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LHCb Core Software Meeting

Date and Location

27. September 2006
10:00 - 11:45
CERN (2-R-030)

Attendees

Florence, Greig (phone), Hubert, Joel, Juan, Marco Ca., Marco Cl. (minutes), Markus, Manuel, Matt, Nicolas, Olivier, Thomas

Apologies

Andres, Gloria, Nick, Philippe

Subjects

Specific Topics

Some statistics (generation, simulation) extracted from Gauss log files during production (Manuel)

- see the slides [↗](#)
- the function used to compute the statistics are at `LHCbPhysics.GengaussCounters`
- examples of output [↗](#)

Florence: The developed script is very useful to have quick feedback about the behavior of generation jobs.

Marco Ca.: It is a nice tool, but it has the same problem of a similar tool that Eric was developing, which is that when the application changes a bit, the script needs to be updated.

Florence: Manuel also extended the script to generate the option files for new event types.

Handling Time Alignment events (Olivier Callot)

Discussion started on the basis of the document [↗](#) Olivier proposed.

From the point of view of the analysis of the TAEs, it is clear that dedicated algorithms will have to access the event trees in PrevX and NextX, so nothing special is needed. (Matt suggested to adopt the PrevX, NextX convention for spill-over in Boole too)

The most complex point is simulation and Boole. After some discussion it seems that the easier and more flexible approach is to define special options (like the Context) to pass to the algorithms the string to use as prefix (e.g. "Prev1", "Next2") and the time offset. The algorithm will need to be adapted. This will allow us to extract data from `/Event/MC` and store the output in any of `/Event/PrevX`, `/Event/NextX` (we have only one simulated event).

Matt pointed out that the tracker digitization algorithms cannot be simply replayed because they are generating the shape of the signal based on some random number. If we simply re-execute them, we will find different shapes and not only shifted ones in the PrevX and NextX events. In such cases we will need bigger changes (e.g. generating the shape with a tool that caches it).

The subject of TAEs will be discussed again during the software week [↗](#).

News

- Application Area meeting [☞](#) in the afternoon
- LCG 47 is being built. (all changes)
 - ◆ ROOT 5.13.02
 - ◆ dcache (?)
 - ◆ CASTOR
- LHCb Software week [☞](#)
- (Joel) All the produced rDST files are not usable for the stripping (a bug in DIRAC caused the usage of a wrong GUID for DIGI files)

Software Releases

Gaudi (Hubert)

- Working on v19r0
 - ◆ basically, it works
 - ◆ no feedback about the position of an unchecked StatusCode in the source files for Windows
 - ◆ generation of rootmap files for the dictionaries
 - ◆ added SSE compilation flags
 - ◆ waiting for LCG 47

LHCb, Boole, Brunel (Marco Ca.)

- Pre-release of Brunel in DEV
 - ◆ many small changes
 - ◆ code for HLT alleys (the code may need a review because of possible duplications)

DaVinci (Juan)

- Testing with signal data
 - ◆ problems with vertex fitter when the vertex is far from the primary (ok with Ks, bad for B)
- Next release will need the new Brunel
- KtJet package moved to Phys

Panoramix (Guy)

- Problems with Python (crash on exit)

Round Table

Greig

Andres wrote a tool to which he moved part of the functionalities of the EventSelector (still to solve a segmentation fault at finalization, Marco Cl. is investigating). They will write a new implementation of the tool that uses GFAL and pre-stages the files.

Marco Cl. suggested to ignore the problem at finalization and concentrate on the functional part.

Marco Cl.

One of the new thing in Brunel is the first attempt of getting the event time from the raw buffer. The EventClockService uses a tool to decode the ODIN raw bank which is stored as an ODIN object in "DAQ/ODIN". Marco Ca. propose to remove RecHeader and keep only ODIN. We agreed to shrink RecHeader: only run number and event number (for clarity) and use ODIN for the rest.

Managed to reduce the number of folders for XmlDDDB to 1/3 with just a renaming (and some internal extensions in DetCond). Will contact the writer of the scripts generating those files to use directly the nwe naming convention.

-- MarcoClemencic - 02 Oct 2006

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