



Contribution ID: 407

Type: Poster

An Exhibition Booth for demonstrating recent developments in data processing software used at the LHC

Thursday 24 May 2012 13:30 (4h 45m)

The PH/SFT group at CERN is responsible for developing, releasing and deploying some of the software packages used in the data processing systems of CERN experiments, in particular those at the LHC. They include ROOT, GEANT4, CernVM, Generator Services, and Multi-core R&D (<http://sftweb.cern.ch/>). We have already submitted a number of abstracts for oral presentations at the conference. Here we request access to a booth so that we can continue a dialogue with interested delegates in front of practical demos that we have prepared and that illustrate new developments in detail. We would undertake to keep the booth manned during the breaks and poster sessions.

We would plan to show a number of demos covering a variety of different software domains, namely:

- our latest development for Apple's mobile devices; firstly a "RootBrowser" for iPad and iPhone and secondly ROOT's event visualization framework ported to OpenGL for embedded systems/iOS. ("EVE for iPad")
- a prototype of ROOT that highlights a new C++ interpreter (called cling) that has been developed using the new Low Level Virtual Machine compiler technology (LLVM)
- use of the MCPLLOTS tool, which is dedicated to the tuning and the validation of MonteCarlo event generators, such as Pythia, and its connection to the LHC@home project; we will show the physics content of MCPLLOTS, with different comparisons to the LHC data, as well as the underlying computing technology used to produce these results.
- an automated solution for validation and testing of the Geant4 toolkit through the integration of a variety of tools and technologies, including the configuration and submission of jobs on grid-based resources, as well as the analysis and recording of results.
- the procedures and tools used in the CernVM project to manage the virtual machine (VM) lifecycle for developing, testing and running the software frameworks of the LHC experiments; we will present how one can manage the full CernVM lifecycle using a Web-based user interface as well as a lightweight application for portable devices such as mobile phones and tablets.

Summary

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Session Classification: Poster Session

Track Classification: Event Processing (track 2)