



Introduction

Mandate of the review

- **Review the progress that has been made since the last review, the adoption of the recommendations and the preparation of the program of work for the second phase of the LCG project.**
- **Examine the overall coherence of the software, identify real and potential problems and risks, and make recommendations on evolution.**

Before going to the detailed recommendations I would like to:

- Thank the projects and experiments for their detailed and thoughtful presentations
- Remind the proposed evolution of AA projects (Pere)
- Summarize the feedback got from all four LHC experiments

Proposed Changes in AA Projects

- ◆ Round of discussions with PH management, project leaders, experiment architects, experiment representatives, presentations to experiments, etc.
- ◆ The proposed changes the Applications Area are:
 1. SEAL and ROOT projects merge
 2. Some redefinition of SPI role
 3. Some adaptations of POOL required
 4. PI libraries absorbed by client projects
 5. SIMULATION project basically unchanged

AA: core software for LHC

- ❖ **CMS believes that the goals of LCG/AA (to provide to the LHC experiments a set of coherent software packages) has been largely successful and the full integration of ROOT will bring it to completion**
 - ❑ Persistency
 - ❑ Foundation
 - ❑ Framework services
 - ❑ User interface
 - ❑ Simulation
 - ❑ Software Process (?)

- ❖ **We take the opportunity to acknowledge the key role of Torre Wenaus as project leader in this**
 - ❑ We warmly thank him for his efforts
 - ❑ We wish Pere Mato a fruitful tenure



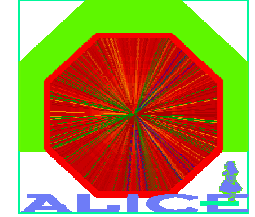


Conclusions

- LHCb uses extensively LCG-AA software
- LHCb welcomes the merge of SEAL and ROOT
 - The new project should conform to the LCG-AA practices
 - Experiments priorities should be taken into account
- Still a lot of developments around ConditionsDB
 - Aim at a DC05 in October/November using it...
- Starting to make use of SPI testing / QA tools



Executive Summary



- ALICE applauds the proposed merge of SEAL into ROOT and having one ROOT based core LCG AA infrastructure
- This is in line with what ALICE did propose 3 years ago in the annex of the LCG AA Blueprint
- ALICE is happy with the extra manpower assigned to ROOT development in line with its important role in providing the core LCG AA infrastructure
 - ALICE, as major and long time ROOT user, will continue providing significant manpower to the ROOT project



Apps Area Reorganization

- ATLAS believes that the new LCG Apps Area organization is capable of functioning well
 - But relies on good integration of teams with different philosophies
 - It requires buy-in from all and design changes from both sides
 - Crucial that needs of experiments continue to be met
 - Remember that we have large user communities
 - We also have production & trigger environments as well as physics analysis users
 - Crucial to clarify plans quickly so that we can understand the implications
 - E.g. CLHEP and maths libraries
 - Long term evolution support
 - This is essentially the last chance before LHC startup



Findings/Recommendations

- **Most recommendations of last review implemented or in the plan**
- **The proposed evolution plan is technically reasonable and supported by all experiments; it should**
 - Integrate ROOT activity in LCG organization**
 - Increase the coherence of the products**
 - Facilitate the long term support**
- **The technical details of the plan should continue to be discussed and approved by the Architects Forum**
- **LCG-SC2 should follow up closely the progress**



Findings/recommendation

- The experiments are developing their distributed data analysis frameworks and get support from ARDA.
- POOL and PROOF are AA projects and clients of grid services
- There is no technical forum to discuss interactions between the experiments, the AA developers and the grid service providers
- Recommend regular extended Architect's forum meetings to establish better communication and working relationship between the relevant parties.