Table of Contents

Muon System operations for tagging....1
The MDT calibration example....1
The MDT alignment example....1
The CSC calibration example....2

Muon System operations for tagging

The MDT calibration example

The MDT calibration conditions data are a good use case for the 36h loop. Calibration centers receives calibration stream data from T0 processing and they have 36h to produce a set of constants in view of the Bulk reprocessing. A validation before insertion occurs. This step is for the moment done manually, but will probably be automatic in future.

The insertion in COOL is done via ATLAS scripts like AtlCoolMerge which the expert run to insert some previously created SQLlite files.

The MDT calibration cool tags are:

- a) UPD4/UPD1 : best knowledge inside 36h loop, update only if needed using manual validation by experts
- b) REPP tag : one new tag for every reprocessing, cloned from the older, and filled with new close ended iovs

QUESTION: can the MDT calibration group foresee to have a Close-Ended tag which would be filled from time to time with the best conditions data in view for a new reprocessing, but WITHOUT changing the tag ? This could then be associated to every new cool global tag, and would avoid proliferation of tags for reprocessing.

COMMENT: calibration constants computed inside the 36h loop will in general be different from the ones used in reprocessing.

The MDT alignment example

The MDT alignment corrections are a different case because the Endcap and Barrel system use as input data optical sensors images which are taken in asynchronous mode respect to data taking.

Present situation (end 2010, March 2011) is that every alignment system (Barrel, EndCap SideA,SideC) maintains 4 tags :

- a) reference BEST alignment tag : a sort of private tag with best alignment constants, open ended, never associated to anything
- b) Close Ended tag (for reprocessing) : it is the close ended version of the previous tag (a).
- c) UPD4 tag : for bulk, best knowledge in the 36h loop
- d) UPD1 tag : best knowledge for future data (new iov has always "now" as since time)

In ideal situation all 4 tags contains the same information, and a), b), c) have exactly the same iovs, while d) has not the same iovs. In other situations the a)b) tag are filled with best knowledge every week (e.g.) and c)d) are filled every day with approximate constants.

COMMENT: MDT alignment experts can deliver the best alignment in 36h time interval. So having some fixed UPD4 tags only to maintain makes things even easier to "log". Nevertheless, this is not realistic now, because it would imply that we insert too many IOVs for Endcap system respect to the desired frequency for UPD4.

The CSC calibration example

CSC calibration uses pedestal runs taken between physics run to follow detector variations and deliver corrections to be applied at reco level. The experts have been working until now with the following set of tags:

- a) reference BEST tag : this tag is regularly filled by jobs analysing pedestal runs and allows expert to follow time variations with a good detail.
- b) UPD1/UPD2 tag : this is updated from time to time when pedestal variations observed are too large to be ignored. The policy is similar for Express Stream and Bulk reprocessing.

COMMENT: the tag a) is used to feed a Close-Ended reprocessing tag. This is done from time to time, and the Close-Ended tag does not in principle change from a reprocessing to another.

-- AndreaFormica - 13-Apr-2011

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