PROCEDURE FOR INCLUDING GNSS STATIONS IN EPOS

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Available from the M3G-Bureau at https://gnss-metadata.eu/site/guidelines/
Questions and comments are welcome at C.Bruyninx@oma.be.

Updates:
Created: January 13, 2017: Initial version discussed at TCS-ICS Integration Workshop (02/2017)
Update:
March 27, 2019: Refinement
Feb. 19, 2019: Revision of "Data Supplier/OC" terminology.
Feb. 2, 2018: Revision of "Data Centre/Node" and "Agency" terminology.
Jan. 10, 2018: Revision to reflect higher maturity of M3G system.
July 17, 2017:
- Added M3G-bureau, information on the Supplier Letter
- Clarified relation Operational Centre – Data Supplier

Intended for:
This document describes the procedure to be followed by the Data Suppliers in order to integrate GNSS stations in EPOS.

Terminology:

Data Supplier: The EPOS Data Supplier is the agency owning the GNSS station and having the legal rights to distribute the data of the GNSS station. The Data Supplier signs the EPOS-GNSS Data Supplier Letter and ensures the data flow of the GNSS station to EPOS.

Operational Centre (OC): The Operational Centre maintains the GNSS station metadata (e.g. site log) within EPOS. The Data Supplier indicates the name of the agency acting as Operational Centre in the EPOS-GNSS Data Supplier Letter. Mostly, the Data Supplier acts as Operational Centre.

Unless otherwise specified, all emails should be sent to m3g@oma.be (M3G: Metadata Management and distribution system for Multiple GNSS networks).
Procedure:

   1.1. Make sure the station complies with the Requirements for Permanent Stations in this document. Pay attention to guidelines specifically for new stations and make sure the equipment (receiver, antenna) you use is known to the International GNSS Service (IGS)! If it is not, contact m3g@oma.be.
   1.2. Make sure your agency is the data owner allowed to sign the EPOS-GNSS Supplier Letter, available from https://gnss-metadata.eu/Guidelines/EPOS-GNSS_Supplier_Letter.docx
   1.3. Make sure you or another agency is capable of performing the tasks of an Operational Centre described in the document "Guidelines for EPOS-GNSS Stations and Operational Centres". As a basic principle, EPOS has an open data policy.

2. Make sure you, or another agency, is capable of acting as an EPOS Data Node as it is described in the document "Guidelines for EPOS-GNSS Data Nodes (not available yet)". A list of available EPOS-GNSS Data Nodes is available from https://gnss-metadata.eu/site/datanode

3. Choose the station(s) 4-character identification code(s):
   All EPOS-GNSS stations are uniquely identified using a 9-character abbreviation code (RINEX 3 naming conventions), consisting of a 4-char ID, followed by "00" and the 3-char ISO country code. Consequently, choosing the 4-char station code is the first step. The 9-char code will be used for all future reference to your station (data and documentation).
   To prevent duplication, check for already used 4-char station abbreviations at http://sopac.ucsd.edu/checkSiteID.shtml
   ftp://igs-rf.ign.fr/pub/DOMES/codomes.snx
   https://gnss-metadata.eu/site/stations
   OPTIONAL, but recommended: 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

   Download (from https://gnss-metadata.eu/Guidelines/EPOS-GNSS_Supplier_Letter.docx), complete and sign the EPOS-GNSS Supplier Letter including Annex A, B, and C. Send the scanned letter to the M3G-bureau (m3g@oma.be) and send the original to Carine Bruyninx
   Royal Observatory of Belgium
   Av. Circulaire 3
   1180 Brussels
   BELGIUM

   If you are proposing several stations to EPOS, then just sign the letter once and list all the stations in Annex A, associated Operational Centres in Annex B, and Data Nodes (if applicable) in Annex C.

4. Upon reception of the EPOS-GNSS Data Supplier Letter, the contact person of the Operational Centre(s) indicated in Annex B of the EPOS-GNSS Supplier Letter will receive an email invitation from the M3G-bureau to register an account at https://gnss-metadata.eu in order to upload the GNSS station metadata. If an EPOS Data Node has been inserted in Annex C of the EPOS-GNSS Data Supplier Letter, the M3G-bureau will also ask confirmation from the selected Data Node to see if it agrees to redistribute the GNSS data to EPOS through its node. If no EPOS-GNSS Data Node was selected, the M3G-bureau will assist the Data Supplier to select the most appropriate EPOS-GNSS Data Node for distributing the station data.
5. In M3G, the Operational Centre must verify/update its User Agency information, add the Associated Agencies (if any), add the new proposed station(s), select the network (at least EPOS must be selected) to which the station is proposed, select the EPOS Data Node (option not yet active), and upload, validate and save the GNSS station metadata.

6. Once the mandatory GNSS station metadata is validated and saved at M3G and the EPOS Data Node has been confirmed, the GNSS station metadata will show up at the EPOS-GNSS Data Gateway (even if it is still ‘Proposed to EPOS’).

7. As soon as the GNSS RINEX data from of the new GNSS station will become discoverable at the EPOS-GNSS Data Gateway, the M3G-bureau will switch the label of the GNSS station from Proposed to Included in the EPOS network.