ACTIVITIES AND NEW INITIATIVES OF THE EUREF TECHNICAL WORKING GROUP

EUREF 2009 symposium
Florence, Italy
May 26-30, 2009

C. Bruyninx

For more info . . .
INTERNATIONAL ASSOCIATION OF GEODESY (IAG)

IAG Commission 1
Reference Frames

Sub-commission 1.3 Regional Reference Frames

Other sub-commissions

Sub-commission 1.3 d
Africa

Sub-commission 1.3c
North America (NAREF)

Sub-commission 1.3b
South America (SIRGAS)

Sub-commission 1.3a
Europe (EUREF)

Working Group
Regional Dense Velocity Fields
CURRENT MEMBER LIST EUREF TWG

- Zuheir Altamimi, France
- Elmar Brockmann, Switzerland
- Carine Bruyninx, Belgium (TWG chair)
- Alessandro Caporali, Italy
- Jan Dousa, Czech Republic
- Rui Fernandes, Portugal
- Heinz Habrich, Germany
- Helmut Hornik, Germany (EUREF secretary)
- Johannes Ihde, Germany (EUREF chair)
- Ambrus Kenyeres, Hungary
- Martin Lidberg, Sweden
- Jaakko Mäkinen, Finland
- Markku Poutanen, Finland
- Wolfgang Söhne, Germany
- Guenter Stangl, Austria
- João Torres, Portugal

Honorary members:
- Claude Boucher, France
- Erich Gubler, Switzerland
- Werner Gurtner, Switzerland
- Herman Seeger, Germany
- Werner Gurtner, Switzerland
- Herman Seeger, Germany
- Knud Poder, Denmark
## TWG MEETINGS 2006 - 2009

<table>
<thead>
<tr>
<th>No</th>
<th>City</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>Florence</td>
<td>26/5/2009</td>
</tr>
<tr>
<td>49</td>
<td>Budapest</td>
<td>26-27/2/2009</td>
</tr>
<tr>
<td>48</td>
<td>Munich</td>
<td>3-4/11/2008</td>
</tr>
<tr>
<td>47</td>
<td>Brussels</td>
<td>17/6/2008</td>
</tr>
<tr>
<td>45</td>
<td>Paris</td>
<td>29-30/11/2007</td>
</tr>
<tr>
<td>44</td>
<td>London</td>
<td>5/06/2007</td>
</tr>
<tr>
<td>43</td>
<td>Lisboa</td>
<td>5-6/03/2007</td>
</tr>
<tr>
<td>42</td>
<td>Frankfurt</td>
<td>6-7/11/2006</td>
</tr>
<tr>
<td>41</td>
<td>Riga</td>
<td>13/6/2006</td>
</tr>
</tbody>
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COOPERATIONS

EuroGeographics
- MOU signed August 2007
- Mutual projects, e.g. INSPIRE
- Presentation by J. Torres

EUMETNET
- MOU signed June 2007
- Mutual exchange of data

International GNSS Service
- Common standards
- Cross-fertilization
- EUREF involved in IGS real-time, antenna calibration WG and Infrastructure committee
PROJECTS AND GOALS

- EVRF2007 distributed
- **Session 1**: New ETRS89 WG, more frequent updates of ITRS/ETRS89 coordinates

Increasing importance for maintenance of ETRS89

**Session 1**

**Session 2**

**Session 5**

- New chairman
- Final report in

**Development and promotion of ETRS89 and EVRS**

**European Combined Geodetic Network (ECGN)**

**EUVN Densification (EUVN_DA)**

**Unified European Levelling Network (UELN)**

**EUREF Permanent Network (EPN)**
- **ETRS89**
  - ITRFyyyy → ETRFyyyy (Memo Boucher and Altamimi)
  - ITRF2005 introduced Nov. 2006 in EPN
  - Conversion ITRF2005 → ETRF2005 coordinate jump up to 2 cm wrt ITRF2000 → ETRF2000

- Avoid jumps by using ETRF2000 as conventional frame for ETRS89

- ITRF2008 → ITRF2000 → ETRF2000
Memo on conversion from ITRS to ETRS89 (Boucher and Altamimi) has been updated, Nov. 24, 2008

Creation of new Working Group “Development of the ETRS89”, chaired by M. Lidberg (session 1)
  - Education, outreach, future development

Guidelines for EUREF Densifications, C. Bruyninx (session 1)

Survey on official ETRS89 coordinates of EPN stations in NMCA, E. Brockmann (session 1)
RECENT ACTIVITIES

- Need for more up-to-date coordinates of EPN stations
  
  + Updates following the ITRFyy updates: ITRF2000, ITRF2005, ITRF2008
  
    - EUREF mail 4142 (Dec. 12, 2008)
  
  + Follow up, since May 2009: EUREF densification of ITRF2005 is updated each 15 weeks, using the most recent EPN data, A. Kenyeres (session 1)
    - Class A stations → to be used for EUREF densifications
  
  + Coordinates available from http://epncb.oma.be/_trackingnetwork/coordinates/
RECENT ACTIVITIES

- New EPN Special Project “Real-time Analysis”, chaired by W. Söhne (session 2)
  - 47% EPN stations stream real-time GNSS data
  - Processing of the real-time data to derive and disseminate new (or extended) real-time GNSS products
  - Increase reliability and decreasing workload of today’s broadcasters
  - Contribution to the IGS RT Pilot Project

- New EPN Special Project “Reprocessing”, chaired by C. Völksen (session 2)
  - Pilot reprocessing done in 2007/08 by MUT and ROB: improvement of EPN time series
  - Official EUREF reprocessing following IGS schedule
  - Continuous reprocessing?
  - Global stations
- Increased effort to quickly monitor EPN coordinates and generate alarms
  - LAC coordinator, H. Habrich (session 1)
  - Rapid daily solutions from the EPN analysis centers
  - Stations are missing, need to more AC to get involved.
RECENT/FUTURE ACTIVITIES

- EUREF associate member of International Committee on GNSS (United Nations Office for Outer Space Affairs)
  - Working Group D: Interaction with national and regional authorities and relevant international organizations

- EUREF Web site

- EUREF campaign database

- ITRS-ETRS89 transformation programs on-line