News on the Tracking Event Model

E. Rodrigues, Jose A. Hernando

* Work and progress since last meeting on 14th Dec 2004

* Next steps ...

For end February

... and later...
Work done / progress / status (1/2)

Base classes:

- **Track:**
  - In package Event/TrEvent
  - Minor changes since 12/04 for POOL, XML GaudiObjDesc, etc.
  - In working status

- **State:**
  - In package Event/TrEvent
  - In working status
  - 1 missing method only (position-momentum covariance matrix) – code is ready

Extrapolators (pure virtual) interface:

- **ITrExtrapolator:**
  - In package Kernel/LHCbInterfaces
  - Ready for use / tests
Work done / progress / status (2/2)

Others:

- **LHCbID:**
  - *In package Kernel/LHCbKernel*
  - *Functionality extended:*
    - Spare bits used for e.g. store the OT ambiguity (needed for testing converters, etc.)
    - Backward-incompatible changes in main methods, for clarity
  - *Changes committed to CVS*

Converters:

- **TrConverters:**
  - *In package Tr/TrConverters*
  - *Conversions TrFitTrack <-> Track work well/correctly in both directions*
    - last check: use of latest LHCbID with storage of OT ambiguity – done this week

- **TrgConverter:**
  - *In package Trg/TrgConverter*
  - *Conversions TrFitTrack <-> TrgTrack not fully tested – done this week*
Next steps (1/3)

Base classes:

- **Track:**
  - Present implementation for minimum class size required extension of XML bitfields
  - Also some features were found there (because of specific needs in manipulation of bits)
    - Fruitful discussions with Stefan Roiser
    - New features are to be implemented this week in GaudiObjDesc
  - Next improved version will follow shortly after …

- **State:**
  - “final” version with missing method released this week

Converters:

- **TrConverters:**
  - Last check of storage of OT ambiguity done this week
  - New version in CVS by end of week

- **TrgConverter:**
  - Missing tests to be done during the week
  - New version in CVS by next week
Extrapolators:

- **TrExtrapolator:**
  - *Base class inheriting from pure virtual class ITrExtrapolator*
  - *Implements most of the extrapolators functionality*
  - *To be release in Tr/TrExtrapolator by end of week*

- **TrLinearExtrapolator and others:**
  - *Inherit from TrExtrapolator*
  - *Implement only a few (~4 max) methods*
  - *TrLinearExtrapolator to be released next week, for the full tests of the base classes*
  - *The other extrapolators will follow later …*
    - *Most important now is to have at least one extrapolator for the tests*

Others:

- **LHCbID-related tool:**
  - *Handy tool to get the clusters from the LHCbIDs and vice-versa*
  - *To be written using code at present in the converters*
  - *Release not first priority; to be done by end of month*
Others (continued):

- **TrFitTrack:**
  - *Important to make it inherit from Track*
  - *High priority as soon as converters done*

Other work:

- **tests:**
  - *Done in parallel*
  - *Have made us find bugs (e.g. bitfields manipulation in Track.h) and problems*

- **Open question of refitting from DST:**
  - *Classes / packages / tools for tests soon available*
  - *Big issue to be investigated in detail in the forcoming weeks*
Conclusions

- Good progress since last meeting on 14/12/2004
- A lot is about to be “finalized” in the next couple of weeks
- Work on schedule according to plans drawn at last meeting
- Still much work ahead of us – think positive like us