



Contribution ID: 334

Type: **Parallel contribution**

An outlook of the user support model to educate the users community at the CMS Experiment

Thursday, 11 August 2011 10:30 (30 minutes)

The CMS (Compact Muon Solenoid) experiment is one of the two large general-purpose particle physics detectors built at the LHC (Large Hadron Collider) at CERN in Geneva, Switzerland. In order to meet the challenges of designing and building a detector of the technical complexity of CMS, a globally distributed collaboration has been assembled with different backgrounds, expertise, and experience. An international collaboration of nearly 3500 people from nearly 200 institutes in 40 different countries built and now operates this complex detector. The diverse collaboration combined with a highly distributed computing environment and Petabytes/year of data being collected makes CMS unlike any other High Energy Physics collaborations before. This presents new challenges to educate and bring users, coming from different cultural, linguistics and social backgrounds, up to speed to contribute to the physics analysis. CMS has been able to deal with this new paradigm by deploying a user support structure model that uses collaborative tools to educate and reach out its users via a robust software and computing documentation, a series of hands on tutorials per year facilitating the usage of common physics tools, annual hands-on-learning workshops on physics analysis and user feedback to maintain and improve the CMS specific knowledge base. This talk will describe this model that has proved to be successful compared to its predecessors in other HEP experiments where structured user support was missing and the word of mouth or sitting with experts one-on-one was the only way to learn tools to do physics analysis. To carry out the the user support mission worldwide, an LHC Physics Center (LPC) was created few years back at Fermilab as a hub for US physicists. The LPC serves as a “brick and mortar” location for physics excellence for the CMS physicists where graduate and postgraduate scientists can find experts in all aspects of data analysis and learn via tutorials, workshops, conferences and gatherings. Following the huge success of LPC, a center at CERN itself called LHC Physics Center at CERN (LPCC) and Terascale Analysis Center at DESY have been created with similar goals. The CMS user support model would also facilitate in making the non-CMS scientific community learn about CMS physics. A good example of this, is the effort by HEP experiments, including CMS, to focus on data preservation efforts. In order to facilitate its use by the future scientific community, who may want to re-visit our data, and re-analyze it, CMS is evaluating the resources required. A detailed, good quality and well maintained documentation by the user support group about the CMS computing and software may go a long way to help in this endeavor.

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Session Classification: Computing in HEP

Track Classification: Computing in HEP