Working plan

For the period of
1st January - 31st December, 2007

Prepared by Sándor Kertész
19th February, 2007

1. Investigation of the feasibility of the exchange and usage of more dense SYNOP data between the LACE Members.

This work started last year when the availability of non-GTS SYNOP data was mapped and the necessary non-GTS SYNOP data for a selected 10-day test period was collected from the LACE members. This data has already been put into ODB.

The original idea was that someone else would investigate the non-GTS SYNOP observations in data assimilation experiments but in the meantime the idea emerged that DM should carry out the experiments. The recent idea is that for both the reference (GTS) and the extended observation (GTS+non-GTS) datasets two 3D-VAR experiments will be performed:

- in the first case only geopotential will be used from the SYNOP reports
- in the second case beside geopotential the T2 and RHU2 observations will be also used from the SYNOP reports.

Thus altogether four experiments will be carried out. The reference experiments (with the reference GTS observations) have been already finished and the non-GTS SYNOP experiments are soon to start. The detailed evaluation of the results are expected to be available by the end of March.

Priority: high
Realization: Budapest
Estimated efforts: 1.5 PM
Proposed contributors: Kertész S.
Schedule: Spring

2. ODB related activities

Help in the configuration and usage of ODB and ODB related applications at RC LACE members' site (if there is a need for it).

Preparation of a documentation about observation usage in the ALADIN data assimilation system based on CY30. The documentation will contain the description of data formats and

data decoding techniques. This task was also planned for the last year but the work on it has just started this year.

Priority: medium
Realization: Budapest
Estimated efforts: 1.5 PM
Proposed contributors: Kertész S.
Schedule: continuous work

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

This task also started last year. The prototype version of this system has been already developed and it now available for test purposes for LACE members. The major upgrade and renewal of the system (in order to read ODB directly) is an ongoing work. It seems now that I will not have the necessary time to finish it this year (unless I distract some time from other works).

Priority: medium
Realization: Budapest
Estimated efforts: 1 PM (an extra 3 months would be required to finalize the developments)
Proposed contributors: Kertész S.
Schedule: continuous work

4. Acting as Technical Co-ordinator for the ECMWF Special Project for "Coupling of ALADIN and AROME models to boundary conditions from ECMWF and ERA model data" and related research activities.

The preparation of sample scripts and documentation for the project was done last year. As TC of the project the main task for this year is the preparation and testing of a new set of global climate files used in BC generation.

Beside the TC works I would like to carry out DA experiments using IFS BCs. According to these plans I will perform experiments to test the possible use of T799 IFS BCs in the operational ALADIN 3D-VAR system. Due to the scheduling of the IFS runs at Reading the BCs for an operational DA application are available only with a 6h shift. It means that e.g. for the 00 ALADIN analysis and forecast only the 18 UTC IFS analysis and forecast could be used. I have already designed and performed experiments to investigate this delayed mode BC usage, but due to the recently identified problems in the global climate files all the experiments should be re-run again.

Priority: medium
Realization: Budapest
Estimated efforts: 2 PM

Proposed contributors: Kertész S.

Schedule: 1ˢᵗ half of the year

Summary of the planned RC LACE Data Manager Activity for 2007

	Plans (01.01.-31.12.)
NON-GTS SYNOP data	1.5 PM
ODB-related activities	1.5 PM
Observation monitoring	1 PM
ECMWF SP	2 PM
Total	6 PM