Comments to POOL

General remarks

- Excellent progress since last review
  - Deployed and used in Data Challenges by 3 experiments
  - Close to 400 TB of data stored in POOL
  - No major problems
  - Happy users
- Most recommendations implemented
- General concern about impact of SEAL + ROOT merger on POOL
  - Will generate additional workload which must be anticipated in the planning

Documentation

- Greatly improved, however, problems remain. Examples of problems in the User's Guide
  - Missing documentation:
    - How to set storage technology specific options (e.g. ROOT tree split level)
  - Wrong/obsolete documentation:
    - Initialization of untyped collections is described incorrectly
  - Garbled documentation:
    - Some lists do not show up in PDF version (e.g sections 18.4.1 and 18.6.1). These are OK in HTML version
    - Suggestion
      - Drop Workbook and refer to User Guide

Bug fixes, Releases, Error handling

- Bug fixes
  - Great support
  - Small number of persisting bugs, not clear who will fix them
- Release process
  - Welcome split of RAL and POOL release cycles
  - Suggestion:
    - Make release process compatible with the rest of AA
- Error handling & reporting
  - Has to be improved
  - Error reporting must propagate to end user with clear indication which component in complicated stack encountered an error

POOL Collections

- Collections
  - Confusion, not clear what is really needed
    - Lack of clear requirements from experiments
    - The lack of progress is not due to any failing on POOL's part.
  - CMS is using POOL implicit collections
    - All current requirements are met
  - Concern:
    - As experiments mature, new requirements for collections may be requested in the future. POOL should meet these requests, subject of course to manpower constraints.
    - The experiments may need to provide manpower
  - Suggestion:
    - Try to suggest deadline for user requirements

POOL Collections (...)

- The goal of ROOT interactive browsability for POOL collections (2003 AA review) has already been met for ROOT collections.
  - For the ROOT browsability of MySQL collections, the necessary work is inside the ROOT project (targeted for the June ROOT release)
  - In that light, there is no need for a root plug-in for POOL collections.
- Providing collections within the POOL storage manager (e.g. the prototype of Markus Frank) would be highly desirable
  - collections as a whole could then be referenced by a pool::Ref<T>.
  - However, at this point it is not clear if this is a current requirement of the experiments

Storage Manager

- The goal of full ROOT browsability for files produced by the POOL storage manager has mostly been met by ROOT 4
  - Some small improvements are needed, but these are within ROOT and are already being addressed by the ROOT team
  - The ability to follow a pool::Ref<T> in an interactive ROOT session is needed (this work falls probably within the new ROOT/SEAL team rather than with POOL)

File Catalogues

- POOL API
  - Publishing POOL API to File and Metadata catalogue an important and welcome step
  - Suggestion:
    - Keep it stable
  - Different catalogue providers should implement POOL APIs
- POOL & emerging catalogues
  - Which catalogue will be deployed will be ultimately decided by
    - Resource/service providers (sites, grids,..)
    - Virtual Organisation (experiment)
  - POOL will have to use various FC backends and that will result in end users experiencing different Quality of Service
  - Suggestion:
    - Define a reference benchmark for the file catalogues to be able to discriminate between quality of FC implementations and differentiate between POOL and backend problems

COOL

- There is a public commitment from 2 experiments to use COOL
- The CMS conditions database group is considering the use of COOL, but has not made any commitment to use it
  - Currently, they are using POOL directly, and considering FroNTier
- Suggestion:
  - Experiments interested in COOL are encouraged to commit more manpower to assure project survival

POOL & Security

- Authentication, Authorization, Confidentiality
- No silver bullet
  - The solution must be end-to-end
  - POOL should not be the weakest point in the chain
  - Precise user input is required to define an appropriate solution
- Concern:
  - Performance with security implemented
- Suggestion
  - Check user requirements and solutions developed in Grid community and other applications (PROOF)