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RINEX3 in EPN/IGS

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RINEX3 data availability

- BKG:
 - Identical upload directory + automatic recognition which RINEX version is submitted
 - Archive under:
 - RINEX3: ftp://igs.bkg.bund.de/IGS/obs_v3/yyyy/ddd
 - RINEX2.11 <ftp://igs.bkg.bund.de/IGS/obs/yyyy/ddd>
- CDDIS:
 - Send RINEX2.11 and RINEX3 files to different upload directories
 - Archive under:
<ftp://cddis.gsfc.nasa.gov/pub/gps/data/rinex3test/daily>



Status RINEX3 daily (October 2011)

- BKG: 8 sites (BOGI, GANP, MAT1, SASS, UNB3, WARN, WTZZ, ZIM2)
- CDDIS: 1 site: ZIM2



RINEX3 format: Experiences from ZIM2 implementation

- Since Aug. 22, 2011 (DOY 234) station ZIM2 is providing RINEX3.0 daily files to the data centers BKG and CDDIS.
- The data are submitted **in addition** to the standard upload of daily and hourly RINEX2.11 files.
- Problems:
 - Parallel data stream in **raw format** on receiver necessary
 - Conversion from internal raw format to RINEX3 using program **convert2rinex.exe**
 - **No teqc.exe** to test compliance of format or to reduce data from 1-sec. data to 30-sec. data



Actions till now

- EUREF TWG (Mai 2010, Gävle): WG and Resolution 3

"Finally the TWG decides to prepare a proposal for creating a WG (or EPN Pilot Project) on GNSS modernization/Galileo/RINEX 3. As members **E. BROCKMANN, C. BRUYNINX, A. CAPORALI, R. DACH, J. DOUSA, H. HABRICH, W. SÖHNE and C. VÖLKSEN** are nominated. The topic will be put on the agenda for the next TWG again.



Resolution no. 3

The IAG Reference Frame Sub-commission for Europe (EUREF)

Noting the leading role that EUREF has taken using and developing the use of GNSS together with the advantages that such leadership has given Science, IAG, EU and NMCAs;

Recognising the GNSS modernisation programmes in particular the European Galileo;

Encourages members of EUREF to provide the necessary infrastructure, data and analysis from these new GNSS developments:

Requests the TWG to establish a platform for the exchange of experiences in upgrading the EPN.



Actions till now (2)

- EUREF Mail 5400 (Sep. 2010)

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*****  
EUREF Electronic Mail 22-Sep-2010 09:30:02 UTC Message Number 5400  
*****  
Author: Heinz Habrich, Carine Bruyninx, Wolfgang Söhne  
Subject: RINEX Version 3 Data Files
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- No further actions / no topic at TWGs... (but detailed action plan at BKG concerning RTCM3 and RINEX3; Nov. 2010)



Further “correlations”

- 21.10. (last week): Start of 2 Galileo IOV satellites
- IGS M-GEX (MULTI-GNSS Experiment) call for participation: asking for Galileo data and analyses; start 1.2.2012; finish 31.8.2012 (IGS workshop Poland) – CODE answered call
- Format question 3.0 or 3.01 (handling quarter cycle)
- RINEX3.0 and RTCM3.0:
 - RINEX3 part of the RTCM group (IGS is member)
 - RTCM3.0 / 3.1 -> RINEX3
 - next meeting hosted in Bern beginning 2012 (prior to IGS WG “Biases”)
- Bernese Software 5.2:
 - Ready for Giove, Galileo, RINEX3
 - Release beginning 2012
- teqc: no support expected



Conclusion

- Relying on IGS M-GEX enough or can EUREF can do more?
- Proposed actions:
 - An **additional EUREF-mail** from Heinz et al. encouraging station managers to deliver RINEX3
 - Further tests within **EUREF TWG Galileo WG** (E. BROCKMANN, C. BRUYNINX, A. CAPORALI, R. DACH, J. DOUSA, H. HABRICH, W. SÖHNE and C. VÖLKSEN): e.g. first tests using BSW5.2 and **presentation on EUREF symposium**. Additional interested persons?
 - Follow the action plan of the real-time activities (Georg, Wolfgang: EUREF-IP using BNC; IGS real-time WG)
 - ...