Round table discussion
(ALADIN Maintenance Workshop, 2002 Budapest)

Source code management (validation)

- Use of *cc_depend*, *gmkpack*

Code has more and more dependencies. Use of sophisticated compilation and building tools is recommended. Possibilities:
- *gmkpack*'s (Météo-France) advantage is, that there is support for *ODB* as well.
- *cc_depend* (CHMI) is the other option, but it is currently does not handle *ODB*.
- *cc_depend* could be perhaps built in *gmkpack*.

⇒ Recommendation :

Developers outside Toulouse are encouraged to use *gmkpack*. The possibility to merge *cc_depend* and *gmkpack* should be explored.

- Source code management:

There will be more and more need to have local source code management due to local development and local operational applications.

⇒ Recommendation :

The usage of *CVS*. Export version of *CVSTUC* (a set of scripts making *CVS* more user friendly for ALADIN) will be created. For the package contact Martin Janousek.

Xrd problems

- *xrd* should be cleaned (useless routines to be removed etc.).
- duplication of .c and *.F* routines.
- All project (except *xrd*) can be compiled without explicit promotion of real and integer values.
- Problem of explicit declaration of arrays (memory consumption)

⇒ Conclusions :

Olda, Gabor, Martin, Stjep and Jure write a list of existing problems in *xrd* with a proposal of solutions. Olda starts the action. Jean-Daniel Gril will be the Météo-France contact person. It should be decided inside the above nominated group how to sort out problems and in which format to enter the modifications, after a possible (mandatory) check with ECMWF.

Documentation

- Users manual for configuration 001 would be very useful. There are some parts partially covered (i.e. non-hydrostatic) from scientific and architecture point of view.
- Technical/scientific documentation (with the structure similar to Alain Joly's paper) has to be written.

⇒ Conclusion :

Météo-France will invite a volunteer to Toulouse to set up the skeleton of documentation. Afterwards, the documentation will be completed and maintained with the help of experts for specific parts.

- Other proposal is improve self-documentation in the code (modules): short explanation of the module + description of module variables (easier to follow changes)
- Exercise for phasing: enhance explanations in modules

⇒ Conclusion :

Prototype namelists of all working configurations have to be added to export versions of new cycles with explanations in separate file or in the namelist itself.

<u>Coding rules</u>

- A great part of the work has been done with Ryad's documentation.
- Automatic checker for the code is needed.

⇒ Conclusions :

> Read and comment the coding rules and send the comments.
> Météo-France will discuss the usage of coding rules with ECMWF.
> Coding rules are obligatory while working on the ALADIN code.
> Coding rules are recommended while working on external tools related to ALADIN.
> Concerning the automatic checker, it could be the supplementary part of new *fortran2html* parser.

<u>Future code evolution</u>

- Further externalization, modularization (as TFL/TAL)

goal :	step by step towards more rationalized and modular code.
proposals :	biperiodization, coupling?, FullPos...
question :	how to handle the interfaces to modular part?

- Parallel I/O: follow the evolvement of implementation of MPI-2, but no concrete actions for the time being.
- Revision of data flow (not decided yet who and how it is going to do the job)
- Reformulation of physics/dynamics interface

<u>Phasing (validation) strategy</u>

- Number of phasers is limited, on the other hand the number of configurations has increased and they have to be phased rather sequentially than in parallel

⇒ The spirit of phasing has slightly changed :

> rather continuous than a "one go" procedure
> the job has been split to direct code phasing followed by the phasing of data assimilation parts (a core-group works on the basic configurations and the rest is phased afterwards)

⇒ Further proposals :

> Some parts of the phasing could be exported.
> Training of newcomer phasers (this workshop was a proper introduction).

Export version

- Some additional information to be attached to export versions:

> prototype namelists
> specific document about validated configurations

- Incremental strategy for export versions was proposed which means:

> a basic export version (at least 927, 001, FullPos)
> bugfixes for other working configurations (bugfixes with respect to the basic version)

- LACE ASC (Olda) will be responsible to report the platform-specific modifications of the code with respect to the reference version in Météo-France and other local specific issues.

ODB

- Generic problem is the lack of documentation:

- installation guide would be very useful
- validation guide/doc. - " -

Both have to evolve with modifications cycle by cycle...

- It was decided that the LACE Data Manager (Stjep) will take over the coordination of the *ODB* related work, to start with the writing of an installation guide.
- It is planned that possibly Sandor + Stjep will work together on next cycle's installation in Budapest.

Web server

- Recommendation: Visit to Météo-France has to be organized to maintain the web server.
- Mirroring between intranet and internet part of ALADIN web server.

AOB

- Next workshop about maintenance in 2004, decision at the next ALADIN Assembly of Partners
- Format has to change perhaps to the lectures in the morning and exercises in the afternoon.
- Undiscussed topics : Optimization, E923