

# Minutes of the MAP D-PHASE Steering Committee meeting, 27 March, Hohenheim

Participants: Manfred Dorninger, Andrea Montani, Evelyne Richard, Hans Volkert, Volker Wulfmeyer, and Marco Arpagaus (MD coordinator; minutes).

Excused: François Bouttier, Andrea Buzzi, Giuseppe Frustaci, Christoph Hegg, Ken Mylne, Roberto Ranzi, Andrea Rossa, Mathias Rotach, Christoph Schär, Michael Staudinger.

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## 1 Opening, agenda, minutes

By agreement of all the Steering Committee members present at the 5<sup>th</sup> COPS Workshop in Hohenheim (26-28.3.2007) as well as Christoph Hegg and Michael Staudinger (phone calls by Hans Volkert), the Steering Committee meeting was re-scheduled from 28 March 09:00 to the evening of 27 March to allow some of the Committee members to take part at the excursion to the COPS OC and Supersites on March 28.

Mathias Rotach was not able to attend the Steering Committee meeting due to private reasons. Hans Volkert, who kindly accepted to chair the meeting on behalf of Mathias, opened the Steering Committee meeting at the Restaurant Garbe in Hohenheim on Tuesday evening, 27 March 2007, at roughly 21:00.

The agenda was adopted unanimously.

The minutes of the last meeting (8 November 2006, in Vienna) have been approved with thanks to the author.

## 2 Information

### 2.1 Data Archive and Visualisation Platform

- Data Archive (DA):
  - upload and retrieval successfully tested during first dry-run
  - **no major problem-area identified**
- Visualisation Platform (VP):
  - first version of level 1 running, levels 2 & 3-a promised for March dry-run, level 3-h for April dry-run
  - xml upload and visualisation successful during first dry-run
  - still missing: product browser, feedback form, etc.
  - still a lot of work; **no major problem-area identified**
  - VP will remain online, also in between the dry-runs: <http://www.d-phase.info>

### 2.2 Dry-runs and related milestones

- February dry-run (26 February – 2 March 2007):
  - Pilot users only:  
CLEPS/Montani, MOGREPS/Robertson, MM5/Bauer, COSMOCH2/Ament, LAMI7/Cesari, ISACMOL/Davolio, DIMOSOP/Ranzi, and PREVAH/Jaun&Zappa.
  - Very useful:
    - it triggered a lot of activities;
    - we all realised that there still is a lot to be done;
    - it showed us that our aim of a state-of-the-art distributed end-to-end forecasting system is realistic;
    - it confirmed that D-PHASE indeed has the potential to become a very successful demonstration project;
    - all in all a good motivation for the time (and work!) ahead.
- Next milestones:
  - Dry-runs:  
29 March – 4 April 2007  
24 April – 30 April 2007
  - Ramp-up:  
24 May – 31 May 2007
  - D-PHASE Operations Period (DOP):  
1 June – 30 November 2007

It was foreseen to decide on a possible upgrade of the VP (CPU, disks, bandwidth) based on the performance of the VP during the March dry-run. This will have to be postponed to after the April dry-run since too few systems will contribute to a stress test

of the VP during the March dry-run. – This implies the (small) risk that the upgrade will not be ready for the beginning of June, but only a week or two after that.

### 2.3 List of participants

The list of participants was not shown since no beamer was available. – An updated version will soon be available on the D-PHASE web-site.

### 2.4 Web-site

Since no internet connection was available, the web-site could not be demonstrated. – The site now features an updated list of all the people involved in D-PHASE, including mail address, phone number, and membership in the working groups.

## 3 Observational data

This item on the agenda was discussed during the Joint COPS-ISSC / MD-SC meeting on the late afternoon of March 27, right before the MD-SC meeting itself. The discussion and decisions made are documented in the respective minutes and are reproduced here for convenience.

The following observational data have been requested from all European Met Services in the Alpine region and will be stored on the data archive (DA) in Hamburg:

- surface station data (including precipitation data):
  - GTS and non-GTS-data (i.e., densest network available)
  - in GTS format, if available
  - data delivery in real-time (for monitoring purposes) whenever possible
- radiosonde data (TEMP, PILOT):
  - all radiosonde data available (GTS and non-GTS-data)
  - in GTS format, if available
  - data delivery in non-real-time (for verification purposes)

**Concerning the transfer of these data from the Met Services to the DA, the following responsibilities have been defined and agreed upon:**

- **Setup of data inventory ('What data is available from where, in what format, at what interval, etc') and collection of the data from the data owners (Met Services) will be done by D-PHASE; responsible person is Manfred Dorninger.**
  - **The data will be collected in Vienna and transferred to Cologne (GOP) for further processing (see below).**
- **GOP PI Susanne Crewell agreed to provide interim archiving of the collected data in Cologne in the framework of the GOP.**
- **Transformation of the data (in whatever format; GTS formats will be encouraged, see above) into the appropriate format (most probably NetCDF) for storage on the data archive (DA) is planned to be done in close collaboration with the GOP PIs. The responsible person(s) have to be defined as soon as possible, and will act as PIs for these data (in analogy to other data collected during COPS and the GOP). – Data transformation is planned to be done in Cologne, utilizing the substantial know-how acquired within GOP.**
- **The archiving on the data archive (DA), i.e., the transfer of the data from Cologne to Hamburg as well as the uploading into the DA will be done in close**

**collaboration with the GOP Pls. The responsible person(s) have to be defined as soon as possible.**

Radar data in graphical format will – if ever possible – be made available to D-PHASE, COPS, and GOP through dedicated password-protected web-sites by the data providers / owners. These web-sites will – again: if ever possible – also host an archive for all the data provided during the DOP (responsibility: D-PHASE). – Radar data in a numerical format will only be available on request and on a bilateral basis.

Gridded precipitation products (based on surface station) in real-time would be nice to have, too. However, no data provider has promised such a product yet, and therefore the question of long-time archiving is not relevant, yet.

Since the data requested from the Met Services will cover the entire year 2007, and since all data (including data from climatic networks, which will most certainly not be available before well into 2008) need to be archived on the DA until the end of March 2008 (COPS data policy), D-PHASE is concerned about the financing of the DA and Claudia Wunram as the responsible for the data archive. Volker Wulfmeyer explained that the financial situation beyond March 2008 is not clear yet, and that no promises can be made. He however shares the concern related to this issue.

**Finally, Manfred Dorninger raised the question of quality control of all these additional data. Volker Wulfmeyer agreed on the importance of quality control, but again stated that there was no funding available at this point. It was however agreed that Manfred Dorninger contacts Susanne Crewell (GOP) to formulate a common GOP/COPS/D-PHASE data quality control proposal for the next funding period of the SPP PQP (deadline for submission of proposals is November 2007).**

## 4 Project Marketing

Marco Arpagaus briefly reported on a few ideas of Mathias Rotach and the WG chairs concerning **publications**. Based on this input, the MD-SC made the following recommendations:

- Publish BAMS article asap ('publicity'); authors: WG chairs and MD-Co, lead author Mathias Rotach;
- Try to publish another, more scientifically oriented article in the Journal of Hydrology (lead author: Roberto Ranzi or Christoph Hegg or Christoph Schär?), in the Journal of Hydrometeorology (lead author: as for JoH), or in MAP (lead author: Mathias Rotach?);
- A publication in an end user oriented journal would be nice;
- Don't be too ambitious, but be fast ...
- Try to publish a D-PHASE article in the ICAM 2007 special issue (Mathias Rotach will possibly do that in any case);
- Information by Volker Wulfmeyer: COPS will soon publish a paper in BAMS; could this be coordinated with the D-PHASE BAMS paper?

Similarly, Marco Arpagaus reported on the **media concept by MeteoSwiss**. Hans Volkert considered the concept to be a good example that should be followed. – The concept (which is not yet final) is available from Marco Arpagaus. **Please report all similar efforts and all press or media coverage of D-PHASE to the MAP D-PHASE coordinator (Marco Arpagaus), thanks!**

## 5 Review of critical tasks on the action list

Since many of the relevant persons were not present at the meeting, the action list was not reviewed. However, the following points have been made:

- Marco Arpagaus will contact all responsible people personally to discuss critical tasks.
- Andrea Montani has been (thanks!) and will continue to be the prime contact person for the data archive (Claudia Wunram, Hannes Thiemann).
- Marco Arpagaus has been (thanks!) and will continue to be the prime contact person for the visualisation platform (Gerhard Kittel).
- COPS-Ch 1: Volker Wulfmeyer would like to get more and faster feedback from the atmospheric modellers concerning the GrADS script provided to generate the model products ('plots'). Marco Arpagaus will try to trigger this feedback after the March dry-run. – Related to the possible problems with the GrADS scripts at the various centres, Andrea Montani has agreed to check the GRIB output of the atmospheric models for consistency with the specifications, which should help to prevent non-successful execution of the GrADS scripts.
- *Input from Roberto Ranzi in writing after the meeting:* The definition of target and impact areas is almost completed. Also the definition of criteria and values to set meteorological thresholds for target and impact areas is almost completed (indeed, it was completed on April 16). Because the above tasks required more time than foreseen, tasks WG-HEU 17 and WG-HEU 18 are in delay.

## 6 Open issues from the Working Groups

### 6.1 WG-DI

- WG-DI 7: COPS is kindly invited to provide its feedback on the list of atmospheric model products as soon as possible. – Volker Wulfmeyer will provide the information within a week.

### 6.2 WG-HEU

- *Input from Roberto Ranzi in writing after the meeting:* New hydrological forecasters received accounts for the DA (Politecnico di Milano, CIMA, Autorità di bacino dell'Alto Adriatico, etc). The NetCDF and xml format conversion seems to be a critical task not yet solved by many hydrological modellers.

### 6.3 WG-VER

- Manfred Dorninger informs the MD-SC that the verification tool-box by Michael Denhard will be installed on the DA (or on some download area) for easy access and minimisation of data transfer. According to Claudia Wunram, the necessary scratch disk-space is available, but it may become necessary to impose some quota mechanism.

### 6.4 WG-DP

- The Met Services that have not answered to the request for observational data will be reminded to do so within the next days. Most critical are a few regional Met Services in Italy.

## **7 End user meetings**

### **7.1 In Brescia, Italy, on 18 (?) April**

The meeting has been shifted to the 19<sup>th</sup> of April.

### **7.2 In ?, Switzerland, on 20 June**

*Input from Christoph Hegg in writing after the meeting:* On the 20th of June a workshop will be held to introduce end users from Switzerland, Germany and Austria to the Visualisation Platform of D-PHASE. It will take place at MeteoSwiss and it will be accompanied by social scientists to assess the quality and the success of the introduction for the end users.

### **7.3 Elsewhere?**

No further plans for other countries.

## **8 Next Scientific D-PHASE Meeting**

ARPA-SIM (Andrea Montani) and ISAC-CNR (Andrea Buzzi) jointly offer to host the second Scientific D-PHASE Meeting in Bologna:

- date: March, April, or May 2008 (preference for May);
- duration: at least 3 full days;
- exact location to be defined;
- local organizing committee to be appointed;
- programme committee to be appointed.

Andrea Montani will report on further decisions at the next meeting of the WG chairs (14 May, in Zurich).

## **9 Next meeting and any other business**

The next MD-SC meeting has been scheduled for a day in August 2007, at the COPS Operations Centre in Baden Airpark (exact date to be defined by e-mail).

Hans Volkert closed this somewhat special MD-SC meeting at 22:45 with an offer for a 'Schnapsel'. – Thanks to Hans for the Grappa and the superb chairing, and to Marco for the good preparation of this meeting.

## Appendix: Updated action list

### Updated action list (status as of MAP D-PHASE Steering Committee meeting, 27 March 2007)

Identifier	Action	Responsible	Due date	Remarks
WG-DI 2	Work out detailed specification of information flow for and common format of output data. Define variables and lead times needed as input for the hydrological models. <i>Still missing:</i> - information flow for hydrological models (frequency, timing; MD-IP 4.1.2) - final specification of output format for hydrological models (MD-IP 4.1.3)	WG-DI	asap	See MD-IP sections 3.1.2, 3.1.3, 4.1.2, 4.1.3, 5.1.2, and 5.1.3. – Coordinate with WG-VER.
WG-DI 7	Work out detailed specification of atmospheric model / hydrological model / nowcasting products to be visualised. <i>Still missing:</i> - final specification for visualisation of atmospheric data (MD-IP 3.1.4)	WG-DI	asap	See MD-IP sections 3.1.4, 4.1.4, and 5.1.4.
WG-DI 10	Work out detailed specification of common format of alerts. <i>Still missing:</i> - xml format for hydrological models (MD-IP 4.2.4)	WG-DI	asap	See MD-IP sections 3.2.4, 4.2.4, 5.2.4, and 6.2.4.
WG-DI 13	Check metadata information on DA for accuracy and completeness.	WG-DI	24.05.2007	
WG-DI 15				
WG-HEU 4	Work out detailed specification of warning criteria for alerts produced for (deterministic) hydrological models.	WG-HEU / Hegg & Vogt	asap	See MD-IP sections 3.2.2, 5.2.2.
WG-HEU 6	Search for specific sites where cost/loss analysis can be carried out.	WG-HEU	05.2007	
WG-HEU 8	Work out detailed specification of warning criteria for alerts produced for hydrological forecasters. <i>Still missing:</i> - Specify thresholds for “yellow” and “orange” alert levels in case hydrological forecaster specified only one (“red”) threshold.	WG-HEU	asap	See MD-IP sections 3.2.2, 4.2.2, 5.2.2, and 6.2.2.
WG-HEU 9	Collect and document end user specifications concerning alerts (warning criteria). <i>Still missing:</i> - Specify thresholds for “yellow” and “orange” alert levels in case end user specified only one (“red”) threshold. - Identify end users that request alerts from a well-defined forecaster (“push”) as opposed to end users which access the Visualisation Platform individually (“pull”).	WG-HEU	asap	See MD-IP section 6.2.2.
WG-HEU 11	Organise end user meeting in Switzerland, mainly for training/educational purposes. –	Hegg	20.06.2007	Open to everyone; coordinate

**Updated action list (status as of MAP D-PHASE Steering Committee meeting, 27 March 2007)**

Identifier	Action	Responsible	Due date	Remarks
	Input: results / information of end user questionnaire.			with Italy (Ranzi, Tibaldi, etc).
WG-HEU 13	Work out detailed specification of warning criteria for alerts by limited area EPSs and the high-resolution EPS for ensemble hydrological models. <i>Only ensemble hydrological model that requests such alerts is FERW (BAFU).</i>	WG-HEU / Hegg & Vogt	asap	See MD-IP section 3.2.2.
WG-HEU 14	Work out detailed specification of information flow for feedback. <i>Still missing:</i> - <i>feedback strategy for end users (MD-IP 7.3.2; coordinate with WG-VER)</i> - <i>feedback strategy for hydrological forecasters (?)</i>	WG-HEU	04.2007	See MD-IP sections 6.3.2 and 7.3.2. – Coordinate with WG-VER 2.
WG-HEU 15	Work out detailed specification of common format for feedback. <i>Still missing:</i> - <i>format for feedback by end users (MD-IP 7.3.3; feedback will presumably be in a non-electronic form, e.g., by interview or paper questionnaires)</i> - <i>format for feedback by hydrological forecasters (?)</i>	WG-HEU	04.2007	See MD-IP sections 6.3.3 and 7.3.3.
WG-HEU 16	Work out detailed specification of evaluation protocol for feedback. <i>Still missing:</i> - <i>specification of evaluation protocol for end users (MD-IP 7.3.1)</i> - <i>specification of evaluation protocol for hydrological forecasters (?)</i>	WG-HEU	04.2007	See MD-IP sections 6.3.1 and 7.3.1.
WG-HEU 17	Prepare a User Guide (“What do I need to do when participating in D-PHASE”) for the hydrological modellers	Ranzi	asap	
WG-HEU 18	Prepare a User Guide (“What do I need to do when participating in D-PHASE”) for the end users.	Hegg	asap	
WG-HEU 20				
WG-VER 3	Work out detailed specification of offline verification.	WG-VER	05.2007	See MD-IP section 9.2.
WG-VER 4	Make offline verification.	WG-VER		See MD-IP section 9.2.
WG-VER 5	Work out detailed specification of feedback assessment.	WG-VER	05.2007	See MD-IP section 9.3.
WG-VER 6	Make feedback assessment.	WG-VER		See MD-IP section 9.3.
WG-VER 8				
WG-DP 5				

**Updated action list (status as of MAP D-PHASE Steering Committee meeting, 27 March 2007)**

Identifier	Action	Responsible	Due date	Remarks
MD-Ch 3	Prepare WWRP FDP and/or MAP D-PHASE letter of recommendation for possible proposals to national funding bodies.	Rotach	on request	
MD-Ch 5	Publish paper in BAMS and/or in other, more specific journals (e.g., JoH, JoHM, MAP; end user journals?). Author for BAMS paper: WG chairs and MD-Co.	Rotach	2008	First draft by the end of the DOP.
MD-Co 8	Work out detailed specification of the technical realisation of common visualisation platform.	Arpagaus	ongoing	In collaboration with MD-VP. – See MD-IP section 10.2.
MD-Co 11	Collect input for and edit MD-IP.	Arpagaus	ongoing	
MD-DA 1	Implement the technical realisation of storage and retrieval of data, alerts, and feedback.	Wunram	ongoing	See MD-IP sections 10.1.1 – 10.1.3.
MD-DA 3	Work out detailed specification of the technical realisation of information flow.	Wunram	asap	In collaboration with MD-VP. – See MD-IP section 10.3.
MD-DA 4	Implement the technical realisation of information flow.	Wunram	ongoing	In collaboration with MD-VP. – See MD-IP section 10.3.
MD-DA 7	Work out detailed specification of the technical realisation of storage and retrieval of data, alerts, and feedback.	Wunram	asap	In collaboration with MD-Co and COPS-Co. – See MD-IP sections 10.1.1 – 10.1.3.
MD-VP 1	Implement the technical realisation of common visualisation platform.	Kittel	ongoing	See MD-IP section 10.2.
MD-VP 2	Implement visualisation of alerts.	Kittel	ongoing	See MD-IP sections 3.2.5, 4.2.5, 5.2.5, and 6.2.5.
MD-VP 3	Implement evaluation protocol for feedback.	Kittel	ongoing	See MD-IP sections 6.3.1 and 7.3.1 (?).
MD-VP 4	Implement information flow for feedback.	Kittel	ongoing	See MD-IP sections 6.3.2 and 7.3.2 (?).
MD-VP 5	Implement common format for feedback.	Kittel	ongoing	See MD-IP sections 6.3.3 and 7.3.3 (?).
MD-VP 7				
COPS-Ch 1	Provide software that generates atmospheric model products.	Wulfmeyer	asap	See MD-IP section 3.1.4.