

Minutes of the 22 November 2016 technical video-conference

Participants:

EC: Deborah, Mats, Yannick, Tomas, Olivier, Roel

MF: Claude, Ryad, Etienne, Karim, Alexandre

Hirlam: Daniel

Aladin: Olda

1. OOPS aspects

ECMWF expect to implement into CY44 the following features:

- adaptation of GMV/GFL and FIELDS container for constructing INCREMENTS in OOPS (Mats);
- new trajectory code, with a temporary solution using duplicated routines for enabling testing both old and new TRAJ codes in the IFS (Olivier). The temporary duplicates shall be progressively cleaned after the OOPS re-factoring and the prototyping has well progressed (Olivier);
- VarBC code: one major object is defined for VarBC in OOPS, that will contain all elements related to VarBC (ErrCov, Increments, Background coefficients, etc.). Alan has coded the interfaces, now checked and tested by Roel. If VarBC tests are completed by January, then this code will enter in CY44 (otherwise CY45 ?);
- fixes in OOPS-IFS and IFS for enabling a simple 4D-VAR of IFS from OOPS (Olivier). This is ongoing work, and technical validation will be continued over the coming days.

MF have prepared a set of interfaces and aggregated codes for enabling the definition of the PostProcessor object based on Full-POS (basically, this first version enables one instant of Full-POS from OOPS, Ryad & Etienne). Etienne has tested this code against an in-line FP called from Arpège, with quite many identical fields in the output. There are a few technical problems for radiation fields and for instance wind gusts calculation, but to proceed further requires to have a re-factored MODEL (Arpège) from OOPS. The OOPS PostProcessor code will be added to the pre-CY44 in MF's GIT, and become available to EC for validation in OOPS-IFS.

Olivier is preparing an initial proposal for listing the content of the dynamics / physics groups for the MODEL object. He intends to send his proposal to MF asap. MF will check and liaise with EC (Arpège options, Arome parameters and LAM in general, re-check dynamics versus physics). At MF, Karim, Alexandre and probably Yves will check this. Ideally, the agreed list is ready before Christmas, so the technical steps could start already in January (Python script for SPAMing, manual intervention where necessary). Alexandre will be in charge of testing the SPAMing Python script at MF, and liaise with Olivier as required. The goal is to eventually apply SPAMing on top of CY44, for building CY45 in March 2017.

EC presently have three repositories (IFS moving from Perforce to GIT, OOPS/IFS interfaces, OOPS abstract C++ layer). They intend to merge the OOPS/IFS interfaces into the IFS repository and versions for CY45. MF and EC discussed the possibility to implement mirror repositories using GIT clones. This would help developers to have frequent updated views of specific changes, like for instance the ongoing efforts in OOPS-IFS (while MF will have parallel efforts in 2017 for their OOPS prototypes and test programs). The item was left open for further discussion.

2. Steps for building CY44

The following steps have been agreed:

- EC sent CY43R3 to MF (17/11/16);
- MF to check R3, compile, install in GIT. Stéphane will contact Tomas and Deborah for compile problems already found this week;
- MF will start merging CY43R3 (R3) and CY43T2 (T2) in a pre-CY44 version 0 (v0). In parallel, LAM code phasing will start (Olda and Canberk – Turkey -). Validation of Arpège and LAM configurations starts asap;
- MF will send v0 back to EC in week 12/12 (possible target dates could be 14 or 15/12);
- EC will start validation on their side (IFS). Exchange of fixes is expected on the fly;
- EC will implement their OOPS re-factoring items (see previous section) in mid-January. This will primarily become version 1 of pre-CY44 (v1), and be sent back to MF in January;
- MF to implement remaining fixes, LAM code phasing, and complete validation of Arpège and LAM configurations (forecasts, Full-POS, TL/AD models) => version 2 (v2);
- MF will send v2 back to EC in February. EC to declare CY44 when ready. Target for declaration of CY44 is end of February 2017.

CY45 will be mostly CY44 + SPAMing for the OOPS MODEL object. Target declaration date is around 1 April 2017.

4. AOB

Claude will further discuss with Roel, Roger and Hirlam management about Roel's visit to MF (content, timing). Early visit for participation to CY44 or CY45 phasing, or later visit for OOPS-oriented work (tests, prototypes).

Next meeting: technical video-conference planned for Thursday 12 January 2017, 14h30 CET / 1.30pm UK.

Claude.