

Work Packages of WorkGroup 6: Reference Version and Implementation

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|---------------|---|--------------------|-------------------------|---|----------------|
| Period | 10/2006-09/2007 | Coordinator | Ulrich Schättler | Version | 2007-08 |
| usage | press the D and S symbols beside each package Id-No, to individually expand/collapse description and status info, or use the View mode menu for en masse view toggling. If a symbol is hidden, the corresponding info is not yet available | | | | |
| status colour | finished | delayed | ongoing | the WP's without a status row: is early for reporting or did not send a report: work is assumed "ongoing as in previous year" | |

| WP Number | Main Responsibility/ Firm Commitment | Pri | Activities and Deliverables | Status/ Milestone | Required for WP |
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View mode: [list](#) | [description](#) | [status](#)

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| 6.1 | Source Code Administration | | | | |
| 6.1.1 D S | Implementation DWD: Schättler | SA | Updates of the programs and the documentations | ongoing | |

The *Source Code Administrator* gathers programming work done at the different institutes and implements it into new versions of the source codes. He checks that the work obeys to the *Coding Standards*. He does a thoroughly testing of different COSMO-Model configurations. For (proposed) Reference Versions he does tests for selected cases on ECMWF computers. The Source Code Administrator is supported by members from other institutes, who do a testing of new versions, before these are officially released.

The gathering of the work from all institutes should be done twice per year.

Special tasks this year:

- COSMO-Model: Implementation of a new Reference Version 4.0
- INT2LM:
 - Implementation of NetCDF;
 - enhancements for climate runs
 - developments for high resolution runs

Estimated Time: 8-10 weeks per year (DWD: Schättler): 0.2 FTEs

Status August 2007:

Since Summer 2006, several new versions of the COSMO-Model have been implemented. Here are some highlights of the developments:

- COSMO-Model 3.21 (14.12.06)
 - Preparations of Ensemble Mode: new Namelist groups /EPSCTL/ and TUNING
 - New Runge-Kutta dynamical core: all developments have been incorporated into the official version
 - Parameterizations: An update of the FLake Model, several technical changes for other schemes
 - Assimilation: A package for doing diagnostics for the Latent Heat Nudging has been included
 - I/O: Update of Restart scheme; added new variables
 - Diagnostics: Splitted file YUPRMEAN to YUPRMASS and YUPRHUMI; added mean values for all moisture variables. Changed control of grid point output
- COSMO-Model 3.22 (24.01.07)
 - A new version of hydci_pp with major changes in the parameterization of snow is included:

Variable intercept parameter based on Field et al. (2005), temperature-dependent sticking efficiency, changes in geometry and fall speed of snow. Use of Seifert and Beheng (2001) warm rain scheme with a constant cloud droplet number concentration.

- COSMO-Model 3.23 (30.03.07)
 - Technical Changes and bug fixes: introduced a debug-level parameter; introduced the possibility of a full flexible time step; changed some defaults of Namelist parameters.
 - Radiation: Topographical corrections in radiation scheme.
 - Relaxation: Introduced a new treatment of lateral boundaries for moisture variables.
 - Diagnostics: Introduced the possibility to calculate volume- and surface integrals over an arbitrary cuboid.
- COSMO-Model 3.24 (26.04.07)
Changes in the graupel scheme (Subroutine `hydc_i_pp_gr` in `src_gscp`) according to the latest changes in the cloud ice scheme (`hydc_i_pp`)
- All other releases were bugfixes and consolidations of the schemes. We now have COSMO-Model Version 4.0!

FTEs invested:

| | Sep - Dec | Jan - Apr | May - Aug | Sum |
|-----------|-----------|-----------|-----------|-----|
| Schättler | 0.07 | 0.07 | 0.06 | 0.2 |

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| 6.1.2 DS | Testing ARPA-SIM: Cesari; MCH: Zala | SA | Testing of new versions | ongoing | |
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New versions are tested at different institutes and on different platforms before they are officially released. In this way we hope to minimize the bug-fixes after the official releases.

Estimated Time: 4 weeks per year (ARPA-SIM: Cesari; MCH: Zala): 0.2 FTEs

The new versions (namely: 3.21 and 3.23) have been tested. Bug-fixes have been put to Version 3.24 then. In Bologna, COSMO-Model and INT2LM were undergoing severe tests, where several technical problems were detected.

FTEs invested:

| | Sep - Dec | Jan - Apr | May - Aug | Sum |
|--------|-----------|-----------|-----------|------|
| Cesari | 0.01 | 0.05 | - | 0.06 |
| Zala | - | 0.05 | - | 0.05 |

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| 6.2 D | Web Page Administration |
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One of the tasks of WG 6 is to provide a high-quality web site. To ensure this, every partner has to provide up-to-date material. It should be given to the *Contents Manager* or the *Web Master*, in order to be processed and put to the web.

The official site is managed at HNMS in Athens, it is also mirrored at CSCS in Manno.

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| 6.2.1 DS | The Contents Manager: NMA: Rodica Dumitrache | SA | Keep information on the web page up-to-date | ongoing | |
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The *Contents Manager* is responsible to keep the information on the web site up-to-date. For that purpose he is in contact with the *responsible authors* of the different pages, he does not have to write

the pages himself. Together with the *Web Master* he helps the authors to put the contents of the pages into the proper format. The *Contents Manager* is the contact person for everybody, who wishes to put information on the web page.

Estimated time: 0.5 days per week (NMA: Dumitrache) 0.1 FTEs

Status August 2007:

Since May 2007, Rodica Dumitrache is accompanied for the *Contents Manager*-Job by her colleague Cosmin Barbu. Together they undertook some efforts, to gather necessary material for updating the private part of the web. Some more minutes of meetings could be updated.

Cosmin Barbu now helps in gathering and compiling the material for the description of the COSMO Priority Projects. The idea is, that the Project Leaders send their material to Romania. There it is compiled and put into the proper format. But up to now, not all Project Leaders send their material.

Note that this is a new paradigm: The *Contents Manager* now really takes an active part in writing pages. This was discussed and accepted during the SAC Meeting in Zürich in May 2007. Romania will get more FTEs for this work.

For the public pages, a "Call for Contribution" has been started to some specified people already before Christmas. Some material has been gathered, but there was no time for the corresponding *responsible authors* to compile these materials in a proper way and update the web.

FTEs invested:

| | Sep - Dec | Jan - Apr | May - Aug | Sum |
|------------|-----------|-----------|-----------|-----|
| Dumitrache | 0.02 | 0.03 | ? | 0.? |
| Barbu | - | - | ? | 0.? |

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| 6.2.2 DS | The Web Master: HNMS: Andreadis MCH(Manno): Consoli | SA | Maintaining, updating and mirroring the Web Site | ongoing | |
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The *Web Master* gathers all contributions from the *responsible authors* and the *Contents Manager* and puts them to the web page. He works on the design and the further development of the site and helps the authors to put the contents of the pages into the proper format.

Estimated time: 60 % FTE (3 days per week)

Status August 2007:

Regular updates are coming for the verification pages (mainly from Switzerland). The presentations from the General Meeting last year in Bucarest are available.

On the technical side, a new server has been installed in Manno. The greek site was completely mirrored to Manno again and this server has been put to work on 1st of June.

FTEs invested:

| | Sep - Dec | Jan - Apr | May - Aug | Sum |
|-----------|-----------|-----------|-----------|-----|
| Andreadis | 0.2 | 0.2 | 0.2 | 0.6 |
| Consoli | - | - | - | 0.0 |

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| 6.3 | Documentations; Newsletter; Technical Reports | | | | |
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| 6.3.1 DS | Editor of the Documentation DWD: Schulz et.al. | SA | Updating and maintaining the Documentation | ongoing | |
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The *Editor of the Documentation* compiles the work from the different authors of the seven parts of the *Description of the Nonhydrostatic Regional COSMO-Model*. He checks that all contributions are obeying to the adopted (LaTeX) format. He takes care that the documentation is updated by the authors in time. He is the *responsible author* for the corresponding web page (*Documentation* on the public pages) and has to update these pages.

Estimated time: 2-3 weeks per year (DWD: Schulz) 0.05 FTEs

Special tasks this year:

- Finish missing parts of the *Physical Parameterizations*
- Scientific Documentation of the Runge-Kutta dynamical core
- *Implementation Documentation*
- Enhancement of the *User Guide*

Status August 2007:

Only few material could be gathered for updating the documentation. Essential parts (Runge-Kutta dynamical core; new material for the User Guide) are still missing. But work is going on (slowly).

FTEs invested:

| | Sep - Dec | Jan - Apr | May - Aug | Sum |
|--------|-----------|-----------|-----------|-----|
| Schulz | - | - | - | 0.0 |

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| 6.3.2 DS | Editor of the Newsletter DWD: Schättler ARPA-SIM: Montani ARPA-P: Milelli | SA | Editing of the Newsletter | ongoing | |
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The *Editor of the Newsletter* compiles the contributions from different authors for the COSMO Newsletter. Normally, the Newsletter appears once a year, but can be published more often, if enough material is available. The *Editor of the Newsletter* is the *responsible author* for the corresponding web page (*Publications/newsLetters* on the public pages) and has to update these pages.

Because many people are contributing to the Newsletter and their contributions are not always formatted in the proper way (no LaTeX), editing of the Newsletter is a very time-consuming work. To help that Newsletters can be published in due time, this work can (should) be supported by co-editors.

Estimated time: 8-10 weeks per year (DWD: Schättler, ARPA-SIM: Montani; ARPA-Piemont: Milelli): 0.30 FTEs

Special tasks this year:

- COSMO Newsletter No. 7: Proceedings from 8th COSMO General Meeting

Status August 2007:

The material for the COSMO Newsletter has been gathered. But due to additional duties in his office, the main editor had no time this year to work on that task.

FTEs invested:

| | Sep - Dec | Jan - Apr | May - Aug | Sum |
|-----------|-----------|-----------|-----------|-----|
| Schättler | - | - | - | 0.0 |
| Montani | - | - | - | 0.0 |
| Milelli | - | - | - | 0.0 |

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| 6.3.3 DS | ARPA-P: Milelli | SA | Editing of the Technical Reports | ongoing | |
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The *Editor of the Technical Reports* has to support authors in order that they can write the report in the adopted LaTeX format. He makes a fine-tuning of the layout and adds prefaces and appendices, if necessary. He is the *responsible author* for the corresponding web page (*Publications/Technical Reports* on the public pages) and has to update these pages.

Estimated time: 2-3 weeks per year (ARPA-Piemont: Milelli) 0.05 FTEs

Status August 2007:

No new Technical Report has been written this year.

FTEs invested:

| | Sep - Dec | Jan - Apr | May - Aug | Sum |
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| Milelli | - | - | - | 0.0 |

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| 6.4 D | Additional Work |
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In the COSMO year 2006/07 there were some other activities going on:

- Implementaton of the COSMO Model System in Russia:
After a visit of Gdaly Rivin and colleagues in Offenbach, the COSMO-Model System has been implemented in Russia. GME data are sent to Russia now on a trial-basis to test the system. Poland supported the implementation by delivering the system of run-scripts that control the operational runs.
- MeteoSwiss distributed a questionnaire on the use of a common data base system for observations inside COSMO. Information were gathered on the current state and problems and the future needs of the COSMO members concerning use of observations and the database system.
- *COMMPOST*: This is an acronym for *common postprocessing*. This mini-project arose as an unofficial low-level subtask of the QPF Priority Project. The main aim of COMMPOST was the automation of postprocessing for multiple simulations. The system is a combination of Kornshell scripts, Grads scripts, customary programs written in Fortran90 and third party GPL/freeware software like wgrib or grads. The project is still under construction.