

User Tools and Interfaces: Introduction and Goals

Fabrizio Bianchi
University of Torino and INFN-Torino

SuperB Computing R&D Workshop
Ferrara, March 9-12, 2010

The problem as seen by a user

- Define the desired dataset(s):
 - Database query.
 - Creation of list(s) of input files.
- Create the executable to be run on the dataset(s):
 - Compatibility between code and dataset(s).
 - Appropriate configuration of the jobs.
 - Parameters to be passed to the executable.
 - Active and inactive modules.
- Submit jobs and keep track of success and failures in a distributed environment.
- Graphic tools and multivariate analysis tools highly desirable.

The BaBar experience

- BaBar computing was a success: >400 published papers demonstrate it.
- However it was regarded as:
 - Expansive (resources + manpower).
 - Difficult to use:
 - Steep learning curve.
 - Lot of orally transmitted information.
 - Tools to define the dataset not so transparent to use.
 - Compatibility between software releases used and dataset and job configuration were totally user responsibility.
- Not a distributed environment.

What can be improved ?

Some ideas that could become R&D projects

- Documentation and training.
- Code quality:
 - Memory footprint.
 - Efficient use of CPU.
 - I/O bottleneck.
- Engineered control over administrative (= user) control.
 - Compatibility between datasets and code.
 - Job configuration.
- Job submission and bookkeeping tools.
- Graphic display and common analysis tools.

In this session

- Ulrik Egede: experiences from Babar and LHC.
- Mat Bellis: tools and graphic interfaces.
- Discussion:
 - Lessons learned.
 - Areas that need to be improved.
 - R&D projects.