Framework Discussion

Framework / PXD DAQ Workshop

22.02.2011

How to get to redmine?

First get a personal web server account:

- Go to the Belle II homepage: http://belle2.kek.jp
- Click on Belle II Internal (below the logo)
- Click on these instructions in the introduction section
- Click on account creation page
- Fill in the form and click the Create button

Then log into redmine:

- Go to http://belle2.kek.jp/redmine
- Use your private user name and password to log in

Event / Run Number and Master Module

- Master module:
  Module that sets the exp/run/event number
- Master module automatically determined by the framework
- Only one master module per job allowed
- Code link

- Are generators master modules?

Relations

- Code link
- Pointers vs. indices
- User interface, internal implementation
- Behavior in case of rearrangement of arrays (deletion, insertion)
- Relation manager

Random Seed

- Uniqueness (for MC production)
- Reproducibility (for debugging)
- Random numbers in external packages (e.g. geant4)
- Treatment in Belle?

Processing Times

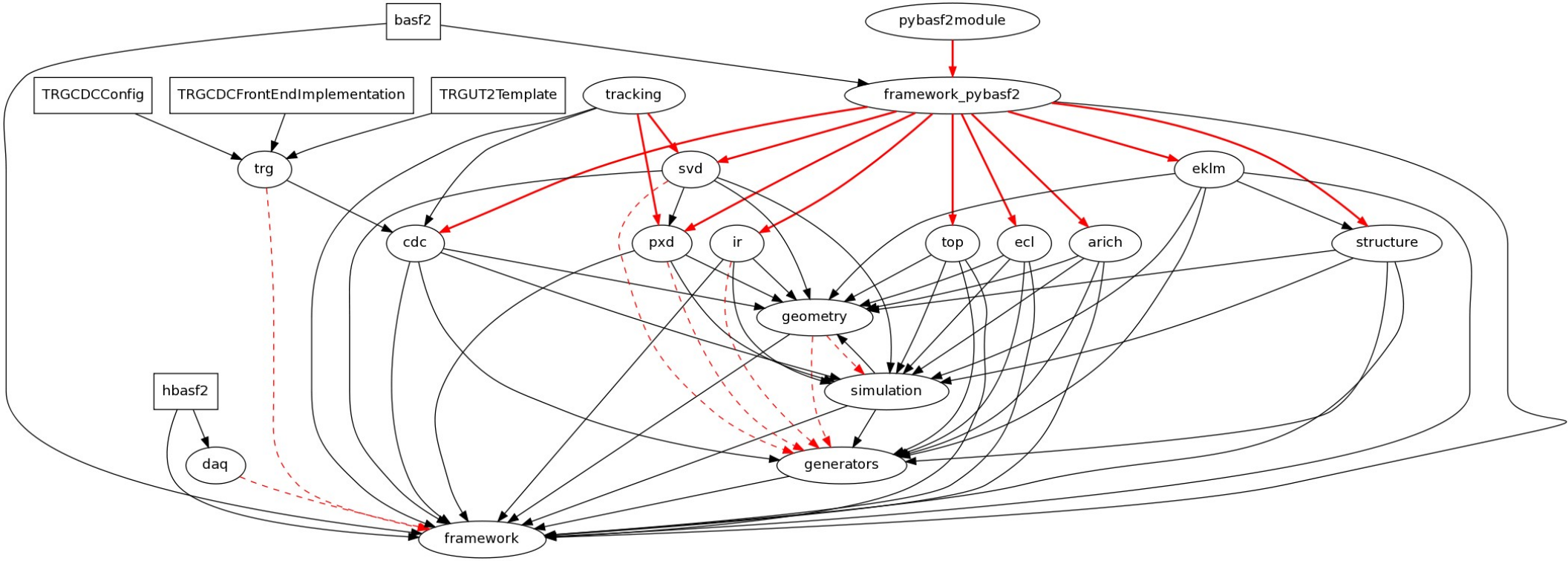
- New tools command: `setoption debug|opt`
- Also applies to externals (with just one option for root)

- Profiling
  - Valgrind?
- Nightly tests

Event Overlay / Utilities

- Event Overlay
- Utilities

Library Dependencies



- Dataobject libraries?

Parallel Processing

- Certification of modules
- Treatment of run/persistent datastore objects

Naming Conventions for DataStore

- String identifiers for data objects can easily be wrong
- Conventions clearly needed

Proposal:

- By default use class name (MyClass::Class()->GetName())
- Class name + “Array” for arrays
- For more than one per class: default name + “_classifier”
- Relations: “DataStoreName1_to_DataStoreName2”

Coding Conventions

- Proposals for additional conventions based on code review:
- Link
- Conventions for modules?
- Proposal for tests:
  It is highly recommended to write (unit) tests for
  - critical code
  - code that could be affected by changes at other places in the code (side effects)
  - and in case a bug is discovered.

SVN structure

- Link
- Cleanup of obsolete code
- documents/trunk → trunk/documents
- Separate externals?
  - How to make sure the right version is used?

Support Infrastructure

- To be discussed at the next computing meeting

- Mailing lists: sbelle_comp, sbelle_tracking, geant4_ml
- Mailing list server system
- Archive, search feature
- Redmine, categories vs. sub-projects

Manpower and Future of basf2 Core

- Andreas has to work on his thesis

- framework
- geometry
- ir
- pxd
- svd