



EPN real-time report

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- **EPN broadcaster guidelines**
 - **Contents (what is really necessary and what could be referenced to)**
 - **CAS and NET records**
 - **STR records: Aligning EPN regional broadcasters naming conventions**
 - **Identification of stream origin (STR record parameter #19 <misc>)**
 - **Where to put the broadcaster guidelines**
 - **How to handle MGEX real-time data**
- **Reviving EUREF-IP mailing list**



- **New feature introduced at EPN CB for monitoring of the EPN real-time streams: <http://www.epncb.oma.be/ann/epnstream2.php>**

EPN CB
HOME

EUREF PERMANENT NETWORK



ORGANISATION	NETWORK & DATA	PRODUCTS & SERVICES	DOCUMENTATION	NEWS, EVENTS & LINKS
About Components Working groups Management Contributors Collaborations Site map	Station list Maps Tracking status Data access Proposed stations Station log submission Station picture submission	Data analysis Daily/weekly positions Positions & velocities Tropospheric delays ETRF/ITRF transformation Position time series Satellite orbit & clock correction streams	Formats Guidelines Equipment & calibration Papers FAQ	News Mails Calendar Workshops FTP server Web history Links

NETWORK & DATA > DATA ACCESS > REAL-TIME > PRODUCTS & DATA STREAMS

REAL-TIME PRODUCTS

Mountpoint	ASI (status: 2014-09-11 10:25 UTC)	BKG (status: 2014-09-11 10:25 UTC)	ROB (status: 2014-09-11 10:25 UTC)
EUREF01	RTCM 3.0 - BKG	RTCM 3.0 - EUREF filter combination	RTCM 3.0 - EUREF filter combination
EUREF02	RTCM 3.0 - BKG	RTCM 3.0 - EUREF filter combination	RTCM 3.0 - EUREF filter combination
RTCM3EPH	RTCM 3 - BKG		

REAL-TIME DATA STREAMS

Mountpoint	ASI (status: 2014-09-11 10:25 UTC)	BKG (status: 2014-09-11 10:25 UTC)	ROB (status: 2014-09-11 10:25 UTC)
ACOR0	RTCM 3.1 - ergnss-ip.ign.es:2101/ACOR0(1)	RTCM 3.1 - ergnss-ip.ign.es:2101/ACOR0(1)	RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
AJAC0	RTCM 3.1 - rgp-ip.ign.fr:2101/AJAC1(1)	RTCM 3.1 - www.igs-ip.net:2101/AJAC0(2)	RTCM 3.1 - none
ALAC0	RTCM 2.3 - ergnss-ip.ign.es:2101/ALAC0(1)	RTCM 3.0 - ergnss-ip.ign.es:2101/ALAC0(1)	RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
ALBA0	RTCM 2.1 - ergnss-ip.ign.es:2101/ALBA0(1)	RTCM 3.0 - ergnss-ip.ign.es:2101/ALBA0(1)	RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
ALME0	RTCM 2.3 - ergnss-ip.ign.es:2101/ALME0(1)	RTCM 2.3 - ergnss-ip.ign.es:2101/ALME0(1)	RTCM 2.3 - IGNE, Servicio de Programas Geodesicos
AUT10	RTCM 3.0 - www.euref-ip.net:2101/AUT10(1)	RTCM 3.0 - none	RTCM 3.0 - none
BELF0	RTCM 3.1 - www.euref-ip.net:2101/BELF0(1)	RTCM 3.1 - Ordnance Survey of Northern Ireland	RTCM 3.1 - Ordnance Survey of Northern Ireland
BELL0	Last received on 2014-09-07 21:15 UTC	Last received on 2014-09-07 21:05 UTC	Last received on 2014-09-07 21:15 UTC
BOGI0	RTCM 2.1 - www.euref-ip.net:2101/BOGI(1)	RTCM 3.0 - IGIK	RTCM 3.0 - IGIK
BOR10	RTCM 2.3 - www.euref-ip.net:2101/BOR10(1)	RTCM 2.3 - SRC PAS	RTCM 2.3 - SRC PAS
BORJ0			RTCM 3.0 - BKG
BORJ1	RTCM 3.0 - www.euref-ip.net:2101/BORJ1(1)	RTCM 3.0 - BKG	Last received on 2014-08-20 02:05 UTC
BORR0	RTCM 3.0 - ergnss-ip.ign.es:2101/BORR0(1)	RTCM 3.0 - ergnss-ip.ign.es:2101/BORR0(1)	RTCM 3.0 - Instituto Cartografico Valenciano
BRST0	RTCM 3.0 - BRST0 rgp-ip.ign.fr:2101/BRST1(1)	RTCM 3.0 - www.igs-ip.net:2101/BRST0(2)	RTCM 3.1 - none
BRUX0		Last received on 2014-09-11 05:15 UTC	Last received on 2014-09-11 05:15 UTC
BRUX1			RAW - ROB -- http://www.gnss.be
BRUX2			RTCM 3.0 - BKG

BSCN0	RTCM 3.0 - rgp-ip.ign.fr:2101/BSCN1(1)	RTCM 3.0 - rgp-ip.ign.fr:2101/BSCN1(1)	RTCM 3.2 - ROB
BUCU0	RTCM 3.0 - www.euref-ip.net:2101/BUCU0(1)	RTCM 3.0 - TU Bucharest	RTCM 3.1 - none
BUTE0	RTCM 3.0 - /BUTE0(1)	RTCM 3.0 - Budapest University	RTCM 3.0 - Budapest University
BZRG0	Never received	RTCM 2.3 - www.igs-ip.net:2101/BZRG0(2)	RTCM 2 - 9600
CACE0	RTCM 2.3 - ergnss-ip.ign.es:2101/CACE0(1)	RTCM 2.3 - ergnss-ip.ign.es:2101/CACE0(1)	RTCM 2.3 - IGNE, Servicio de Programas Geodesicos
CANT0	RTCM 3.1 - ergnss-ip.ign.es:2101/CANT0(1)	RTCM 3.0 - ergnss-ip.ign.es:2101/CANT0(1)	RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
CANT1	RTCM 2.3 - ergnss-ip.ign.es:2101/CANT1(1)		
CASC0	RTCM 3.0 - 62.48.187.123:2101/CASC0(1)	RTCM 3.0 - 62.48.187.123:2101/CASC0(1)	RTCM 3 - B
CEU10	RTCM 2.3 - ergnss-ip.ign.es:2101/CEU10(1)	RTCM 2.3 - ergnss-ip.ign.es:2101/CEU10(1)	RTCM 2.3 - IGNE, Servicio de Programas Geodesicos
CFRM0	RTCM 3.0 - /CFRM0(1)	RTCM 3.0 - Land Survey Office	RTCM 3.0 - Land Survey Office
CLIB0	RTCM 3.0 - /CLIB0(1)	RTCM 3.0 - Land Survey Office	RTCM 3.0 - Land Survey Office
COBA0	RTCM 3.1 - ergnss-ip.ign.es:2101/COBA0(1)	RTCM 3.1 - ergnss-ip.ign.es:2101/COBA0(1)	RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
CPAR0	RTCM 3.0 - /CPAR0(1)	RTCM 3.0 - Land Survey Office	RTCM 3.0 - Land Survey Office
CRAK0	RTCM 3.0 - /CRAK0(1)	RTCM 3.0 - Land Survey Office	RTCM 3.0 - Land Survey Office
CREU0	RTCM 3.0 - /CREU0(1)	RTCM 3.0 - ICC Catnet	RTCM 3.0 - ICC Catnet
CTAB0	RTCM 3.0 - /CTAB0(1)	RTCM 3.0 - Land Survey Office	RTCM 3.0 - Land Survey Office
DARE0	Never received	Last received on 2014-07-27 09:45 UTC	RTCM 3.1 - OS Net reference station Daresbury
DENT0	Last received on 2014-09-09 12:55 UTC	Last received on 2014-09-09 12:55 UTC	Last received on 2014-09-09 12:55 UTC
DOUR0			RTCM 3.0 - ROB -- http://www.gnss.be
DRES0			RTCM 3.1 - BKG
DRES1	RTCM 3.0 - www.euref-ip.net:2101/DRES1(1)	RTCM 3.1 - BKG	Last received on 2014-08-20 02:05 UTC
DYNG0		RTCM 3.0 - CNES	RTCM 3.0 - CNES
EBRE0		RTCM 3.1 - www.igs-ip.net:2101/EBRE0(2)	RTCM 3.1 - www.igs-ip.net:2101/EBRE0(2)
EIJS0		RTCM 3.1 - AGRS.NL	
FLRS0	RTCM 3.0 - 62.48.187.123:2101/FLRS0(1)	RTCM 3.0 - www.igs-ip.net:2101/FLRS0(2)	RTCM 3 - B
FUNC0	RTCM 3.0 - 62.48.187.123:2101/FUNC0(1)	RTCM 3.0 - www.igs-ip.net:2101/FUNC0(2)	RTCM 3 - B
GATA0	Last received on 2014-09-10 23:05 UTC	Last received on 2014-09-10 23:15 UTC	Last received on 2014-09-11 09:55 UTC
GANP0	RTCM 3.0 - www.euref-ip.net:2101/GANP0(2)	RTCM 3.0 - www.igs-ip.net:2101/GANP0(2)	RTCM 3.1 -
GOPE0	Last received on 2014-05-15 10:15 UTC	RTCM 2.3 - www.igs-ip.net:2101/GOPE0(2)	RTCM 2.3 -
GRAS0		RTCM 3.0 - www.igs-ip.net:2101/GRAS0(2)	RTCM 3.1 - none
GRAS1	RTCM 3.0 - ASH701945E_M_NONE		
GRAZ0			RTCM 3.0 - 217.13.180.215:2101/GRAZ3(1)
GRAZ3	RTCM 3.0 - www.euref-ip.net:2101/GRAZ3(2)	RTCM 3.0 - 217.13.180.215:2101/GRAZ3(1)	Last received on 2014-08-20 02:05 UTC
HELG0			RTCM 3.0 - none
HELG1		RTCM 3.0 - none	Last received on 2014-08-20 00:35 UTC
HERT0	RTCM 3.0 - www.euref-ip.net:2101/HERT0(1)	RTCM 3.0 - NERC Space Geodesy Facility	RTCM 3.0 - NERC Space Geodesy Facility
HOE21	RTCM 3.0 - www.euref-ip.net:2101/HOE21(1)	RTCM 3.1 - BKG	RTCM 3.1 - BKG
HOFN0	RTCM 3.0 - www.euref-ip.net:2101/HOFN0(1)	RTCM 3.0 - National Land Survey of Island	RTCM 3.0 - National Land Survey of Island
HUEL0	RTCM 2.3 - ergnss-ip.ign.es:2101/HUEL0(1)	RTCM 2.3 - ergnss-ip.ign.es:2101/HUEL0(1)	RTCM 2.3 - IGNE, Servicio de Programas Geodesicos
IENG0	Never received		
IGEO0	RTCM 3.0 - www.euref-ip.net:2101/IGEO0(1)	RTCM 3.0 - LRCA	RTCM 3.0 - LRCA
INVR0	Last received on 2014-07-27 09:45 UTC	Last received on 2014-07-27 09:45 UTC	RTCM 3.1 - OS Net reference station Inverness

ISTA0	RTCM 3.0 - www.euref-ip.net:2101/ISTA0(1)	RTCM 3.0 - BKG	RTCM 3.0 - BKG
IZAN0	RTCM 3.1 - ergnss-ip.ign.es:2101/IZAN0(1)	RTCM 3.1 - ergnss-ip.ign.es:2101/IZAN0(1)	RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
JOEN0	Last received on 2014-01-20 15:35 UTC	Last received on 2014-01-21 10:55 UTC	Never received
JOZ20	RTCM 3.0 - www.euref-ip.net:2101/JOZ20(1)	RTCM 3.0 - Univ Warszawa, Geod. Inst.	RTCM 3.0 - Univ Warszawa, Geod. Inst.
KARL0			RTCM 3.0 - BKG
KARL1	RTCM 3.0 - www.euref-ip.net:2101/KARL1(1)	RTCM 3.0 - BKG	Last received on 2014-08-20 02:05 UTC
KIR00		RTCM 3.0 - www.igs-ip.net:2101/KIR00(2)	RTCM 3.1 -
KRA10		RTCM 3.0 - AGH University of Science and Technology	RTCM 3.0 - AGH-UST
KRAW0	RTCM 2.2 - 149.156.118.211:2101/KRAW0(1)	RTCM 2.2 - gps1.geod.agh.edu.pl:2101/KRAW0(1)	RTCM 2.2 - AGH-UST
KURE0	Last received on 2014-09-11 10:15 UTC	RTCM 3.0 - ELB	Last received on 2014-09-11 10:15 UTC
LAG00	RTCM 3.0 - 62.48.187.123:2101/LAG00(1)	RTCM 3.0 - 62.48.187.123:2101/LAG00(1)	RTCM 3 - B
LAMA0	RTCM 3.0 - www.euref-ip.net:2101/LAMA0(1)	RTCM 3.0 - University of Warmia and Mazury	RTCM 3.0 - University of Warmia and Mazury
LEON0	RTCM 3.1 - ergnss-ip.ign.es:2101/LEON0(1)	RTCM 3.1 - ergnss-ip.ign.es:2101/LEON0(1)	RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
LPAL0	RTCM 3.1 - ergnss-ip.ign.es:2101/LPAL0(1)	RTCM 3.1 - www.igs-ip.net:2101/LPAL0(2)	RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
M0SE0	Never received	RTCM 3.0 - 151.100.84.21:2111/M0SE(1)	RTCM 3 - 9600
MALA0	RTCM 3.1 - ergnss-ip.ign.es:2101/MALA0(1)	RTCM 3.1 - ergnss-ip.ign.es:2101/MALA0(1)	RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
MALL0	RTCM 3.1 - ergnss-ip.ign.es:2101/MALL0(1)	RTCM 3.1 - ergnss-ip.ign.es:2101/MALL0(1)	RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
MAR60		RTCM 3.0 - www.igs-ip.net:2101/MAR60(2)	RTCM 3.1 -
MARS0	RTCM 3.1 - rgp-ip.ign.fr:2101/MARS1(1)	RTCM 3.1 - www.igs-ip.net:2101/MARS0(2)	RTCM 3.1 - none
MATE0	RTCM 3.1 - CGS-Demo	RTCM 3.1 - www.igs-ip.net:2101/MATE0(2)	RTCM 3.1 - CGS-Demo
MELI0			RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
METS0	Last received on 2014-01-21 09:57 UTC	Last received on 2014-01-21 10:55 UTC	Never received
MOP20		RTCM 3.1 - 147.175.80.46:2101/MOP2(1)	RTCM 3 -
NICO0	RTCM 3.0 - www.euref-ip.net:2101/NICO0(2)	RTCM 3.0 - www.igs-ip.net:2101/NICO0(1)	RTCM 3.0 - www.igs-ip.net:2101/NICO0(1)
OBE40		RTCM 3.0 - www.igs-ip.net:2101/OBE40(1)	RTCM 3.0 - www.igs-ip.net:2101/OBE40(1)
ONSA0		RTCM 3.0 - www.igs-ip.net:2101/ONSA0(2)	RTCM 3 -
ORID0	RTCM 3.0 - www.euref-ip.net:2101/ORID0(1)	RTCM 3.0 - DZGR	RTCM 3.0 - DZGR
OSLS0	RTCM 3.0 - www.satref.no:2103/Oslo(1)	RTCM 3.0 - www.satref.no:2103/Oslo(1)	RTCM 3.1 -
PADO0	Never received	RTCM 2.3 - www.igs-ip.net:2101/PADO0(2)	RTCM 2 - 9600
PDEL0	RTCM 3.0 - 62.48.187.123:2101/PDEL(1)	RTCM 3.0 - www.igs-ip.net:2101/PDEL0(2)	RTCM 3 - B
PENC0	Never received	RTCM 3.0 - www.igs-ip.net:2101/PENC0(2)	RTCM 3.0 - FOMI, SGO
POTS0		RTCM 3.0 - www.igs-ip.net:2101/POTS0(1)	RTCM 3.0 - GFZ
RANT1		RTCM 3.1 - BKG	
REYK0	RTCM 3.0 - www.euref-ip.net:2101/REYK0(2)	RTCM 3.0 - www.igs-ip.net:2101/REYK0(1)	RTCM 3.0 - www.igs-ip.net:2101/REYK0(1)
RIO10		RTCM 3.1 - ergnss-ip.ign.es:2101/RIO10(1)	RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
ROVE0	RTCM 2.3 - 147.162.229.36:80/ROVE0(1)	RTCM 2.3 - 147.162.229.53:2101/Rovereto	RTCM 2 - 9600
SALA0	RTCM 3.1 - ergnss-ip.ign.es:2101/SALA0(1)	RTCM 3.1 - ergnss-ip.ign.es:2101/SALA0(1)	RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
SASS0			Last received on 2014-08-19 16:45 UTC

TERC0	RTCM 3.0 - 62.48.187.123:2101/TERC0(1)	Last received on 2014-07-10 13:25 UTC	RTCM 3 - B
TERS0		RTCM 3.1 - AGRS.NL	
TERU0	RTCM 3.1 - ergnss-ip.ign.es:2101/TERU0(1)	RTCM 3.1 - ergnss-ip.ign.es:2101/TERU0(1)	RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
TLSE0		RTCM 3.0 - www.igs-ip.net:2101/TLSE0(2)	RTCM 3.1 - none
TLSE1	RTCM 3.0 - none		
TOIL0	RTCM 3.0 - www.euref-ip.net:2101/TOIL0(1)	RTCM 3.0 - ELB	RTCM 3.0 - ELB
TOR20		RTCM 3.0 - ELB	RTCM 3.0 - ELB
TORIO	RTCM 3.0 - www.euref-ip.net:2101/TORIO(1)	RTCM 3.0 - Politecnico di Torino	RTCM 3.0 - Politecnico di Torino
TRDS0	RTCM 3.0 - www.satref.no:2103/Trondheim(1)	RTCM 3.0 - www.satref.no:2103/Trondheim(1)	RTCM 3.1 -
TUBO0	Last received on 2014-05-16 12:25 UTC	RTCM 2.3 - ntrip.pecny.cz:80/TUBO0(1)	RTCM 2 -
UNPG0	RTCM 2.3 - www.euref-ip.net:2101/UNPG0(1)	RTCM 2.3 - Universita di Perugia	RTCM 2.3 - Universita di Perugia
UNTR0	RTCM 2.3 - www.euref-ip.net:2101/UNTR0(1)	RTCM 2.3 - Universita di Perugia	RTCM 2.3 - Universita di Perugia
USAL0	RTCM 3.1 - CGS-Demo	RTCM 3.1 - 192.106.274.7:2101/USAL0(1)	RTCM 3.1 - CGS-Demo
VAAS0	Last received on 2014-01-21 09:57 UTC	Last received on 2014-01-21 10:55 UTC	Never received
VALA0	RTCM 3.1 - www.euref-ip.net:2101/VALA0(1)	RTCM 3.1 - ITACYL	RTCM 3.1 - ITACYL
VALE0	RTCM 2.3 - ergnss-ip.ign.es:2101/VALE0(1)	RTCM 3.0 - ergnss-ip.ign.es:2101/VALE0(1)	RTCM 3.1 - IGNE, Servicio de Programas Geodesicos
VARSO	RTCM 3.0 - www.satref.no:2103/Vardo(1)	RTCM 3.0 - www.satref.no:2103/Vardo(1)	RTCM 3.1 -
VEN10	RTCM 3.1 - CGS-Demo	RTCM 3.1 - 192.106.274.7:2101/VEN10(1)	RTCM 3.1 - CGS-Demo
VFCH0	RTCM 3.0 - rgp-ip.ign.fr:2101/VFCH1(1)	RTCM 3.0 - rgp-ip.ign.fr:2101/VFCH1(1)	RTCM 3.1 - none
VIG00	RTCM 2.3 - ergnss-ip.ign.es:2101/VIG00(1)	RTCM 2.3 - ergnss-ip.ign.es:2101/VIG00(1)	RTCM 2.3 - IGNE, Servicio de Programas Geodesicos
VIS00		RTCM 3.0 - www.igs-ip.net:2101/VIS00(2)	RTCM 3.1 -
WARE0	RTCM 3.0 - www.euref-ip.net:2101/WARE0(2)	RTCM 3.0 - ROB	RTCM 3.0 - ROB -- http://www.gnss.be
WARN0			Last received on 2014-08-19 17:25 UTC
WARN1	RTCM 3.0 - www.euref-ip.net:2101/WARN1(2)	RTCM 3.0 - BKG	RTCM 3.0 - BKG
WROC0	RTCM 3.0 - www.euref-ip.net:2101/WROC0(2)	RTCM 3.0 - Wroclaw University of Environmental and Life Sciences	RTCM 3.0 - Wroclaw University of Environmental and Life Sciences
WSRT0	Last received on 2014-02-12 21:15 UTC	Last received on 2014-02-12 21:15 UTC	Never received
WTZR0	RTCM 3.0 - www.euref-ip.net:2101/WTZR0(2)	RTCM 3.0 - BKG	RTCM 3.0 - BKG
YEBE0	RTCM 2.3 - ergnss-ip.ign.es:2101/YEBE0(1)	RTCM 2.3 - www.igs-ip.net:2101/YEBE0(2)	RTCM 2.3 - IGNE, Servicio de Programas Geodesicos
ZARA0	RTCM 2.3 - ergnss-ip.ign.es:2101/ZARA0(1)	RTCM 2.3 - ergnss-ip.ign.es:2101/ZARA0(1)	RTCM 2.3 - IGNE, Servicio de Programas Geodesicos
ZIM20	Never received	RTCM 3.0 - www.igs-ip.net:2101/ZIM20(2)	RTCM 3.1 - RTCM 3.1 stream of AGNES station Zimmerwald
ZOUF0	RTCM 2.3 - www.euref-ip.net:2101/ZOUF0(1)	RTCM 2.3 - Centro Ricerche Sismologiche	RTCM 2.3 - Centro Ricerche Sismologiche

STATUS

Broadcasters	Dynamic source table	Static source table
ASI	updated on 2014-09-11 10:25	updated on 2014-09-11 10:10
BKG	updated on 2014-09-11 10:25	updated on 2014-09-11 10:10
ROB	updated on 2014-09-11 10:25	updated on 2014-09-11 10:02

- **CAS record**
 - **broadcaster specification record**
 - **purpose: description / information of the broadcaster**
 - **not mandatory**
 - **≥ 1 allowed**
 - **11 mandatory + 1 optional field**
 - **EUREF: at least one (i.e. own caster), other RBs recommended (but could be more, see below)**

- **NET record**
 - **network specification record**
 - **purpose: data sources could be grouped according to useful specifications**
 - **not mandatory**
 - **≥ 1 allowed**
 - **11 mandatory + 1 optional field**
 - **EUREF: all networks referred to in the STR records**

- **STR record**
 - **stream specification record**
 - **purpose: description for each mountpoint of the caster**
 - **not mandatory***
 - **one record for each mountpoint**
 - **18 mandatory + 1 optional field (in progress)**
 - **EUREF: all EPN RT stations in all RBs**

*: see for example www.rtcn-ntrip.org (contains CAS records only)

- **STR record: Usage of optional field #19 for Identification of source of mountpoint**
- **Pulling**
 - **SASS0;(...);www.euref-ip.net/SASS1(2)**
→ means that this stream is pulled for the second time
- or
- **SASS0;(...);CAS BKG**
→ means that this stream is pulled from caster 'BKG'
→ needs for each of the casters a CAS record line in the sourcetable

■ Streaming

■ SASS0;(…);BKG

→ means that this stream is streamed by the organisation ,BKG‘

or

■ SASS0;(…);STR SASS

→ means that the stream for EPN station ,SASS‘ is streamed

- **Two EPN guidelines identified**
 - **Guidelines for EPN Data Centres (GDC)**
 - **Guidelines for EPN Stations and Operational Centres (GSOC)**
- **Pros and cons**
 - **Broadcasters belong to OCs as well as DCs**
 - **GDC short, not frequently updated (last update 2012), no complete description of EPN components**
 - **GSOC up to date, description of all EPN components, e.g. local and regional broadcasters and DCs**



- **Proposal:**
 - **Add broadcaster guidelines to GSOC**
 - **Move GDC into GSOC as separate section (only one doc to be updated in future)**

- **MGEX RT data means MSM format (GPS/GLONASS +)**
- **Several European stations provide RAW data**
 - (BRST, BRUX, DLF1, DYNG, GOP6, GRAC, HOFN, KIR8, M0SE, MAR7, MATG, METG, MYVA, NYA2, OBE4, ONS1, POTS, REYK, TLSE, WT21, WTZZ, ZIM3)
- **Conversion to RTCM 3.2 (MSM) by BKG (tool provided by Fa. Alberding), in progress**
- **Proposal:**
 - no RAW data at the EUREF RBs
 - no mixing of „legal“ and MSM format at the EPN RBs



- **Had been introduced several years ago in addition to EUREF and EPN LAC**
- **Almost no use during last years**
- **Reviving necessary?**
 - **Many subscriptions outdated**
 - **Update necessary (manually? E.g. all stream providers)**
 - **EUREF RBs not in favor of extending mailing list by registered users**