M8 Online Software Summary

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- Recent Progress
- To Do Lists

TDAQ, Offline, etc

- New tdaq-05-05-00 was used for M8
  - "No" API changes cf previous version
    - Except complete change of the resource manager applications!
      - The calibration panel uses these to check everything was cleaned properly: now harder
  - LCG release was missing Python/Tk widgets
    - Was used by l1chuck (disable hot towers): ported to PyQt
      - Meanwhile LCG was fixed quicker than I expected
  - Still some weird issue with the calibration panel
    - Works fine from the command line but not from ACR desktop menus
      - Being investigated by TDAQ experts
  - Otherwise the new release is fine
    - And now includes uhal (IPbus) software: much more convenient
- Latest (usable by us) Athena release 20.1.0
  - But cannot run L1Calo with ALFA menu - awaiting fix
  - Otherwise we are now using the official run 2 trigger menu

Preprocessor

- ## Recent progress
  - Online SW updated for latest REM & CALIPPR firmware
  - Bytestream decoder tested with compressed readout
  - New Run 2 COOL folders defined
    - Initial implementation: to be tested tomorrow
    - Possibly some changes still to come (ASAP please!)
- ## To do list
  - Pedestal correction
    - VME monitoring and control
  - PHOS4 run and pulser timing: further fixes (still issues?)
    - We need a new timing calibration soon to do proper energy calibration
  - Rate metering SW update (2nd LUT, also CMX)
  - Various cleanups and configuration improvements...
  - nMCM serial number to IGUI

CPM and JEM

- **Recent progress**
  - Reset registers in JEM to recover 160 MHz clock
    - Last problems with the Jet FPGA now fixed?

- **To do list**
  - ?

CMX

- ## Recent progress
  - Extra checks for clocks and links (better order)
    - Topo links configured
  - Thorough tests of algorithms (with spy memories)
- ## To Do List
  - Set fine delays from DB
  - Set detailed internal readout latencies and BCID offset
    - Hopefully new COOL DB folder will help
  - Set BCID offset [needs DB work]
  - Write deskew1&2 to DB by calib program [exists, untested]
  - Read and publish rates

L1Topo

- **Recent progress**
  - Various fixes to configuration procedure (ROD, input links)
  - Status published to IS/IGUI
    - Still needs debugging work?

- **To do list**
  - Check order of resets, incoming and outgoing links, etc?
    - Ensure we have a good order of clock resets between CMX and L1Topo
      - And whats the situation with the MuCTPI interface to L1Topo?
  - Publish DCS type data to IS and transfer to DCS
    - Need to understand exactly whats needed here
  - Use controlhub for reliability

COOL Database

- **Recent progress**
  - Made first implementation of all new Run 2 COOL folders
    - Add new attributes, remove unused/obsolete ones
    - Remove unused/obsolete folders
  - Recreated sqlite DB for point 1
    - Two folders had got corrupted in the last few months
      - Restored the latest uncorrupted versions (from irregular backups)
  - Test new ReadoutConfig folder: seems OK
    - New attributes for CMX/L1Topo readout details
  - Plan to test new PPM folders tomorrow in the test rig
    - There may still be changes to come

- **To Do List**
  - Its getting urgent to move back to Oracle (monitoring!)

Miscellaneous

- ## Rate metering
  - Need to add PPM jet LUT and CMX rates (archiving, display)
- ## Web displays
  - Several web pages fixes, but many are still not working
    - Despite webis update from Reiner Hauser

M8 Summary

- Better, but still not quite there yet...