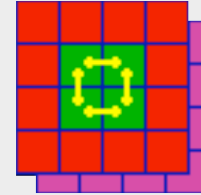




# ATLAS Level-1 Calorimeter Trigger



## Module Services Update

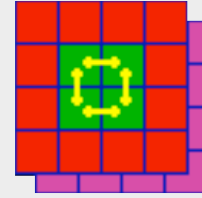
Autumn or Fall

(maple leaves still turn)

Bruce M. Barnett



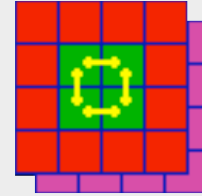
# Overview



- Overview
- HDMC Support
- Service Definitions (2)
- New Methods
- Other Modules: cmm
- Other Modules: cpm (2)
- Ttcvi
- Loose Ends



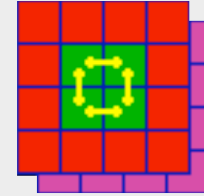
# HDMC Support



- File-list support engineered:
  - readDaqPartsList() reads a file
    - itemising parts files describing a system
    - accessible from Gui and cpRodTests
- Bug in PartManager::remove\_part(recursive) functionailty identified.
  - Fix engineered:
    - wrote remove\_subtree(), but must integrate in remove\_part(recursive).
    - Gilles should be freed from the persecution of segvs now!



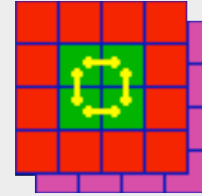
# Service Definitions (1)



- 1) TTC controller, in transition to loaded, apply busy. Reset TTCvi. Stable clock should be available as transition to loaded completes.
- 2) Other Modules. Access in order of dataflow.
  - a) In transition to loaded, configure firmware, reset h/w, select clocks reset ttcrx. set xoffs at the output of h/w which may pollute fifos of attached modules. Disable all inputs: ie: operations which may affect other modules.



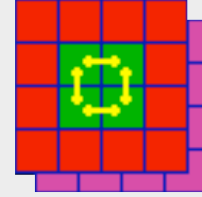
## Service definitions (2)



- b) In transition to configured, configure registers, load playback memory from testvectors. Don't select clocks (Q: If the deskew is altered, does the ttcx need reset? If so this had better be done in step a.) No resets allowed except to fifos or spy-buffers, which must be cleared/reset.
- c) In transition to running, remove all xoffs, enable appropriate inputs.
- 3) TTC controller removes of busy. Broadcast of 'start' for playback.



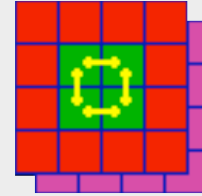
# New Methods



- to appear soon in the DaqInterface definition.
  - Ie: Modules and SubModules will support this.
    - verify() - excercises relevant verify methods from hdmc.
    - identify() - reports and logs contents of version, id registers.
  - Question:
    - Should DaqInterface methods be available from the Gui?



## Other Modules: cmm

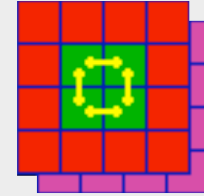


- updates to register map need to be incorporated.
- integration with db to be completed.
- Sub module structure required?
- Module service framework there
  - yet to be completely fleshed out.

(courtesy Norman)



## Other Modules: cpm (1)

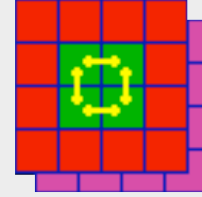


- Cpm
  - only daqInterface methods implemented, for the most part.
- CpChip:
  - typical DaqInterface methods such as load(),reset(), initmodule(),etc...
  - other methods:  
emptyScanPath(),setThreshold(),getClock(),getDelay()
- SrlChip:
  - DaqInterface+ loadDPR() (from a file or with constant, ramp,etc...)





## Other Modules: cpm (2)

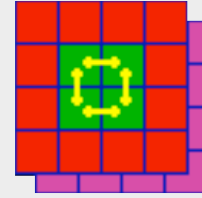


- work on db-integration (16th October ... with M.L.)
- accessory implementations
  - eg: CpmFpgaFlashRam
    - mostly completed

(courtesy Gilles)



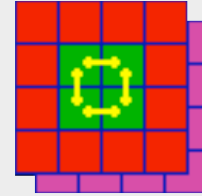
# Ttcvi



- Basic implementation with simple register module
  - (bruce)
- Fifo fill for sending data on the B channel
  - (get\_FifoValue, fillFifo).
    - (gilles)
  - how to deal with complexities of Ttcvi in a general way?
    - (kithsiri?)



# Loose Ends



- module services now 'fully' integrated with hdmc, and the looper based test bed (dss-rod-dss)
- Dss: Ivds source functionality missing
  - now rather urgent.
- Ttcsi complexities. Not addressed in an integrated way.
- CTP-Dss not incorporated in hdmc model.