30°EWGLAM

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VERSUS Priority Project

- **Versus (ex CV project) started just after the end of GM 2005 and it was planned to last 3 years for analysis, planning and implementation**

- **The project will be set as „complete" in mid-december and will be offically released at the end of January 2009**

- **An „ad hoc" workshop /tutorial will be held in Italy and at least one participants from any COSMO member will attend**

VERSUS Priority Project

- The development of a complete Conditional Verification Tool has been the first priority and outcome of the VERSUS project.

- The typical approach to Conditional Verification consist of the selection of one or several forecast products and one or several mask variables or conditions, which can be used to define for example thresholds for the verification products

- The more flexible way to perform a selection of forecasts and observations using conditions, is to use an "ad hoc database", planned and designed for this purpose, where the mask or filter could be simple or complex SQL statements.

VERSUS Priority Project

- VERSUS was planned (with some changes during its life) on 10 tasks (form 0 to 9)

- All the tasks have been completed except task 8 and task 9

- Task 8: test phase is ongoing just in these days

- Task 9: "plug and play" installation of the package providing all the software and modules it's also ongoing, but at the same time is "pending" waiting for the final version f the package
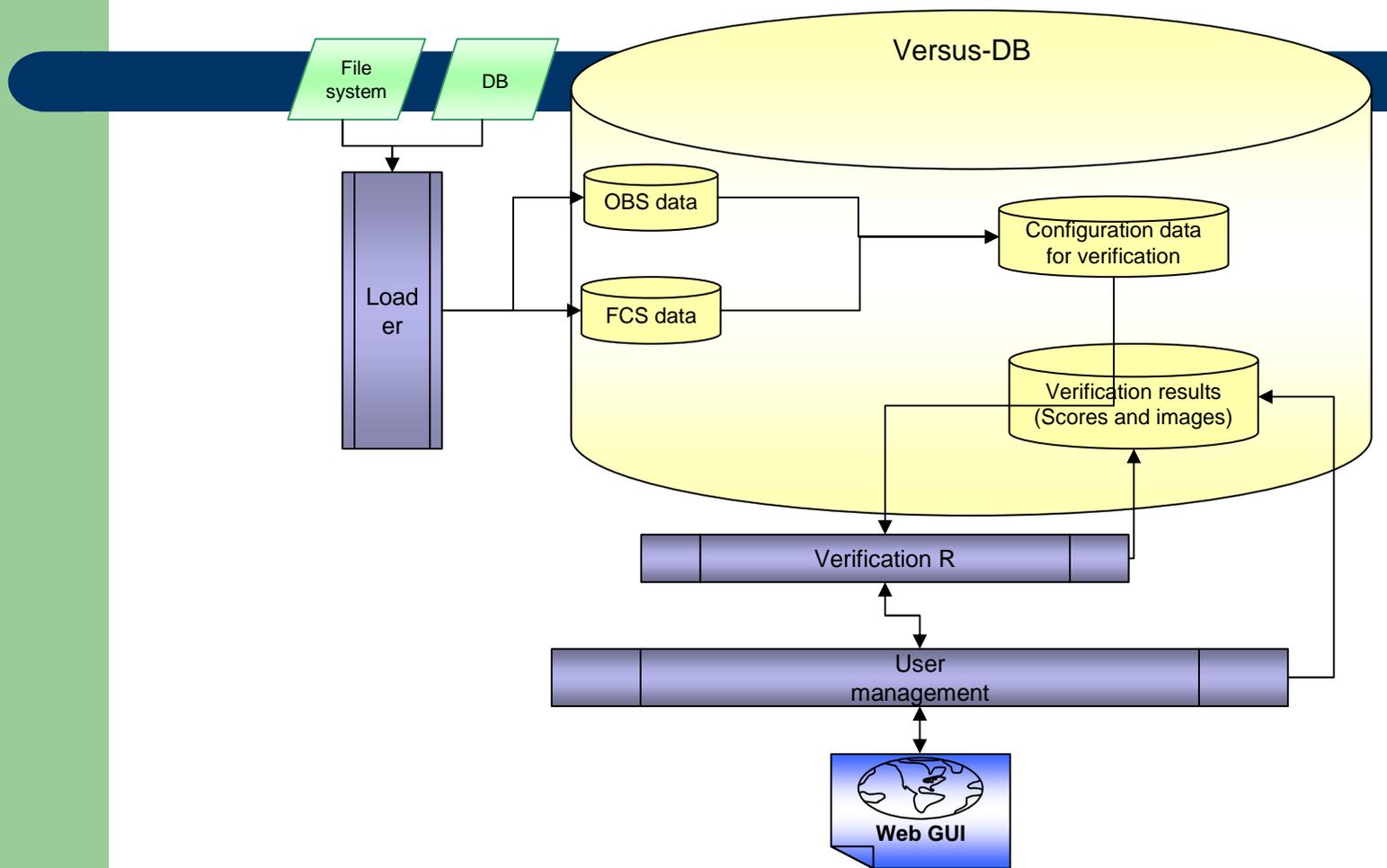
VERSUS Priority Project

Final Version?

- **Some cosmetics changes….**

- **Some „last minute" updates**

- **Some „last minute" requirements from WG5**

- **Waiting for the end of the test phase searching for bugs….**

- **…and also some time to organise the workshop…**

VERSUS Priority Project

File system

DB

Versus-DB

Loader

OBS data

FCS data

Configuration data for verification

Verification results (Scores and images)

Verification R

User management

Web GUI

VERSUS Priority Project

Main Modules

- ➢ RDBMS (MySQL) features :
  - OBS e FCS data – Surface and Upper air (BUFR and GRIB format)
  - Configuration data to perform verification
  - Verification results, Scores and plots
- ➢ "daemon" process (Loader) to load data from different sources (MARS, DB, File system)
- ➢ processes performing verifications through specific requests (Integration with "R" statistic package) and storing of resulting data
- ➢ Graphics through PhP tools
- ➢ WEB GUI (server-client architecture)

VERSUS Priority Project

OPEN POINTS: VERSUS has not been planned to cover all the existing verification methods, as well as all the possible products from a NWP and not all types of observation

- implementation of probabilistic and ensemble forecasts verification;
- implementation of obj-based and fuzzy verification methods applied to precipitation;
- New scores for extreme events (e.g. extreme dependency score);
- Statistical features like Confidence intervals and Bootstrap method;
- Use of non conventional obs (e.g. radar, satellite, raingauges) and gridded observations (precipitation analysis);
- User oriented verification (questionnaire for users)

- ....and so on-----→ VERSUS2!!!

VERSUS2 – Phases and tasks 2009

PHASE 1: COSMO year 2009
Task 0: Requirements specification for VERSUS and accepted review

Main Activities (or subtasks)
- Preparation of a "forum" and start of a survey (1,5 months to collect requirements)
- Survey analysis (1,5 months to gather, organise and edit requirements: delivery of System Design Overview (SDO))
- Review of System Design Overview (0,5 months)
- Drawing up the project (3 months for delivery of a detailed System Architecture Design (SAD),
- Final acceptance of the System Design Overview and SAD (0,5 months)

VERSUS2 – Phases and tasks 2009

PHASE 1: COSMO year 2009
Task 0: Requirements specification for VERSUS and accepted review

Deliverables
Until 30.04.2009: Requirements specification document compiled, reviewed, and approved by the STC.

Expected Start: Started in these days

VERSUS2 – Phases and tasks 2009

PHASE 1: COSMO year 2009
Task 1a: Implementation of a multiplatform RDBMS version of VERSUS

The development of a multiplatform DB for VERSUS is necessary for the installation and use of VERSUS at every service within COSMO. A multiplatform DB shall be provided by means of an interface class which will be set up during the installation of VERSUS.

Main Activities
• Analysis, design, development, and implementation of DB classes for multiplatform implementation;
• GUI, R package and front-end integration with the above DB classes
• Test phase

VERSUS2 – Phases and tasks 2009

PHASE 1: COSMO year 2009
Task 1a: Implementation of a multiplatform RDBMS version of VERSUS

<u>Deliverables</u>
Until 31.05.2009: Multiplatform DB version of VERSUS available for installation.
<u>Expected Start:</u> February 2009 (just after the workshop/tutorial for delivery of the initial VERSUS version, ex CV-package, to be held Dec 2008-Jan 2009)

VERSUS2 – Phases and tasks 2009

PHASE 1: COSMO year 2009
Task 1b: **Installation of multiplatform DB version of VERSUS at every service within COSMO**

The installation and the use at every service should be reached before the implementation of the any other requirements and functionalities from phase 2.

Main Activities

• Installation and use of VERSUS package original version at every service within COSMO

• Functionality tests, configuration and production of verification scores

• Installation of updated multiplatform DB version of VERSUS at every service within COSMO

• Help Desk by PL team

30°EWGLAM   Madrid 6-9 October

VERSUS2 – Phases and tasks 2009

PHASE 1: COSMO year 2009
Task 1b: **Installation of multiplatform DB version of VERSUS at every service within COSMO**

Deliverables
Until 31.07.2009: Installation of multiplatform DB version of VERSUS at every service within COSMO.
At GM 2009: Presentation of VERSUS-based verification results for all operational deterministic COSMO implementations.
Expected Start: February 2009 (just after the workshop/tutorial for delivery of the initial version of VERSUS, ex CV-package, to be held Dec 2008-Jan 2009)

VERSUS2 – Phases and tasks 2010-2011

PHASE 2: COSMO year 2010-2011

It is the actual implementation phase

To be defined after the delivery of TASK0 - System Design Document

VERSUS Priority Project

CONTRIBUTING SCIENTISTS for VERSUS 1
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