

SuperBelle Data Handling with AMGA

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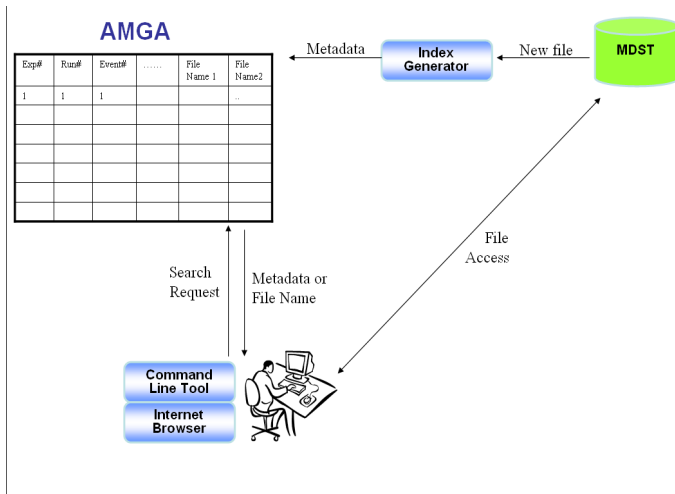
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Overview

- 1 The Data Handling Scenario with AMGA
- 2 Starting Point
- 3 To extract the useful information
- 4 The information parameters
- 5 Summary and next plan

The Data Handling Scenario with AMGA



- We should establish the architecture of the database.
- To establish, we will get the information parameters from Belle.

- Installation Belle lib: 150.183.234.69
 - Belle Lib : b20090127_0910
 - postgreSQL:postgresql-8.1.11-1
 - pntdb :pntdb_dumpall-bwg80-20090427_1842.gz
- Configuration of the AMGA : kenobi.kisti.re.kr
 - It is based on the postgresQL.
- We extracted the simple parameters from Belle lib.

To extract the information from the data files

- To make the catalog, we need to extract the information from Belle data.
- For testing and programming, we used the signal MC($B \rightarrow \phi\pi$ decays)
- Example of the extraction in data

```
process_event ../../mdst/phipi0-genpak-b20070402_1209-0.mdst 0
flag = 1 ; exp num = 51 ; runnum = 0 ; evt num = 11
flag = 1 ; exp num = 51 ; runnum = 0 ; evt num = 12
flag = 1 ; exp num = 51 ; runnum = 0 ; evt num = 13
flag = 1 ; exp num = 51 ; runnum = 0 ; evt num = 14
```

To extract the information from the directories

- We should understand the directory of Belle to make the catalog.
- We get the information from `check_process_url`(get the data information for Belle.)
- The information from `check_process_url`

```
process_event bfss02:/bdata/mcprod/dat/e000055/evtgen/uds/00/all/  
0607/on_resonance/00/evtgen-uds-00-all-e000055r000007-b20070607_2106.mdst 0  
process_event bfss02:/bdata/mcprod/dat/e000055/evtgen/uds/00/all/  
0607/on_resonance/00/evtgen-uds-00-all-e000055r000012-b20070607_2106.mdst 0
```

- We have a problem for looking the real data. The `check_process_url` was not operated.
- We should check what it is changed?

- The Belle2 will support the Grid.
- The Belle2 will be 50-60 times data size than Belle.

● From the data files

- exp number
- run number
- evt number
- we will include the number of tracks:

● From the directories

- file system:nfs, afs, http, rootd: we will include this for Belle2
- data (real or MC)
- data type(on resonance or off resonance)
- type(uds,charm,mixed,charged,real)
- skim(HadronBJ, fullrec and so on)
- stream(0-9)
- version of Belle Lib
- and so on: If you have the good parameters, give the idea.

- Your suggestions are welcome.

How to access AMGA: making by AMGA Team

● Command Line Interface

- belle_amga_search exp 1 run 2
- belle_amga_write exp 1 run 2 evt 111 file srm://..

● Programming API

- belle_amga_connect (host,port,dir)
- belle_amga_search (condition)
- belle_amga_eot ()
- belle_amga_fetch (variable)
- belle_amga_write (...)
- belle_amga_close ()

● Web Interface:

The screenshot shows the LHCb Bookkeeping Web Access interface. The page title is "LHCb Bookkeeping Web Access - Windows Internet Explorer". The address bar shows "http://valhalla01.cern.ch/lhcbook/BookkeepingHome.htm". The page has a navigation bar with "LHCb", "Computing", "Gaudi", "Meetings", and "Search" links, along with a timestamp "[Mar 08 14:03:25]".

The main content area is titled "Search for datasets". It includes a "Configuration" dropdown set to "DC06 - phys-lum2" and an "Event type" dropdown set to "10000000 - incl_b". Below this is a table of datasets:

Datatype	Dbase Version	Step3	Step2	Step1	Events Available
RDST 1	[Default]	Brunel - v30r14	[ANY]	[ANY]	15645851

Below the table, there are several search filters: "Datasets replicated at:" (dropdown: CERN), "Physical File Names Protocol:" (dropdown: ANY), "Output requested:" (dropdown: Only Gaudi Card), "Nb of datasets per page:" (dropdown: 200), and "Nb of input datasets per job in cards:" (input field: Default: ALL). A "Submit" button is located at the bottom of the search area.

The page footer shows "Done" and "Internet" status, and a zoom level of "100%".

Figure 1

- 1 Belle Lib and AMGA was established
- 2 We get the ways of the extraction from Belle data.
- 3 We are looking for the good parameters.
- 4 Is there any missing?
- 5 To connect the information parameters with AMGA.
- 6 To use the number of tracks, we should study more and more

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