RC LACE Data Manager working plan

For the period of
1st January - 31st December, 2009

Prepared by Alena Trojáková, 21th February, 2009

1. On demand help in ODB related activities

- The DM will be available for ODB related support in case of requirement from local staff of LACE members, which include help in the configuration and usage of ODB and ODB related applications at RC LACE members' site. The DM is willing to perform a short visit, if required, but it is necessary to ensure minimum one person from local stuff to learn and adapt the developments.
- The DM will act as ODB contact point. An ODB contact person should be informed about the latest releases and developments by the ODB database developer and could help to solve the emerging problems and further spread the information inside the community. RC LACE members are kindly asked to address the questions through ODB contact person (not directly ODB database developer).
- The DM will continue to update and maintain RC LACE forum, mainly "user and installation guide" type of documentation about observation usage in the ALADIN data assimilation system based on CY32.

Priority: high
Realization: Prague or short stay in members' site if required
Estimated efforts: 1 PM
Proposed contributors: DM
Schedule: continuous work

2. Development and maintenance of observation pre-processing tools

- The DM will provide support for data assimilation project related to the centralized pre-processing of observations.
- The DM will include newly usable observation types in ALADIN into the pre-processing system. METOP, GPS, radar data are foreseen as the first.

- The DM will ensure co-ordination in the use and decoding of observation with Météo-France and HIRLAM.

Priority: high
Realization: Prague, Budapest
Estimated efforts: 1.25 PM (short stay in HMS if necessary)
Proposed contributors: DM
Schedule: spring and summer

3. Impact study of national (non-GTS) SYNOP data

Previous study by Kertész (2006) did not show a benefit of the national (non-GTS) SYNOP data in ALADIN 3DVAR experiments. An exchange of non-GTS data should be approved on the level of LACE Council, clear positive impact of data should be demonstrated first.

The DM will help to prepare studies that measures the usefulness of the data for assimilation and/or verification. The first proposal for such study is to use non-GTS SYNOP data in surface analysis. There are two options for realization of this item, if a suitable candidate is found, the DM would prepare data sample and proposal for impact study, eventually supervision. Or all work would be performed by DM as this item has high priority for 2009.

Priority: high
Realization: Prague, Budapest
Estimated efforts: 0.5 - 1.5 PM
Proposed contributors: 1.5 PM DM or LACE stay of 1PM + 0.5 PM DM data preparation, eventually supervision
Schedule: autumn for DM (schedule can be adapted according to a contributor)

4. HARMONIE developments

LACE approved to dedicate an effort to HARMONIE script system development (to include needed elements we miss at the moment) to be able to use HARMONIE on the long term (2-3 years) as a unified script system for compiling and running the model. The DM will help with tasks related to observation and data handling.

Priority: high
Realization: Prague
Estimated efforts: 1 PM
Proposed contributors: 1 PM DM
Schedule: autumn

5. Development and maintenance of an interactive web-based observation monitoring system for the ALADIN variational data assimilation systems (3D-VAR, 3D-FGAT).

The prototype version of this system has been developed by S. Kertész and is now available for test purposes. The major renewal of the system (in order to read ODB directly) should be considered as well as continuous extension of the system to include more diagnostics (flags from CANARI) and development related to new observation types.

- The DM will extend the monitoring system in order to handle newly usable observations in the ALADIN data assimilation system (METOP, GPS) – high priority
- The DM will extend the monitoring system in order to handle diagnostic from surface CANARI analysis - medium priority
- The DM will work on the redesign of the monitoring input data flow (direct read of ODB instead of netCDF files) in order to make the monitoring more flexible – medium priority

Some priorities in this item are medium thus could be postponed for 2010, if items with higher priority (Impact study of national (non-GTS) SYNOP data or HARMONIE developments) need to be fulfilled.

Priority: medium
Realization: Prague
Estimated efforts: 1.5 - 2.5 PM
Proposed contributors: DM
Schedule: continuous work

Summary of the planned RC LACE Data Manager Activity for 2009

ODB related activities	1.00 PM
Observation pre-processing – adding new data	1.25 PM
Impact study of non-GTS SYNOP data	1.50 - 0.50 PM
HARMONIE developments	1.00 PM
Observation monitoring for new data	1.00 PM
Observation monitoring for CANARI	0.50 - 1.00 PM
Observation monitoring redesign	0.00 - 0.50 PM
Total	**6.25 PM**