

WG6 Activities Summary

Massimo Milelli and WG6 colleagues

Offenbach, 18th COSMO General Meeting - Wednesday, September 7th 2016

Outline

- Reporting
- Support activities
- Git/GitHub
- NWP Test Suite
- Future Tasks
- Announcements

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- *Reporting*
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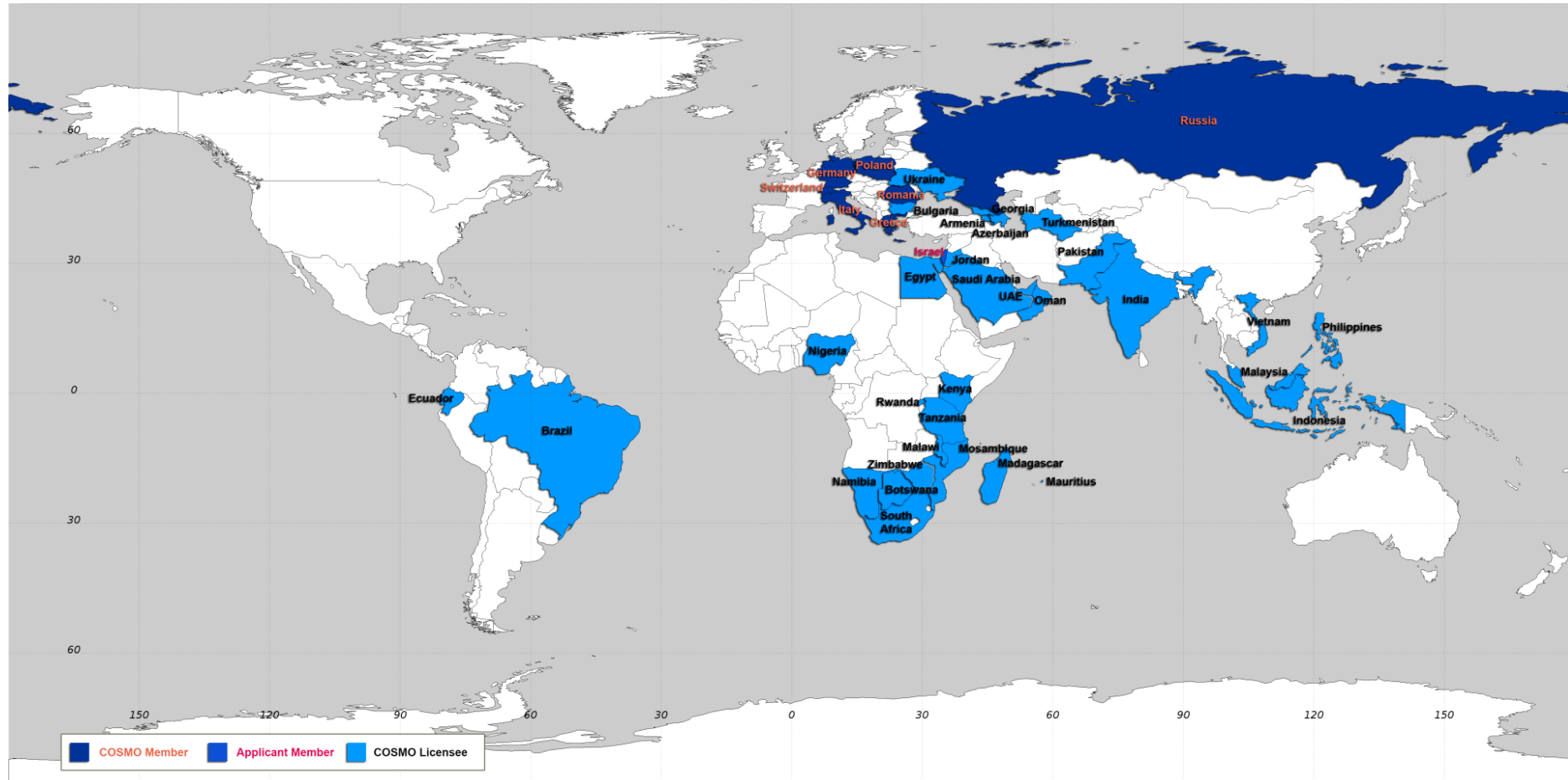
Reporting

- Newsletter: July 2016 (6 contributions)
- Technical Reports:
 - 1) RADAR_MIE_LM and RADAR_MIELIB - Calculation of Radar Reflectivity from Model Output, Ulrich Blahak (TR28)
 - 2) A Stochastic Pattern Generator for ensemble applications, M. Tsyurulnikov and D. Gayfulin (TR29)
- NWP Test Suite report:
 - 1) v5.3 vs v5.1, September 2015
 - 2) v5.3 vs v5.4a, August 2016 (not yet released officially)
- Common plot activity

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Support activities



Support activities

- Increased number of countries
- COSMO/CLM/ART Training Course in Langen (February 2016)
- Support for the compilation of C++ Dycore version

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Git/GitHub

Short tutorial given by Kate Osterried and user-approach given by Uli S.

- Powerful tool for Source Code Management (or any other "many file" system)
- For standard use a few commands are sufficient
- The tool is usable and recommended
- Users can be invited by MCH to join the COSMO software community

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NWP Test Suite

- Proposals after the joint WG6/WG5 meeting:
 - Writing of a guideline for the whole process
 - Update of Versus to the latest version
 - Inclusion of verification against model analysis
 - Creation of a scorecard to simplify the reading of the results by the users (similar to ECMWF's one)

NWP Test Suite

Domain	Parameter	Level	Anomaly correlation										RMS error										
			Forecast day										Forecast day										
			1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	
Europe	Relative humidity	300hPa	▲																		▼		
		700 hPa	▲	▲								▲										▲	
	Temperature	100 hPa	▲	▲								▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
		500 hPa	▲	▲								▲				▲							
		850 hPa	▲	▲								▲				▲						▲	
		1000 hPa	▲									▲	▼									▲	
	Wind	200 hPa	▲	▲								▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
		850 hPa	▲	▲	▲	▲						▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
	Geopotential	100 hPa	▲	▲	▲							▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
		500 hPa	▲	▲								▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
850 hPa		▲	▲								▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲		
1000 hPa		▲									▲										▲		
Extratropical Northern Hemisphere	10 m wind		▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲		
	Relative humidity	300hPa	▲	▲	▲								▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	
		700 hPa	▲	▲								▲										▲	▼
	Waves	swh										▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
		mwp	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
	Temperature	100 hPa	▲			▼	▼	▼	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
		500 hPa	▲	▲								▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
		850 hPa	▲	▲	▲	▲						▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
		1000 hPa	▼	▼								▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
	Wind	200 hPa	▲	▲								▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
		850 hPa	▲	▲	▲	▲						▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
	Geopotential	100 hPa	▲	▲	▲							▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
		500 hPa	▲	▲								▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
850 hPa		▲	▲								▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲		
1000 hPa		▲									▲										▲		

Symbol legend: for a given forecast step...
 (d: score difference, s: confidence interval width)

- ▲ Cy38r2 better than Cy38r1 – statistically highly significant
- ▲ Cy38r2 better than Cy38r1 – statistically significant
- ▲ Cy38r2 better than Cy38r1 – not statistically significant
- ▲ Little difference between Cy38r2 and Cy38r1
- ▲ Cy38r2 worse than Cy38r1 – not statistically significant
- ▼ Cy38r2 worse than Cy38r1 – statistically significant
- ▼ Cy38r2 worse than Cy38r1 – statistically highly significant

NWP Test Suite

Shortage of Billing Units in ECMWF Special Project (SPITRASP).

In May-June 2016, ECMWF upgraded the processors of the super-computers. COSMO is about 1.5 more expensive on the new processors (we could not know this last year!). We have already spent 4.8 million BUs out of the 5.0 millions allocation for 2016.

On 24/8, we applied for extra-resources to test next model release.

On 5/9 we got the positive answer from ECMWF.

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Future tasks

- Special issue of the Newsletter: DWD research projects EWeLiNE and ORKA about the optimization of COSMO for wind and solar energy operations in Germany (Kristina Lundgren) *postponed*
- CORSO, COTEKINO and KENDA TR expected during this COSMO year
- Update of the web pages contents
- New PT under WG6 area: EDP² (Evaluation of dynamical core Parallel Phase)

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Announcements

- Anybody willing to add some post-processing to the COSMO software should inform TAG in advance. No rule can be decided a priori, but each case has to be analysed on its own and TAG has to address the developers towards the appropriate software
- There are problems with the main web server (Swiss mirror is up and working at the moment). The setting up a new one is in progress.

**Thanks for your attention and for
your work !**



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