T0 RAW data status

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Outline

1. Detailed schedule of the detector commissioning - test-beam, cosmic, calibration, data taking.
2. List of the persons who are responsible for the DAQ and analysis of the data.
3. Geometrical mapping (inside a DDL)
4. Status of raw-data reconstruction
5. Status of raw-data simulation
6. Raw-data visualization

Detailed schedule of the detector commissioning

Test-beam :

preproduction electronic prototype will be tested during this and next week

Calibration :

after commissioning,

before and during run-time

Commissioning:

T0C detector will be mounted in January

electronics should be ready January –February

People responsible for DAQ Greece group

Martha SPYROPOULOU-STASSINAKI

and for analysis

Alla Maevskaya

Readout electronics test

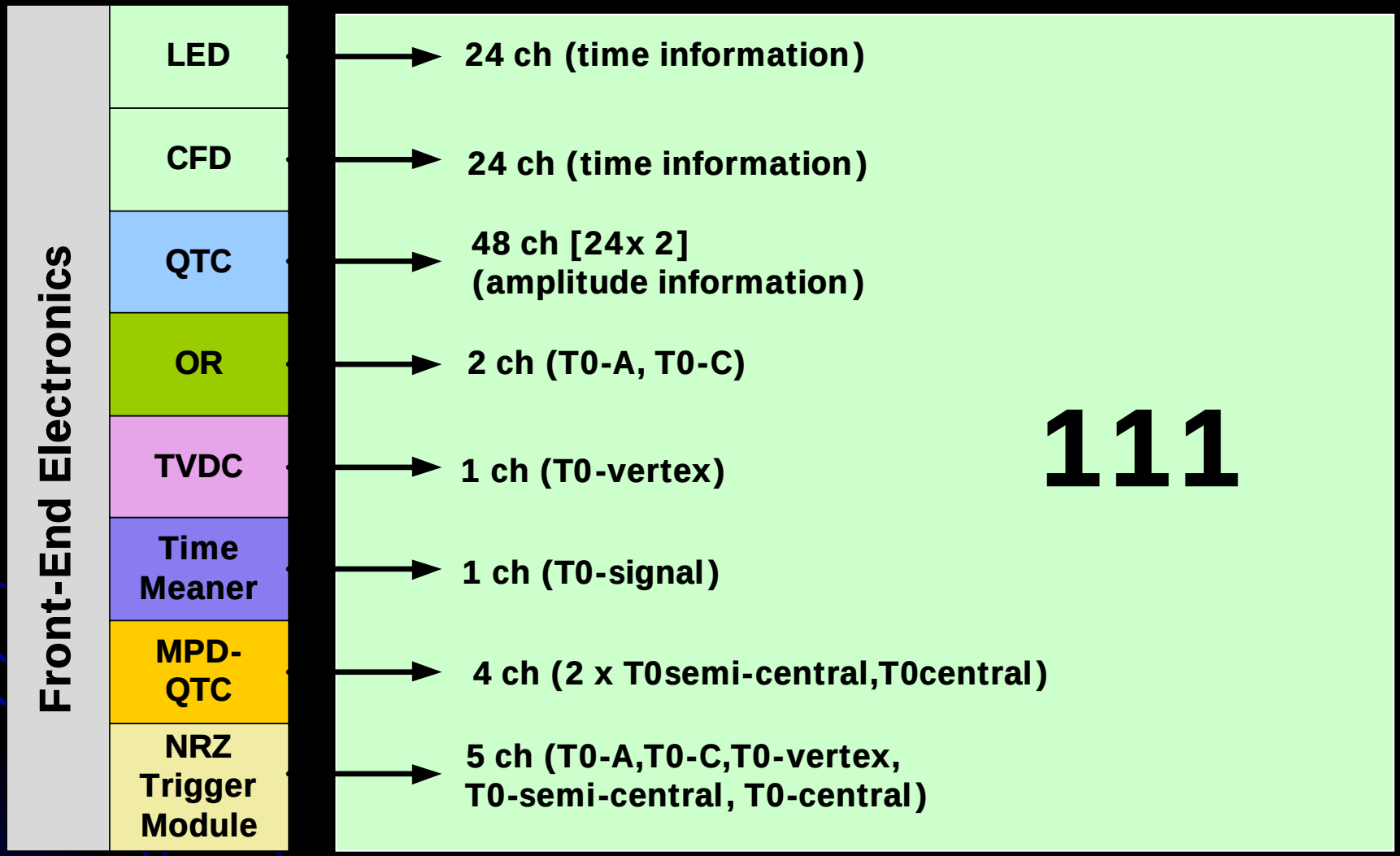
Tomorrow the 1st test of preproduction prototype of readout electronics will start. Now I can provide only simulated RawData.
At the end of August a simple test setup was built to send and record pulses. So now I have the first example of raw data files. These files were read with Cvetan's help by existing AliSTARTRawReader.

RAW data status

T0 has the same readout electronics as TOF.

Realistic data format was known only in June. In AliRoot release 4-04 used for PDC06 START RAW data format is old. New format was commited in August, fully tested and can be used for PDC06.

New List of Readout Channels



RAW data structure

Common Data Header (CDH) 7words
DRM header
DRM data (4 words)
TRM global header
TRM header from chain 0
TDC hits from channels
TRM trailer from chain 0
TRM header from chain 1
TDC hits from channels
TRM trailer from chain 1
TRM global trailer

Geometrical mapping

Lookup table provides setup correspondence between the number of channel and the source of data.

Exactly the same lookup table will be used for MOOD and will be written in DAQ log-book, but reading this table by reconstruction procedure is not implemented yet.

Status of reconstruction of the simulated Raw Data

Analysis of PDC06 data shows very good precision of T0 reconstruction.

Reconstruction of RAW data simulated in recent TOF format shows the same good precision of T0.

Additional preprocessor

During long gap inside run laser pulses will be sent and time delays of each channel will be collected in histograms. After the run mean value and sigma of collected histograms will be read by SHUTTLE and compared with the existing one in CDB. If they coincidence, validation for TimeDelay in CDB will be extended, if not – replaced with new values. This parameter will be used in reconstruction.

See Tomasz Malkiewicz presentation tomorrow

Raw-data visualization

T0 detector does not reconstruct tracks so the only things I can visualize are
in p-p case : hitted PMTs and vertex position

Pb-Pb case: only vertex position

Could be implemented before the end of November

RAW2(S)Digits

Works inside AliSTARTRawReader class, but not write Digits . Will be improve during weekend

To do list

- **Tune existing AliSTARTRawReader for reading test beam data** ***(next week)***

- **Removal of all the dependencies on *gAlice* in raw data reconstruction**

(next week)

- **Raw-data visualization**

(end of November)

- **Reading MOOD Lookup table in reconstruction procedure**

(end of this year)