ATLAS Database Work Plan

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Near-term Priorities

- **Access to existing data**
- **Infrastructure for database creation, population, distribution, and development**
- **Mechanisms to support data access through the prototype control framework and its successors**
- **Initial detector description infrastructure, including detector component identification, and input geometry**
- **Datastore support for testbeams**

Access to Existing Data

This refers primarily to data from the physics TDR.

Related milestones:

- **April 00: Geant3 digits available**
- **July 00: Geant3 hits available**

Status report from RD later in this session

Infrastructure

…for database creation, population, distribution, and development

Proposed milestones:

- June 00: SRT-based support for database creation with reference schemata
- August 00: Support for database distribution to secondary federations

Status report from RD later in this session

Data Access through Control Framework

Related milestones:

- **September 00: Objectivity/DB data access through control framework**
  - **Precise meaning to be determined in conjunction with architecture team**
  - **Involves both infrastructure definition/development and concrete physics data models (transient and persistent)**
  - **Tile testbeam data access initiative to begin May 00 (Calafiura/Malon)**
  - **Access to TDR data via Objectivity/DB needs prioritization (but see Fabiola's milestone: end of 00)**

Detector Description Infrastructure

Including detector component identification, and input geometry

Related milestones:

- **April 00: Shared identification conventions and definitions (STATUS: draft circulated in April; awaiting endorsement by subsystems--report from RD later)**
- **July 00: Revised identifier utility classes and utilities (STATUS: first version done in 1998; revision in progress)**
- **November 99: XML DTD for geometry (STATUS: done, with several subsequent revisions)**
- **Summer 00: XML geometry definitions from subsystems (STATUS: in progress; subsystems are responsible)**
- **November 99: XML DTD for materials, and XML materials definitions (STATUS: done; evolving to common implementation with LHCb)**

XML status report from Stan later in this session

Datastore Support for Testbeam

Related milestones:

- **July 99: Tile calorimeter testbeam pilot project using Objectivity/DB (STATUS: completed)**
- **July 00: RD5 calibration database infrastructure in place**
- **August 00: RD45 naming; support for user data areas in shared federation**
- **August 00: Testbeam data models (subsystems have primary responsibility)**
- **September 00: Current tile testbeam data model connected to control framework**
- **October 00: Tile and LAr data available through framework**

Session devoted to testbeam on Friday

Other Database Activities

- Viability assessment of ATLAS baseline datastore strategy to support technology decision in appropriate timeframe, which is …
  - 2001? (currently quoted by RD45)
  - 2002? (Computing TDR)
- New hits and digits definitions, to support, for example, Geant4-related milestones)
- Grid-related database work

Viability Assessment of Baseline Database Strategy

In the current calendar year, the principal components of that effort are proposed to be:

- **Accumulation of a significant body of experience with Objectivity/DB**
  - **based in part upon testbeam**
  - **specific technology use and evaluation**
- **Reassessment of ATLAS requirements**
  - **LHC common effort**
  - **ATLAS-specific, in conjunction with Architecture Team requirements effort**
- **Evaluation of scalability/viability testing done by others**
  - **RD45, CMS, BaBar**
  - **also experiments that have chosen not to use Objectivity/DB**

This effort may require augmentation based upon review outcomes.

Grid-related Database Activities

Proposed current-year milestones:

- **October 00: Grid-enabled support for database distribution to secondary federations**
- **December 00: Connections to grid-based replica management for data replicated at remote sites**

These milestones are optimistic, and are contingent upon grid project funding (e.g., PPDG).

Grid connections to database and other offline software development will be discussed on Friday.