Software workshop summary

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Atlas software workshop

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Tutorial

- OO data bases in HEP (Dirk Duellmann): Good introduction into basic concepts and an implementation
- More specific tutorials in next software workshop

Atlas Computing Review

- Strong recommendations for changes
- Management preparing a proposal
- ACOS insists in software process, organisational changes debated and mostly questioned
- Geant4 and Atlas DAQ backend software processes: found very important for the success of the project. Both increased the formality of the process with time, and both are exploiting “real” meetings

DIG report

- Design and code reviews, evaluations going on
- WG on architecture document started, preparing writeup of current understanding
- Will start new evaluation of design tools

TDR software and productions

- Generally in good shape, work recently focussing on muon system and combined reconstruction
- Lot of packages written as analysis code on private basis
- All code in cvs, needs careful testing
- Productions for reconstruction not centrally organised
- Open points: Evolution of geometry, reconstruction; maintenance of Fortran code

Repository and releases

- C++ code base growing
- Difficulties to support 5 platforms
- Fortnightly releases, nightly builds; difficult to optimise
- NT support particularly difficult; decision:
  - No NT releases, no Studio project files
  - Guidelines how not to preclude later move to NT
  - Packages not required to run on NT
  - Revise decision if volunteer found

99 status report, mgmt tools

- Status report: follow-up of CTP
  - scope not very clear yet
  - Main subjects: Project management, software, computing model, SDE, remote communication, training
- Management tools: Information about work packages related to PBS
  - Define work packages, request and write progress reports, produce summary reports

US-Atlas Computing

- Create organisation, request funding
  - Structure and people defined, awaiting funding
- Software: contribution according to 20% rule
  - Pilot project (test beam)
  - Core software (control, data base)
  - System reconstruction software
- Implementation through regional centre ARC
  - LBNL selected as lead site, NERSC
  - People and hardware investment planned

Database meeting

- 1 TB milestone
  - Feasibility demonstrated successfully
  - Performance bottlenecks under study
- Detector description
  - Single source for all applications
  - Sample implementations based on Age files
- Event model
  - So far, only Geant3 digits considered
  - Many open questions, volunteers welcome

Amber walk-through

- AMBER
  - Atlas muon barrel and endcap reconstruction
  - High-level overview: Detector hierarchy, dataflow paradigm, detector reconstruction toolkit, reconstruction
  - Ideas for Track class evolving
- Walkthrough:
  - Far too much covered, too many people, no deliverable before walk-through
  - Many good remarks
  - Workable with formal combined review of design and code later on

Spider

- Slow, but steady progress
- Coding standards: proceeding towards a unified document,but some surprises in the procedure
- SRT: requirements collected, glossary made, requirements being consolidated - “Spider/SRT has a slim chance”
- Success of Spider will crucially depend on these two projects

Training

- Identified key element of software success
- C. Onions agreed to coordinate efforts at no more than 30% of his working time
- Issues: Who, what, where
- General course in June
- Material collected on the Web
- Infrastructure of national training coordinators

Next workshop(s)

- May 17 - May 21 at CERN
- August 30 - September 3rd at CERN... unless there is an expression of interest today!

- and ... wait for the surprises the management is preparing for us