

# ATLAS Project Management

# Organization

- The organization of the US ATLAS Software and Computing Project closely mirrors the organization of the US ATLAS construction project. The organization seems to be workable. All key positions are filled with experienced personnel and the organization is functioning.

# Organization

- While the interfaces to International ATLAS are well-defined and the US project is in principle well-aligned with it, we have some concerns about how well the interaction is really going. There does not yet seem to be an ATLAS wide set of software and computing responsibility assignments and certain decisions that could affect the US effort are not getting made.
- We also note that some of the key managers are overloaded with multiple tasks and responsibilities. A particular example of this and a cause for concern is the WBS 2.2 Level 2.

# Scope

- The scope is now better defined than Nov '00. The incorporation of projects supported by multiple funding sources and some not within the control of the collaboration create many new challenges. Good progress has been made in defining the scope of grid-related projects. Issues connected to networking have been identified as an area where effort and resources are needed but is not within the defined project scope.
- The issues connected with International ATLAS can also result in “mission creep” that can increase the project scope if not carefully controlled.

# Scope

- We are concerned that decisions made by the new CERN Grid project, which will emphasize commonality among LHC experiments may introduce new burdens on ATLAS and US ATLAS.
- We commend US ATLAS for writing the software to be resilient against the changes most likely to be required.
- US ATLAS needs to make clear the costs of any such changes and the likely rescoping that would be needed to accommodate them.

# Scope (and Cost)

- The Facilities Subproject presented some new proposals for an all-disk based system to facilitate access to the ESDs. We agree that this will make a more flexible facility and probably improve the physics output. We are not clear that the cost of this approach has really been understood. This is essentially a new model of access which encourages more reading of the ESDs and may have a large impact on CPU requirements and networking needs. We would like to see this very interesting idea more fully developed and a new cost estimate provided.

# Budget

- It is hard to tell whether total budget request and obligation profile for FY02-FY06 is well matched with the guidance given by funding agencies but seems not too far off.
  - E.g., escalation and “off-project” not consistently applied
- Budgets shown were not consistent with flat profile beyond FY06.
  - US ATLAS will be short on completing full scale hardware system if profile stays flat.

# Schedule

- overall, there are more breathing room due to LHC overall slip. However, if one defines the projection completion date as having full scale planned system in place, the project will not be completed even beyond FY07. (can not estimate project completion date due to funding guidance not available beyond FY07)
- Some of key milestones are still not well defined . We have heard that the data challenges, especially DC2, might slip.
- We endorse further regular and well-defined data challenges until LHC turn-on.

# Manpower

- A small but persistent shortage presented. The staffing plan for software developers is flat. Due to uncertainties in scope and lack of "standards" (at the International ATLAS level), there is high probability of needing more manpower than planned (i.e.. cost increase and possible schedule delay) while scope and standards issues get sorted out.
- Higher labor rates for software professionals (1.37xCMS)
  - We understand this is a cost/quality tradeoff that has been made
  - Facility budget is \$6.5M less while nominally trigger rates are higher

# LHC Grid

- We expect CERN to be particularly active in defining interfaces between the Tier0 and Tier1 center. It is important that the US be represented in these discussions and that US ATLAS and US CMS support each other rather than mutually annihilate.