

CHEP 2012

A first-timer's summary

ROOT

- Cling the new C++ interpreter
 - Full C++ support (STL, templates, aim for C++11)
 - LLVM – core libraries provide code generator and optimizer
 - Clang (C/C++ compiler for LLVM)
 - Dictionaries will ultimately be replaced by precompiled headers
- Going mobile – iOS only for now
- v5.34 long term support version released May 2012
- Root v6.00 - November 2012
 - No windows support initially
- ROOT I/O Javascript interface
 - browse ROOT files w/o ROOT and display histograms
- CMake support
- New Solids Geometry Library coming for ROOT and G4
 - Providing support for GDML

Frameworks

- art C++ analysis framework
 - Spinoff CMS framework
 - Uses Boost and ROOT
 - Removed internal use of Reflex to prepare for Cling
 - CMake
 - Working to support parallel processing

PLUME

Promoting economical Useful and Maintained software
(for higher education and research)

- <https://www.projet-plume.org/en>
- Share software expertise across disciplines
- Peer-reviewed software descriptions
- Looking for new contributors

Software Quality

- Profiling
- Framework auditors
- Atlas ROOT I/O Testing Framework
 - Zip-level, auto-flushing, basket optimization..
- Automated Performance Monitoring

GOoDA

- Generic Optimization Data Analyzer
 - Open Source in collaboration with Google & LLBL
 - Low overhead profiling by using CPU's PMU
 - Analyzer then converts those counts to cycles and creates summary data
 - Web based GUI

Common Phrases

- Don't reinvent the wheel
- Early deployment
- MultiCore
- Open environment
- Collaborative Tools
- CMake

