WG7 wish-list for VERSUS

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WG7 wish list

- A "wish-list" document for VERSUS had been prepared by WG7 at the end of 2012, before the first implementation of probabilistic scores in VERSUS

- The document had been presented at the VUS in May and discussed; further discussions came later by email

- Here (COSMO GM 2013) we should decide the exact requirements for VERSUS for this COSMO year (2013/2014)

- The requirements should be ranked on the basis of their priorities, keeping in mind also easiness of implementation

New scores

- CRPS and CRPSS (Continuous Ranked Probability (Skill) Score), already in R verification package (top priority)

- PIT histogram (a flavour of the rank histogram which is calculated in probability space). It allows for a better comparison of EPS with different number of members

- Ignorance Score (and Skill Score) -> comes with CRPS in R package

- Inconsistency index

- …

According to VERSUS team, these (or part of them) can be easily implemented if the VERSUS EPS part is re-structured to make it user-configurable

Other features (priority order)

1. Plots of spread/skill relation (rmse and std)
2. CRPS/CRPSS
3. Use of a reference provided by the user in the skill score computation
4. Observation-based verification
5. Verification against "precipitation analysis" (e.g. QPE from radar)
6. Perform spatial (fuzzy outside!) verification:
   1. Upscaling
   2. FSS
   3. Scale-intensity
   4. Pattern recognition
   5. …
7. Add statistical significance indicators

How to determine priorities?

- The main purpose of VERSUS development during this COSMO year is to make it ready for OPERATIONAL VERIFICATION in the COSMO Countries

- Define what is really needed and start testing

- Are there in WG7 available resources and/or pieces of code which can be "plugged in" in VERSUS? All the EPS scores are based on R code.