What Next?

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May Milestone

- Successfully met
  - Only one of the “may have” features not yet delivered
    - Scripting
- Several features not on formal feature list delivered
  - Generators
  - Xkalman++
- Despite using GAUDI as a basis, a lot of people have been working very hard to meet milestone
  - Many thanks to them all
- Indications of a snowball effect
- Now we have to maintain the momentum

Vote for a Name

- Final call for you to vote for your favourite name if you haven't already done so.
  - AALTO, ABULIA, ACF, Adobe, A-Frame, APHRODITE, Athena, AUDI, BAZAAR, CAT-FLAP, FADO, GATE, Gaudia, HYADES, Nuria, OATS, Orlando, Pandora, PLEIAD
- Voting closes at noon tomorrow
- Name will be announced at reception tomorrow evening
  - Unless we need a run-off!
- We might also need a contest to decide on all caps or leading caps!
  - ATLAS Coding rules?

Presentation of Tutorial at CERN

- Tuesday 30 May 2000
  - Already sold-out!
- Ongoing series?
- Continually updated to reflect new functionality
  - *E.g.* Sequencer instead of sub-algorithms

GAUDI Issues – Visible to Algorithm

- Transient Event Store needs to be reworked
  - Hierarchy tied directly to persistent model
  - Inadequate flexibility in keys
  - ATLAS-specific base class?
- Particle Properties
  - Both interface & implementation inadequate
    - Use HepMC or Geant4?
      - Current plan is to use Geant4
  - Need to understand how to incorporate into framework
- Transient Stores
  - Event, detector, histogram
  - Same store with different lifetimes?
  - Arbitrary number of stores?
- Sequencer instead of composite Algorithm
- Module instead of Algorithm?

GAUDI issues – Not so visible

- Use of non-ATLAS ratified external software packages
  - *E.g.* Root I/O
  - Goal is to extract these by time of Architecture Review
  - What do we do if we can't extract them?
- General issue of creation of services
  - Currently done up front rather than on demand
- ApplicationMgr is a bit monolithic
- JobOptions compiler has some problems (*e.g.* unable to handle float properties)
- Error/failure handling
- *Etc.*

Event Data Model Workshop

- Wednesday 31 May 2000 at CERN
  - Still trying to get video all day
- Get requirements & experience
  - Propose Paolo Calafiura & Massimo Marino to collect
- Multiple aspects
  - Architecture
  - Framework
  - Event
  - Detector description
  - *Etc*.
- I hope to have a preliminary agenda by end of this week
  - My goal is to have several speakers giving experience from e.g. other experiments and also their own view of requirements, and suggestions

Scripting Language

- Talk by Craig
- I'd like to see a prototype before Architecture Review
  - Initially Tcl
- Understand compatibility with JobOptions
  - Totally replace?
  - Run-time selectable?
- I'd also like to use USDP and gather requirements from users
  - Propose Craig Tull & Chris Day to collect

On Demand Sequencing

- Attach algorithm(s) to converters
  - Understand implications
  - Job Options Service accessible from converters?
- Allows reconstruction on demand
  - Similar concept to CARF & Object Networks
- Proof of principle to demonstrate capability
  - Later than May
- Not obvious how to combine both strategies
- High level policy decision
  - What might be best for physics analysis might not be best for production reconstruction
- No work on this yet
- Goal is demonstrate it prior to Review

Documentation

- Basic GAUDI Documentation is very good
- Ours is currently almost non-existent
  - Tutorial web-pages
  - Mailing list postings
- Need to address this in next few weeks
- Reminder that documentation includes USDP diagrams *etc*.
  - Reverse Engineering

USDP Development

- Progress hampered by hardware problems at LBNL
- Need to accelerate prioritization of use cases and linkages
- I still want us to merge development by September
  - Prioritized use cases
  - Reverse engineering
  - Tracability
  - Identification of missing functionality
- Further development based on USDP
- Stress on iterative and incremental
  - Of the complete cycle from use-cases through code
- Goal is functional code that does what's needed in a timely manner

Subject Prototype to ATLAS QA

- Need to start discussing this with Dario
- Good test of both the Framework development process and the QA process itself
- Goal is to complete this prior to Architecture Review

GAUDI Release 4

- Is now available
- Timing was just too late for us to use for May prototype
- Need to migrate our code to this
- Merge changes to GAUDI core
- Need to understand new functionality (services *etc*.)
- Goal is prior to Architecture Review

GAUDI Repository (or lack thereof)

- Lack of repository is a problem
  - Unsafe
  - Difficult to make releases
  - Prone to mistakes (manually merging code changes)
- Premature to embark on this before Architecture Review?
  - I believe not
- More intense discussions with LHCb on incorporating our changes/enhancements in the core code base

Architecture Review

- Nominal date is Thursday 13 July 2000
- Several people have pointed out that this is not ideal
- Monday 10 July suggested as an alternative
  - Follows on from LHCC Review & ATLFAST Workshop
- A-Team working on suggested agenda and reviewers
- Still very much in flux
- Twofold goal for the review
  - Should we continue with this development and collaborate more closely with LHCb?
  - What should be the feature set for the September milestone?
    - 29 Sep 2000

Tentative Feature Set for September 2000

- Merge of USDP and Prototype
- Preliminary Event Data Model
- Preliminary Reconstruction Objects
- Preliminary Database Integration
- Fast Simulation
- Multiple Event Generators
- Limited Physics Analysis Integration
- SRT Support (new)
- Testbeam-specific features?
- Refine what we mean by these and add/remove

Summary

- We've made a good start
- Now we've got to maintain the momentum
- Event Data Model is major focus
- Lots of other things to work on
- Not much time before Architecture Review
- My goal is to plough ahead as rapidly as possible
  - "Until the fat lady sings"
- Not much time following Review before September milestone