



Core Application Software Report to the PMG

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- ◆ **News**
- ◆ **Technical Progress**
- ◆ **Milestones**



News

◆ DOE/NSF Review went very well

- ◆ We were “baselined”

◆ Committee had a few comments

- ◆ Some were aimed directly at US-CMS

- *Endorsed our request for an additional software engineer to work on persistency*
- *Approved of our scope and schedule*

- ◆ Some were aimed at CMS in general

- *Expressed a desire for more common projects*
 - *CMS is organizing LHC common persistency discussion with LHC experiments, CERN-IT, and the ROOT development team.*
 - *CMS is also trying to organize the creation of utility libraries for C++, similar to the CERNLIB for FORTRAN, based on the GAUDI development*
- *Thought we needed better understanding of the deliverables of the Grid projects*
 - *Wanted better list of deliverables and better integration by next meeting*



News

- ◆ **SOW's have gone out for comment from Princeton, Caltech, and UC Davis.**
 - ◆ Initial comments are back
 - ◆ Should have no problem finishing signed documents by end of the year.

- ◆ **Now that we have been “baselined” and have SOW's we need to improve the project tracking**
 - ◆ Need to improve engineer reporting
 - ◆ Need to keep milestone status up-to-date on the web page

- ◆ **A lot of you saw the technical and milestone progress at the review. I'll keep it short today.**



Technical Progress **Architecture 2.1**

- ◆ **Lassi Tuura has been developing the new analysis architecture for IGUANA.**
 - ◆ Released on time at the end of October
 - ◆ Already used to create prototype for OSCAR visualization prototype
 - ◆ Will be used for ORCA visualization this year

- ◆ **Michael Case: First complete prototype of the Detector Description Database (DDD) should be released shortly.**
 - ◆ DDD team working together more efficiently

- ◆ **Vladimir Litvin working on redesign of Calorimetry code, first release was completed in October**
 - ◆ Vladimir was appointed coordinator for this code.
 - ◆ Working to incorporate PRS improvements
 - ◆ Code for production needs to be released in time for validation



Technical Progress **IGUANA 2.2**

- ◆ **Analysis Workshop Scheduled for Nov 7th during CPT week at CERN**
 - ◆ **Well attended by software and physics developers**
 - ◆ **IGUANA visualization praised as a useful tool for analysis and debugging**
 - *PRS and IGUANA development team have created a prioritized list of improvements for next twelve months*
 - ◆ **Strong opinions expressed on interactive analysis**
 - *Demonstrations from Root developers and CERN-IT Lizard development*
 - *Demonstrations of integration of CMS reconstruction and visualization code and Lizard analysis code*
 - *Developers like modularity of Lizard while users like additional functionality available in Root.*
 - ◆ **Trying to determine ways of integrating some root functionality into CMS software**
 - *Encouraging better modularity in Root*



Technical Progress

Distributed Data Management and Processing 2.3

- ◆ **CMS trying to get prepared for production starting in either late January or early February**
 - ◆ **Trying to get productions tools ready for smooth production**
 - *Some confusion about responsibilities for integrating US and European developed code*
 - ◆ **Need to get monitoring tools ready for wide deployment as well.**
- ◆ **CMS is attempting to organize definition of ROOT-IO format**
 - ◆ **Idea is to define in writing ROOT-IO format so that other programs can be developed to read and write format and it can be relied upon to be stable.**
 - ◆ **Rely in part on Fermilab Root expertise.**
- ◆ **Throughout this year CMS will analyze creation of hybrid persistency solution combining Root-IO and a relational database.**



WBS

- ◆ **WBS is now defined in both MS-Project and Xproject**
 - ◆ **MS-Project useful for creating GANT charts**
 - ◆ **Xproject useful for web display and milestone tracking**

Both accessible from

http://heppc16.ucsd.edu/Planning_new

- ◆ **Need to find efficient way of keeping two files synchronized**
- ◆ **Working with Bakul**