mountpoint decoder lat long mutes 1 www.euref-ip.net:2101/BELF0 RTCM_3.1 54.34 -5.55 no 11.055 kb 2 www.euref-ip.net:2101/ZOUF0 RTCM_2.3 46.56 12.97 no 29.226 kb							
Logfile (full path) G:\rinex\bnc_log Append files Image: Construction of the panel of the pa							
Append files Image: Comparison of the section of t							
General settings for logfile and file handling. mountpoint decoder lat long nmea bytes 1 www.euref-ip.net:2101/BELF0 RTCM_3.1 54.34 -5.55 no 11.055 kb							
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2 www.euref-ip.net:2101/ZOUF0 RTCM_2.3 46.56 12.97 no 29.226 kb							
3 www.igs-ip.net:2101/ALBH0 RTIGS 48.39 236.51 no 7.076 kb							
08-04-17 12:33:13 ======== Start BNC ========							
08-04-17 12:33:13 Get Data: BELF0 in RTCM 3.x format 08-04-17 12:33:13 Get Data: ZOUF0 in RTCM 2.x format							
08-04-17 12:33:13 Get Data: 200F0 in RTCM 2.x format 08-04-17 12:33:13 Get Data: ALBH0 in RTIGS format							
08-04-17 12:33:46 ZOUF0: Mean latency 1.2 sec, min 0.52, max 1.87, 32 epochs							
08-04-17 12:33:46 BELF0: Mean latency 1.41 sec, min 0.75, max 3.64, 33 epochs 08-04-17 12:33:48 ALBH0: Mean latency 2.78 sec, min 2, max 3.02, 32 epochs							

The purpose of BNC is to (a) retrieve real-time GNSS data streams available through NTRIP transport protocol, (b) generate high-rate RINEX Observation and Navigation files to support near real-time GNSS postprocessing applications, and/or (c) generate ephemeris and synchronized observations epoch by epoch through an IP port to support real-time GNSS engines, and/or (d) monitor the performance of a network of realtime GNSS reference stations to generate advisory notes.

BNC has been written under **GNU General Public License** (GPL). Binaries for BNC are available for Windows, 32-bit Linux, 64-bit Linux, Solaris, and Mac.

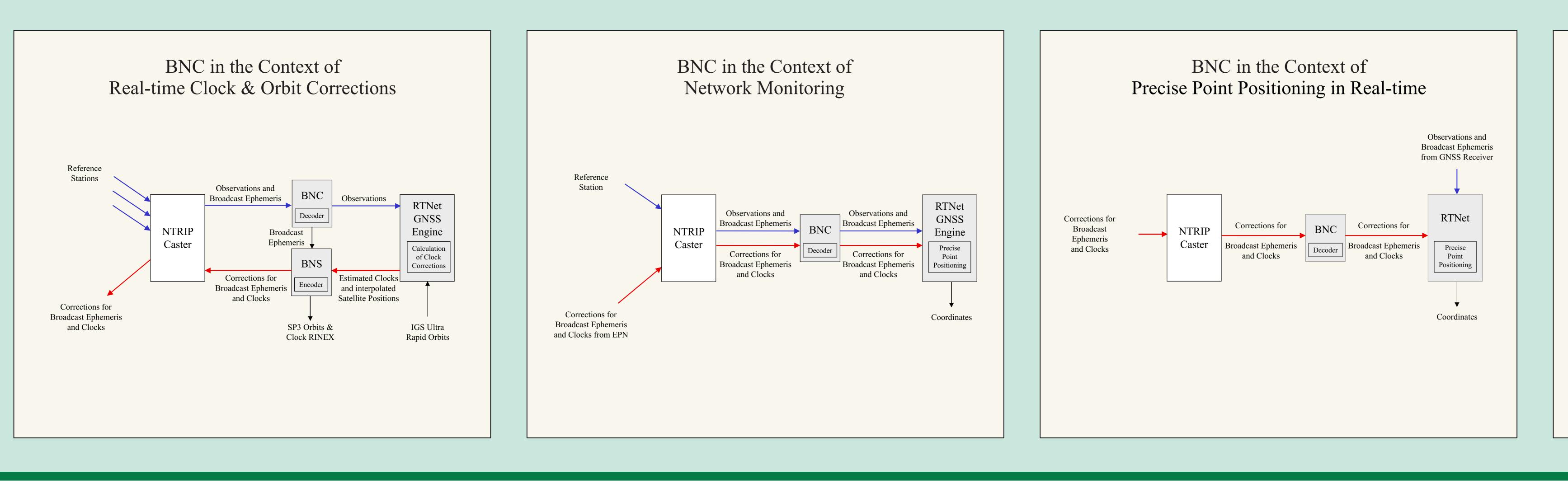
Add Mountpoints								
Caster host		www.euref-ip.net		Caster port		2101]	
	User	[hr	j	Password	ſ	*****	1
	mountpoint $ riangle$	identifier	format		format-details	carrier	system	network 📥
1	ACORO	Coruna	RTCM 2.3	1(1),2(60),3(10),18(1),19(1),22(10),23(10),24(10)	2	GPS	
2	ALBAO	Albacete	RTCM 2.1	1(1),3(10),16(3	0),18(1),19(1),59(5)	2	GPS	EUREF
3	ALMEO	Almeria	RTCM 2.3	1(1),3(10),18(1),19(1),22(10),23(10),24(10),59(10)	2	GPS	EUREF
4	AUT10	Thessaloniki	RTCM 3.0	1004(1),1006(1	0),1008(10)	2	GPS	EUREF
5	BELFO	Belfast	RTCM 3.1	1004(1),1006(1	5),1008(15),1012(1)	2	GPS+GLO	EUREF
6	BELLO	Bellmunt_de_Segal	RTCM 3.0	1004(1),1005(5	5),1008(5)	2	GPS	EUREF
7	восно	Bochum	RTCM 2.1	1(1),3(60),14(6	0),16(60),18(1),19(1)	2	GPS	Misc
8	BOGIO	Borowa_Gora	RTCM 2.1	3(10),18(1),19(1),22(10)	2	GPS+GLO	EUREF
9	BOR10	Borowiec	RTCM 2.3	1(1),3(10),18(1),19(1),22(10)	2	GPS	
┛								▶
He	lp=Shift+F1				Get table		Cancel	OK

Streams selected for retrieval are listed under the 'Mountpoints' section on BNC's main window. Use the 'Get Table' button to download the source-table from the NTRIP broadcaster.

Enter the NTRIP broadcaster host IP and port number. Enter a valid 'User' ID and 'Password' for access to protected streams.

Select your streams line by line, use +Shift and +Ctrl when necessary. Hit 'OK' to return to the main window. If you wish you can click on 'Add Mountpoints' and repeat the process again to retrieve mountpoints from different casters.

BNC automatically allocates one of its internal decoders to a stream based on the stream's 'format' and 'format-details' as given in the source-table.





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KG Ntrip Client (BNC) Version 1.5 Proxy General RINEX Observations RINEX Ephemeris Synchronized Observations Monitor Logfile (full path) G:\rinex\bnc_log General settings for logfile and file handling

Records of BNC's activities are shown in the Log section on the bottom of the main window. These logs can be saved into a file when a valid path is specified in the 'Log (full path)' field.

The message log covers the communication status between **BNC and the NTRIP broadcaster** as well as problems that may occur in the communication link, stream availability, stream delay, stream conversion etc.

When BNC is started, new files are created by default and any existing files with the same name will be overwritten. However, users might want to append existing files following a restart of BNC, a system crash or when **BNC crashed. Tick 'Append files'** to continue with existing files and keep what has been recorded so far. Note that option 'Append files' affects all types of files created by BNC.

🗞 BKG Ntrip Client (f	NC) Version 1.5				
File Help					
Proxy General	RINEX Observations	RINEX Ephemeris	Synchronized Observations	Monitor	
Directory	G:\rinex				
Interval	15 min 💌	Sampling 🛛 sec 🚔			
Skeleton extension	skl				
Script (full path)	G:\tools\up2archive				
Version 3	v				
Saving RINEX obser	vation files.				

Here you can specify the path to where the **RINEX** Observation files will be stored. Select the length of the RINEX Observation file generated. Select the RINEX **Observation sampling interval in** seconds.

Whenever BNC starts generating **RINEX Observation files, it first** tries to retrieve information needed for RINEX headers from so-called public RINEX header skeleton files which are derived from sitelogs.

Whenever a **RINEX** Observation file is saved, you might want to compress, copy or upload it immediately via FTP.

BNC allows you to execute a script/batch file to carry out these operations.

The default format for RINEX **Observation files is RINEX Version** 2.11. Select 'Version 3' if you would like to save observations in RINEX Version 3 format.

Georg Weber¹⁾, Leos Mervart²⁾ ¹⁾ Federal Agency for Cartography and Geodesy (BKG) Germany, ²⁾ Czech Technical University Prague, Department of Geodesy IGS Workshop 2008, Miami

The BKG Ntrip Client (BNC)

🔀 BKG Ntrip Client (BNC) Version 1.5						
File Help						
Proxy General	RINEX Observations RINEX Ephemeris Synchronized Observations Monitor					
Directory	G:\vinex					
Interval	2 min 💌					
Port	1968					
Version 3						
Saving RINEX ephemeris files and ephemeris output through IP port.						

Broadcast ephemeris can be saved as RINEX Navigation files when received via RTCM Version **3.x as message types 1019 (GPS)** and 1020 (GLONASS) or via **RTIGS records type 300.**

Specify the path for saving broadcast ephemeris data as **RINEX** Navigation files. **Select the length of the RINEX** Navigation file generated.

BNC can output broadcast ephemeris in RINEX ASCII format on your local through an **IP port. Specify an IP port** number to activate this function.

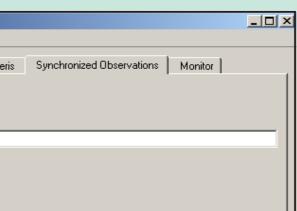
Default format for RINEX Navigation files containing broadcast ephemeris is RINEX Version 2.11. Select 'Version 3' if you want to save the ephemeris in **RINEX Version 3 format.**

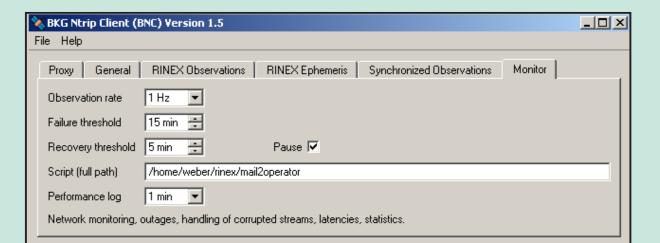
I	💸 BKG Ntrip Client (BNC) Version 1.5								
	F	ile Help							
I									
		Proxy	General	RINEX Observations	RINEX Epheme				
		Port		1969					
		Wait for	full epoch	5 sec 🚦					
		File (full	path)	G:\data\obs.txt					
		Sampling		0 sec					
		Output :	synchronized	observations epoch by ep	och.				
I									

BNC can produce synchronized observations in binary format on your local host through an IP 'Port'. Specify an IP port number here to activate this function.

When feeding a real-time GNSS engine waiting for input epoch by epoch, BNC drops whatever is received later than 'Wait for full epoch' seconds. A value of 3 to 5 seconds could be an appropriate choice for that, depending on the latency of the incoming streams and the delay acceptable for your real-time GNSS product.

Specifies the full path to a 'File' where synchronized observations are saved in plain ASCII format. The default value is an empty option field, meaning that no ASCII output file is created. Select the observation output sampling interval in seconds.





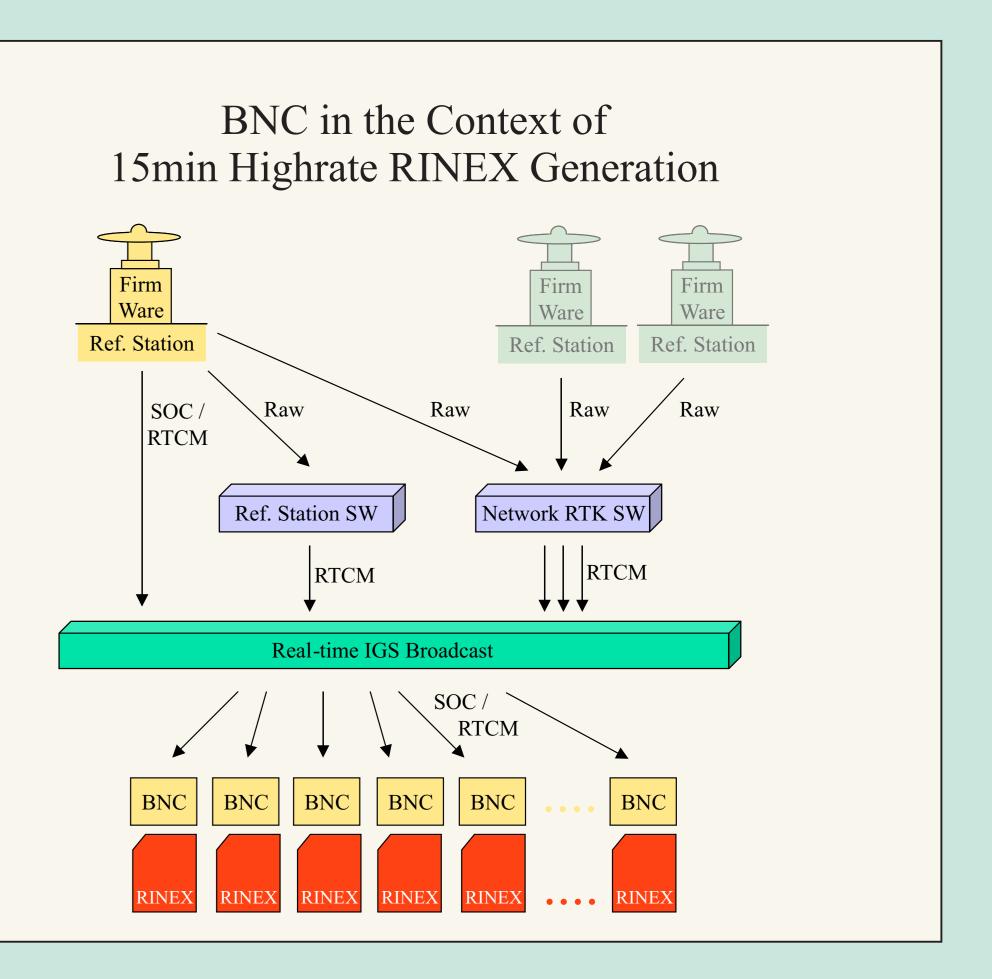
At various times, the incoming stream might become unavailable or corrupted. In such cases, it is important that the BNC operator and/or the stream providers become aware of the situation.

BNC can decide whether a stream has an outage or its content is corrupted. This procedure needs a rough a priory estimate of the expected observation rate.

Failure/recovery events will be reported if no or currupted data is received continuously for longer than the 'Failure threshold' time or valid observations are again detected continuously throughout the 'Recovery threshold' time span.

BNC can trigger a shell script or a batch file to be executed when one of these events are reported. This script can be used to email an advisory note to network operator or stream providers.

Latencies and statistical information can be recorded in the Log file/section at the end of each 'Performance log' interval.



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