

Report from the ETD Parallels TDR Progress

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Discussions & Agreements

- We introduced and discussed the possibility of changing the central clock frequency to $\sim 40\text{MHz}$
 - This would be a major change with the devil in the details. Not the baseline for the TDR, but will be mentioned as possibility. Not uncontroversial.
- We discussed and resolved the “use of optical link mezzanines”
 - Mezzanines can be installed in fan-out crates
 - Very natural choice for clock and command links
 - Fan-out and throttle aggregation is needed anyway
- We selected clock distribution over the command links as the baseline
 - But keeping the option of dedicated clock distribution network if this would be necessary
- We reinforced that failure detection, handling and recovery strategy must be flexible, reliable and fast
 - Have a nominal design: fast detection, hardware support to resynchronized FEEs in FCTS and FEEs, orchestration of recovery through global control system and ECS
- Agreed on a nominal data link speed of $\sim 2.5\text{ Gbit/s}$ with 90% link utilization allowed
- This closes all open design question for the ETD/Online part of the TDR



Reading the TDR - ETD/Online

- Another round of reading the ETD/Online TDR chapter
- Review of the WBS and budget for the central ETD/Online components
 - Updated a few items where needed (e.g. trigger)
- → This is in a reasonable shape
 - WBS and budget will greatly benefit from having a target completion date
 - Makes a difference in technology choices and cost
 - Some Online software development tasks are big (10s of FTE-years) but scale well, so that the completion date drives the amount of FTEs required



Reading the TDR - Sub-Detectors

- We reviewed the sub-detector contributions to the Electronics chapter
 - Still need a few updates but it is well understood what needs to be done
 - Updated all sub-detector sections with a per-sub-detector summary table at the end
 - Will have a summary of all sub-detectors table that will show total link counts, event size, etc.
- Reviewed the WBS and budget
 - Sub-detectors should also update the ETD 1.7 line items when they update their WBS
 - Some discussion about what goes where (cables, etc.).
 - Not clear-cut in many cases. More important to make sure that the items are somewhere (and not missing). We can always move things if necessary.



Summary

- Design completed
- ETD/Online TDR is in a reasonable shape
- ready for editorial review
- WBS and budget is work in progress

- Photos from the meeting:
 - http://www.steffensphotos.com/v/SLAC/superb_pisa_09_2012/