

PROCEDURE FOR INCLUDING EPN 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:

April 26, 2023:

- Harmonization with terminology used in new M³G release
- Introduction of "Station Metadata Maintainer (MM)"
- Update of URLs

May 6, 2021: Align with revisited handling of EPOS metadata in M³G

August 5, 2020: Added clarifications based on user feedback

Feb. 28, 2019: Refinement

Feb. 19, 2018: Revision of "Data Supplier/OC" terminology.

Feb. 2, 2018: Revision of "Data Center/Node" and "Agency" terminology.

Jan. 29, 2018:

- Improved consistency of terminology with other EPOS documents:
 - o removed IPR and replaced it by 'has full ownership rights to the data and/or it has full rights to distribute them or to allow their distribution by a third party' (similar to what is mentioned in Data Supplier Letter).
 - o Corrected use of "Data Node/Center" terminology.
- Clarified step 1 of the procedure.

July 17, 2017: Creation

Intended for:

This document describes the procedure to be followed by the **EPN Station Owners** wishing to integrate EPN stations in EPOS.

If the Station Owner wishes to also include non-EPN stations in EPOS, then, for the non-EPN stations we refer to "[Procedure for Including GNSS Stations in EPOS](#)".

Terminology

Data Supplier or Responsible Agency or Station Owner: The 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. The Data Supplier is responsible to ensure regular uploading of the RINEX data of its station to EPOS and keeping the station metadata in M³G up to date. However, it is possible that the Data Supplier delegates these tasks to other agencies such as the Operational Centre and/or Metadata Maintainer.

Operational Centre (OC): The OC performs data validation, conversion of raw data to the Receiver Independent Exchange Format (RINEX), data compression, generation of real-time streams, and data upload to the Data Centres and the Broadcasters through the Internet. For some stations, the OC is identical with the agency responsible for the respective station (i.e., the OC is identical to the Station Owner).

Station Metadata Maintainer (MM): The agency that keeps the GNSS station metadata (e.g. site log) up to date within M³G portal. The Data Supplier indicates the name of the agency acting as Metadata Maintainer in Annex B of its EPOS-GNSS Data Supplier Letter.

For the majority of the EPN stations, the Data Supplier itself acts Operational Centre and Metadata Maintainer. However, it is also possible that the Data Supplier delegates the upload of the station data to the data centres and/or the maintenance of the station metadata to another agency(ies).

M³G-Bureau: Collects the EPOS-GNSS Data Supplier Letters and helps station owners to select the most appropriate EPOS data node. The M³G-Bureau maintains the M³G portal (<https://gnss-metadata.eu>) where GNSS station metadata (such as the site log) must be submitted. It validates these metadata, provides them to the EPOS-GNSS Data Gateway and EPN Central Bureau, and it also collects information on the agencies involved in operating EPOS- GNSS stations.

For more information, see the EPOS-specific glossary at <https://gnss-metadata.eu/site/glossary?page=epos>

Unless otherwise specified, all electronic messages should be sent to the M³G-Bureau at m3g@oma.be.

Procedure

(1) Agency proposing to include GNSS stations in EPOS

Make sure your agency is the Station Owner, having full Ownership Rights to the RINEX data of the EPN station(s). This means in practice also that in M³G the *Responsible Agency* in section 12 of the site log(s) of your EPN station(s) must correspond to the Station Owner agency proposing the EPN station(s) to EPOS.

(2) Agreeing that EPOS can redistribute the data

Send an email to m3g@oma.be with the list of EPN stations (use RINEX 3 9-char naming convention) for which your agency agrees

- that EUREF makes the daily RINEX data also discoverable to EPOS
- that EPOS is allowed to redistribute these daily RINEX data

and clearly state both points above in the email.

(3) Metadata in M³G

If not yet done, insert in M³G a data license (CC BY 4.0 is the standard data license in use within the EPN and EPOS) for the RINEX data set of your EPN station(s).

(4) Status of the EPN station(s) in EPOS

Once the station metadata in M³G are complete, the M³G-bureau will

- propose the EPN station(s) to EPOS and send the station metadata to the EPOS-GNSS Data Gateway (<https://gnssdata-epos.oca.eu/>)
- make sure the station(s) daily RINEX data that have been provided to EUREF become discoverable within EPOS

The M³G-bureau will switch the status of the EPN station(s) from “Proposed to EPOS” to “Included in EPOS” as soon as a relevant number of RINEX data becomes discoverable at the EPOS-GNSS Data Gateway:

- *For active stations (which have a receiver and antenna installed): minimally 4 weeks of recent RINEX data must be discoverable.*
- *For inactive stations (which have temporarily no receiver or antenna installed), decommissioned stations (which will never track again), or stations temporarily unable to submit data: Minimally 3 years of RINEX data over the full station history must be discoverable.*

The status of a station within the EPOS network is available on-line from the M³G web page:

<https://gnss-metadata.eu/site/stations>