PROCEDURE FOR BECOMING AN EPN STATION

EPN Central Bureau
epncb@oma.be

Changes

Jan 20, 2017	Use igs14.atx instead of igs08.atx.
Dec. 18, 2013	Added http://offiler.demon.co.uk/~dave/gwv/gwv_list.cgi for checking multiple station 4-char IDs
Jan. 17, 2013	- Added http://facility.unavco.org/data/gnss/sitecheck.php for checking multiple station 4-char IDs - Updated revisited links - Clarifications in "Steps to be followed"
Dec. 5, 2011	Candidate EPN stations must provide information on the national ETRS89 coordinates of the station
Dec. 5, 2006	New EPN stations must have an antenna/radome with known absolute calibrations Reflect new data flow.
Sep. 08, 2004	Update "Procedure Summary"
Dec. 01, 2003	Major document revision to reflect the current procedure used at EPN CB
Apr. 22, 2002	IGS stations in Europe no longer automatically part of EPN
Nov. 24, 2000	Update "Data Format, Flow and Archive"

This document describes the procedure to be followed by GNSS stations in order to be included in the EUREF Permanent Network (EPN). It is applicable to European GNSS stations of regional interest, and includes detailed steps to be taken by the responsible agency, in consultation with the EPN Central Bureau.

In addition to this document, candidate EPN stations should consult the "Guidelines for EPN Stations and Operational Centres" (http://epncb.oma.be/_documentation/guidelines/guidelines_station_operationalcentre.pdf) in order to comply with the detailed station requirements with respect to monumentation, receiver, antenna, data handling, documentation, and data formats as described in this document.

GNSS stations wishing to join also the IGS network need to solicit separately their inclusion into this network (see "IGS New Site Checklist" at http://kb.igs.org/hc/en-us/articles/202014573-New-Site-Checklist).

Prior to the station installation is it recommended to follow the "Monumentation Design and Implementation Recommendations" (http://kb.igs.org/hc/en-us/articles/202094816-Monumentation-Recommendations) issued by the IGS.

All electronic messages, unless otherwise specified, should be sent to the EPN Central Bureau (CB) at epncb@oma.be.

1. Make sure the station complies with the **Requirements for Permanent Stations** in the document "Guidelines for EPN Stations and Operational Centres"
   http://epncb.oma.be/_documentation/guidelines/guidelines_station_operationalcentre.pdf
   Pay attention to guidelines specifically for new stations.

2. Make sure you, or and associated agency, are capable of filling the **Requirements for Operational Centres** in the document "Guidelines for EPN Stations and Operational Centres"
   http://epncb.oma.be/_documentation/guidelines/guidelines_station_operationalcentre.pdf

3. Choose the **station 4-character identification code**:
   All EPN stations are uniquely identified using a four-character abbreviation code. Consequently, choosing this code is the first step. It will be used for all future reference to your station (data and documentation).
   To prevent duplication, check for already used station abbreviations at
   http://sopac.ucsd.edu/checkSiteID.shtml
   http://facility.unavco.org/data/gnss/sitecheck.php
   ftp://igs-rf.ign.fr/pub/DOMES/codomes.snx
   http://daveoffiler.uk/cgi-bin/gbgnss

4. **Request a DOMES number** for your station/marker from the International Earth Rotation and Reference Systems Service (IERS): http://itrf.ensg.ign.fr/domes_request.php.

5. **Send a letter** to the
   EPN Central Bureau
   Dr. Carine Bruyninx
   Avenue Circulaire, 3
   B-1180 Brussels
   Belgium

   stating the **long-term commitment** (at least 5 years) to operate the station following EPN Guidelines. Describe
   - The chosen station 4-character identification code, the a priori station coordinates and station location compared to other EPN stations,
   - The collocated instruments (tide gauge, meteo sensor, seismometer, gravity,…)
   - The connection to the national levelling network and UELN
   - The availability of national official ETRS89 coordinates (if available and if used for national reference frame densifications) of the station. Provide the station name and DOMES number, X-Y-Z coordinates, frame, epoch and the time since when these coordinates were used. Specify also the responsible agency and persons (e-mail) maintaining the national ETRS89 coordinates.
   - The receiver and antenna/radome type using standard names from ftp://epncb.oma.be/pub/station/general/rcvr_ant.tab. Indicate if the receiver is tracking other GNSS next to GPS and if individual antenna/radome calibrations are available (if not, type mean calibration from the IGS should be available, check ftp://igscb.jpl.nasa.gov/igscb/station/general/igs14.atx).

- The planned data flow (primary and secondary Data Centre) for daily, hourly as well as real-time streams as well as the responsible Operational Centre
- The station installation date and availability of historical data.
- The name of the Parent/Funding Organization, name and title of the Authorizing Official, name and title of the Primary Point of Contact, mailing address and phone/fax/e-mail should be included.
- The letter should be signed both by the Authorizing Official committing the organization/institution to the EPN and the Primary Point of Contact involved.

A draft letter is available from http://epncb.oma.be/_documentation/guidelines/commitment.doc

After reception of the letter, the EPN CB will propose the station to the EPN Coordination Group (CG) for inclusion in the EPN. As soon as the CG has made a decision, the EPN CB will inform the station Primary Point of Contact if the procedure can be continued.

6. **(Re)Submit the Operational Centre form to the EPN CB**
   If the station is part of a new network, the new Operational Centre has to create a centre description form (download ftp://epncb.oma.be/pub/center/oper/BLNKFORM.OC), include the station, and send it to the EPN CB.
   For existing networks, the responsible Operational Centre has to include the new station (and 4-char ID) in its centre description form (download ftp://ftp.epncb.oma.be/pub/center/oper/'center'.OC and modify it) and send it by email to the EPN CB.

   Wait for the EPN CB to confirm reception of the form. After reception, the status of the inclusion of the station into the EPN will be given at http://epncb.oma.be/_networkdata/proposed.php.

7. If available, send the **individual antenna calibration** values (in ANTEX format) for the antenna/radome installed at your station to the EPN CB.

   Wait for the EPN CB to confirm reception of the calibrations.

8. Use the EPN **Station Log Submission** tool
   http://epncb.oma.be/_networkdata/sitelogsubmission/
   to complete the station log including the full observation history of the station/marker. Then validate and submit it.
   Instructions are available from ftp://epncb.oma.be/pub/station/general/sitelog_instr.txt and examples can be retrieved at from in ftp://epncb.oma.be/pub/station/log/.

9. Use the EPN **Station Picture Submission** tool
   (http://epncb.oma.be/_networkdata/sitepicturesubmission/) to upload digital station pictures from relevant monuments, markers or collocated.

10. Subscribe to **EUREF Mail**
    (instructions at http://epncb.oma.be/_newseventslinks/EUREFmail/).

11. Contact two EPN Data Centres to **start the daily and hourly data flow** and the EPN Regional Broadcaster(s) to **start the real-time data flow** (details in B. Data Format, Flow and Archive)

When the data quality, latency and consistency checks performed by the EPN CB are successful, the station will be designated to at least three EPN Local Analysis Centres.

The EPN CB will announce through EUREF mail the official integration of the station into the EPN.