Time & location:
Monday, May 23, 2016: 13:00 – 19:00
Sociedad de Ciencias Aranzadi, San Sebastian
Alto de Zorroaga Bidea, 11, 20014 Donostia
Room: Rene Cassin (first floor)

AGENDA

Last update: May 11, 2016

1. Opening (Kenyeres)
2. Approval of minutes of 70th TWG meeting in Lisbon (all)
3. Review of Action Items from previous TWG meetings (Söhne)
4. EUREF 2016 symposium
    a. Current status (Zurutuza)
    b. Pre-conference resolutions (Söhne)
5. Working Groups
    a. Reprocessing WG – repro2 results and conclusions (Araskiewicz et al.)
    b. Repro2 troposphere combination (Pacione)
6. EPN
    a. Analysis Centre Coordinator report (Liwosz et al.)
    b. Status of new tropo SINEX format (Dousa, Pacione)
    c. New EPN stations (Söhne)
    d. EPN real-time project (Söhne)
7. Proposal for ITRF2014-based ETRS89 realization (Altamimi)
8. External Interfaces
    a. EPOS-GNSS consortium and governance (Bruyninx)
    b. UN-GGIM: Europe (Poutanen, Ihde)
9. Action Items (Söhne, Kenyeres)
10. AOB
    a. Next TWG meeting (all)
    b. Next EUREF Symposium (all)

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. Habrich (HH, excused)
J. Ihde (JI)
A. Kenyeres (AK)
M. Lidberg (ML)
T. Liwosz (TL)
R. Pacione (RP)
M. Poutanen (MP)
W. Söhne (WS)
G. Stangl (GS)
J. Torres (JT)

Guests:
A. Araskiewicz (AA)
J. Zurutuza (JZ)

MINUTES

1. Opening
2. Approval of minutes of 70th TWG meeting in Lisbon

   The minutes of the last meeting are approved without any further changes.
3. Review of Action Items from previous TWG meetings

   WS reviews the twelve Action Items of the last meeting. Only small corrections concerning the status of some.
4. EUREF 2016 symposium
   a. Current status

      JZ informs about the status of the registration and the program. Exactly 100 participants are registered for the symposium, with 56 of them for the tutorial (plus seven speakers). 22 National Reports are already confirmed, only three countries seem to give no report. For the next symposium, the session chairs propose to get a copy of the incoming abstracts in due time as it was for previous symposia.

   b. Pre-conference resolutions

      WS displays two draft resolutions, which has been prepared by EB (RINEX 3) and WS (ToR) in advance, both coming from action items of the last meeting. RP proposes another resolution about data availability from station providers for free. Question, to whom this resolution should be addressed. Proposal from CB to find approaches to archive the data for later scientific use, if not made available for free immediately.
5. Working Groups
   a. Reprocessing WG – repro2 results and conclusions

      AA presents the combination results (created by AK) from the second reprocessing (repro2). A discussion follows about the list of stations where individual solutions showed problems - mainly in the height – when repro2 was continued with the routine analysis results. This could be a problem of the different software used. It is difficult to decide which solution is the correct one.

It could also be a problem of the used antenna phase center corrections. It is mentioned that most of the problematic stations have similar issues also at the routine processing. Discussion about example station CANT where an antenna change caused an increase of disagreement. There is a jump in the cumulative solution when introducing the repro2 results including 2014 in contrast to the solution when repro2 was used only up to 2013. The reason could be that in 2014 not all individual solutions (IGE, LPT) were available for repro2. One possible explanation is the use of atmospheric tidal loading in contrary to the guidelines, although the influence cannot be so large. Lessons learned from repro2 should be kept for repro3. General discussion about the question whether the use and combination of solutions from different software is recommended. Discussion about traceability, for example, if different models were used. AC wonders why the IGS with its 6 or 7 different software packages is able to agree on one common standard and EPN not. What to do now with repro2 combination? For example, concerning cleaning the historical data base because it is well known that most people are used to use whatever data they could get..

b. Repro2 troposphere combination

RP shows some plots about the agreement of the contributing solutions w.r.t. the combinations. Two combinations have been performed: a preliminary considering all the eight available AC solutions and a final which is consistent to the final coordinate combination performed by the EPN ACC. She mentions again three important aspects to consider prior any further reprocessing, namely the data cleaning, the consistency and the redundancy.

6. EPN

a. Analysis Centre Coordinator report

TL reports on the improvements of the ACC activities. One is the refreshment of the ACC web page. Scale changes are usually seen when change from BSW5.0 to 5.2, mutually due to relativistic effects. There are two types of final combined solutions, weekly combined and daily combined. Showing some outlier problems, TL proposes to switch to daily combined solutions and to create from that the weekly solutions. Discussion again to drop the weekly solution but this is the official EUREF product, yet. Should ACs stop sending weekly solutions? Not yet – further testing is necessary.

b. Status of new tropo SINEX format

RP explains shortly the first version of the new version 2.00 of SINEX_TRO format to be adopted within all the IAG services and by all the techniques dealing with tropospheric parameters. The format is able to support: a) parameters from different sources than space geodetic techniques such as numerical weather prediction models and re-analyses, radiosondes and water vapour radiometers, b) long station names (9 characters) in concordance with RINEX 3 data format, c) products including slant tropospheric delays, d) parameters corresponding to long-term time-series of individual stations. The format structure follows the SINEX scheme but it is a NEW format independent from SINEX. Step-by-step consultation is on-going. Development has been done in the framework of the COST Action GNSS4SWEC with the support of the IGS troposphere working group.

c. New EPN stations

WS informs about the proposed EPN stations from Germany. In particular, he

explains the example for station LDB2, which is used for some years within the E-GVAP project, and raises the question about the procedure which antenna phase center corrections to be used for already existing stations. The EPN guidelines[1] are clearly formulated for such cases of stations with individually calibrated antennas. However, it is mentioned that almost all stations have a history before becoming proposed EPN stations, which could prevent them to being processed with individual calibrations. It is agreed for the time being to postpone the inclusion of station LDB2.

d. EPN real-time project

WS informs about the initiative within the IGS to rename the mountpoints on the IGS broadcasters. The current strategy with 5 characters – four character station ID plus 1 additional number – is not really transparent. Moreover, using only numbers 0 to 9 for the 5th character leaves 10 options only. What, if all the different RTCM-MSM options have to be provided, plus raw data stream, etc. RD mentions the discussion in the IGS MGEX working group about consistent naming of the products, which may have an impact on the real-time products, too. The TWG asks WS as the chair of the real-time project to actively follow the discussion within the IGS Real-Time Working Group.

7. Proposal for ITRF2014-based ETRS89 realization

ZA is presenting a proposal for an ETRF2014. One advantage of such a new realization would be the higher accuracy of the new solution (for example due to more stations defining the rotation pole). But changing from ETRF2000 to ETRF2014 the up to 2 cm coordinate change is in the range which is important for the NMAs. Differences are likely due to the scale rate. ZA indicates to write a new version of the memo. AK and JT recall the discussion about ETRF2005, where finally the decision was taken to not switch to ETRF2005 but to stay on ETRF2000. What is the impact of such a change to the national realizations? EB says that it is very difficult to explain a 1 to 3 cm change of all coordinates to the users. ZA highlights that the new version would remove the bias, which came from the offset in the Z component in ITRF2000. Discussion about a redefinition of ETRS89. Discussion about how many countries are still on older version than ETRF2000. EB proposes to formulate a resolution, where the TWG asks the opinion of the NMCAs on the introduction of an ITRF2014-based ETRS89 realization.

8. External Interfaces

c. EPOS-GNSS consortium and governance

CB informs about the EPOS-GNSS Consortium Agreement (CA), which will be setup within the GNSS work package of EPOS-IP. This Call will deal with the operational phase of EPOS. She explains the discussion about the voting scheme and the several options, sent out by mail last week. How many votes, how many participations? Several partners representing EUREF are involved with the delivery of EUREF products to EPOS: MUT/WUT, FOMI, BKG, ROB; GOPE and ASI as reprocessing ACs will not be included in the governance. LM and UBI do not provide any EUREF products, but are EUREF contributors. Non-EUREF partners in the group are INGV, CNRS (with three different/individual organisations) and

[1] Guidelines for EPN Stations and Operational Centres (http://www.epncb.oma.be/_documentation/guidelines/guidelines_station_operationalcentre.pdf)

IMO. TWG agrees on the option, that each partner signing the EPOS-GNSS CA has one vote. Discussion about a MoU between EUREF and EPOS. TWG is in favor not to go in this direction for the moment. CB explains that a MoU might be necessary to list the data & products for which EUREF grants permission to EPOS to redistribute them. AC expresses concerns as to the effect that decisions taken by majority within the EPOS Consortium, perhaps with EUREF in a minority position, could have on matters in which EUREF has so far been free to decide, once ratified by the EUREF Symposium. CB and RF explain that it is the goal that within the EPOS-GNSS consortium board decisions will be taken in consensus, similar to how the EUREF TWG operates.

d. UN-GGIM: Europe

MP starts the discussion with an overview about GRF Europe. JI added some thoughts and questions. The central question is if a GRF Europe is necessary. ZA reviews the GGRF and UN-GGIM. He highlights that a committee like UN-GGIM is limited in time whereas a commission would be permanent. He displays some pros and cons for the establishment of a GRF Europe working group within UN GGIM:Europe. Geodetic reference frames are number 1 of 10 tasks which shows the importance of GRF. The main deal behind UN GGIM is to start strengthening actions to reach a more sustainable status of reference frame maintenance replacing the current best-effort based work.

9. Action Items

Action Item 1 on Agenda Item 5a to AK, CB, TL, JD and RP: draw conclusions from repro2, agree and perform the cleaning of all databases before the next repro.
Action Item 2 on Agenda Item 6a to TL: after acceptance of the new strategy by the TWG, write a EUREF mail informing about changing the strategy.
Action Item 3 on Agenda Item 6c to WS, CB, EB and ML: come up with a reformulation of the specific sections of the Guidelines for a better inclusion of existing stations into the EPN.
Action Item 4 on Agenda Item 7 to all: formulate a resolution about ETRF2014 questionnaire for the upcoming symposium.

10. AOB

a. Next TWG meeting

The next TWG meeting will take place on October, 20-21, 2016 (Thursday-Friday, noon-to-noon) in Vienna.

b. Next EUREF Symposium

There will be a presentation about Wroclaw for 2017 during the upcoming symposium. A date should be fixed during this symposium.