							
FCT/UNESP	Brazil	X (4)	X	(X)					
CDDIS	USA		X	(X)					
Chalmers	Sweden					X			
ESA/ESOC	Germany	X (10)			X		X	X	X
GEO++	Germany								X
gAGE/UPC	Spain				X				
GMV	Spain				X				
UNAVCO	USA	X (TBD)		X					
GNS	New Zealand	X (6)							
U. Modena	Italy	X (1)							
NERC	UK	X (1)							
INRIM	Italy	X (1)							
IIT	India	X (1)							
KASI	Korea	X (2)	X	X	x	(x?)			X
U. Padova	Italy	X (5)	X	X					X
Newcastle U.	UK	X (1)			X				
ROB	Belgium	X (1)						X	
Wrockaw	Poland	X (1)							X
Lantmateriet	Sweden	X (5)							
CTU Prague	Czech Republic				X				
DLR	Germany								X
CDSM	South Africa	X(2)							
NRCan	Canada	X (10)		X	X			X	X
Totals:	32 proposals	19 (91+)	6	10	9	2	1	9	14

Network of NTRIP Broadcasters

- Total of ~1 Tbyte streaming data per month
- Sharing workload through operating additional thematic and/or regional broadcasters