



# PP VERSUS 2

## WG5-WG7 Meeting EPS Verification

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# Task 4 - EPS Refinements

## Task defined within WG7 collaboration

Since VERSUS 3.0 version, the software is skilled to perform probabilistic verifications for standard statistical indexes (BRIER, BRIER.reliability, BRIER.resolution, BRIER.SKILL, BRIER.uncertain, RPS, RPSS, RPS.clim) and common diagrams (ROC, Reliability, Cost-Loss, Rank).



# Task 4 - EPS Refinements PP 2013/2014 (Phase 6)

In the aim of ensuring the proper functionality of the system, a *Pre-Operational* phase has been defined, linked with the performance of the system under the extensive use of EPS model data. After this period (4 months), a feedback information list will be drawn to define possible problems.

The purpose of the task is ensuring that developments are in line with Partner operational requirements for EPS verifications performance.



# Task 4 - EPS Refinements

**Task 4a:** CRPS/CRPSS implementation and Spread/Skill relation Plots.

**Task 4b:** Pre-operational phase, each partner should:

- Install VERSUS last updates
- Configure the System
- Load EPS data (LEPS)
- Perform verifications for 2-3 months time range
- Compare VERSUS results with current operational EPS verification
- Compile a feedback/suggestions document (coordinated possibly by WG7 Coordinator)



# CUS - Requirements

## (March 20th 2014)

During the WG5/ WG7 Session (Minutes\_20Mar2014\_COTEKINO-WG7\_fin.doc) the following needs have been identified:

- ✓ RPS and RPSS computation (MECE - NON MECE), problem in the consistence of scores output: **DONE- VERSUS** computes MECE classes even if verification is non MECE thresholds configured ( in this way score is corrected calculated ).
- ✓ Adding ROC area values in the score table: **DONE** -Scores are saved in a **txt file**.
- ✓ Producing plots in pdf instead of png format: (**NOT DONE not crucial**)
- ✓ CRPS/CRPSS implementation and spread/skill relation: **DONE**

### Open Issues:

- ✓ Observation-based verifications implementing (deterministic like). Currently they are forecast-based (**Required from all the partners?**)



# VUS - Requirements

A VERSUS EPS Meeting has been held in Bologna last June 24<sup>th</sup>, within the VERSUS USER SEMINAR.

During the meeting a "To Do List" was drafted by the MCH colleagues in the aim of improving VERSUS EPS . The following suggestions/corrections have been applied: **VERSUS 3.3** (still on testing phase):

- ✓ Rank diagrams -> Bug fixed
- ✓ Attribute diagrams -> got rid of the 'RANDOM' property in R
- ✓ Reliability diagrams -> all thresholds added
- ✓ Cost/Lost curves -> sequence used from R inserted into the plot title
- ✓ png-files RPS/RPSS diagram -> refinements in the plot made
- ✓ Pdf plot -> verification description added into the plot title
- ✓ Addition of **Control Member ( 0 )**
- ✓ CROSS EPS MODEL - VERSUS DB saved scores (to be tested)





# Considerations

It has been found out that some new php area settings are required, in order to execute Eps verifications with such a massive bulk of data on Virtual Machine

- › 2200 stations
- 21 members
- 1 model each 6/12 hours running
- 10/20 steps
- Seasonal Verifications ( Monthly work properly)

A deeper analysis/ study is still in progress about which configuration is to be considered more appropriate (php.ini)



# Considerations

The Pre - Operational Phase has been really important in having allowed us to recognize each service necessities about the EPS verifications.

This COSMO year CRPS, CRPSS development has been performed as well as the partners requirements (VUS, CUS emerged).

Thanks for collaboration to ARPA-SIM, MCH, RHM.





Thank you all  
for your  
attention and your  
cooperation!!!

