
News on the Tracking Event Model

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** 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*

Next steps (2/3)

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*

Next steps (3/3)

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 forecoming 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**