**13ᵗʰ PAC meeting,
Brussels, Belgium, 23 May 2016**

**Draft minutes**

_**PAC Participants**: Philippe BOUGEAULT (MF rep.), Radmila BROZKOVA (PAC Vice-Chair), Fatih BUYUKASABBASI (PAC Chair), Claude FISCHER (CSSI Chair), Daniel GELLENS (non-LACE non-MF rep.), Alain JOLY (MF rep.), Heiner KORNICH (HIRLAM observer), Maria MONTEIRO (non-MF non-LACE rep.), Patricia POTTIER (Secretary), Piet TERMONIA (ALADIN PM), Yong WANG (LACE PM)_

_**Excused**: Jure CELDINIK, Branka IVANCAN-PICEK, Abdelwaheb NMIRI, Vladimir PASTIRCAK_

1. **PAC Chairperson opened the meeting and welcomed the participants.**

2. **The agenda below was proposed and adopted :**

| Agenda [1] | Introduced by | Documents |
|---|---|---|
| **1.** Opening and welcome | PAC chair | |
| **2.** Adoption of the agenda | PAC chair | 2_agenda_13thPAC |
| **3.** Final approval of the minutes of the 12ᵗʰ PAC meeting and of the Toulouse extraordinary PAC meeting **(D)** | PAC chair | 3_minutes_PAC2015 |
| **4.** ALADIN policy issues **(C)**<br>○ 2014 joint ALADIN-HIRLAM Declaration<br>○ Strategy<br>○ ALADIN-HIRLAM agreement<br>○ Code Architect<br>○ Changes in governance positions (if any)<br>○ Organization of the next GA/Council | PM & PAC chair | 4_Declaration<br>4_Strategy<br>4_A-H_Agreement<br>4_Code_Architect<br>4_Matrix<br>4_Organization_CA_Council |
| **5.** PM Activity report (issues related to ALADIN; more discussion in the common HAC/PAC meeting) **(I)** | PM | 5_PM_activity_report |
| **6.** Resource matters: **(C)**<br>○ Manpower status<br>○ Budget matters:<br>  ▪ accounting of the ongoing 2016 budget,<br>  ▪ PAC's first guidance for the 2017 budget. | PM | 6_Manpower_status<br><br>6_Ongoing_budget<br>6_Guidance_2017 |
| **7.** A.O.B | PAC chair | |
| **8.** Date and place of the next meeting (to be decided with HAC) **(D)** | PAC chair | |
| **9.** Closing | PAC chair | |

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1   **(D): Decision ; (C): Consultation; (I): Information**

**3. The minutes of the 12th PAC meeting were approved without changes.**

**4. ALADIN policy issues**

    1. 2014 joint ALADIN-HIRLAM Declaration

Piet took the floor and introduced the five issues identified in the joint declaration as to be resolved with the aim of forming a single consortium by the end of 2016-2020 MoUs. He reported on his activities to tackle these issues.

- <u>Code ownership (software IPR)</u>

In ALADIN, the ownership is determined by the accumulated manpower contribution since 1991 (the manpower has been quarterly reported with many criteria by each Partner and is kept in the manpower data base; the manpower can roughly be split in 1/3 Météo-France, 1/3 LACE, 1/3 flat-rate Partners, with Météo-France's part increasing in the last years to 40% during the 4th MoU).
The main impact of the ownership is on the governance : it determines the voting rights when taking decisions at the General Assembly in the absence of consensus (it was never used); see article 4.1.21 of the 5th MoU.
Despite this shared ownership; all partners have the full right to use the code.

In HIRLAM, there is no such a manpower reporting thus Piet proposed to estimate the HIRLAM initial ownership based on the HIRLAM contributions to the ALADIN-HIRLAM common codes. The first step is to make the list of the ALADIN-HIRLAM common codes and to propose it for approval by the joint ALADIN General Assembly & HIRLAM Council. Piet gave some possibilities regarding the identification of the contributions to the common code and asked PAC to comment :
- to check the routines of the code in the ALADIN repository,
- to analyse the phasing reports,
- to write a scientific paper on the ALADIN System (this reference paper would assess ALADIN legacy and put major scientific issues in the spotlight) and to scientifically document the increment with the ALADIN-HIRLAM system; other publications may later describe the CMCs, with respect to this definition of the ALADIN System (Piet recalled the concept of the CMC for Canonical Model Configuration: two CMCs are defined in the ALADIN 5th MoU, ALARO and AROME; they are defined from their schemes, namelists, … and maintained in the Toulouse repository, with identified experts ready to help in case of problems during the installation or the operational use of these models).
- to possibly include contributions other than mere model code (e.g. HARMONIE scripting system).

Philippe approved the complementary approaches proposed by Piet to assess what has been brought by HIRLAM (and to possibly estimate how much of the ownership would be granted to HIRLAM) in the absence of common manpower statistics: to establish a list of what HIRLAM has contributed to the code and is used by others, and to write a reference paper at the same time the counting of the contributions is done.
Radmila warned that, in ALADIN, the ownership is granted according to the past contributions (accumulated manpower) but not for ever : the countries have the obligation to contribute on a yearly basis (2 FTE by year) otherwise they loose IPR to new versions.
Claude explained that the archive (since 1998) of the cycling history and the technical memoranda contain the contributions, the lists of routines and the lists of contributors for each cycle. Everybody can check the technical memoranda (they are available on the ALADIN website since CY30T1 in 2006). It should be possible, from these memoranda, to draw a list of what has been introduced by HIRLAM.

Heiner asked that HIRLAM (Jeanette, Ulf) would be associated to the establishment of this list.

Piet commented on the difficulty to quantify how big or small a contribution should be considered.
Maria worried about the visibility of the small ALADIN countries that have very low contributions to the code. It was answered that, within the ALADIN partners, the contributions keep estimated from the manpower database. The estimation of the HIRLAM contributions will give a basis to estimate the ownership granted to HIRLAM, but the use of the codes is granted to all ALADIN & HIRLAM Partners.

*PAC recommended to propose to the HAC/PAC members to ask the ALADIN and HIRLAM Program Managers (with experts if needed) to propose a list of potential ALADIN-HIRLAM common codes and to identify the HIRLAM contributions to these common codes. This list should be prepared in the next months and presented for approval at the next joint ALADIN General Assembly & HIRLAM Council (in case of disagreement when establishing this list, the HAC/PAC may be consulted by email).*
*PAC recommended that Piet goes ahead with the reference paper (contacts have already begun with some possible authors) but be careful to avoid frustration if forgetting somebody, both in the ALADIN community and among those who built ARPEGE/IFS (cf. IFS paper on the 25th anniversary of the ARPEGE/IFS cooperation). Piet was asked to propose to PAC (email consultation) a process to create this iconic paper: lead authors, contributed authors, reviewers, .., how the paper will be prepared, when/how they can contribute, …*

- Data policy
The map of the various current operational configurations of the limited area system was produced and supplemented by a table to summarize the overlaps (see preparatory document 4_Declaration).
Regarding data policy, it is proposed to transpose the data policy as agreed on in the 5th ALADIN MoU into the ALADIN-HIRLAM agreement (see point 4.3).

- Annual contributions (manpower)
See above, the discussion about ownership.

- Identification of common/specific activities
See below, point 4.2 (Strategy).

- Branding
Piet explained that HARMONIE had been initially used to name the scripting system that was used in HIRLAM NMSs to run AROME or ALARO models with Data Assimilation. But, at the last joint ALADIN Workshop & HIRLAM ASM, HARMONIE was presented as a model configuration. An HARMONIE-climate community is emerging. He also gave the example of the map of the HARMONIE configurations published by HIRLAM that shows the AROME and ALARO models that are run operationally with the HARMONIE scripting in HIRLAM countries but also includes an HARMONIE configuration in Portugal and Turkey (these configurations had been installed and tested during the system working weeks but never went operational due to reproducibility problems and installation of T export versions).
Radmila underlined that, even on the HIRLAM website, HARMONIE appears as a model : "*The model which is the focus of HIRLAM-B research activities is the non-hydrostatic convection permitting model HARMONIE*".
Heiner explained that HARMONIE had initially been introduced as the name of the scripting system but had taken its own way, widely used within HIRLAM community. He proposed that HIRLAM might stop

using HARMONIE for the model and use instead ALADIN-HIRLAM system.
Philippe added that it is important to first decide on the scope of the collaboration and clarify the use of HARMONIE word, the branding for the single consortium may be solved later.

Regarding the CMCs defined in the ALADIN-HIRLAM shared system (currently ALARO and AROME), it is not possible to maintain a huge number of systems and, for additional CMC (HIRLAM wishes to propose HARMONIE as a new CMC), the maintenance responsibility should be defined (the tests of the HARMONIE scripting system in Portugal and Turkey underlined the issue of its central maintenance and its reproducibility with the so-called T cycles).

***PAC recommended to propose to the HAC/PAC members to agree on using only ALADIN-HIRLAM shared system (instead of HARMONIE), waiting for the single consortium and its future branding. The discussion on the maintenance of a possible 3rd CMC should continue during the HAC/PAC meeting.***

2. Strategy

The Strategy Workshop held in Toulouse on April 26-28 was an opportunity to address the fourth bullet of the joint declaration (see 4.1). Based on the Toulouse technical discussions, Piet proposed a definition and gave some examples (see preparatory document 4_strategy) of common activities, core activities and specific activities :
- common activities :activities necessary to create the export versions (definition and implementation of the ALADIN system, implementation of the CMCs in the repository, maintenance, phasing, support to local porting of the CMCs from export versions to the operational platforms).
- core activities (R&D) : commonly agreed programs of recognised strategic importance (scalability, development of a DA "starters kit") : topics where we have been quite active, with identified experts and possible roadmap and plans with milestones for the next 5 years.
- specific activities : activities not widely used (OPLACE, operational EPS, 4D-var, …) OR activities that do not impact the CMCs or the phasing in the short term (EnKF, …) OR activities that are not needed to guarantee operations (development of a climate model, …).
The concept of specific activities leaves freedom for subgroups to work on things that are not developed in common. On the contrary, all members should commit to contribute to the common activities and to some of the core activities.

PAC commented on the proposed definitions and examples :
- Alain asked for a clear reference to the maintenance and the phasing as common activities.
- Alain asked for a clear splitting between numerics and scalability/optimisation (numerics is not only for scalability).
- Piet insisted on the strategic priority for all ALADIN partners to run a data assimilation in their operational suites : he proposed as a first step to develop a basic starters kit based on the technique of BlendVar coupled to the global ARPEGE model.
- Heiner commented that some activities considered as specific by Piet are listed as core activities in Jeanette's document for HAC (e.g. EnKF, 4DEnvar, ..). Piet answered that, even when there is a consensus on the goal, he considered as specific the activities where there is no consensus on how reaching this goal (4D-EnVAR) or where there is a long-term goal (EnKF).
- Alain proposed to extend the core activities to not only phasing, numerics, scalability and DA starters kit, but to consider also the technical data treatment and the quality control that would be necessary whatever (3D, 4D, EnVar) the DA algorithm. Alain acknowledged that it is complicated to work together

on these aspects now as Météo-France is using a scripting system (Olive and Vortex) that is not exportable and OOPS is coming, meaning many things will have to be re-done. Meanwhile, some training visits of ALADIN colleagues can be hosted in Toulouse. Claude suggested that a Working Week on computing B-matrix files from AEARP, for some Partners domains, could be organized in Toulouse. If decided, this could be planned on the 2017 flat-rate budget.

- Philippe commented that, if the specific activities are not currently imposing constraints on the maintenance of the code, at one stage they will. Thus, Météo-France needs some time to assess their impact on the maintenance effort (chemistry, ensembles, coupling with ocean, climate, …).

*PAC recommended to take into account these above remarks and prepare a list of actions where we can collaborate (this could be a high level strategy document and/or a common work plan as indicated in the article 3.4 of the new ALADIN-HIRLAM agreement). This should be discussed with HIRLAM during the HAC/PAC meeting.*

### 3. ALADIN-HIRLAM agreement

Philippe has prepared a new version (V3) of the ALADIN-HIRLAM Agreement that takes into account the new MoUs (mainly the transposition of the ALADIN new data policy) and the comments made on the former versions of this text.

*PAC had no comment on this new version.*

### 4. Code Architect

The 5th MoU foresees funding for an ALADIN Code Architect (half-time position). As decided by the General Assembly in Budapest, a call for application was issued (3 applicants sent their C.V. together with their publication list before the deadline on 25 March 2016) and the Selection Committee (PAC chair, CSSI chair, PM, LACE rep.) reviewed and ranked the candidatures after (WebEx) interviews (held on May 12). See details on the preparatory document 4_Code_Architect.

*PAC approved the ranking and the 1st candidate (Daan Degrauwe) being proposed to the General Assembly (email consultation) for decision on his appointment.*

### 5. Changes in governance positions (if any)

Vladimir Pastircak (Sk) resigned from his PAC position as LACE representative. It is up to LACE to choose another representative and let the PAC and the General Assembly chairpersons know about it.

### 6. Organization of the next GA/Council

Fatih explained that Alain Ratier confirmed that EUMETSAT will be able to host our meetings at the EUMETSAT Headquarters (Darmstadt) according to the following schedule : the LACE Council and the HIRLAM Council in parallel on December 7 afternoon; the 21st ALADIN General Assembly on December 8 morning and the 2nd joint ALADIN General Assembly & HIRLAM Council on December 8 afternoon. In order to give the room to informal discussions between the ALADIN and HIRLAM Delegations, a joint diner will be organized once a year, besides the joint GA/Council. In the current alternating scheme of organization (by HIRLAM on even years and by ALADIN, generally in an ALADIN country, on odd years), HIRLAM will support this diner on even years and ALADIN on odd years (each consortium according to its internal rules). *PAC approved.*

## 5. PM Activity report

Piet insisted on two main events (since the last PAC) : the signature of the 5th MoU and the celebration of the 25th anniversary of ALADIN. In his preparatory document, he also reported on the ACNA activities and on a selection of specific activities. More details are published in the Newsletters[2]. *No comment from PAC.*

## 6. Resource matters

### 1. Manpower status

Extensive statistics were produced at the end of the 4th MoU (see the aladin website). These statistics were updated with the last data (see preparatory document). *No comment from PAC.*

### 2. Budget matters:

#### 1. accounting of the ongoing 2016 budget,

The 2016 flat-rate budget was prepared in line with all recommendations of the last GA (main novelty is the Code Architect position and the new ceiling for the flat-rate contribution). It was distributed to the Partners in February and is under way (see preparatory document).
Alain remarked that the Code Architect is a paid position and the ACNA an unpaid one and wondered if this could somehow make difficult their working together.
It should not be the case as both CA and ACNA are directly employed by their NMS, the ALADIN budget does not pay people but reimburses part of the CA salary to the NMS that employs the CA.
*No further remarks from PAC.*

#### 2. PAC's first guidance for the 2017 budget.

The inflation in the Euro zone for 2015 was 0%, thus it is proposed to keep the flat-rate contribution for 2017 equal to the 2016 contribution : 11000€.
*PAC recommended to keep 11000€ as the 2017 flat-rate contribution.*

## 7. A.O.B

None.

## 8. Date and place of the next meeting (to be decided with HAC)

See minutes of the 4th joint HAC/PAC meeting, point 6 : *DMI invited HAC and PAC members in Copenhagen : 14th PAC meeting on May 22 in the morning, 5th Joint HAC/PAC meeting on May 22 in the afternoon and HAC meeting on May 23, 2017.*

## 9. Closing

Fatih thanked the participants and closed the meeting at 12:10.

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2    http://www.cnrm-game-meteo.fr/aladin/spip.php?article260