

## Minutes of the 9th Assembly of ALADIN Partners 29-30/10/2004, Split, Croatia

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### List of participants

AUSTRIA Mr. Fritz Neuwirth

BELGIUM Mr. Alfred Quinet

Mr. Gaston Demaree

CROATIA Mr. Ivan Cacic

Mr. Branko Gelo

Ms. Branka Ivancan-Picek

Ms. Dijana Klaric

CZECH REP. Mr. Ivan Obrusnik

Ms. Radmila Brozkova

FRANCE Mr. Alain Ratier

Mr. Francois Duvernet

Mr. Christian Blondin

Mr. Emmanuel Legrand

Mr. Eric Brun

Mr. Francois Bouttier

Ms. Dominique Giard

Mr. Jean-Francois Geleyn

HUNGARY Mr. Ivan Mersich

Mr. Andras Horanyi

Mr. Gergely Boloni

PORTUGAL Mr. Aderito Vincente Serrao

Ms. Margarida Pereira

ROMANIA Ms. Doina Banciu

SLOVAKIA Ms. Maria Derkova

SLOVENIA Mr. Joze Roskar

Mr. Jure Jerman

Ms. Neva Pristov

TUNISIA Mr. Moncef Rajhi

Mr. Abdelwaheb Nmiri

HIRLAM Mr. Per Uden

Ms. Jeanette Onvlee

ECMWF Mr. Martin Miller

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## 1. Opening

The 9th Assembly of ALADIN Partners, held in Croatia, Split, on 29th and 30th of October 2004, was opened and chaired by Dr. Branko Gelo. The host of the meeting, Mr. Ivan Cacic, Acting Director of Meteorological and Hydrological Service of Croatia, welcomed the participants of 9th ALADIN Assembly.

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## 2. Adoption of the Agenda

J.-F. Geleyn proposed to extend the 6th item of the Agenda with the manpower commitments. It was added to point 6e. Otherwise the Agenda was adopted as proposed.

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## 3. ALADIN-2

In the introductory talk D. Klaric shortly reminded the ALADIN-2 project background, its objectives and the vocabulary used around it. The main outcomes from the so-called "AAA meeting", held in Prague on 13th February 2004, were presented with their implications on the ALADIN working plan and coordination. Also the first achievements in the framework of ALADIN-2 project were summarized.

F. Bouttier, the AROME Project Leader in Meteo-France, reported on the ALADIN-2 news in France. ALADIN will keep running and improving until at least 2010 (improvements mainly through 3D-VAR assimilation and changes in ARPEGE). The ALARO-10 prototype is ready and working, but the first results on the few test cases are not good. On the contrary, AROME results are very promising and there is still potential for improvement (mainly high resolution data assimilation), but more effort is needed.

The synthesis of the discussions around the ALARO-10 problems among the ALADIN teams was given by R. Brozkova (this discussion was based on her letter to ALADIN Partners summarizing the ALARO-10 results, which were first presented at the LACE Steering Committee session (Bratislava, 13-14/09/2004). After that the LSC addressed a letter to Meteo-France asking for explanations and MF answer was obtained): the consensus on the principle how to build ALARO-10 was achieved (to introduce selectively MESO-NH parametrizations into ALADIN). However, there is a discussion on the environment in which the decisions would be taken. Three particular points are of big interest: 1) an updated computational roadmap for AROME cost is required; 2) the question of the reference system for physics (we have learned that ALADIN/France is not the most advanced application any more); 3) what is the right level of political/scientific interaction (better cooperation

between ALADINists and AROMists highly recommended).

(Later on the program the required AROME computational roadmap was prepared by

Meteo-France colleagues and given to Assembly for discussions.)

J.-F. Geleyn presented the revised strategy for ALARO-10 subproject with its short-term implications on the ALADIN-2 working plan. To minimize risks, a step-by-step way of progressing was proposed, with an emphasis on the step No. 1 (short-sharp-shock effort): selective import from Meso-NH of prognostic treatment of 'dry turbulence' + detailed 'large-scale only' microphysics. The crunch point will be phasing and maintenance steps (for this a quick upgrade to cy28t3 necessary!), so the ALADIN teams priorities shall be redistributed and shifted to be able to focus on "Assembling, Testing, Validating" (ATV) period in summer 2005 (for better understanding, refer to the slide No. 18).

Later on the program J.-F. Geleyn and F. Bouttier also explained the short-term likely benefits of the corresponding first step (2005) in the advocated course of ALARO-10.

In the round-table discussion following items were mentioned:

- the optimisation and effectiveness of the code was questioned (is it really 300x more expensive than ALADIN?). Work on code optimization is needed, and some improvement can be expected due to coming ITT in Meteo-France. However, the cost of application depends not only on the model used, but also on the domain size, horizontal resolution, and the chosen strategies (3DVAR, NH...). Anyway, it seems we have to accept the need of stronger computers.

A careful evaluation of costs and a description of the present status of AROME

should be produced by MF.

- question of physics used in different models and/or scales was discussed:

- + activities at the grey-zone seem to be suppressed (at least postponed)

- + ALARO-10 should be seen as an improvement of ALADIN: example is cloudiness

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- known weakness of ALADIN, which can be improved using prognostic microphysics

- + all possible physical parametrisations shall be compatible with

- general interface and available for all Partners. Thus ARPEGE physics will be

- also plugged to the new interface and possibly the HIRLAM one.

- new situation due to ALARO-10 prototype problem was recognized. The consensus

reached in the discussion among ALADIN scientists should be endorsed (combining pragmatism and concentration), and the need of intensive work for ATV was stressed (availability of people experienced in porting and validation).

F. Duvernet read the letter from our Moroccan colleagues, who could not participate on the Assembly due to difficult local situation. They gave their attitude to the documents/questions distributed prior to the Assembly (those answers will be referred to later in the Minutes).

The opinion on the proposed revised strategy of ALARO-10 and commitment of ALADIN Partners to reorient their individual priorities in 2005 to participate on "Assembling, Testing, Validating" period was asked in the round-table. The answers are recorded in alphabetical order:

Austria: they are in favor of proposed strategy (need of 10km model does not prevent AROME) but commitment must be discussed at home

Belgium: they believe their future is AROME, presently 3 persons deeply involved ALARO and they wish to continue

- Croatia: they have to see their available manpower at home
- Czech rep.: they wish to discuss everything today, not at home; understand that not more manpower needed, just temporary redistribution => accept
- France: they commit themselves
- Hungary: they have to discuss at home (too new information)
- Morocco: they are interested in ALADIN-2 project, but (obviously) no commitment given in their letter
- Portugal: they support the proposed step-by-step strategy but due to small size of their team they cannot commit (but will work on ALARO-10)
- Romania: given the pressure on improvement of present forecast and on the availability of very detailed forecast they are interested both in AROME and ALARO and will be involved in ATV period
- Slovenia: they understand that there is no other chance, so support and try to do best even with small team
- Slovakia: they are already involved in AROME (NH, radar), and also interested in present forecast improvement, so they will participate in ATV
- Tunisia: they wish to collaborate on ALARO/AROME, but for near future their preferences are in improvements of ALADIN for their specific environment ("climate"). Some work on pure ALARO and AROME issues is also planned
- LACE: will follow the decision of directors and refer to ATV slide in their working plan

To summarize, there is a consensus on the strategy reorientation. Concerning the commitments, roughly half of the team agrees and commits, one quarter has to explore their manpower and possible computer cost at home, and one quarter has other local priorities for next year => proposal for revised strategy and ATV commitment was accepted by weak majority.

ALADIN directors gave the mandate to take final decision on the approval to the TCWGPD workshop to be held in Prague, 22-26/11/2004.

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#### **4. HIRLAM-ALADIN cooperation**

In introductory talk A. Horanyi summarized the history of the ALADIN-HIRLAM mesoscale collaboration events. Then he suggested to present and discuss the proposal of the HAC (HIRLAM Advisory Committee) at this Assembly and report the taken decision to HIRLAM Council.

J. Onvlee, the HAC chairwoman, presented the views and recommendations of HAC on possible HIRLAM-ALADIN partnership in mesoscale modelling. The NWP challenges require joint efforts of European LAM consortia. For HIRLAM, the expected benefits from collaboration with ALADIN outweigh potential drawbacks. They support full code

collaboration and they also propose how the cooperation could look on management and projects levels.

P. Uden, HIRLAM Project Leader, explained HIRLAM activities with ALADIN in 2004 and the scientific outlook for coming years (2005-2010) both in topics and estimated manpower.

In the following discussion first A. Horanyi recapitulated the pros and cons of proposed HIRLAM-ALADIN cooperation. Then he explained proposed three levels of cooperation:

- 1) code (full code collaboration on common code with defined rights for usage and for products);
- 2) scientific/research (2 projects at the first stage, possible merge into one project later);
- 3) management (both groups maintain their Assembly/Council structure with mutual cross-representation).

In the round-table all delegates supported ALADIN collaboration with HIRLAM.

They also mentioned several important issues:

- new ways of proposed collaboration should be reflected in MoU(s)
- some working mechanism should be established. A proposal for planning and supervision of the HIRLAM-ALADIN common work was made (see the .ppt slide): The CSSI (Committee for Scientific and Strategic Issues) should be put forward, with a modified composition : 2 LACE representatives, 2 Meteo-France ones, and 2 neither-neither members, so as to better take into account contributions to the project. Its HIRLAM counterparts is HIRLAM Management Group. They should meet once per year and elaborate a scientific plan for common actions. Then, the HIRLAM Advisory Committee (HAC) shall have one ALADIN observer at its sessions. HAC counterpart will be LACE Steering Committee (LSC), having already one Meteo-France observer, and enlarged by one HIRLAM observer and one ALADIN (not MF not LACE) observer. The annual work plans will be derived during HIRLAM All staff meeting and ALADIN workshop (thus those shall be organized roughly the same time of the year and the cross-participation on those meeting was agreed). The project leaders/managers will have the responsibility for the "consistency check".
- there should not be a problem to accept observers at the above mentioned meetings; also there should be no need to change the terms of references of concerned people (ex. LACE MG), because they are only observers
- the problem with travel cost for the participation to more meetings will be overcome by the kind offer of Meteo-France to finance those missions for non-LACE countries for the 1st year (RC LACE has common budgeted for travels)
- anyhow, it was stressed that such "minor" problem as financing few more travels should not prevent us to take the historical chance for so big and important project (especially in enlarged Europe)
- the frequency of the meetings is not so important, many issues could be solved by e-mail correspondence

- the forthcoming HIRLAM Council expects formal signal from ALADIN Assembly, therefore it was proposed to capture the message to HIRLAM in a resolution stating that we (ALADIN) wish to cooperate with HIRLAM and that we wish to establish joined effort (the population of working groups is internal affair).

The resolution was quickly prepared by Meteo-France delegates, then discussed during the meeting and after corrections unanimously adopted.

In the name of HIRLAM P. Uden expressed the satisfaction with the adopted document.

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## **5. New Memorandum of Understanding**

The opened issues concerning the new ALADIN MoU were discussed. A working group responsible for new MoU was proposed with J. Roskar (Slovenia) as chairperson, and C. Blondin (France), A. Quinet (Belgium) and A. Horanyi (Hungary, contact point with HIRLAM) as other members, and adopted.

The importance of the harmonization effort with HIRLAM was recognized: their first draft version of MoU shall be ready by the end of March. The question of the scope of reflection of ALADIN-HIRLAM cooperation in MoU was raised (symmetric references in MoUs?). The concern about the commercial issues was expressed: the appropriate reference to the guidelines for relations among NMSs regarding commercial activities, attached to the WMO Resolution 40 (Cg XII), should be included in the next MoUs.

The clarification on the representative/highest correspondent of ALADIN between the Assembly sessions was reached: it is the chairman of the previous Assembly, as decided at the 7th Assembly of ALADIN Partners held in Bucharest, Romania, 28th October 2002. It was mentioned that this issue shall be reviewed in next MoU. However, chairman of last organized Assembly is authorized to contact HIRLAM with the resolution adopted (see above) and sign the potential agreement on ALADIN-HIRLAM cooperation with HIRLAM representative.

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## **6. Usual business issues**

### **6a) Operations and telecommunications**

The technical overview of operations and telecommunications was given by E. Legrand. The expected evolution of the operational applications and the volume/frequency of the LBC files was shown. The planned change of ARPEGE cut-off times was recalled (for March 2005?) and a move to 4 runs a day for all partners recommended. It was mentioned that ALADIN-NORAF products are not yet disseminated to North Africa NMSs.

The estimated roadmap for the most interesting question: “*when will be the Partners able to run AROME?*” was distributed also as a separate document.

In the following discussion it was stressed that thanks to the efficient ALADIN NH dynamics we gain about 4-5 years according to Moore's law, i.e. one computer generation.

As an addendum the short range EPS version run in Toulouse and its scientific and possible operational links with ALADIN applications were presented.

### **6b) Common objective verification project**

The current status of ALADIN Verification Project was described by J. Jerman. Software is currently running in test mode, with the full list of TEMP and SYNOP stations, and 7 partners sending data. Some work is required to solve performance issues, add new scores (e.g. from ECMWF Tech Memorandum) and produce automated reports. Then other centers will be invited to join the project.

HIRLAM would be also interested in cooperation in this field.

- Participants thanked to Slovenian team for their work.

- The recommendations from SRNWP workshop on verification methods were mentioned, namely the need of hourly SYNOP data and radar observations in GTS (official information should be passed via EUMETNET)

- Also the activities for mesoscale verification of WMO/WWR program soon leading to WMO recommendation shall be followed and possibly taken into account within ALADIN verification project. Dedicated web pages were designed by WMO experts.

### **6c) Common MAP downscaling project**

D. Klaric presented the common (LACE/ALADIN) MAP downscaling project. The data now available can serve as a test-bed for validation of new developments. Also the possible participation on MAP FDP (Forecast Demonstration Project) project was discussed: AROME, Meso-NH, ALADIN (or ALARO-10?) are the candidates for various demonstration projects. Better coordination and spread of information related to MAP-FDP is required. The importance of ALADIN 3D-VAR in this framework was underlined.

### **6d) Maintenance**

The statistics of phasing and maintenance issues were shown by D. Giard with satisfactory comments: maintenance effort is steadily increasing and phasing effort remains constant. The evolution of the cycles along 2004 with the outlook to 2005 was discussed. A modification was brought to the initial schedule for 2005, with another interim cycle in the autumn incorporating the ALARO-10 physics, as presented in 3d) by J.-F. Geleyn. CY28T1/T3 shall be the basis for operations in 2005.

## **6e) Status of research at members + manpower commitments**

Various statistics of participation on ALADIN and ALATNET project were presented by J.-F. Geleyn (time evolution, split per countries, by funding etc.).

The manpower commitments for 2005 were asked and given (in man-months):

Austria: 45-50

Belgium: 60

Croatia: 36

Czech rep.: 50

France: 205 (a significant increase due to the federating work on AROME)

Hungary: 60

Morocco: 84 (by letter, with question marks due to the strong increase -  
from 35- and the definition of items)

Portugal: 29

Romania: 40

Slovenia: 30

Slovakia: 45

Tunisia: 36

Contributions from Poland and Bulgaria were missing.

If their last year commitment is kept also for 2005 (PO: 24, BU: 10):

the total sum is between 710 and 760 man-months (pending the Moroccan uncertainty).

## **6f) Workshops, trainings, ALATNET-2**

The list of already planned workshops and other actions was presented by D. Giard together with the preference table of ALADIN teams for training courses in 2005. Training on the AROME prototype and on Meso-NH physics were chosen as the most attractive ones. Given the tight calendar of already announced activities, the dates and places of those trainings were not decided. However it was proposed to joint and organize them late 2005 in Bucarest.

The proposal for a SRNWP Research Training Network within the 6th FP of EC was also presented and the official agreement of those ALADIN Partners who already applied to participate was asked and given.

## **6g) AOB**

- it was stressed that the consolidation of CSSI group and its chairperson is important. A. Horanyi was proposed and accepted for this position.

- the distribution of the relevant documents and presentations prior to the meeting was asked

- F. Duvernet informed participants about commercialisation of ALADIN outputs by Meteo-France. They will sell ALADIN data to "ARIA Technologies" company over a domain not covering any current ALADIN area. The way how the announced incomes will be distributed to ALADIN Partners is to be discussed during the next Assembly.

- J.-F. Geleyn thanked to F. Duvernet, who is leaving his current position in Meteo-France, for all his work and support to the ALADIN project (being with the ALADIN initiative right from the start).

- participants thanked to B. Gelo for his work for ALADIN while being the director of Meteorological Service of Croatia; and also to local organizers D. Klaric, B. Ivancan-Picek and E. Pecenkovic for perfect preparation of both RC LACE and Assembly meetings.

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## **7. Time and the place of the next ALADIN Assembly**

Next Assembly of ALADIN Partners will take place in Slovakia (Bratislava or nearby) on 21st October 2005.

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## **8. Closing**

B. Gelo closed the 9th Assembly of ALADIN Partners.