

Time & location:

Thursday, February 16, 2017, 09:00 – 18:30
 ASI e-geos, Space Geodesy Center, Matera
 Room: MT-Geodinamica

MINUTES**1. Opening (Kenyeres)**

The TWG chairman AK welcomes the members and guest of the TWG and thanks RP and the local hosts for the invitation to Matera.

2. Welcome (local organizers)

On behalf of the host agencies ASI and e-geos, Giuseppe Bianco (head of ASI Space Geodesy Center) and Bruno Versini (e-geos Chief Operating Officer) welcome the TWG members and guests at the premises of the Italian Space Agency. Bruno Versini gives a short presentation on e-GEOS (an ASI/Telespazio Company) activities.

3. Approval of minutes of 72th TWG meeting in Vienna (all)

Two comments on changes by AC to agenda item 7 and AA to agenda item 4.c have to be introduced before publishing the final minutes on the EUREF web page.

4. Review of Action Items from previous TWG meetings (Söhne)

Discussion on Action Item 6 concerning the accumulated solution, to be discussed in more detail within Agenda Item 11. Action Item 9 done in understanding of RD and AC.

5. EUREF: Terms of Reference (Poutanen, Söhne, Kenyeres, Altamimi)**Revision of Terms of Reference**

*The TWG discusses the EUREF membership. ZA repeats his position to stay as close as possible to IAG / IUGG rules concerning membership. TWG to find a solution (exception) for countries supporting EUREF but are no IUGG members. He emphasises the voting in the plenary which he judges not to be fair due to very different participation of countries in the annual symposia. AK does not see such differences in numbers that critical. A discussion is taking place about the procedure to nominate national delegates for EUREF. MP agrees with ZA and says it is not up to EUREF to nominate. ZA proposes to ask the national IAG delegates to nominate one or two official delegates. CB and MP are supporting this idea. CB points to the fact that the practical realisation is the problem, not the procedure itself. Agreement to include also active countries which are not IUGG members. Discussion follows about subsequent details, e.g. the question if only countries could vote where delegates are physically available. ML proposes to give one vote per participating organisation to reflect the different levels of activity which some countries provide for EUREF. RD and AK raising the question of the time needed for the delegates to prepare their decision. All questions to vote on must be distributed in advance. A majority of TWG members are in favour of "one vote per country".
 The TWG agrees to consider WS's proposal to rename the TWG into, for example, "Governing Board" to reflect the changing requirements and workload of this board.*

Members in charge of specific tasks – appointment of new and succeeding members

AK announces the appointment of Martina Sacher as new TWG "member in charge of specific task" for the topic "height and gravity". The TWG agrees.

AK also announces the successor of the position "reference frame coordinator" (RFC), Juliette

Legrand (JL)¹. It turns out that there is a second proposal for this position, by EB². On behalf of JL, CB explains what JL was working on in the past and what she is proposing to do as the RFC, separated in a two-step solution. EB presents his contributions to EUREF in past and present and in a general way what he proposes to do as the RFC. After the coffee break the TWG chair proposes to appoint JL as the next RFC. Parts of the TWG do not agree with the procedure of this appointment. They argue that the members of the TWG should be part of the decision and they ask for discussion on the decision. JD mentions that the coordinator is not a one person show, but could stimulate a collaboration in a more coordinated manner. AC says that he is in favour of a joint effort. He mentions that for the roles of coordinators the TWG should firstly search amongst the TWG itself before adding someone from outside. The most recent examples of the analysis center coordinator and the troposphere coordinator are mentioned representing both options. ZA replies that a new independent contribution to TWG would stimulate. CV and JD complain that there was no open call for the position and limited transparency. This stimulates a discussion about voting or not for the decision. No agreement on this. A discussion about a compromise follows, splitting of the work in a collaborative approach. CB emphasises that validation for national realisations should be independent of the scientific estimation of the cumulative solution. The proposal to postpone the decision on the RFC by two or even four weeks to give both candidates the opportunity to provide more information on how they plan to realize the work as the RFC, possibly underlined with some results, was not agreed upon. Finally, a voting took place amongst the regular members (without guests and honorary members). As the result of the voting is a tie, the TWG chair decides and nominates JL as the new RFC.

6. EUREF 2017 symposium – progress, status, issues (Kaplun, Söhne)

On behalf of Jan Kaplun WS gives an overview about the status of the symposium. AC proposes to invite Gian-Gherardo Calini from GSA to give a solicited talk, in the opening session or in session 1. Agreement on having again a poster session – WS to inform Jan Kaplun about adding this information to the web page. The local organisers and WS propose to organize a tutorial on real-time GNSS, as half-day tutorial on Tuesday afternoon. Majority of presenters is not fixed yet.

7. ETRS89 realization

a. On the ETRF2014 realization (Lidberg)

ML explains his investigations on the development of an ETRF2014 just by modifying the translation parameters. This results in no problems in the vertical component, mainly shifts in the horizontal components. ZA stresses the consistency of the series of transformation parameters which must be ensured.

b. ETRS89 questionnaire (Söhne, Altamimi, Kenyeres, Poutanen)

WS shortly recalls the prepared document for the questionnaire, containing the official letter, the questionnaire and three annexes. Discussion about Annex 3 on the correctness and validity of the realisations listed. TWG pushes to finish and distribute the questionnaire, after some small changes, e.g. change back from 4 to 7 cm in Annex 2 and an update of Annex 3, e.g. for CZ to ETRF2000 with campaign was in 2009.

8. EPN: Central Bureau – new web page (Bruyninx)

¹ The candidature of JL has been officially proposed by CB to AK, MP and WS on February, 8, 2017.

²

Mail by EB to ZA, CB, AC, JD, RD, HH, JI, AK, ML, TL, MP, RP, RF, GS and JT on January, 23, 2017

CB states that the new web page is working well. She continues with some slides on new stations. Finland is proposing approx. 20 new EPN stations. 13 have co-located gravity measurements, real-time is also supported. CB is not convinced to find enough ACs for all 20 stations. Proposal to select half of them for EPN to find enough ACs. MP would like to see all stations in the EPN. There is no priority list, by he emphasizes that the resulting station density of Finland in the EPN should be comparable to, e.g. the density of Sweden. He adds that the station density in Southern Europe is still much higher.

9. EPN: Data Flow Coordinator – transition OLG AC and DC to BEV (Stangl)

GS presents the status of the transition. One unexpected problem was IT security, because the ftp option was initially skipped. March, 13 is announced to the TWG as the date for starting BEV.DC. There will be parallel processing, but no regular synchronization, so that for a certain period there will be three EPN DCs. Problems with some station providers still exist. New monitoring tool will be in place soon. New AC will contribute with the first solution in GPSweek 1940. OLG has to be closed December, 31, 2017 at the latest. The TWG, however, clearly prefers a shorter period of parallel actions.

10. EPN: Analysis Centre Coordinator – status report (Liwosz)

TL informs about the recent changes and the action items of the last meeting he had to work on. Update of ACC webpage done (www.epnacc.wat.edu.pl). ZA asks about the combination details, in particular about combination of normal equations. One station affected by post-seismic deformation (PSD), BUCU, is still used as reference station.

11. EPN: Reference Frame Coordinator – preparation for the introduction of IGS14 (Kenyeres)

AK reports on the switch from IGb08 to IGS14. Change from weekly to daily input solutions and combination. Position corrections (POS), antenna and latitude dependent, have to be applied, as it has been done in the past for the switch from IGS05 to IGS08. The difference is that it now can be carried out by using an IGS tool, i.e. no PPP corrections have to be applied like the last time when they were computed by Quentin Baire. AK shows differences between REPRO2 results to EPN routine, for IGb08 and IGS14. CB asks for clarification whether all stations are shown in the plot displaying the differences IGb08.atx vs. IGS14.atx. Publication of C1950 based on IGS14 is planned for mid this year as a collaboration between the old and new RFC. AK is aware of the tight schedule he presents for all the intermediate steps.

12. EPN: Real-Time Coordinator – status of EPN real-time streams (Bruyninx, Söhne)

CB and WS show details about the status of real-time streams. Homogenization of all three broadcasters is still an issue. TWG agrees to allow for RTCM3.2 MSM streams on the EUREF casters if this stream format is provided directly by the station provider itself, and not generated by converting from raw real-time observations to RTCM3.2 MSM. Long mountpoint names still under progress in IGS. A first mountpoint with long mountpoint name, i.e. with 10 characters, is available from the IGS caster at BKG.

13. EPN: Troposphere Coordinator – status of SINEX_TRO format (Pacione)

RP reviews the status of the troposphere SINEX format discussion, especially pushed by the COST ES1206 project. The format discussion is almost finished. Encoding/decoding already implemented in G-Nut software. RP also pointed to some issues with the routine combination, which is almost always affected by the same ACs and the same stations.

14. Multi-GNSS WG

a. Status of and plans for Multi-GNSS (Brockmann)

EB gives an update on Multi-GNSS. He explains some firmware issues. He also mentions the meteo files. Discussion about 1 cm jump in the up component while switching from E08 to E14 in the LPT computation. Possible reasons are added new chamber calibrations or updated type mean calibration values due to higher number of identical antennas used for the computation of the means.

b. Review on Multi-GNSS action items (Söhne)

WS gives some examples on Rx3 to Rx2 conversion where he concentrated on GPS only. For Galileo the situation could be more complicated due to many more signals. ML emphasizes that such conversion could be important in the future because the parallel transfer from Rx3 and Rx2 files might not be possible.

15. Reprocessing WG

a. Cleaning of EPN historical database (Dousa, Araszkievicz, Bruyninx, Kenyeres, Liwosz, Pacione)

AK proposes to start working on this topic and volunteers to initiate the first version of the meta database.

16. EPOS

a. Status report (Bruyninx, Fernandes, Dousa, Kenyeres, Lidberg, Söhne)

CB and WS had worked on an agreement between the EPN Data Provider and EPOS. They announce a recently received draft version of the EPOS Data Policy and a more general Letter of Interest to be signed by the Data Provider which will be distributed to the TWG members soon.

b. Introduction to GLASS (Fernandes)

RF presents details to the EPOS-related software GLASS, which is developed by EPOS-IP partners, starting with the “big picture” and giving more details about GLASS design, its goals and functionalities. Several data and product metadata levels from T0 to T6 are defined to support dissemination GNSS of data and data products: e.g. T1 metadata for site-specific information, T2 metadata for access to data files, T3 metadata about actual file content and data quality. Example of EPN station CASC shown. Additionally, metadata T4, T5 and T6 are defined for GNSS products.

Which levels of repositories will exist? Primary repository: only one, secondary repository: could be multiple, plus mirror repositories.

WS asks if and how the developments by Jan Dousa and his group were connected to GLASS? G-Nut/Anubis has been modified to serve at local GLASS nodes (or repositories) to support generation of T2 and T3 metadata.

How to integrate the EPN framework into GLASS? Is GLASS flexible enough to be adapted for existing, different data centres / repositories / frameworks? GLASS is considered to be flexible enough to support existing repositories including the EUREF data centres. This will be achieved by adding a virtualization level over existing repositories and by managing and disseminating the metadata (and also ensuring optionally the redundancy of the data). However, tools to generate and collect T2+T3 metadata require an access to data repositories, e.g. optimally via NFS (Network File System) access (read-only at least).

17. AOB – next TWG meeting (all)

Next TWG meeting Monday-Tuesday noon-to-noon before the next EUREF symposium (May, 15-16, 2017) in Wroclaw at the premises of the University.

CB announces to invite the TWG to hold its 75th meeting in Brussels.

18. Review of Action Items (Söhne, Kenyeres)

Action Item 1 on Agenda Item 5 to AK, MP and WS: *to proceed with the ToR section on membership and to come up with a final solution until the upcoming symposium*

Action Item 2 on Agenda Item 6 to the session chairs of the 2016 symposium: *to check the text of the session description of last symposium and to identify potential invited talks*

Action Item 3 on Agenda Item 7b to WS: *to complete the questionnaire including updating the Annex 3, compile the list of addressees of the NMAs, upload the questionnaire to*



EuroGeographics web page, announcement with EUREF mail

Action Item 4 on Agenda Item 16a to CB and WS: *to distribute the EPOS Data Policy and Letter of Intent to TWG*



PARTICIPANTS

TWG members:

Z. Altamimi (ZA)
E. Brockmann (EB)
C. Bruyninx (CB)
A. Caporali (AC)
R. Dach (RD)
J. Dousa (JD)
R. Fernandes (RF)
H. Habrichexcused
J. Ihde excused
A. Kenyeres (AK)
M. Lidberg (ML)
T. Liwosz (TL)
R. Pacione (RP)
M. Poutanen (MP)
W. Söhne (WS)
G. Stangl (GS)
J. Torres excused

Guests:

A. Araszkievicz (AA)
C. Völksen (CV)