Summary

ATLAS Reconstruction meeting

19 May 1999

Agenda

- Introduction
- Recent developments in reconstruction for Physics TDR
  - MUID (A. Poppleton)
- Code under development
  - OO Kalman filtering in LVL-2 trigger software (S. Qian)
  - views on common classes from xKalMan++ (I. Gavrilenko)
  - clustering (RD. Schaffer)
  - Track Classes
    - requirements (A. Poppleton)
- Discussion on future plans
  - Inner Detector
  - Calorimetry
  - Muon Spectrometer
- AOB

Atrecon

- For Physics TDR
  - ‘late’ developments
    - muonbox, MUID, COBRA, STACO
  - still some ‘private’ code
    - new banks in RECB chain, ...
  - some fixes needed
    - tile cells
  - update ‘cbnt’
    - MUID information missing
- Need to update atrecon
  - have a stamped ‘Physics TDR’ version
    - remember that studies started in 97
    - difficult to reproduce everything

Atrecon

- Evolution ?
  - keep a running version
  - some improvements already requested
  - adiabatic evolution to OO/C++

  - reconstruction task leaders should be nominated
  - Atlas reconstruction coordinator ?
  - delay the discussion !!!

Plans & Milestones
Inner Detector Reconstruction

- xKalMan ++
  - ‘minimum’ documentation required
  - added to repository
  - June ‘99 implementation in Arve
  - new clustering, track classes, etc ... will be considered (consolidation)

- iPatRec
  - priority is Physics Combined Performance TDR
  - new clustering will be considered after TDR
  - June ‘99 implementation in Arve
  - for “mu-id” needs “muonbox” (++)

Plans & Milestones
Muon spectrometer reconstruction

- new Muon reconstruction code
  - in Arve in April 99

- Muonbox (++) ?
  - amdb++, Hit++ (not discussed at the meeting)
    - in Arve in April 99
  - magnetic field
    - in Arve in April 99

Conclusions

- OO reconstruction end ‘99 ?
  - Inner Detector
    - clustering
    - xKalMan ++
    - iPatRec
    - PixlRec (?)
  - Calorimetry
    - ?
    - better view at the next Software week
  - muon
    - AMBER
    - muonbox ++ (?)

```
// $Id: slugmain.cxx,v 1.1.1.1 1999/03/01 15:56:36 poulard Exp $
#include <commons/config.h>
#if defined(ATLAS_CPP)
#define slmain slmain_
extern "C" {void slmain();}
#if defined(ATLAS_HPUX)
extern "C" {void  FTN_INITRAP();}
#endif

#include <iostream.h>

int main (int, char **)
{
  cout << "C++ main start for SLUG DICE and ARECON \n" << flush;
#if defined(ATLAS_HPUX)
  FTN_INITRAP();
#endif
  slmain();
  cout << "C++ finished   for SLUG DICE and ARECON \n" << flush;
  return 0;
}
#endif
```

Where are we now ?

- ARVE
  - what is ARVE ?
  - what does it mean to put software “into the framework ARVE”

Where are we now ?

- Access to the data
  - user guide
  - digits from GEANT3 (ID, Larg, MDT, RPC)
    - TileCal to be done
  - ready for ID (iPatRec, xKalMan)
  - ready for muon barrel (MDT,RPC)
  - Larg can be started

Where are we now ?

- Detector description
  - enough to do decoding of digits
  - some approximation of geometry description
    - MDT, OK for AMDB 2.1
    - RPC being prepared
  - all detectors will eventually be in database
  - remember that AMBD exists

  - Requirements needed
    - interested parties from subsystems should meet
    - wait for database task leaders

Two presentations

- MUID
  - impressive work in the last 3 months
  - some convergence still needed

- OO Kalman filtering in LVL-2 trigger software
  - ASTRA ?
  - trigger TDR ?
  - same geometry as ID

To Common classes

- Views on common classes from xKalMan++
  - geometry, cluster, space points, track
  - agree on idea of breaking up the reconstruction into packages to define common code
  - many communalities

- Track Classes
  - requirements
  - design

- Next
  - have the information available on the Web
  - discussion during the next Software week

Conclusions

- OO reconstruction end ‘99 ?
  - Inner Detector
    - clustering
    - xKalMan ++
    - iPatRec
    - PixlRec (?)
  - Calorimetry
    - ?
    - better view at the next Software week
  - muon
    - AMBER
    - muonbox ++ (?)

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