WG6 Summary

Massimo Milelli and WG6 colleagues

Eretria, 16th COSMO General Meeting - Thursday, September 11h 2014

Outline

- PP POMPA summary
- Grib2 and code management
- NWP Test Suite
- Technical Test Suite
- User support
- Docs and web management
- Science Plan

Outline

- ***PP POMPA summary*** ← Oli's presentation soon
- Grib2 and code management
- NWP Test Suite
- Technical Test Suite
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Outline

- PP POMPA summary
- ***Grib2 and code management*** ← Uli's presentation later on
- NWP Test Suite
- Technical Test Suite
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- PP POMPA summary
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- ***NWP Test Suite***
- Technical Test Suite
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Amalia's presentation yesterday

Now part of WG6 regular activities

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Technical Test Suite

It is a very useful tool for developers, it checks the technical correctness of modifications to the COSMO-Model.

It performs specific tests such as:

- Having reproducible results (8x8 tasks have to give the same results as 7x9+1 tasks)
- Working of restart function
- Comparing results with a reference simulation (within a given interval)

It has been developed by Xavier Lapillonne and tested by Uli S.

Not yet on the web, but we plan to have it soon.

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User support 2014

- *COSMO/CLM/ART Training Course 2014, Theory and Application, 17 to 21 February 2014*

- *COSMO training in NMA, Romania, 20 to 31 October 2014: the Romanian support team will organize this course for 2 researchers from National Meteorological Service of Malawi*

2014: end of HRM "era" → and migration to GRIB 2

Romanian Team offered support (by e-mail) to all interested parties:
Botswana, Brazil, Ecuador, Egypt, Georgia, Indonesia, Malawi, Mauritius, Nigeria, Oman, Pakistan, Philippines, Rwanda, U.A.E., Vietnam

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Newsletter & Technical Reports

- Newsletter n°14 Published on April 2014
- 12 contributions well distributed among the WGs:
  - ✓ 2 in WG1
  - ✓ 2 in WG3a
  - ✓ 2 in WG3b
  - ✓ 2 in WG4
  - ✓ 1 in WG6
  - ✓ 3 in WG7
- 2 TRs published:
  - ✓ “The COSMO Priority Project 'Conservative Dynamical Core' Final Report”, M. Baldauf, O. Fuhrer, M. J. Kurowski, G. de Morsier, M. Muellner, Z. P. Piotrowski, B. Rosa, P. L. Vitagliano, D. Wojcik, M. Ziemianski, October 2013
  - ✓ “Online Trajectory Module in COSMO: A short user guide”, A. K. Miltenberger, A. Roches, S. Pfahl, H. Wernli, September 2014

Web Management

- The web and mail server is quite old
- It is behind HNMS' firewall (mirroring is complicated…)
- The static contents are not updated (often)
- Some tool is not used (forum, bugzilla)
- Sometimes files are uploaded randomly (the more the users, the larger the chaos)
- Only one person is fully aware of the WHATs and HOWs of the site

Web Management

We have to decide what we really need:

• if the web is intended simply as “we exist”, we could survive more or less as we are now

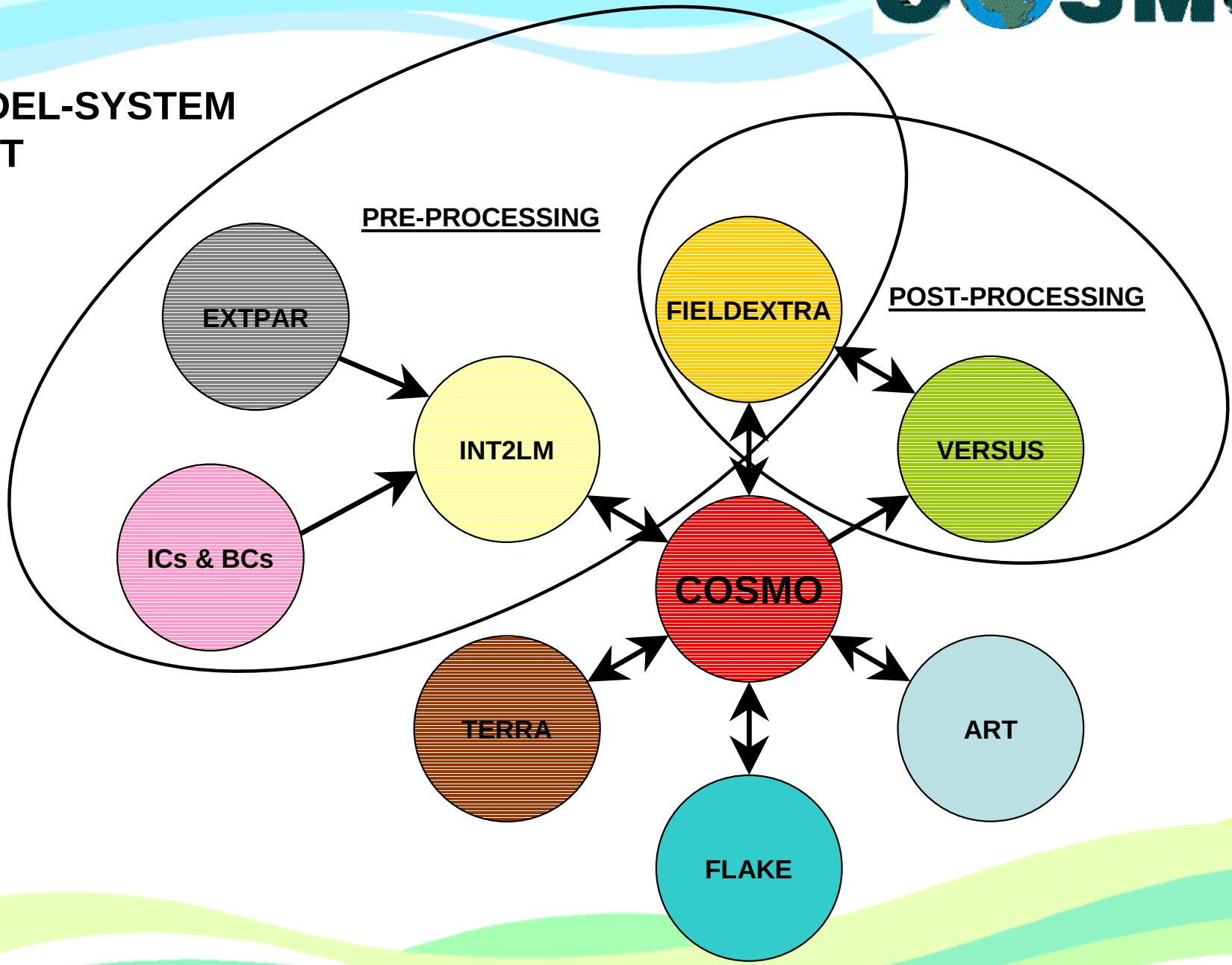
• if we wish to have some more features, and more support also for external users, something has to be done

There will be a TAG meeting (with the participation of Theodore) focused on these items.

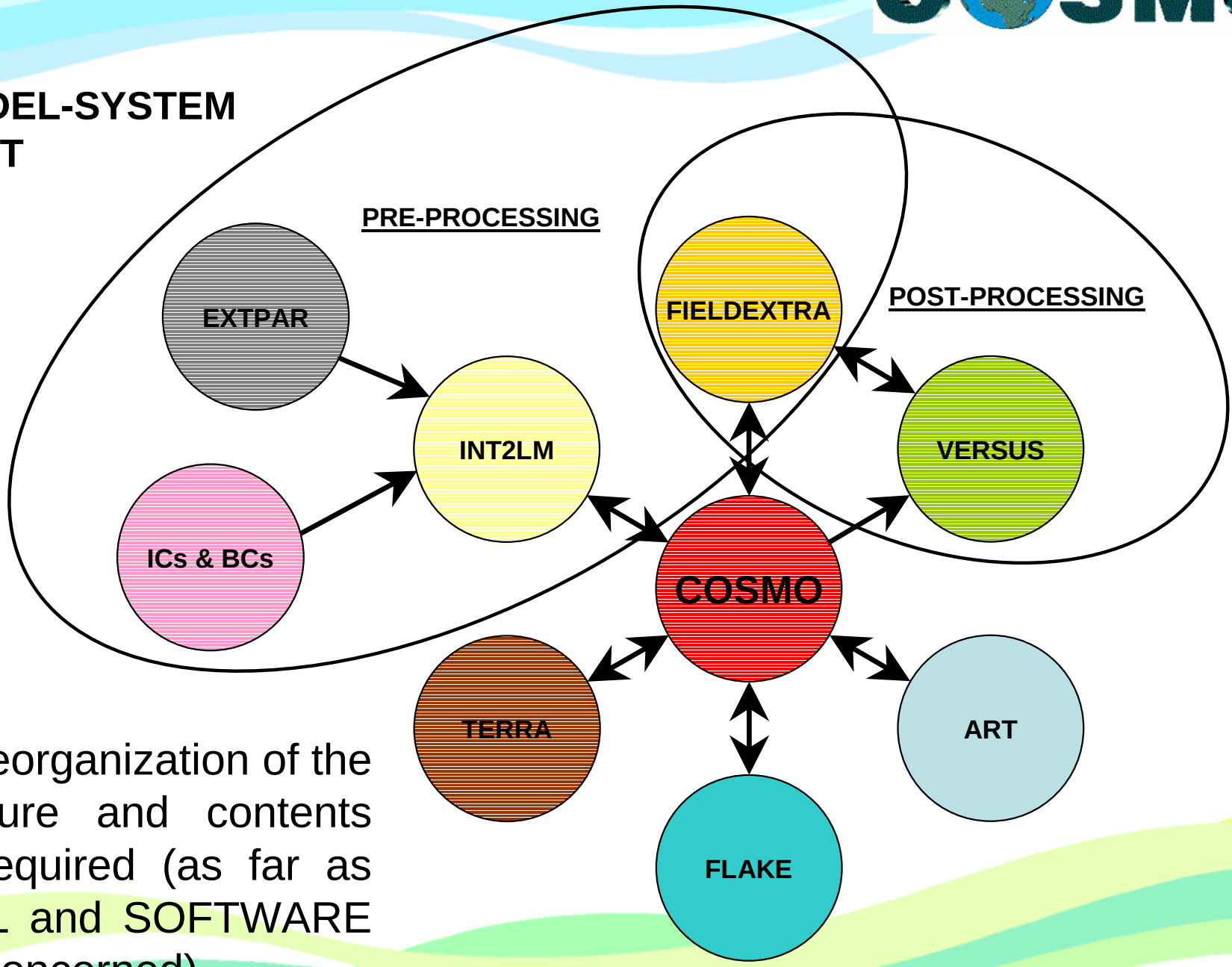
Web Management

- A new page about COSMO model achievements has been created (STC input). This page contains references to successful examples of the international scientific and technical cooperation within the COSMO Consortium. Contributions are welcome. At the moment the Sochi 2014 Winter Olympics results are described.
- There is the need of a clear policy on COSMO software architecture. The TAG proposed to the SMC the following policy (already accepted):
    1. The COSMO software architecture is documented on the COSMO web (basic principle, role of each software component, interfaces, data flow)
    2. The TAG has to be informed before any new development (new software component, new pre- or post-processing task) and gives a recommendation for the implementation.

COSMO MODEL-SYSTEM FLOW CHART



COSMO MODEL-SYSTEM FLOW CHART



A general reorganization of the web structure and contents pages is required (as far as the MODEL and SOFTWARE pages are concerned)

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Short-term actions (2015-2017)

1. *Consolidation of the results of POMPA and further developments*
2. *Consolidation of the GPU-version of COSMO and testing this and also other emerging architectures (as Intel XeonPhi)*
3. *Organization of regular training courses for COSMO researchers on new architectures and programming languages/paradigms like DSEL*
4. *Automation of current procedures*

Long-term actions (2017-2020)

1. *Transfer of new programming paradigms (DSEL, C++) to ICON model:*
2. *Code administration and maintenance*

Continuous actions (2015-2020)

1. *Increase of cooperation with the numerical aspects group*
2. *Various management issues (RCS, web tools, Coding Standards…)*
3. *Participation in European Projects*

Reviewers' comments

- General agreement with the proposed strategy/roadmap
- Some concern about code porting and merging with existing model
- Some remarks about FTEs planning
- Suggestion to include participation in European projects such as H2020

Thank you for your attention

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