Status of Brunel team and next steps

Brunel v2

Brunel team

Topical workshops

Project meetings

Brunel v2

- **First version with added C++ functionality w.r.t. SICBDST**
- **Likely candidate: tracking digitisation and reconstruction**
  - Improved tracking simulation incompatible with SICBDST
  - Essential tool for tracking optimisation
  - Backward compatible if AXTK created from Brunel
- **Output formats:**
  - Existing SICB ZEBRA file?
  - Full ROOT based DST?
    - Requires completion of data-model
  - ROOT based MINI-DST?

Brunel team

- **Original proposal:**
  - OO reconstruction representatives from each sub-detector
  - Frequent (~weekly) team meetings to make progress on:
    - Project plan (milestones and deliverables)
    - Program structure
    - Common issues
      - Event data model, Geometry, Common language, Common Tools etc.
- **Feedback from sub-detectors:**
  - Decisions on common issues are urgent
  - Weekly meetings unacceptable (too CERN-centric)

Brunel team: modified proposal

- **Sub-detector OO contacts remain mandatory**
  - Primary contact with team leader
  - Has responsibility to attend meetings, respond to E-mail etc.
    - Should delegate whenever appropriate
- **Monthly "topical" workshops**
  - One or two days
    - not necessarily at CERN, with telephone conferencing?
  - Decision making forum for common issues
    - One common issue per workshop
      - Alternative proposals, toy studies prepared in advance
    - All interested parties must be represented
    - Goal is to reach agreement
      - Documented, binding (at least until next iteration...)
- **Project meetings every 3-4 months**

Topical workshop I Proposal

- **End July - Event data model**
  - **Reach agreement on event structure**
    - **e.g. Is MonteCarlo, FrontEnd, Raw, Reconstructed, Analysis OK?**
  - **First definition of common classes**
    - **e.g. Tracking hits, Tracks**
    - **Updating strategies**
  - **Reach agreement on naming conventions**
    - **e.g. Consistent naming of classes and methods, functionality**
      - **L0Calo2x2Sum, MCCaloSummedDeposit**
      - **VeloCluster->width(), CaloCluster->size()**
  - **Reach agreement on common approach to navigation from raw+reconstructed data to MC truth**
    - **e.g. Digitisings to MC hits, Clusters to MC Hits, Tracks to MC particles**
    - **Inheritance, reference table, association etc.**

Technical workshop II Proposal

- **End August - Alignment and Calibration strategies**
  - Required infrastructure
  - Geometry and conditions database design
    - Ideal detector? Survey measurements? Alignment results?
  - Impact on event and detector data models
  - Strategy for online calibration / alignment
    - Impact on Brunel structure
  - Strategy for MonteCarlo
    - Perfect Montecarlo? Misaligned? Smeared?
    - Impact on Brunel
  - Initiate an alignment working group?

Project meetings Proposal

- **Review progress in collaboration weeks**
  - **Milano:**
    - **Retirement of SICBDST**
    - **Status of Brunel v2**
    - **Feedback from topical workshops**
      - **Organisation of October workshop**
- **Project meetings in software weeks**
  - **To review progress and define milestones**
  - **To identify "topical" issues**
  - **1-3 November:**
    - **Release of Brunel v2**
    - **Planning for Brunel v3**
    - **Planning for next topical workshops**
- **What about project tracking?**
  - **Status reports at weekly software meeting?**
    - **Can be sent by E-mail**

Discussion

- **SICBDST retirement**
- **C++ migration priorities**
- **Brunel team and topical workshops**