

Software Framework Goals

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for the FCC Experiment Software Team

FCC-hh Detector Meeting

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Summary of informal meeting

- 25/11/2015 we had an informal discussion to better understand the detector needs in terms of software
- We have agreed on a few milestones for the various sub- detectors
 - Short term: for Rome
 - Medium/long term: after Rome
- Working model should be something like:
 - Detector experts
 - Software gurus
 - Physics Inputs } Synergy !

Points to discuss and improve

- The software group cannot work blindly!
- Need a closer relation with FCC-hh physics and detector groups
- Need to coordinate the overall effort and prioritize the activities
 - should be an outcome of this meeting
- How to increase the usage of the FCC software?
 - need more real user examples (a chicken and egg problem)
- How to attract new people?
 - Should define well defined projects that can be assigned to students or fellows

- The common software team now got significantly strengthened
 - Clement Helsens joint for coordination and contact to FCC-hh
 - Joschka Lingemann a new applied fellow
 - Two “new” doctoral students working on tracking & pile-up
- This really gave us a boost!
 - cleaned up and simplified setup of software
 - upgraded to newest versions of ROOT, Geant, Gaudi, ...
 - added more (basic) examples
 - had time to do proper plans

- Fleshed out the “final” design for the MC and simulation suite
 - For the MC truth part got green light by LHCb to use most of their generator tool chain
 - For simulation will gradually refactor our code into final design (which in turn LHCb is interested in)
- Missing components group mainly around pile-up handling
- Allow for the time being using both
 - DD4hep for the complete detector
 - Existing GDML geometries for single sub-detector studies
- Overview presentation in SW meeting next week

Concrete short- to medium-term Plans

- Migrate standalone simulation examples into FCCSW
 - Currently Joschka is importing Carlo's calorimeter example
- Integrate ATLAS tracking code
 - see presentation by A. Salzburger
- Fixing a few technical issues in the new data model
 - see later presentation by Z. Drasal
- Tackle components for the simulation suite one-by-one
- Extend documentation and examples
- Look for lightweight event displays
- For the rest we **rely on your prioritization and your contributions!**
 - **There is plenty to do though!**