

Draft Minutes of the 10th PAC meeting

6-7 May 2013, Toulouse, France



Participants : Philippe BOUGEAULT (MF rep.), Radmila BROZKOVA (LACE rep.), Fatih BUYUKASABBASI (PAC Vice-Chair), Claude FISCHER (CSSI Chair), Daniel GELLENS (non-LACE non-MF subs.), Alain JOLY (MF rep.), Maria MONTEIRO (non-MF non-LACE rep.), Vladimir PASTIRCAK (LACE rep.), Patricia POTTIER (Secretariat), Michael STAUDINGER (PAC Chair), Piet TERMONIA (ALADIN PM), Yong WANG (LACE PM)

Excused : Abdalah MOKSSIT (PAC non-LACE non-MF rep.)

1. PAC Chairperson opens the meeting

2. The following agenda is proposed and adopted.

- 1. Opening by PAC Chairpersons
- 2. Adoption of the agenda
- 3. Final approval of the minutes of the last PAC meeting
- 4. Link with HIRLAM: wrap up and internal discussion about the elements issued from the HAC/PAC encounter
- 5. PAC matters arising from previous ALADIN meetings
- 6. Activity report by PM
- 7. ALADIN Policy issues
- 8. Resources matters
- 9. A.O.B.
- 10. Date and place of the next meeting
- 11. Closing of meeting

3. The minutes of the last PAC meeting are approved without changes.

4. Link with HIRLAM

Michael summarises the recommendations of the 1st joint HAC/PAC meeting (see the Minutes of the HAC/PAC meeting for details) :

- HAC/PAC back-to-back meetings,
- Council/GA back-to-back meetings from 2014 in the framework of the EC Council,
- Data policy Task Force,
- Improvement of the scoping paper prepared by PMs : indicate also the complementary aspects (ie complementarity between the upstream validation mainly done by ALADIN code experts and the downstream validation better coordinated in HIRLAM).

Piet shows Météo-France proposed modifications to the scoping paper : they aim to re-equilibrate the contributions by ALADIN and HIRLAM. Claude underlines that the paper is mainly about how ALADIN countries could benefit from some more coordination of downstream validation; upstream validation is missing. Claude proposes to rewrite the text that describes the technical work on the code. Daniel asks Claude to find a better name for the so-called “mitraille” tool.

Radmila insists on the need to have skilled people in the local teams to tune and validate the model on local domains.

Some HIRLAM tools may help the smaller teams to work more efficiency on their own implementation of the system : this will be assessed at the Ankara working week. Radmila comments/says that LACE tried to adopt the HARMONIE scripting but, as an example, envisaged missing pieces have not been developed yet, and implementation is not generalized. Therefore this effort is not so successful in the end.

Michael asks Yong to send the LACE comments on the scoping paper to Piet and Jeanette.

5. PAC matters arising from previous ALADIN meetings

At the last PAC meeting, Météo-France representatives presented the plan of a revised schedule of the ARPEGE 00UTC runs at Météo-France and its impact on the production of the lateral boundary data (LBC) for Partners' ALADIN/ALARO applications. This issue eventually disappeared when Météo-France stepped back from its plans to put new production times into operation.

Philippe confirms that **MF has no new plan of re-scheduling for the time being.**

6. Activity report

Piet reports on some strategic issues following the recent scientific and technical developments within the consortium.

PAC agrees on this strategic prioritizing of the topics :

1. **physics-dynamics interface and physics interface convergence** : during the workshop in Reykjavik, scientists expressed some concern about “what does HARMONIE mean ?”; there is a scientific bottom-up desire to have new developments implemented in the model code as soon as possible but, at the same time, a lack of concern for top-down organization of the code design to accommodate this diversity; the implementation and the validation of the new common (ARPEGE/ALARO and AROME) physics-dynamics interface gets highest priority now as it can help addressing these issues; the rather recent scientific innovation in thermodynamics can be an opportunity to define what the model is and how the physics schemes should respond to the underlying data flow.
2. **dynamics** : the first step of the dynamics roadmap adopted during the 2011 strategy meeting is completed (investigation of the feasibility to replace the horizontal spectral discretizations by horizontal finite elements); additionally, LACE achieved a remarkable breakthrough in vertical finite elements discretization for the non-hydrostatic dynamics; there are also some renewed activities on the issue of the lateral-boundary conditions; a flat-rate stay is planned about the literature review of the roadmap.
3. **PREP and SURFEX** : the work done since 2011 (profiling, open MP optimization, scientific code optimization) has given the opportunity to build code expertise outside Météo-France (from a new partner : Turkey); the SURFEX SC accepted the modifications proposed by the ALADIN team to improve the efficiency of the code; in 2014, some new tests will be performed and the issue of more optimal memory use should be addressed.

Piet also briefly reports about **HARP** (HIRLAM-ALADIN R package), a common toolbox (probabilistic scores) to verify the newly developed EPS systems; that shows that GLAMEPS adds forecast skill on top of ECMWF EPS for precipitation, besides the standard variables (2m-temperature, wind speed).

7. ALADIN policy issues

- **Maintenance of the FA/LFI library**

As asked by the GA, Piet and Claude have investigated the question of the support to the library handling Input/Output (ARPEGE/ALADIN having its proprietary files format, the so-called FA format). After inquiry, from the feedback of the LTMs, this problem doesn't seem a blocking point for applications in countries but the coordination of the expertise for diagnosing problems could be organised better (quicker bugfixes).

Philippe explains that Météo-France is aware of the problem (resources in the computer department) and is looking for an internal solution.

More generally, Fatih proposes to improve the coordination of the bugfixes by exchanging and recording information about the bugs and their solutions : enhanced use of the (existing) discussion forums and email lists, organisation of webconference meetings, ...

PAC proposes that the PM, the ACNA and the French LTM should discuss possible solutions to better communicate and coordinate around bugs and their solutions : their conclusions should be presented at the next LTM meeting.

- **Licences : GLAMEPS**

GLAMEPS is a cooperation between ALADIN and HIRLAM but contains a ECMWF's EPS (EC-EPS) component, thus it is not easily available to ALADIN non-ECMWF members. As asked by GA, the PM investigated the possibility of removing the EC-EPS members from GLAMEPS, replacing it by LAEF members. This leads to comparable scores.

Yong adds that, contrary to EC-EPS products, LAEF products are freely available for all ALADIN partners. Radmila insists on the availability only for ALADIN partners and doesn't agree to give LAEF data to all HIRLAM GLAMEPS partners, due to free data policy in some HIRLAM countries. Yong underlines that the LAEF code belongs to all ALADIN partners but the LAEF products' ownership is shared by Austria and Turkey who run the application.

PAC recommends that ALADIN partners who are not ECMWF members use GLAMEPS without EC-EPS, plus possibly LAEF data.

- **Free data policy in Europe**

Michael recalls that a data policy Task Force has been proposed by HAC/PAC.

PAC proposes as ALADIN representatives in the data policy Task Force : Radmila Brozkova for LACE, Philippe Santoni for Météo-France and Marc Christiaens from Belgium for non-MF non-LACE partners.

- **Management : task force matters, ACNA**

Piet underlines the crucial role of the ACNA and thanks Maria Derkova for accepting the ACNA position after Roger Radriamianpianina's resignation; Maria is already working with Claude and Piet.

- **Maintenance code issues: local technical knowledge transfer, OOPS**

Phasing: Claude underlines the increased and good level of skill of the phaser teams invited to Toulouse over the past years.

Training: Specific stays or working weeks, participation of one-by-one newcomers in phasing are the main training possibilities besides local transfer of knowledge; the organisation of a comprehensive system-oriented training workshop is not foreseen in the near future (potential lecturers involved in several other projects).

COPE: COPE aims at a complete rewrite of the observation processing and filtering for data assimilation. Claude informs PAC that more in-depth discussions about the technical specifications and the share of work between ECMWF, MF and the LAM partners will start soon.

OOPS: After a technical review in 2011, a scientific review in 2012 and a technical workshop last month, the collaboration at the object-oriented level with ECMWF is increasing.

Claude notes that the HIRLAM contribution to phasing is progressing but HIRLAM contributes far less than ALADIN : HIRLAM is still in the learning process and a deep expertise of the code takes time. The PMs scoping paper should be rebalanced (action: Piet and Claude) by pointing the need for an improvement of the ALADIN/HIRLAM collaboration on phasing (where ALADIN does better), and not only on downstream validation (where HIRLAM does better).

Claude explains that the phaser teams try to validate as much as possible all configurations of ALADIN, ALARO, AROME. Piet reminds that during the last ALARO-1 meeting in Ljubljana of last year it was stated that the tests of ALARO in Meteo France can be limited to the “mitraille” sanity check. For ALARO, Radmila and Piet haven't noted major issues in the past 2 years and they think that the validation with “mitraille” can be limited to one ALARO configuration.

- **EUMETNET matters : link with OPERA, plans for LAMEPS, C-SRNWP, Nowcasting**

Piet asks for guidances on some EUMETNET matters. PAC recommends :

- **OPERA** : ALADIN relies on MF and LACE representatives in the Users' group;
- **C-SRNWP** : Piet reports on opened positions (expert teams' leaders); PAC has no candidate to propose : there are too many committees for the available experts;
- **Nowcasting** : Yong participates to the new EUMETNET Programme Nowcasting and will report about it to PAC and GA; meanwhile, he will contact Piet if anything must be done by ALADIN.

8. Resource matters

- **Manpower status**

Piet presents the standard figures plus the first statistics of the extra reporting on code work : only 4% of the reported manpower is dedicated to the code design. This must be increased.

Michael asks Piet to work with Jeanette on a common reporting for the next joint HAC/PAC meeting. So far, HIRLAM has better commitment (Piet will work on commitment for the next version of the work plan) but ALADIN has an extensive reporting data base with recorded data since the very first days of ALADIN. Radmila would like to keep even closer overview on the specific actions that were highlighted by PM and PAC. Yong would like a project-oriented reporting.

Claude contests that changing the reporting would be a huge job for the PM and the LTMs as the rolling work plan is not organised in terms of projects but of scientific topics.

Michael agrees with keeping the programme management very light: the priority topics and the reporting are presented by Piet to PAC and at the GA. Piet will extend his report by pointing out actions in the work plan that are not fulfilled.

- **Budget matters : accounting of the ongoing 2013 budget, PAC's first guidance for the 2014 budget**

Piet presents the so-called “2013 flat-rate document” with the list of LTMs' missions, research stays and organised working weeks related to the priority topics agreed during the GA and funded by the ALADIN non-LACE non-MF 2013 budget. This document was sent to the NMSs at the beginning of the year. The actions are undergoing and these planned for the first months of 2013 have all been executed with the exception of 2 LTMs missions.

Yong explains that he has installed a rule for all stays paid through LACE : colleagues who carry out the stay should provide a report otherwise they won't get the money. This rule applies also to stays

paid by FR-LACE (LACE account is used as a bank for some actions : LACE receives an amount of money from the non-MF non-LACE partners budget to fund some flat-rate stays). All concerned colleagues should be aware of this rule.

Piets asks PAC for a first guidance for the 2014 budget : he explains the planned expenses (same spending for the missions expenses for the workshop and EWGLAM, another working week on SURFEX, ...) and proposes to adjust the contribution to the ceiling as defined in the MoU (for 2014, the ceiling is 8770.05 € : 8200€ in 2010, adjusted every year to take into account inflation in the Euro zone).

This amount is a few percent of the money spent by the NMSs on ALADIN when one considers the salary of all dedicated manpower but it is important as it is used for specific target.

PAC recommends 8770€ as the 2014 flat-rate contribution.

9. A.O.B.

Yong asks LACE PM to be part of the Task Force in charge of the convergence analysis. **PAC agrees.**

10. Date and place of the next meeting

As agreed by the HAC Chairperson, the 2nd joint HAC/PAC could be hosted in Lisbon (to be confirmed), on Monday afternoon May 12 or 19, 2014 (depending on the date of the ECMWF Council). On Monday evening, to give room for less formal exchanges, a diner will gather HAC and PAC participants, on a self-paying basis.

Next PAC meeting will take place just before the 2nd joint HAC/PAC meeting, on Monday morning May 12 or 19, 2014 in Lisbon (place and exact date to be confirmed).

11. PAC Chairperson thanks the participants and closes the meeting at 11:00.