

IGE Analysis Centre Report in E-GVAP

Instituto Geográfico Nacional

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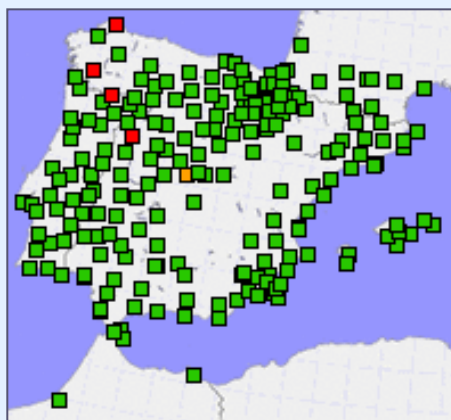
Summary

- Introduction
- Current processed network
- Data flow
- Overview of processes
- E-GVAP ZTD comparisons.
- Next steps.

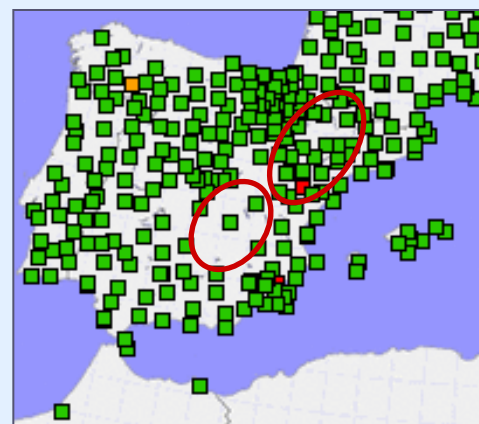


Introduction

- IGE, E-GVAP Analysis Centre since 2008.
- No relevant changes since the last meeting:
 - Number of stations has grown up (from ~ 280 to ~ 300 stations).
 - New region covered in the NE (Aragon) and some new stations in the center.



Nov. 2012

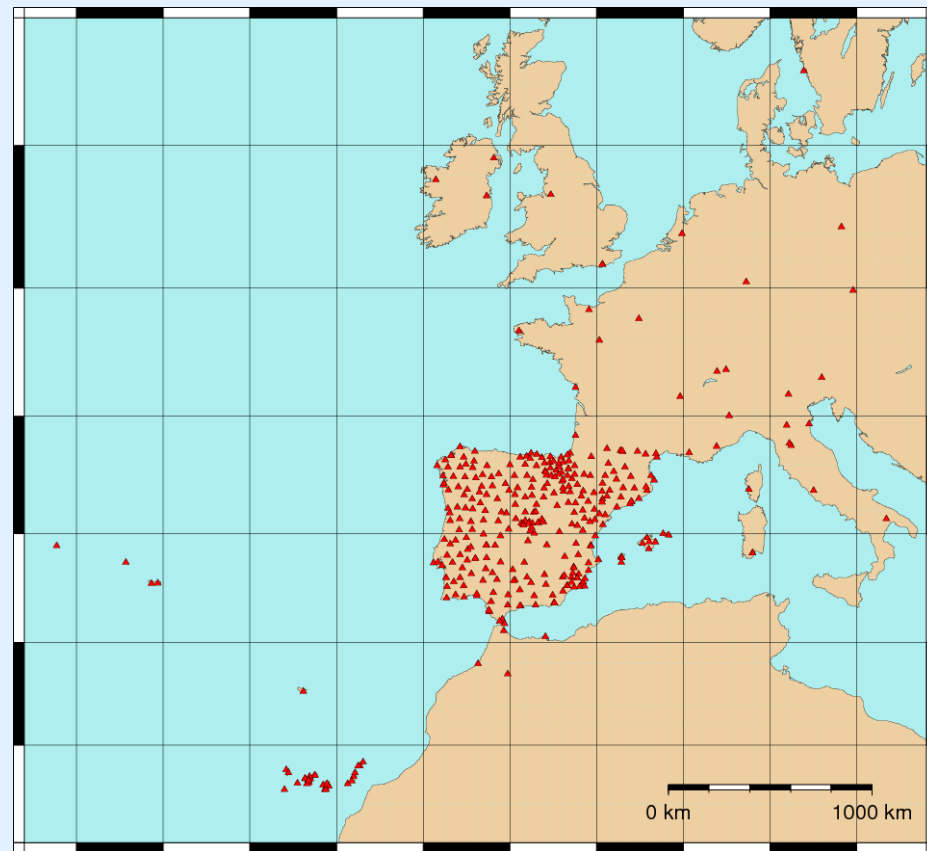


Nov. 2013



Current processed Network

- PP process ~ 350 stations.
 - 72 IGS or EPN.
 - 10 Supersites.
 - 19 IGB08 for Datum fixing.
 - 280 more stations in the area.
 - Spain
 - Public (regional networks).
 - Private.
 - Portugal and France (south).
 - Public stations (IGP & IGN)
- Not all the stations provide hourly data on time (< 25 min):
 - Normally, about 300 stations are not processed for E-GVAP.



Lacks of data in the area

■ Asturias

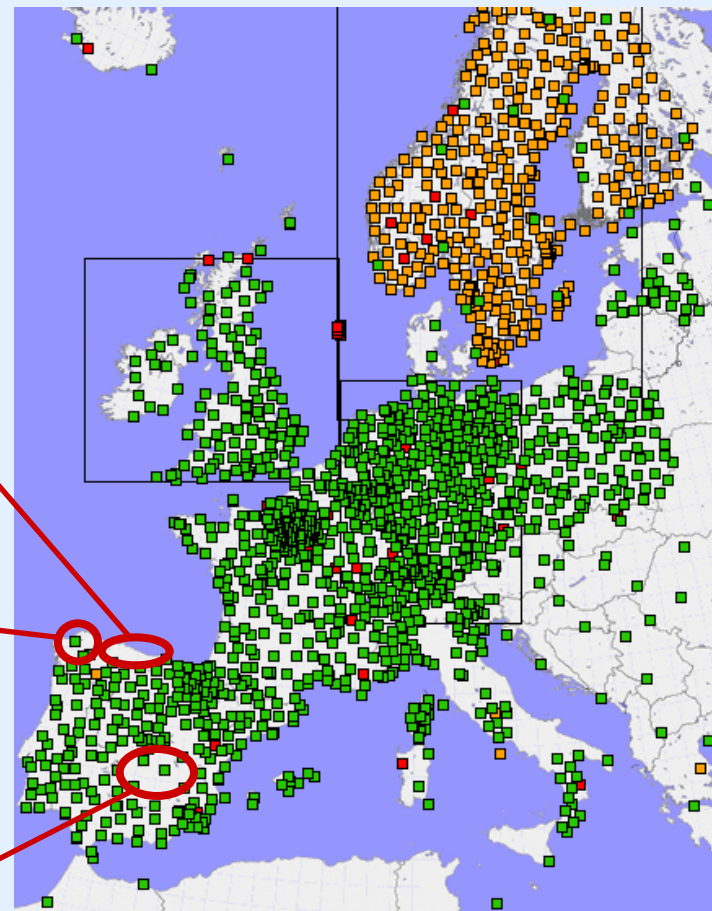
- Public network (RTK) available.
- Currently no FTP RINEX available.
- Agreement with Smartnet in order to obtain the data.

■ Galicia

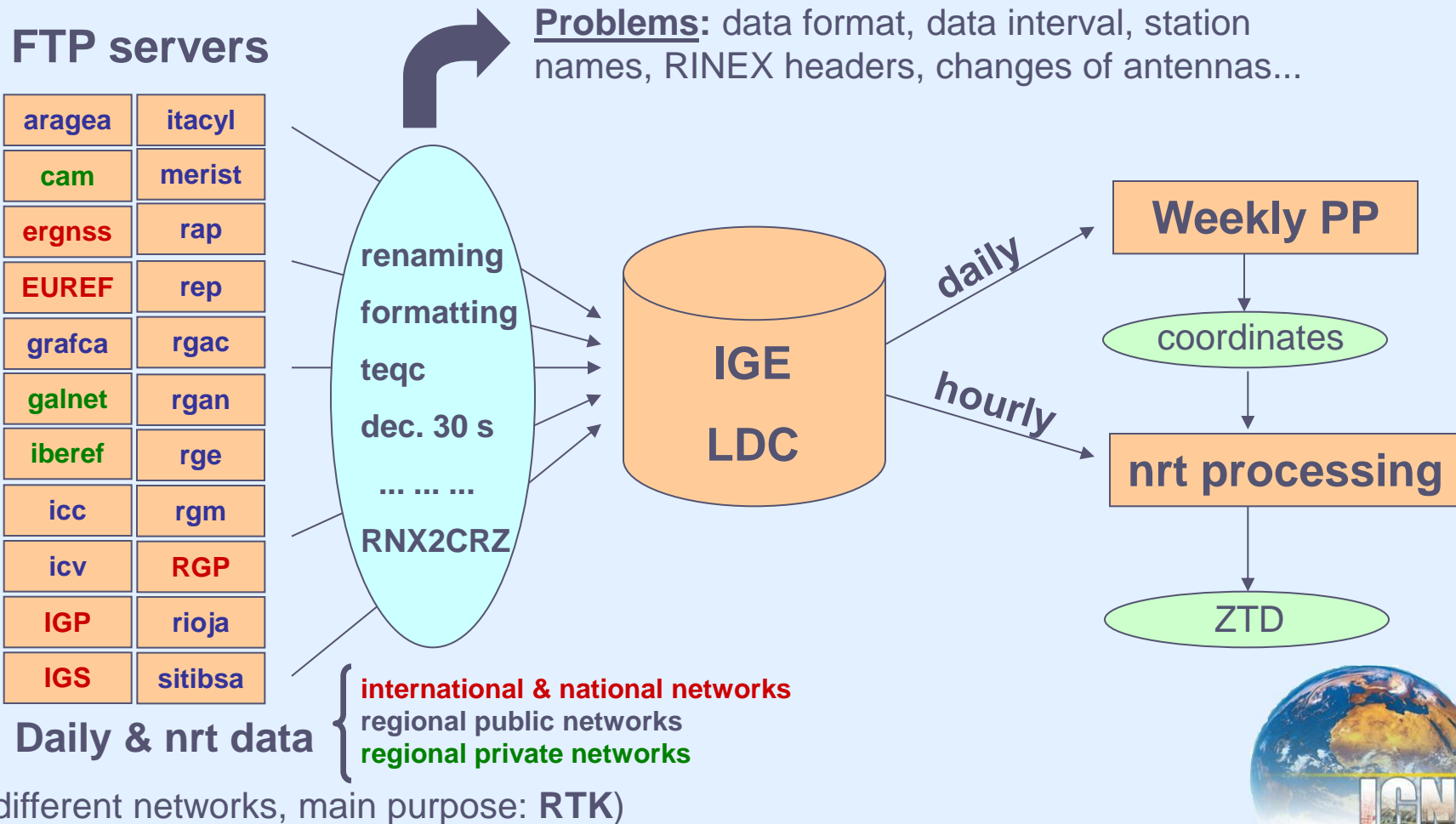
- Private network (18 stations) for IGN.
- Delay of data due to GPRS and FTP unstable.
- Agreement with other private company.

■ Castilla-La Mancha

- No network (public nor private).
- IGN is densifying its network in the area.



Data flow



Overview of processing

■ 1st.- Weekly process.

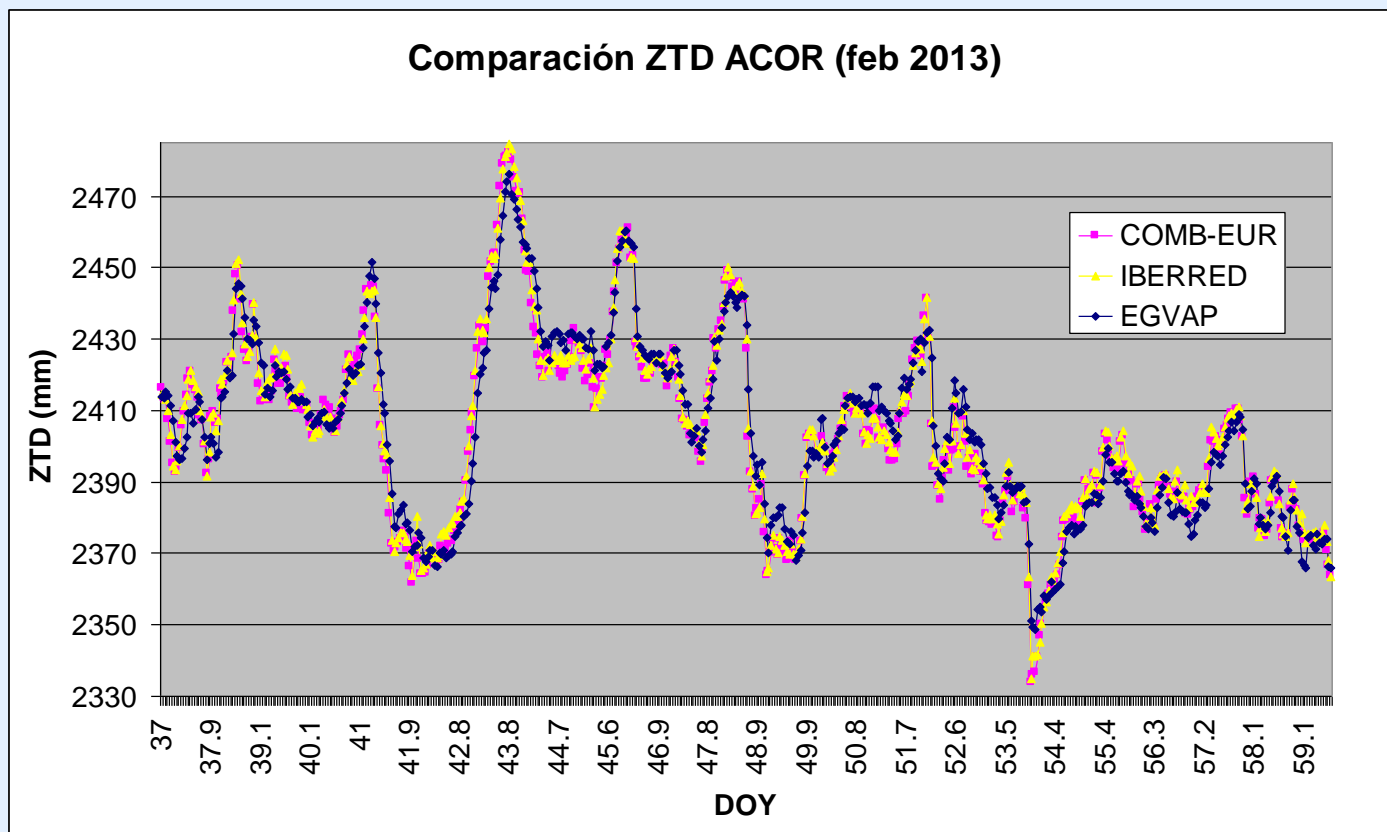
- Objective → Precise coordinates for NRT.
 - Double differences (only GPS, but with the migration to BSW 5.2, also GLONASS).
 - Final IGS Orbits.
 - Finally → Weekly combination.
 - Clustering.
 - Precise Coordinates from weekly solution combination 4 weeks earlier.
 - Datum: Minimal constraint condition to IGb08 sites (from 1709 Wk)

■ 2nd.- Hourly NRT process

- Objective → ZTD
 - Double differences.
 - Ultra-rapid IGS orbits.
 - Finally → 12 last hours are combined.



EGVAP ZTD QC & comparison



Diff. respecting EUR combined sol:

IBERRED: desv. est. = 2.1 mm
prom. (abs) = 1.5 mm

E-GVAP: desv est = 6.1 mm
prom. (abs) = 4.4 mm



Next Steps

- Network processed:
 - Prepare existing new stations for NRT processes.
 - New network in Galicia (NW).
 - Asturias (NW).
 - New IGN stations in the center.
 - With these inclusions, the network will be very homogeneous.
- Change to Bernese 5.2
 - Already working for EUREF processes (final and rapid).
 - Almost completed, IGE submitting solutions 5.2 before the end of 2013.
 - Use of GLONASS observations.
 - New strategies (ambiguities, ATL, troposphere model...).
 - Necessary tests using different strategies.
- Attempt to RT processing.
- Exploit the products (maps, comparisons, COST ES1206...).
- Sub-hourly processing? not possible in stations not managed by IGN.
- Automatic QC plots.



Thank you for your attention

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