



Remaining Online SW Tasks

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- Documentation
- Database
- Calibrations
- Rates and Status
- Monitoring
- Miscellany
- Summary



Documentation

- High level
 - need a good overall description of L1Calo online SW
 - anything we already have is somewhat out of date
- Package level
 - some packages have good or reasonable documentation at the package level, many have little or none
 - where thesis chapters exist, we need pointers to them
- Detailed level
 - some code is well commented with Doxygen style comments from which documentation can be extracted
 - but its not always clear to the uninitiated
 - and some packages have very little of this
- Summary: could do much better at all levels!



Database

- Recent progress
 - Calibration data stored and read in COOL
 - Recently also take trigger menu from official DB
 - *Would like to remove support for the old style soon*
- But still not finished
 - It is clear we still need to tune PPM calibration
 - Probably also the associated run parameters
 - Expectation of schema changes is not compatible with moving to production oracle COOL database
 - though could use non-production oracle DB instead of sqlite
- Initial implementation of offline (Athena) access
 - But this also requires stable production schema



Calibration (1)

- Preprocessor
 - DAC/pedestal and readout pointer (real time delay) scans have been running well for some time
 - But little or no work on fine timing, pulse shape or energy calibrations
 - still expect changes to database schema in these areas
- CP and JEP systems
 - JEP timing scans repeatedly used at point 1
 - Earlier versions of CP scans also well used
 - But CAM versions still only run at Birmingham
 - Need to be completed and run at point 1
 - Automated CMM scans still under (re)development?
 - Very few channels, so not really a problem



Calibration (2)

- Validation
 - Very basic at the moment: need more sophistication
- Long term trends
 - No tools for this yet?
- Usability
 - Need shift instructions to run regular calibrations
 - Though perhaps only experts analyse and validate them



Rates and Status

- Recently added overall BUSY panel in IGUI
- No other overviews of system status
 - though some things can be seen via the mapping tool
- Software for PPM/CMM rate metering still needed
 - start with run control and module services
 - publish to IS
 - view with Trigger Presenter (hopefully)
 - and mapping tool as well
- PPM rate histograms will also be published
 - viewed via OHP, checked via data quality system?



Monitoring

- Lot of work done, lot of histograms available
 - Many quite detailed and only familiar to experts
 - Typically separated by L1Calo subsystem
- Need to distill essential ones for shift crew
 - Must be meaningful to generic level 1 shifter
 - Perhaps need a “whole L1Calo” view as well?
- More work also needed on automated data quality
 - Define criteria for wider set of histograms



Miscellany

- Basic VME changes desirable
 - hardware byte swapping, bus errors
- General error handling
 - many errors only reported to log files
 - doubtless some not handled properly at all
- Better checking
 - read back and check of loaded parameters
 - done for JEM, not for other modules?
 - not actually possible in some cases



Summary

- Mostly functional
- But missing:
 - stable database
 - some calibrations
 - much documentation
 - everything related to rates
- NB very limited time for testing changes