Preparing for L1Calo Operation

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- Plans (approximate)
- Operational model
- Access and Accounts
- Training and Documentation
- Procedures
- Maintenance
- Summary

Plans and Schedule

- M6 next week
  - Last combined run
- Some subdetector weeks in April
- Global running about two months before beam
  - Full shift coverage

Operational Model

- ATLAS control room desk for Level 1
  - Shared by CTP, RPC, TGC and L1Calo
  - Single shifter!
    - We will need to learn about CTP and muon triggers
    - They will need to learn about L1Calo
- Satellite control room (3159-R-008)
  - About 1 desk and screen per level 1 subsystem
  - Room for expert support and development
- On call experts
  - Single phone provided by ATLAS for Level 1 on call expert
- Run coordination
  - Group with one representative per system
    - Coordination group of four for level 1 (CTP,L1Calo,RPC,TGC)
    - Supposedly stable nominees over longish periods (half year?)

Shifts and Experts

- Shifters
  - Need coordinated shift list for level 1
  - Probably not that many shifts per year among all of us
- L1Calo shifts (part time?)
  - Do we want additional regular coverage by L1Calo people?
    - Eg for daily careful checks of data quality by people with good working knowledge of the L1Calo system
    - Larger investment of time by visitors
- L1Calo on call experts
  - Still need to decide how to organise this
    - By subsystem and/or activity?
  - Again, who will be available for each category?
    - Will visitors take on call duties, eg for a week or more?
    - Do we need more CERN mobile phones?

Access and Accounts

- New scheme for access to ATLAS
  - Separate access rights for control room, USA15, cavern
  - Need to apply, do training courses, get dosimeter
- Shifters also need accounts
  - In future (when?) new applicants will get a set of accounts with one application (point 1, ELOG, DCS?)
  - For the moment its still several separate requests
  - In any case, each individual will need to register for privileges according to their expertise
    - expert/operator/shifter in different areas
- Login to point 1 network restricted during runs
  - access only with permission of shift leader
  - new access management system under test...

Training

- Decide what shifters ought to do!
- Need to establish a rhythm and infrastructure for training new shift crew
  - Many new shifters each week
  - Typically with little knowledge of most of level 1
  - Significant time and effort required here!
    - Needs to be spread among several people
- Expert training
  - On call experts may not be expert in all aspects of their subsystem or activity
  - Also need some training for on call experts
  - Still more time and effort needed

Documentation (1)

- New Twiki at point 1 intended for operational documentation for shifters and experts
  - Visible from outside point 1: http://pcatdwww.cern.ch/twiki/bin/view/Main/AtlasOperation
  - Editable inside point 1 or from outside via proxy: https://pc-atlas-www.cern.ch/twiki/bin/view/Main/AtlasOperation
- Some detectors (eg TileCal) are well advanced
- As yet "Trigger" and "Documentation" are strangers
  - We are really awful at writing documentation
  - This must change very soon!
  - Volunteers for writing and checking documentation welcome
    - Could be a full time job for several weeks

Documentation (2)

- We need shifter documentation in many areas
  - Basic operation of TDAQ software with special attention to trigger, level 1, L1Calo
  - Up to date descriptions of the system with further links
  - What to do on shift, how to run monitoring, what to check
  - How to respond to the most common problems
  - How to diagnose enough to know which expert to call
- Also need expert documentation
  - How to run (and analyse) our various calibrations
    - One day should be a shifter task
  - All kinds of maintenance procedures
    - Updating firmware, replacing modules, database operations, etc, etc

Procedures, Shifter Friendliness

- We still really have an expert-only system
- Many procedures need to be more shifter friendly
  - Needs quite a bit of SW work to get to this point!
- Think a lot more about ease of use
  - Even down to more obvious naming
    - Eg why is our standalone partition called something obscure like L1CaloRosREB instead of eg L1CaloStandalone?
    - Many, many instances where we could improve this sort of thing
      - Also helps with training and documentation if there is less to explain

Maintenance and Spares

- Establish (and document!) a maintenance regime
  - What to test at CERN (given test rig)
  - What returns home
  - Documentation of maintenance/update procedures for the installed system
    - firmware updates, tips for module replacements
    - also more serious operations such as how to replace a backplane while we still remember crucial gotchas
- Where to store spares
  - More reorganisation of 3150 required
  - Too many unmarked boxes and bags of bits
  - Pursue long term bulk storage area
    - First email requesting this was sent on 14 Sep 2006!
      - And we still havent got it

Summary

- Experts can (almost) operate the trigger now
- We are still a long way from shifters being able to do so
- We need
  - Documentation and training
  - Better user friendly procedures, online and offline