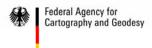
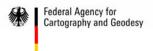


EPN real-time activities

W. Söhne, G. Weber, A. Stürze
Bundesamt für Kartographie und Geodäsie
Frankfurt am Main, Germany

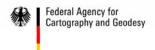


- > Status RT in the EPN
- > IGS RT-PP status
- > New activities
 - Motivation
 - Goals
 - Topics
 - Timescale

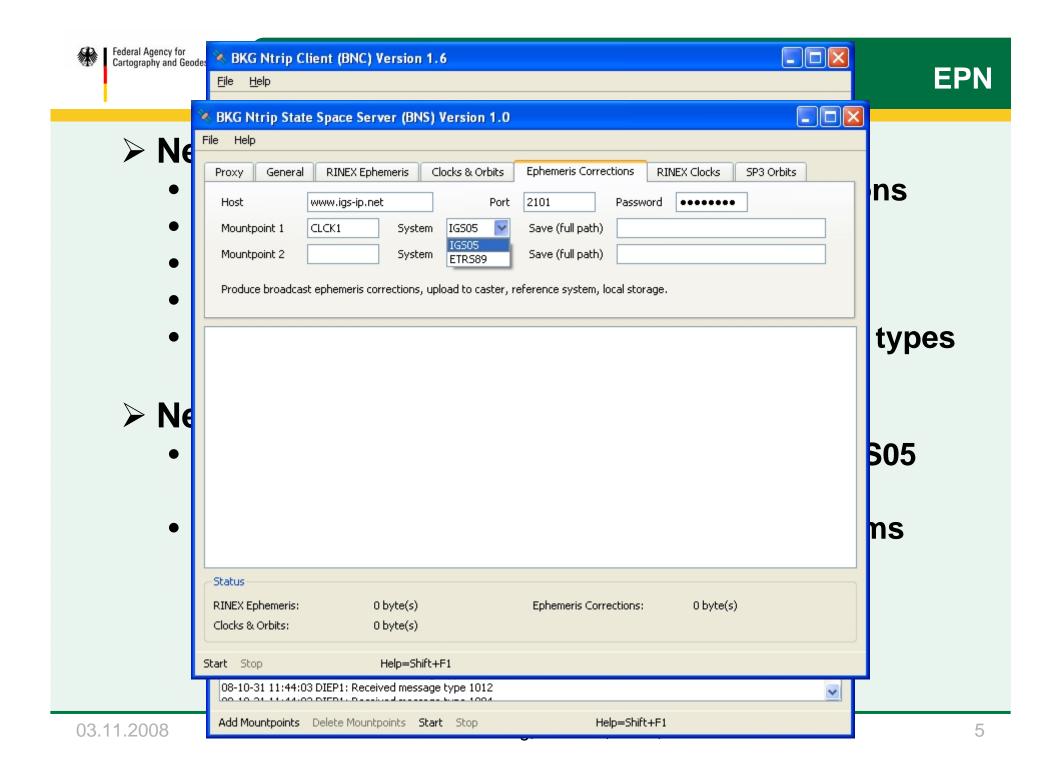


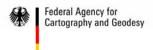
> New EPN RT data streams since last TWG

- DENT (RTCM 3.0)
- FLRS (RTCM 3.0)
- FUNC (RTCM 3.0; was 'Test')
- GRAZ (RTCM 3.0 instead of RAW)
- HFL2 (RTCM 3.0; instead of HLFK (RAW))
- LPAL (RTCM 3.0 instead of 2.3)
- MALA (RTCM 3.0 instead of 2.1)
- NICO (RTCM 3.0; was 'Test')
- WSRT (RTIGS)

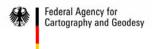


- > New features at caster igs-ip
 - New RT streams of AUCK, DUND, WGTN (New Zealand), NTUS (Singapore); CEEU, SJRP (Brasil)
 - Streaming of GIOVE signals
 Goal. Small global network
 Concepcion (CHL), Fredericton (CAN), Sydney (AUS),
 Wettzell (DEU)
 Format is "Custom" (internal ASCII format)
 Converter to RINEX written by DLR

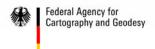




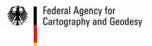
- > 9 additional proposals to the IGS RT-PP following the IGS workshop
- ➤ First draft proposal for RT format (June, 27, 2008)
 Two categories
 - Category 1: exchange format between the IGS RT-PP ACS Basing on SP3 and Clock RINEX
 - Category 2: streaming format for combination product (to user)
 - To be discussed within RTCM
- Participation of Ken McLeod for IGS RT WG at RTCM meeting in September



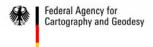
- > Telecon October, 9
 - About ACs status, formats and protocols, RT product accuracy and latency targets, ionosphere product
 - RT network still unsatisfactory
 - Time schedule still foresees
 - end of January 2009 for Category 1 products, and
 - end of March 2009 for Category 2 products
- > 5 contributions (SP3, CLK) so far
 - NRC since 1488
 - DLR since 1489
 - ESOC since 1489
 - BKG since 1498
 - GMV since 1500
- > Next telecon end of November



- GNSS real-time data streaming has been successfully developed within EUREF
 - Special Project "EUREF-IP" was created in 2002
 - Currently ~ 94 EPN stations with real-time data (49 GPS+GLO)
 - SP EUREF-IP moved towards EPN routine operations end of 2007
- Visibility of RT activities within EUREF should be ensured

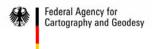


- > Setup of a new Special Project
 - By EPN Coordination Group
 - Needs
 - Description on the web
 - CfP
 - Announcement via EUREF mail
- > Goals for the new SP
 - General goal: get more experience with real-time analysis
 - Extension or modification of existing EPN products
 - Coming up with new EPN products or services



> Potential topics within the new SP

- Analysis
 - Derivation of GPS+GLONASS clock corrections for Europe
 - Precise Point Positioning
 - Troposphere, ionosphere parameters
- Standardization issues
- Dissemination
 - Streaming of orbit and clock corrections
 - Streaming of other products
- Other issues
 - Consistent modelling
 - Intermediate products



First / next steps

- General announcement at the EUREF symposium $\sqrt{}$
- Paper to present at the TWG meeting Nov '08 $\sqrt{}$
- Implementation of a EPN RT webpage
- Announcement via EUREF mail