Contribution ID: **447** Type: **poster**

Implementing a Modular Framework in a Conditions Database Explorer for ATLAS

Monday, September 3, 2007 8:00 AM (20 minutes)

The ATLAS conditions databases will be used to manage information of quite diverse nature and
level of complexity. The infrastructure in being built using the LCG COOL infrastructure and
provides a powerful information sharing gateway upon many different systems. The nature of
the stored information ranges from temporal series of simple values to very complex objects
describing the configuration of systems like the TDAQ infrastructure including also associations
to large objects managed outside of the database infrastructure.
While an unified graphical user interface is crucial for browsing the different data, it must
understand and display many different types of information in a flexible way suggesting the use
of run time specific plugins. This extension mechanism was heavily used in the KTIDBEXPLORER
application that defines and implements not only abstract interfaces to connections to databases
and files but also supports extended ROOT and online configuration (OKS) objects in the
database. The application is aware of the relations between database objects so it's relations
(links) can be explored. The core application, built using QT, displays the hierarchical folder
view and powerful table widgets with panels for selecting the database queries.
An important example of this architecture is the oNline Objects extended Database browsEr
(NODE), that is designed to access and display all data, including histograms and data tables,
available in the ATLAS Monitoring Archive. To cope with the special nature of the monitoring
objects, a plugin from the MDA framework to the Time managed science Instrument Databases
(TIDB2) is used. The database browser is extended, in particular to include operations on
histograms like display, overlap, comparisons as well as commenting and local storage.

Primary authors: AMORIM, Antonio (Universidade de Lisboa (SIM and FCUL, Lisbon)); SOLOVIEV, Igor (PNPI (Petersburg Nuclear Physics Institute)); BATISTA, Joao (Universidade de Lisboa (SIM and FCUL, Lisbon)); DE

ALMEIDA SIMOES, Joao (Universidade de Lisboa (SIM and FCUL, Lisbon)); LOPES, Lourenco (Universidade de Lisboa (SIM and FCUL, Lisbon)); PEREIRA, Paulo (Universidade de Lisboa (SIM and FCUL, Lisbon)); NEVES, Ricardo (Universidade de Lisboa (SIM and FCUL, Lisbon)); KOLOS, Serguei (University of California, Irvine (UCI, Irvine))

Presenter: AMORIM, Antonio (Universidade de Lisboa (SIM and FCUL, Lisbon))

Session Classification: Poster 1

Track Classification: Software components, tools and databases