SeaTray

MANTS 2011, Uppsala

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meta-projects

- 4 new meta-projects:
  - seatray (-> offline-software)
  - seasim (-> icesim)
  - searec (-> icerec)
  - searecsim (all of the above..)

core projects

- we use four projects from code.icecube.wisc.edu/icetray:
  - icetray
  - dataio
  - cmake
  - interfaces

core projects

- no changes necessary!

forked projects

- dataclasses
  - new hit structures
    - geometry extensions [multiPMT, ”floors”]
- phys-services
- gulliver (and friends)
  - in the process of being re-merged

forked projects

- some changes are back-ported
  - e.g. I3MetaSynth, ...

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not yet done..

tools / I3_PORTS

- some additions, most important is:
  - oracle DB interface
- some more projects specific to reconstruction algorithms:
  - “igraph”, “shark”, ...

input

- readers for:
  - DAQ data
  - old Antares event format ".evt"/".det" from the Fortran days
  - online detector (live reconstruction)

input

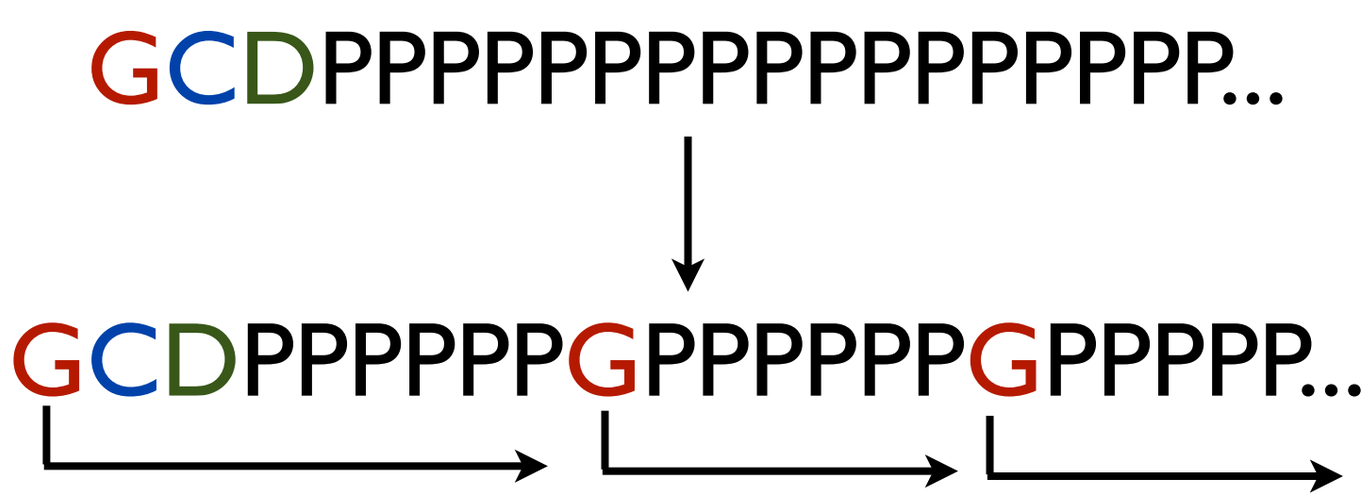
- database interface
- GeometryService, CalibrationService, DetectorStatusService

output

- started to use table output formats:
  - tableio (.root / .hdf5)
  - “antDST”
    summary format based on Auger code

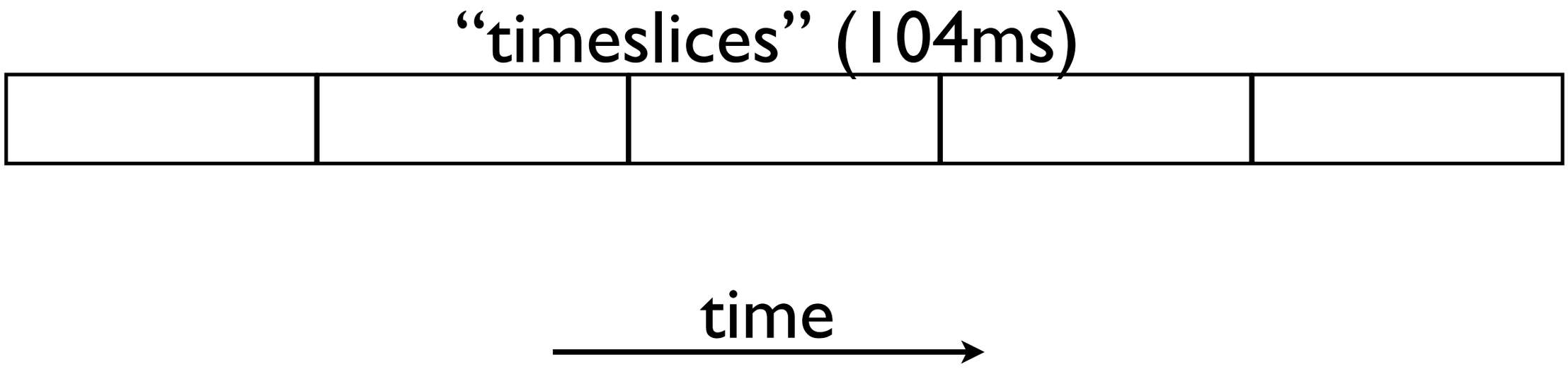
useful icetray feature

- frame merging, "stops":
  - Antares geometry keeps changing constantly
  - icetray/I3Muxer always supported this!



Q-frames

- not used in SeaTray yet
- however:
  - they follow almost exactly the way that the Antares DAQ works



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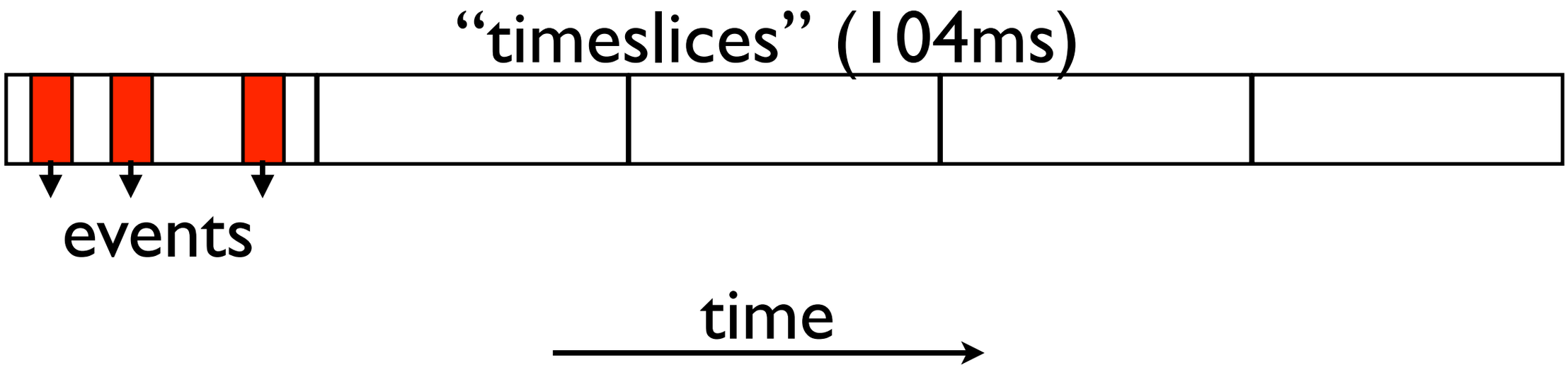

Q-frames

- timeslices are discarded (to limit data rate)
- events are kept (P-frames)
- summary data per timeslice is kept
  - currently also in P-frames!
  - redundancy! -> we should put this into Q-frames!

SeaTray in data/ production

- official productions
- DAQ data is reconstructed (offline only!) within SeaTray

SeaTray in simulation

- many MC tools are still written in Fortran
- monolithic, hard to integrate with C/C++ code
- new simulation tools are becoming available in SeaTray

conclusions

- thank you!