



## **D-PHASE**

a WWRP Forecast Demonstration Project

# **Minutes of the MAP D-PHASE meeting of the WG chairs, 16-17 July 2007, Bologna**

Participants: Manfred Dorninger, Christoph Hegg, Andrea Montani, Roberto Ranzi, Mathias Rotach, and Marco Arpagaus (MD coordinator; minutes)

Guests (part time): Davide Cesari, Chiara Marsigli, Tiziana Paccagnella

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## 1 Opening, agenda, minutes

Mathias Rotach opened the meeting and welcomed all participants in hot Bologna (thanks to Andrea for hosting the meeting!).

The agenda was adopted unanimously, but was reshuffled to account for the late arrival of some of the participants. The minutes will however follow the ordering given by the agenda.

The minutes of the last meeting (5 February 2007, in Zurich) have been approved with thanks to the author. – Note that no minutes have been compiled for the telephone conference of 14 May 2007.

## 2 Information

### 2.1 Status of VP

The VP ([www.d-phase.info](http://www.d-phase.info)) is still being developed. Status:

- atmospheric models: most things done (still missing: days 3-5 on level 3)
- hydrological models: to be done in the next 2 weeks
- nowcasting tools: done
- (atmospheric) forecaster feedback form: online
- end user feedback form: pending (see agenda item 3.1)
- in general: many details, which keep causing delays ...

*Note added in proof (11.10.2007): All missing items are online. Some bug fixing here and there and some improvements are however still ongoing ...*

Although the VP is not yet completely finished, feedback from users has in general been very positive so far. Most notably, COPS is very satisfied with the atmospheric products available on the platform.

#### Discussion:

- On the top row, a section called 'How to get started' should be added.
- Level 3-h will be submitted for feedback to Ranzi/Hegg as soon as a first version is available.

### 2.2 Status of DA

The DA is up and running and has already archived quite some data. – Andrea Montani is currently reviewing the metadata files and cross-checking their content with the actual GRIB files. Some inconsistencies have already been found.

#### Discussion:

- Should coding errors in the GRIB files be corrected? – No (for the sake of consistency of the GRIB files over the entire DOP), but the error should explicitly and exhaustively be documented in the metadata description.

### 2.3 Status of model products

- Most atmospheric models specified in the Implementation Plan are actually providing data both to the VP (xml alert files and plots in real-time) as well as to the DA (same plus GRIB files). The only model that will be substantially delayed is

MOGREPS (problems with GRIB coding and GrADS). The status of LMITA and LMEURO is somewhat unclear (GRIB ok, but no xml files and plots), and MESONH has just joined D-PHASE, but hopes to be ready by the end of the month.

- LAMEPSAT and INMSREPS are not yet providing probability GRIB files that are needed to plot probabilities of exceedance of some precipitation thresholds. – Andrea Montani will contact the responsible contact persons to offer them the CLEPS code to generate probabilistic GRIB output.
- The Meteograms for probabilistic models are still missing. – Andrea Montani will contact Matthias Grzeschik to discuss the issue.
- As for the hydrological models, only PREVAH and FEWS/HBV are regularly shipping data to the VP. Many hydrological models have not yet provided one single xml file for testing.

#### **Discussion:**

- Ranzi/Hegg will provide an update of table 2 of the MD-IP ('hydrological models') asap.
- Ranzi/Hegg encourage all hydrological modellers asap to start working on the D-PHASE specific issues such as xml alert file and NetCDF output generation as soon as possible. They especially invite them to provide a sample xml file to Gerhard Kittel for testing before the summer holiday break!

## **2.4 Status of nowcasting and monitoring tools**

All nowcasting and monitoring tools specified in the MD-IP are online.

## **3 Critical tasks (review of the action list)**

### **3.1 Organisation of feedback from hydrologists and end users (tasks WG-HEU 14-16)**

Christoph Hegg presented a first version of the online feedback form for hydrologists and end users developed in collaboration with social scientists of WSL. This draft will be translated into English by Christoph, followed by translations into Italian and French by Roberto Ranzi and MeteoSwiss (responsibility: Marco Arpagaus), respectively, if possible until the end of July. The different language versions will then be coded into an html form on the VP by Gerhard Kittel.

*Note added in proof (11.10.2007): The end user feedback forms are online since yesterday.*

### **3.2 User guide for end users (task WG-HEU 18)**

Nothing has been done so far. – Christoph Hegg will check with Marco Arpagaus whether the 'How to get started' page on the VP (see agenda item 2.1) is sufficient as an End User Guide.

### **3.3 Other tasks**

- WG-DI 13: Ongoing.
- WG-HEU 6: The only site for which a cost/loss analysis looks feasible is the Zurich railways construction site. The status of this project (and the involvement of D-PHASE) is however still unclear. – Christoph Hegg will check the Mattmark project (Switzerland, Urs Steinegger) as well as the Sylvensteinspeicher project

(Germany, Uwe Ehret) for as possible cost/loss application as soon as these two D-PHASE participants are fully up and running.

- WG-HEU 9: Specification in the MD-IP concerning provision of alerts for end users: the default is pulling the information from the VP, a push from a well-defined forecaster can however be agreed upon bilaterally, but will not be documented in the IP.
- COPS-Ch 1: Andrea Montani will contact Matthias Grzeschik to discuss which plots are still to be generated (or modified/improved) by the GrADS script (cf. agenda item 2.3 as well as IP section 3.1.4).
- ---: It has been decided that no new target or impact areas will be defined. That is, the number (and specification) of the target and impact areas is final and frozen.

## 4 Open issues from the Working Groups

### 4.1 WG-DI

No extra points additional to the ones already mentioned under agenda item 2.

### 4.2 WG-HEU

- End users: Currently 32 in Switzerland, around 10 in Italy, 7 in Germany, 1.5 in Austria, and some more in Slovenia and Croatia.
- In Switzerland, social scientists are accompanying the end user feedback assessment (attendance at end user workshops, design of evaluation form, etc). – Contact Christoph Hegg for more information.

### 4.3 WG-VER

- An invitation to all WG-VER members to download data from the DA has triggered no response whatsoever.
- The 'model – VERA' monitoring tool will soon also include CMC GEMH and MM5\_2\_CT / MM5\_2\_4D.

### 4.4 WG-DP

No extra points additional to the ones mentioned under agenda item 5.

## 5 Observational data

Most Met Services have replied positively to our request to provide observational data. Still pending (11.10.2007) are the answers from Italy (USAM as well as ARPA Veneto) and Slovakia. – Manfred Dorninger is currently contacting all Met Services to negotiate the details of the data transfer (what data, what format, delivery frequency, etc).

The data will be stored both at U Vienna (backup) and U Cologne (GOP), before being uploaded to the DA.

### 5.1 Data transformation and upload to DA

Transformation of the various data formats into NetCDF renders the data more useful (common format), and should hence be pursued. However, this is not a trivial task, and may need some additional funding. Moreover, the transformation of the data into NetCDF and the uploading to the DA is very unlikely to be finished before March 2008 (some climatic data may not even be available before that date).

**Discussion:**

- Should we try to submit a common project of D-PHASE/COPS/GOP for data transformation and uploading within the 3<sup>rd</sup> phase of SPP QNV (funding by German Research Foundation)?
- U Vienna is reading all data for VERA anyhow. Additionally, know-how to write appropriate NetCDF will soon be available at U Vienna, since the data from the Vienna weather stations (COPS!) will need to be transformed into NetCDF as well. – Would it be possible to output the VERA-internal observational data in NetCDF format? Would this need extra funding? How much? – Manfred Dorninger will check.

*Note added in proof (11.10.2007): U Vienna (Manfred Dorninger) has offered to transform the observational data into NetCDF. 10 k€ are needed for this extra effort, which will be provided by MeteoSwiss (50%, from remaining MAP NWS funds) and COPS/GOP (50%; hopefully covered by the common SPP QNV project (see below)).*

**5.2 Quality control**

See next item.

**5.3 Gridded data**

Although the added value of quality controlled and gridded data is obvious, both tasks (i.e., quality control and gridding of data) are not strictly necessary, but rather nice to have. Moreover, both tasks need substantial (human and therefore financial) resources.

**Discussion:**

- Should we try to submit a common project of D-PHASE/COPS/GOP for quality control and gridding within the 3<sup>rd</sup> phase of SPP QNV (funding by German Research Foundation)? – **Ideally, this common project would cover collection of all data (surface station data and radiosonde data, GTS and non-GTS data) from the Met Services (current responsibility: D-PHASE / Manfred Dorninger; the situation concerning GTS data is however not very clear at the moment), data transformation and uploading (see agenda item 5.1), quality control, and data gridding.** Manfred Dorninger will provide an estimate of the resources needed for these tasks.
- **Additionally, some (independent) funding for the prolongation of the DA support by Claudia Wunram has to be ensured.**

Both items above will be discussed at the next MD-SC meeting.

**6 Meetings****6.1 B08FDP/RDP, 20-22 Sep 2007, Qingdao, China**

D-PHASE should be present at the next B08FDP/RDP workshop in beautiful Qingdao. – Manfred Dorninger considers to represent D-PHASE, but would need funding for that.

*Note added in proof (11.10.2007): Manfred Dorninger has successfully represented D-PHASE at the B08FDP/RDP workshop (funding provided by MeteoSwiss). His participation was very much appreciated by the B08FDP/RDP colleagues (and by us, of course!).*

## 6.2 Next meeting of the WG chairs

The date for the next WG chairs meeting has been fixed for 12 October, 2007, in Zurich (full day meeting).

*Note added in proof (11.10.2007): The meeting has been replaced by a telephone conference.*

## 7 Future of VP (and DA) after the DOP

The VP should be switched off by the end of November 2007 (end of the DOP) or at least by the end of the year (the MAP data policy as well as the letter to the Met Services refers to the full year 2007). There is however already widespread interest among the end users (especially in Switzerland) to keep the D-PHASE visualisation platform alive after 31 December 2007. This is a tremendous success for D-PHASE (the platform is running little more than a month now!), but raises the question of the way forward.

The following options are possible (not a final list):

- Each interested country buys 'their share' of the VP, and runs it country wise: no (or limited ...) problems with data exchange and different rules.
- Try to find a joint solution (as is): how about data rights?

### Discussion:

- In Italy, civil protection authorities might be interested in a continuation of the VP. A joint VP (Italy / Switzerland) with different data sources and different access rights (e.g. 'Italian data for Italian users, only') would be preferable.
- No clear signal from other countries, but only Italian and Swiss colleagues contributed to the discussion (Manfred Dorninger arrived after this item was discussed).

The discussion will be continued at the next MD-SC meeting.

Continuation of the DA is no issue, yet (apart from the funding needed for the support of the DA, see agenda item 5).

## 8 Data analysis after the DOP

The main issue concerning data analysis after the DOP is funding. The following options were discussed:

- DFG (German Research Foundation): only an option for Germany, Switzerland, and Austria (Note: the common D-PHASE/COPS/GOP project mentioned in agenda item 5 aims for funding by the DFG). May not fund precipitation studies over the Alps.
- National funding, but joint proposal (umbrella project for everyone, individual projects in each country).
- ESF: too slow (Eurocores), and difficult in some countries (e.g., Italy).
- GMES: different community.
- INTERREG: could join with Meteorisk II. Again, not all partners covered (despite the fact that Meteorisk is in the Alpine Space programme).

The discussion will be continued at the next MD-SC meeting.

## 9 Download accounts for the DA

According to COPS policies, only people providing data to the DA are allowed to download data from the DA. For D-PHASE, this would essentially be all WG-DI members. Obviously, members of the verification group (WG-VER) should also be allowed to retrieve data (otherwise, verification gets relatively difficult ... ;-). All these people will be eligible for data download, but will only receive an account on request. Additional people can always be allowed access if the 3 coordinators (Marco Arpagaus for D-PHASE, Andreas Behrendt for COPS, and Susanne Crewell for GOP) agree. – Marco Arpagaus will send the respective list of users to the DA (Claudia Wunram).

## 10 Publications

A few items have been discussed:

- A list of all published papers, conference talks and proceedings, media articles, etc, will be collected once per year. Marco Arpagaus (lead), Andrea Montani, Manfred Dorninger, Michael Denhard (tbc), and Evelyne Richard (tbc) will do this for Switzerland, Italy, Austria, Germany, and France, respectively.
- Papers:
  - Mathias Rotach (co-authors: all WG chairs plus D-PHASE coordinator) will publish an article in Meteorology and Atmospheric Physics (ICAM 2007 proceedings) by the end of September.
  - HEPEX proceedings will be published in Atmospheric Science Letters. Christoph Hegg checks with Massimiliano Zappa, whether he would like to be lead author of a paper (co-authors: all WG chairs plus D-PHASE coordinator).
  - BAMS article: This is still on Mathias' desk ...
  - HESS article or similar: Roberto Ranzi and Christoph Hegg will take care of that.
- Media: There will be a media day in Switzerland on the 29<sup>th</sup> of August. – Are there any activities planned elsewhere? (*Note added in proof: The media day was very successful and triggered 22 press articles.*)

## 11 Any other business

The only other business raised was a wish by our chairman: Could we make a D-PHASE T-shirt (now that we have a logo ...)? To sell (or give away?) at the 2<sup>nd</sup> MAP D-PHASE Scientific Meeting in Bologna? – Andrea Montani will check the options ...

## Appendix: Updated action list

### Updated action list (status as of MAP D-PHASE meeting of the WG chairs, 16-17 July 2007)

Identifier	Action	Responsible	Due date	Remarks
WG-DI 13	Check metadata information on DA for accuracy and completeness.	WG-DI / Montani	asap	ongoing
WG-DI 15				
WG-HEU 6	Search for specific sites where cost/loss analysis can be carried out.	WG-HEU / Hegg	asap	Mattmark? Sylvensteinspeicher?
WG-HEU 18	Prepare a User Guide ("What do I need to do when participating in D-PHASE") for the end users.	Hegg	asap	<b>Replace by 'How to get started' on the VP? Still needed?</b>
WG-HEU 20				
WG-VER 3	Work out detailed specification of offline verification.	WG-VER	12.2007	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	asap	See MD-IP section 9.3. <b>Transfer to WG-HEU?</b>
WG-VER 6	Make feedback assessment.	WG-VER		See MD-IP section 9.3. <b>Transfer to WG-HEU?</b>
WG-VER 8	Provide estimate of the resources needed for collection of <i>all</i> observational data, data transformation and uploading to the DA, quality control, and data gridding. Serves as input for the D-PHASE/COSP/GOP common project proposal to the German Research Foundation (3 <sup>rd</sup> phase of SPP QNV).	Dorninger	asap	
WG-DP 5				
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. Authors: Rotach (lead), WG chairs, and MD-Co.	Rotach	2008	First draft by the end of the DOP.
MD-Ch 6	Publish paper in Meteorology and Atmospheric Physics (ICAM 2007 proceedings). Authors: Rotach (lead), WG chairs, and MD-Co.	Rotach	09.2007	
MD-Ch 7	Publish paper in Atmospheric Science Letters (HEPEX 2007 proceedings). Authors:	Rotach/Hegg/Zappa	asap	Hegg checks with Zappa

**Updated action list (status as of MAP D-PHASE meeting of the WG chairs, 16-17 July 2007)**

Identifier	Action	Responsible	Due date	Remarks
	Zappa (lead, ?), WG chairs, and MD-Co.			
MD-Ch 8	Publish paper in HESS or similar hydrological journal (JoH? JoHM?). Authors: Ranzi & Hegg (lead), WG chairs, and MD-Co.	Rotach/Ranzi/Hegg	asap	
MD-Co 11	Collect input for and edit MD-IP.	Arpagaus	ongoing	
MD-Co 12	Collect list of published papers, conference talks and proceedings, media articles, etc. – Responsibility: Marco Arpagaus, Andrea Montani, Manfred Dorninger, Michael Denhard (tbc), and Evelyne Richard (tbc) for Switzerland, Italy, Austria, Germany, and France, respectively.	Arpagaus	yearly	
MD-DA 8				
MD-VP 7				
MD-meeting 1	Produce a D-PHASE T-shirt. – To sell (or as give-away?) at the 2 <sup>nd</sup> MAP D-PHASE Scientific Meeting in Bologna?	Montani	04.2008	
COPS-Ch 1	Provide software that generates atmospheric model products. <i>Still missing:</i> <i>- Ensemble-meteograms</i>	Wulfmeyer	asap	See MD-IP section 3.1.4.