



## Minutes of COSMO TAG Meeting, Wednesday, September 24<sup>th</sup> 2014 (14:00-17:00 CET)

**Participants:** COSMO Software Administrators (Uli Schättler (**US**), Uli Blahak (**UB**), Jean-Marie Bettems (**JMB**), Daniel Lüthi (**DL**)), TAG Coordinator (Massimo Milelli (**MM**))

**Excused:** Adriano Raspanti (**AR**)

**Chair:** Massimo Milelli (**MM**)

**Minutes:** Daniel Lüthi (**DL**)

### Agenda item 1: improvement of VERSUS/Fieldextra XML interface

This item was postponed to the next TAG meeting since **AR** was not able to attend the meeting. **JMB** stated that the interface is making good progresses.

### Agenda item 2: GRIB2 policy

**JMB** presented main points of the GRIB2 policy approved by the TAG (see the attached file: TAG\_GRIB2.pdf) and highlighted where action needs to be taken by the different centres. Centre specific table values should be avoided wherever possible. DWD maintains master tables. This needs to be fully implemented before the next GM. All models used in operation at different centres are identified by an n-tuple. Each centre has to provide the respective information. This information will become available on the COSMO web page.

**Action:** communicate to the members that they have to provide this information.

COSMO standard keys are coded in local use section for each centre (default: localSectionNumber=250). Currently 1 COSMO standard key: 'localNumberOfExperiment'. A COSMO set of GRIB API definition files is maintained for all COSMO software. Local modifications to be put in local part of GRIB API definitions with exception of bug fixes, typing and unit errors (need to be communicated to ECMWF), new features that will be in a coming GRIB API release and absolutely necessary modifications (try to convince ECMWF to include it in release to come).

**Action:** prepare such a common set and test it with the different COSMO software.

COSMO TAG is responsible for information flow regarding GRIB 2 within consortium. IT staff of DWD is contact point to ECMWF regarding GRIB API. The cosmo-tag mailing list to be used for communication of relevant changes. Research group at DWD is not immediately informed about all changes. **US** and **UB** will communicate changes as soon as they are informed. The main information regarding GRIB2 is to be maintained on the COSMO web. **US** stated that all information will be on-line soon.

### Agenda item 3: ready and lock file mechanism

Oli Fuhrer provided code for the implementation of optional lock file instead of ready file mechanism. Since new code has only minimal impact and adheres to the standards it can go to the

official code. However, there is still an incompatibility with the GRIB API. Oli will implement a solution for this.

**Decision:** TAG recommends that also this second step should be completed before final green light.

#### **Agenda item 4: modification of COSMO coding standards**

STC tasked PP POMPA to add coding standards also for C++ when code written in this language becomes part of COSMO software. Oli Fuhrer suggested that TAG formulates guidelines about the way to proceed when a code change leads to performance gain on architecture and to a degradation of performance on another architecture. TAG comes to the conclusion that it is hard to come up with such guidelines and, moreover, any decision should apply only within COSMO consortium (e.g. ICON cannot be forced to adopt it).

**Decision:** the TAG recommends not to modify the COSMO coding standards. The developers should first try to solve such a problem bilaterally. If no solution can be found, the issue can be promoted to the TAG for a final decision. Anyway, a performance degradation of at most 5% could be acceptable.

#### **Agenda item 5: source code management**

It was proposed by STC to switch the release planning from content to due date-driven. SMC is responsible for assigning new developments to new releases. According to the coding standards this must only be done when the scientific development, testing and documentation are completed. When efforts to introduce new development are realistically estimated, new releases should not be retarded by the addition of new developments.

**Decision:** TAG prefers to stay with the current way of release planning.

#### **Agenda item 6: Technical Test Suite**

The Technical Test Suite is in a state that it can be promoted to the consortium members. **US** has tested version of 2013 on a workstation and will install it on the parallel machine at DWD.

**Decision:** TAG suggests to put most recent version on the COSMO Web page and recommend to COSMO developers to use it. **MM** will ask Xavier Lapillonne if there is a more recent version, then he will take care of the web publication.

#### **Agenda item 7: next meeting**

The next meeting is scheduled for mid to late November. **MM** will set-up a doodle poll to find a date and provide a tentative agenda. The VERSUS/Fieldextra interface will be a topic there but the main focus shall be on the web management. Theodore Andreadis, as web manager, will be invited.

#### **Agenda item 8: any other business**

**JMB** mentioned that WebPEP is available for COSMO members and it was extended by new features. Guy de Morsier will run a couple of sanity tests of WebPEP.

**DL** added that the yet missing possibility of defining filter options will soon be added to the tool by Burkhardt Rockel. **MM** recommends to keep the documentation up to date as soon as new features are added.

**JMB** reported that CSCS has granted >1 Mio Node hours to CALMO. This will allow a calibration of COSMO with the method of Omar Bellprat.