

Main conclusions of the AROME-ALADIN special workshop, Prague, 11-12th of April 2003

The summing up just below partly tries to address the extensive list of questions of Appendix 2 below. The main executive conclusion is the one described in Appendix 1.

*** Name** *For the time being the convergence between the ALADIN and AROME projects keeps the ALADIN name in its second acronym as proposed by Claude Fischer (AROME Limited Area Decentralised International Network), ALADIN-2 in slang to avoid confusion. AROME remains the name of the 2.5km target project and any 'ALADIN-2' declination around the two roots will have to choose its own specific name. In any case the 'Consortium' should still be named ALADIN.*

*** Performances** *It was agreed to include the question of the compromise level of optimisation in the ones to be treated in the 'basic' document (see Appendix 1). Independently of this more evolutive aspect, the basic cost of the 10-km version, mainly linked to its time-stepping length will be part of its design specification, be it only because it could become a convenient vehicle for forthcoming LAM-EPS applications, if cheap enough.*

*** Capacities** *Only the manpower aspect was treated at that stage. It was evaluated that the first transition period could be of the order of 3 years if an additional 'hill' could be afforded before a return to the current level, at 'unchanged use'. If the additional possibilities offered by the AROME side of the programme would then lead to new ambitions in several of the Partners home effort, this would lead to another more permanent increase, but this was considered to be off the 'convergence' issue. The level of the hill was estimated not to exceed 15% of the current effort, if well coordinated. The length of the second transition period (before everyone could afford using the nominal AROME version) was not mentioned again, but for the fact that it would fluctuate from Partner to Partner, while it was essential that the first length would be homogeneous at +/- 3 months. Météo-France indicated that Jean-François Geleyn would be made available for a three year period in Prague to work on the convergence issue, as seen from the side of Météo-France's Partners.*

*** MoU** *Given the welcome coincidence between the end of the ALADIN and RC LACE MoUs at a time when the convergence ought to be achieved if ever, it appeared very logical not to touch the current legal structures, but simply to use them as such to mobilise the additional networking forces needed for a success around the turn of 2005-2006. Since the matter is however of long-term crucial importance, it was anticipated that the Krakow*

Assembly of Partners of October 2003 would create a task force in charge of all the relevant MoU issues and that the Assembly of 2004, to be hosted by Croatia, would rather take the form of a 3 days gathering at political level to anchor all the legal and economic aspects of 'ALADIN-2'. In particular the questions of possibly setting a secretariat and/or a light legal structure were mentioned. Dijana Klaric was tentatively put in charge of coordinating the whole process.

*** Plan for the transition** *A resolution tasked Jean-Francois Geleyn with preparing for the end of June a complete draft document about all but the legal and economical aspects of 'ALADIN-2' (see Appendix). Joze Roskar will be his correspondent for gathering and synthesising the response of all Directors to this draft, so that a more elaborated version can be put on the table of the Krakow Assembly. It was therefore stressed that a representation of all Partners at the directorial level in Krakow was of utmost importance. In case of important difficulties an intermediate meeting would have to be conveyed during summer. Jean-Francois Geleyn asked and got permission to already partly anticipate a success of the process and to start mobilising the networking means that a 'seeding budget' made available by Météo-France would allow. It was however expected that other sources would eventually come from other Partners and/or the usual external channels on which the ALADIN financing was based up to now. A first response was brought by an RC LACE proposal to finance additional stays in Toulouse this year to help the physics interfacing work of Sylvie Malardel and Yann Seity.*

*** The long-term scientific strategy** *It was decided to create a group in charge of the long-term scientific watch, of the selection of themes that are vital either because representing our strengths or because too important to be neglected in such a prospective effort. The group will combine the forces of the AROME project leader (François Bouttier), of the CSSI and of the LSMG in their present composition (12 people on total, see nominative list below=> (*)). Andras Horanyi was tentatively charged with the coordination of this new action, on time scales comparable with those of the MoU issue.*

*** Other aspects** *Defence (at NATO level?) and training aspects were added to the scope of the possible ALADIN-2 ambitions and, for the latter, it was stressed that the publicising effort should start as early as possible. The need for a bit of specialisation of the demo and beta testing was emphasised, since this could help having a shortened and more successful period of additional efforts.*

() Doina Banciu, Gergely Bölöni, Francois Bouttier, Radmila Brozkova, Claude Fischer, Luc Gérard, Dominique Giard, Thomas Haiden, Andras Horanyi, Dijana Klaric, Abdallah Mokssit, Petra Smolikova.*

Appendix 1

Aladin-Arome special workshop, final resolution. Prague, 11-12 April 2003

Considering the success of the Aladin cooperation both in terms of research and operational implementation;

Considering the worldwide academic research at the meso-gamma scale which has demonstrated the potential for predicting severe weather events;

Considering the other potential applications of operational NWP at the meso-gamma scale, often related to an improved description of the water cycle and the boundary layer;

Considering the requirement of all partners for a continuous and steady improvement of the forecasts at the meso-beta scale, as well as the preparation for the meso-gamma scale;

Considering the importance for NWSs of continuously improving civil security type warning for severe weather dependent events;

Noting the feasibility study conducted by Meteo-France under the Arome pre-project;

Noting that this feasibility study has shown that the Aladin consortium has developed a non-hydrostatic kernel of world-class level;

Noting that the current Aladin MOU remains valid until end of October 2005;

Article 1

The participants of the Aladin-Arome special workshop task the Aladin community to prepare a strategic document aiming at preparing an "Aladin-2" whose ultimate goal is to implement operational NWP systems at the meso-gamma scale while maintaining the meso-beta operational capability at the state of the art level.

Article 2

This document should address:

mission specification

- target scientific objectives
- the user oriented vision of these objectives
- verification strategy (for both above aspects)
- optimal use of observational data

organisational aspects

- networking concept
- tool-box concept
- flexible transition toward operation leading to short term improvements
- maintenance, code management
- calendar aspects

scientific strategy

- key scientific issues
- international context on these issues
- positioning of the consortium with respect to these issues

feasibility

- scientific
- technical
- computer costs (including scenarios of operational implementation)
- manpower

Article 3

Jean-François Geleyn is tasked to coordinate the preparation of this document. A draft version will be available by summer 2003.

Appendix 2

List of main questions raised during the workshop (25)

- I) Research (7)
- II) Maintenance (4)
- III) Policy of the convergence (3)
- IV) Stability of the policy (4)
- V) Extension of the policy (2)
- VI) Frame for the convergence policy (5)

Research

R1) How to co-ordinate the different streams of physics development for a smooth convergence?

R2) The question of the computing costs of the '10-km' version.

R3) How to distribute the data assimilation 'upscaling-downscaling' work before the convergence?

R4) How to revisit the coupling scheme?

R5) By what means will the coordination between the two nearly parallel activities (still in data assimilation) be achieved?

R6) What about the verification side of the project?

R7) What will be the mechanism of collaboration with say, HIRLAM on LBCs?

Maintenance

M1) How exactly to maintain and merge the physics (with respect to ARPEGE, AROME-ALADIN and Meso-NH)?

M2) Who maintains what within the tool-box?

M3) Who coordinates the operational implementations in the ‘transition period’ (to avoid dispersion of maintenance through too diverging operational goals)?

M4) Which compromise on the level of NWP-type optimisation?

Policy of the convergence

P1) How to cope with the spread of possibilities between the different partners (and possible change of position of each one) leading to very different situations in the long transition period?

P2) How to make demonstration of the feasibility of the common aim within the current framework?

P3) How to be sure that there will already be operational dividends on a 2 to 3 year scale and through which compromise? How to maintain such a win-win deal until the end?

Stability of the policy

S1) How to find justifications for such a long term ‘dream’

S2) How to make sure that the political thrust will be sufficiently strong within the project to avoid staying in-between in the medium term (2 to 6 years)?

S3) How to attract new talents around this new concept?

S4) What place for something already more structured like LACE in the new coordination?

Extension of the policy

E1) How to insert the scientific strategy in a concept that goes beyond modelling aspects? The user side of the problem, including the training aspect (encompassing technical tools, forecasters work, downstream application, measurable gain in quality of the response to security demand, crisis management for extreme events, ...)

E2) How to avoid a too uniform (and then surely less convincing in each case) presentation of the justification to authorities? How to link this with the previous item? Is the AROME-ALADIN convergence a catalyser or a marker of differences in this list of more general questions?

Frame for the convergence policy

F1) What body defines the long-term strategic objectives of the process initiated here and now? What are the manpower, financial and other means needed and when?

F2) What group watches the scientific long-term new aspects and proposes a selection of the 'strategic' ones (our strengths and our duties, in short)?

F3) The question of the legal aspects (MoU, rights and duties, policy of collaboration with current non-Members, research use of the product, ...).

F4) Within the previous point, what about the ACMAD-ALADIN-DMN special effort on ALADIN-NORAF?

F5) Kick-off status. How to start and find quickly the current boundary conditions of the exercise?