

Code development: languages, tools, standards, QA, interplay with Online

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Goals of the workshop

- understand what is required
 - for obtaining a high quality software
 - for easily using the code
- what we can expect in the future that affects our programs

Code development

- tools
 - to build release
 - to quality check release
- methodologies
 - coding standards
 - coding techniques for deploying new technologies
- languages

Release Management

- in a development phase code must be released very quickly
- released code must be usable
 - otherwise it's useless
- releases should be available on each user platform
 - not always this is possible

Release Management

- releases must be build with an automatic procedure
- releases could be build using remote resources
 - it was already done by BaBar

Release QA

- to be usable a release must be tested
 - involves different know-hows
 - requires production/inspection of test samples
 - it must be done ASAP

Code Quality

- computing performance is strictly connected with good programming standards
- experience with BaBar shows that code quality in general is not optimal
 - maybe the situation is better within LHC experiments
- standards must be enforced since the beginning

Code Quality

- code reviews could help
- are there any tools that could help?
 - reverse engineering?
 - ...?

Languages

- programming languages might be an issue for SuperB
 - C++: main programming language
 - already well established
 - not the only language used in our code
 - Fortran code still present
 - mainly external packages (generators)
 - who will understand Fortran code in 10 years from now?

Languages

- high level languages
 - interface with the user
 - which language(s)
 - perl, python, ...
 - what to do and not to do

Issues for discussion R&D

- code quality
 - how to enforce a good quality standard
- programming languages
 - not a religious war
 - can we rely on (Fortran) legacy code for the SuperB?