The FINUDA pre-analysis monitor

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Online meeting: May 12, 2005

Main requirements

- **Trigger, DAQ and DAΦNE status:**
  - Scalers
  - Currents
  - ??? (I need some suggestions...)

- **BEAM status:**
  - Instantaneous Luminosity online calculation
  - Φ decay position evaluation
  - Center of mass energy evaluation

- **Event quality:**
  - Number of recognized/reconstructed tracks
  - Number of reconstructed hits per layer
  - Percentage of stopped K^-/K^+
  - Angular distribution of reconstructed tracks (ϕ angle)

- **Reconstruction efficiency:**
  - **Momentum resolution (μ^+)**
  - Anything about ParticleIDentification???

It should run like this:

•**Start New Run**
- ➢ Open raw file for luminosity evaluation
- ➢ Open raw file in read_lib (for fidarc)
- ➢ Reset All scalers and currents (optional)
- ➢ Get the run number (from DAQ?)

•**Event Loop**
- ➢ Every event:
  - ➔ Luminosity evaluation
  - ➔ Read scalers and currents
  - ➔ Fill histograms
- ➢ Every 3 events (for example):
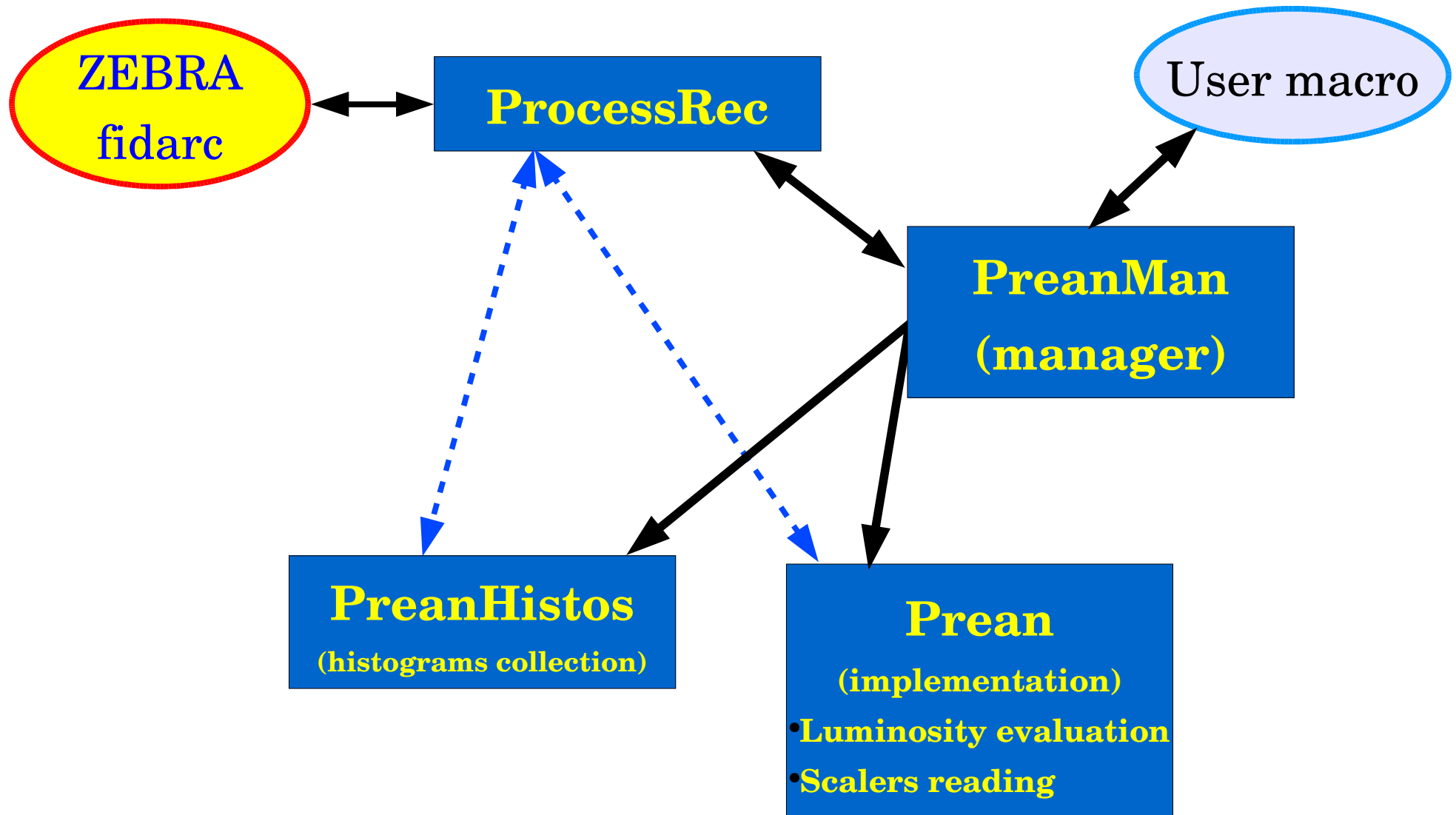 - ➔ Perform the complete fidarc reconstruction process
  - ➔ Fill histograms

•**End Of Run**
- ➢ End of run operations should be discussed...

Write shared text files (time dependent)

Structure (block diagram)

ZEBRA fidarc

ProcessRec

User macro

PreanMan (manager)

PreanHistos (histograms collection)

Prean (implementation)
• Luminosity evaluation
• Scalers reading

Status of the art

- **ProcessRec** (from the TProcess of Filippini/Panzarasa):
  - Completed and tested (multi-run processing available)

- **PreanMan:**
  - Main structure of the class implemented and tested (also online)

- **PreanHistos:**
  - Structure of the class implemented
  - First test histogram added
  - Histograms collection...to be defined and added

- **Prean:**
  - Class structure designed
  - Implementation...to be completed

LMD / TOF
Slow controls status

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TOF

- **Log text files removed**
- **Trip recovery completed (manual or automatic)**
- **Remote control of buttons tested**
  (it should be used by the MegaConsolle for the trip recovery)

LMD

- **Workstation recovered**
- **Log text files removed**
- **Trip recovery: to be implemented**

Questions:

- **What about the PCI board (CAENET)?**
- **How to code informations and write it to raw-files?**
  - Supply voltages
  - Trips, etc...
- **Slow control for new tofino?...**