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Subject: Templates for Signal Processing

Posted by [Lars Schmitt](#) on Thu, 22 Jul 2004 09:59:56 GMT

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Dear colleagues,

I would like to start to collect information on prior experience in our groups on all types of detector oriented signal processing.

I would first like to do this in an informal brainstorming way via this forum hoping that people can contribute a description in a few sentences. In addition you could also report on articles you read or talks you heard.

The topics I would like to cover in this first round are the following (but you may add others you think are important, too):

- \* All types of noise reduction:
  - Zero suppression via thresholds
  - Common mode noise subtraction
  - Amplitude reconstruction (MIPS vs. reaction/delta electrons)
- \* Signal time reconstruction
- \* Clusterisation algorithms (1D and 2D, maybe 3D for TPCs...)
- \* Pre-pattern recognition with limited scope  
(e.g. ring matching for RICHes, tracklets in close chambers)

Previously, some of these items were done only by the reconstruction software. The algorithms used there are however of equal interest, since in future(DAQ) they can be implemented in FPGAs on the frontend.

Regards,  
Lars

{some markup added by moderator}

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