# E-GVAP Activities at ROB in 2013

Eric Pottiaux, Royal Observatory of Belgium

# Since the last meeting…

Royal Observatory of Belgium

Solar-Terrestrial Centre of Excellence

## Status since November 2012

- October 2012: the IT infrastructure was renewed to sustain the service
- Since then: the service has performed well and was stable - all user requirements (NWP) are satisfied
- A few issues fixed in ROB's COST files (e.g. country name) – BUFR encoding and streaming
- Adaptation and testing for the new file naming convention (v 2.2): files are created in parallel but not yet uploaded to E-GVAP server → can start the upload?
- Received the new release of the Bernese software (v 5.2) in April 2013, but not used yet for E-GVAP

# Nomenclature of the ROB solutions

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*ROB has 4 processing systems and provides solutions from 3 of them to E-GVAP:*

**ROBH**

| | | |
|---|---|---|
| *Input:* | *hourly RINEX files* | *Operational* |
| *Update cycle:* | *hourly* | *~ 395 stations* |
| *Purpose:* | *NWP data assimilation* | *Proc. time: 13-16 min.* |

**ROBQ**

| | | |
|---|---|---|
| *Input:* | *real-time GNSS observations (NTRIP)* | *Demo* |
| *Update cycle:* | *sub-hourly (currently hourly)* | *~ 175 stations* |
| *Purpose:* | *nowcasting + rapid-cycle NWP data assimilation* | *Proc. time: 8-13 min.* |

**ROBT**

| | | |
|---|---|---|
| *Input:* | *hourly RINEX files* | *Tests* |
| *Update cycle:* | *hourly* | *~ 550 stations* |
| *Purpose:* | *Tests + prepare next ROBH* | *Proc. time: 20-30 min.* |

**ROBP**

| | | |
|---|---|---|
| *Input:* | *daily RINEX files* | *Internal only* |
| *Update cycle:* | *daily (latency of 6 days)* | *~ 835 stations* |
| *Purpose:* | *CRD + validation + prepare for re-analysis* | *Proc. time: 10-14 hours* |


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# European stations included in ROBH

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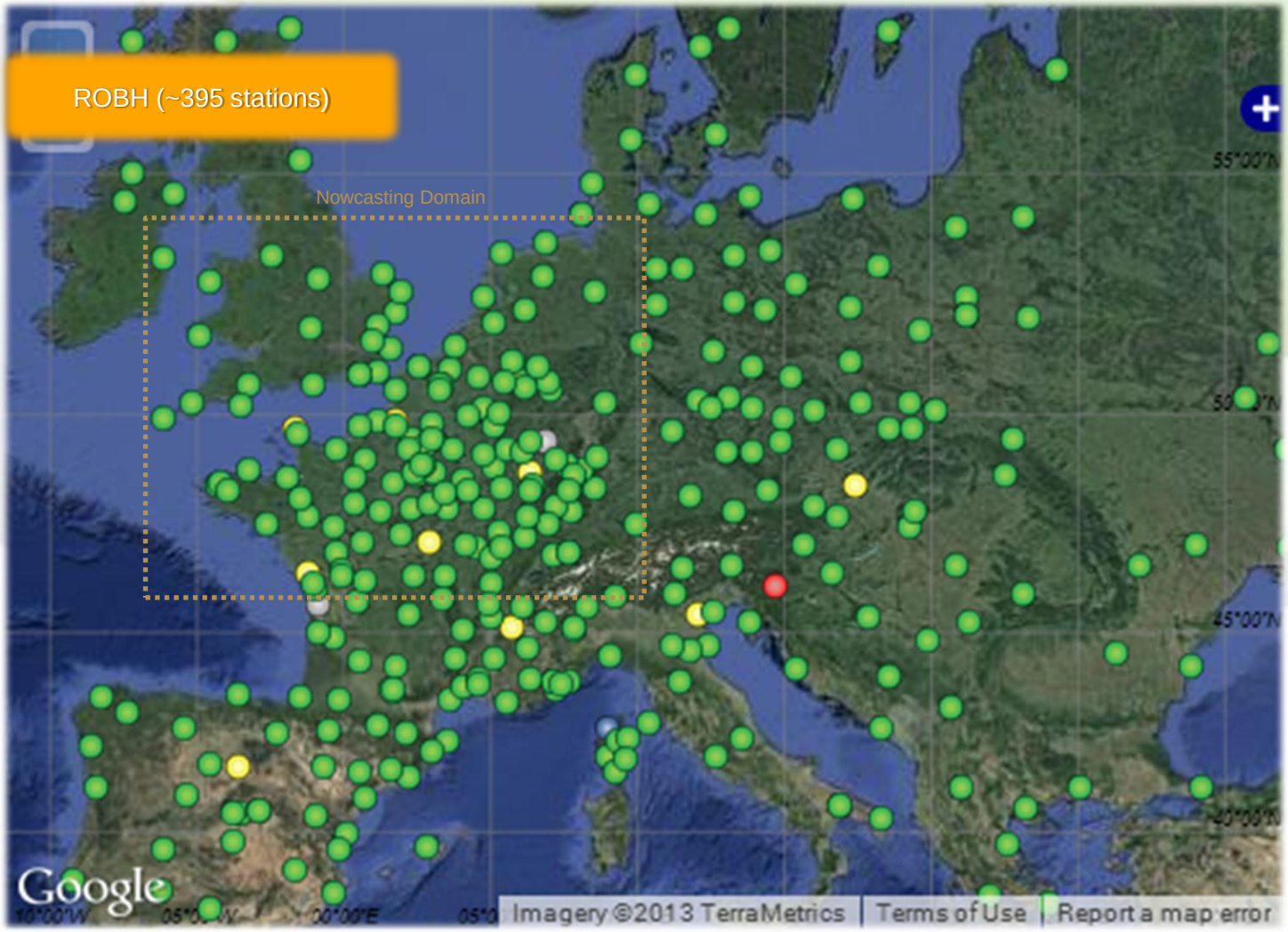


*Status: 26 November 2013 (Several stations are located outside the represented domain).*



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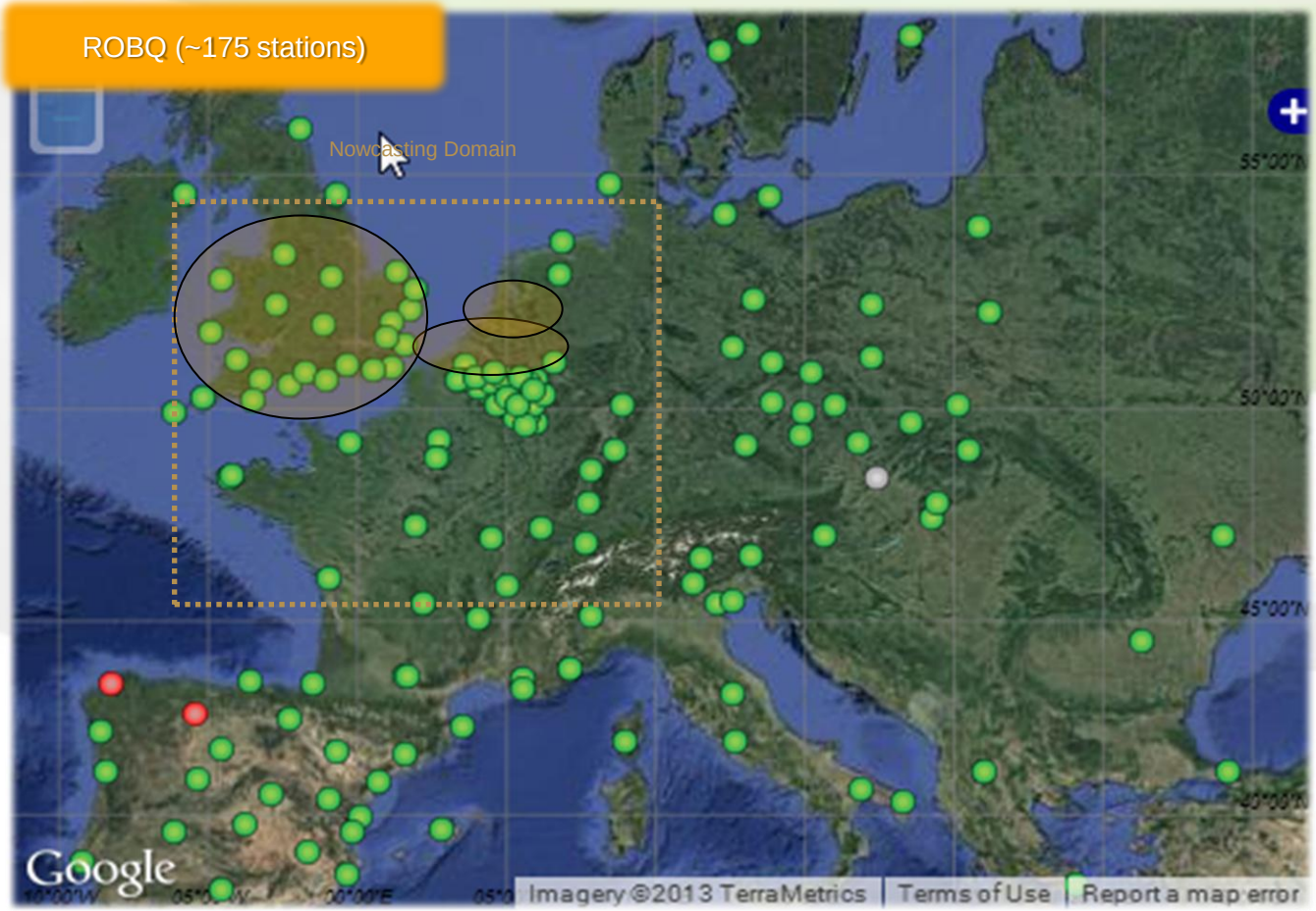


*Status: 27 November 2013 (Several stations are located outside the represented domain).*

- Still expecting to add FLEPOS stations (ready, just wait for open-access to NTRIP caster).
- Access to NETPOS stations (ready but wait the switch to BSW52)
- More U.K. Osnet stations can be added (wait OS ready with their new server + the switch to BSW52).

# Roadmap for next year(s)



1. Further develop ROBQ and ROBT processing systems:
   - Switch to the version 5.2 of the Bernese software (BSW52)
   - Switch to sub-hourly processing fro ROBQ
   - Search for more GNSS station observations (UK, NETPOS, FLEPOS…)
   - Improve automation (site exclusion, monitoring, handling of problems…)

2. Possibly start a new cycle of R&D related to GNSS4SWEC:
   - Develop enhanced/new processing methods (multi-GNSS, PPP, global analysis…)
   - Develop enhanced/new tropospheric products (horizontal gradients, slant delays…)

# Short/Mid-term Work Plan for COST ES1206

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Colour Legend:

- Long-term Goal – Under Consideration
- Short/Mid-term Goal - Planned
- Development & Optimization Stage
- Not applicable