Minutes of WG on system aspect and verification

During the working group meeting on system aspects and verification several topics have been discussed ; however no particular decision has been taken.

 – Technical validation :

This has been the main point of discussion, raised by Hirlam. There is still much differences in the working manners between Aladin and Hirlam, which leads to difficulties like delays or lacks of information ; for instance : bug pointed out by Hirlam, but fixed shortly before by MF and commited to the next cycle ; "Mitraillette" updates not announced. Hirlam's experience with testing suggests that smaller and fewer test cases could be employed.

The main issue concerns the validation of ODB and the variational jobs, which are not part of the "Mitrailette" testbed.

A better knowledge of ODB in Hirlam could help for testing and communication with MF and ECMWF. Furthermore, Claude encouraged the partners to actively participate in the COPE project.

Most of all, Hirlam wishes to have an external test job of a Var-toy. Ryad El Khatib warned that it is made difficult by the input ODB databases which are themselves release-dependent. Claude Fischer explained that Météo-France does not maintain a Var-toy because experience showed that many bugs in new cycles only are seen once a full assimilation is run ; furthermore this would mean that the Var-toy script maintenance and update should be achieved before the update of an Olive configuration, and as a consequence the Var-toy users would become pioneers of the maintenance. This also raises the question of extending the maintenance work to more participants.

 – Namelist Maker :

This is a software in HARMONIE working from a set of options in order to simplify the maintenance and generation of namelists. Different experts are involved in checking different parts at each new cycle. It has been suggested to be used within ALADIN to generate reference namelists. Claude Fischer commented that this is a different strategy than the one in Météo-France but it should not prevent anybody to work on this system. Maria Derkova points out that the expertise on namelists is fullfilled inside Météo-France but not outside, therefore this tool is helpful. However there is no clear strategy for the maintenance of this tool.

 – Compilation :

This topic has been raised after the announcement that ECMWF will adopt FCM as its new build system. Ryad El Khatib explained that FCM is a good build system but which needs, like the other systems, that the code complies to restricted coding rules. The system Makeup used in Hirlam has been reported to be too slow, but improvements are possible. Gmkpack (used by Aladin) is reported to give reasonable satisfaction by computer vendors. Working on the build system is not an urgent issue anyhow.

 – Verification & monitoring :

This question was raised by Trygve Aspelien : which tool is used by whom, and especially who is using the software OBSTAT by ECMWF ? In Météo-France, OBSTAT is used for testing only ; monitoring and validations are performed with other home-made tools. There is another software developed by Hungary. LACE is setting up HARP for intercomparison. Piet Termonia pointed out that these are different tools for different topics. It appears that HIRLAM has different needs than Aladin because of its Reference System. Anyway there should be a general consensus to extend the use of HARP.

 – Use of DDH :

Aladin countries are using the DDH diagnosis but not Hirlam, probably by lack of knowledge about how to use them with their special I/O interface (LFA). This is rather a discussion for the physics teams.

 – Use of INCA :

The source code is at ZAMG. It is available under certain conditions ("visibility" agreement. Ask ZAMG for more). Trygve Aspelien asked if it could be made available for Hirlam scripts, but this is even not so simple because it requires a setup to tune.