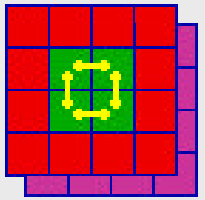
ATLAS Level-1 Calorimeter Trigger

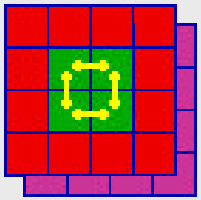


Module Services, ROS, RoIBuilder and SysMan

"...these hoary woods are grand;
But we are exiles from our fathers' land..."

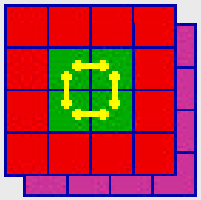
Bruce M. Barnett

Overview



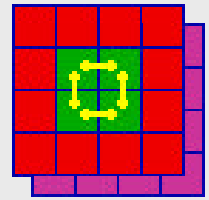
- Overview
- HDMC Support
- Module Progress (6)
- RoIBuilder
- ROS (3)
- SysMan

HDMC Support



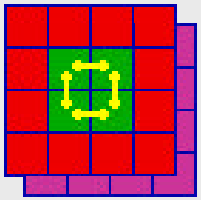
- Bugs in:
  - PartManager::remove_part(recursive)
    - Fix engineered:
      - wrote remove_subtree(), but must integrate in remove_part(recursive).
  - Part::set_dependencies()
    - invoking method with original attribute vector caused deletion of elements of that vector!
  - Gilles should be freed from the persecution of segvs now!

Module Progress: CP/JEP Rod and Dss



- CpRod
  - Mature in daqInterface. Db integration.
  - requires status/monitoring interface.
- Dss
  - Mature in daqInterface. Db integration.
  - requires status/monitoring interface.
  - Requires
    - completion of LVDS support.
    - addition of gio support.
    - Implementation of CTP-emulator.

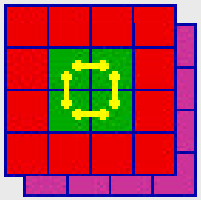
Module Progress: cmm



- 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.

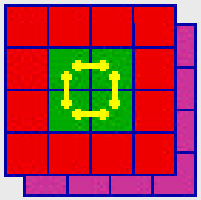
(courtesy Norman)

Module Progress: 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...)

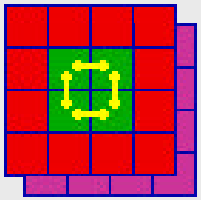
Module Progress: cpm (2)



- Further work on db-integration
  - (6th November … with M.L.)
- Accessory implementations
  - eg: CpmFpgaFlashRam
    - mostly completed

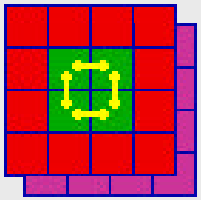
(courtesy Gilles)

Module Progress: Ttcvi



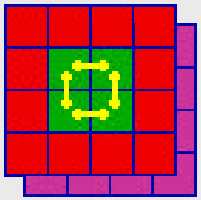
- Basic implementation with simple register module
  - (bruce)
- Fifo fill for sending data on the B channel
  - (get_FifoValue, fillFifo).
    - (gilles)
  - how to deal with complexities of Ttcvi in a general way.
  - Db issues:
    - Especially in light of needs of older ttcrx chips:
      - (ie: no I2C interface.)

Module Progress: Tcm



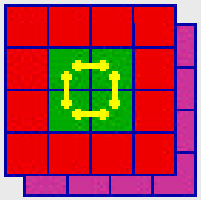
- Basic implementation with simple register module
- DualPort testing.
  - Implementation of some cannery?

RoiBuilder



- New prototypes advancing well.
- Wish a window in which to test with “Real” RODs
  - Is there a window in 2003?
  - Can we afford not to make one?

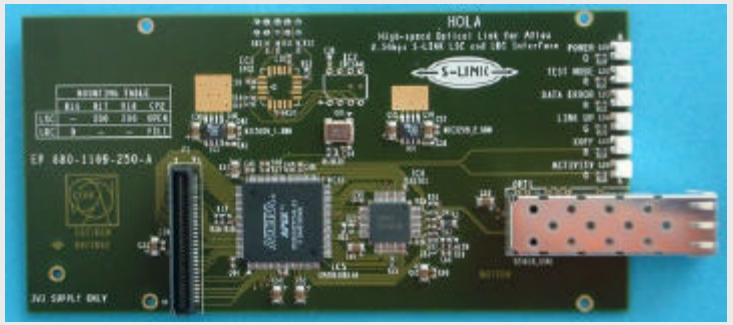
ROS: s/w



- New OO ROS
  - is RH7.x compliant (2.4 kernel)
  - has superceded old ROS s/w, but is not yet compete:
    - DataCollection interface (Q4 2002)
    - S-Link interface (Q1 2003)
- RH7.x (2.4 kernel) port of old s/w was never done.
    - Hence there will be NO distribution!
    - If we want 7.x s/w with S-Link and monitoring sooner:
      - we must justify with:
        - » specific time requirements
        - » consistency of need relative to RodCrateDaq developments: (Q4 2002 …)

ROS: h/w (1)

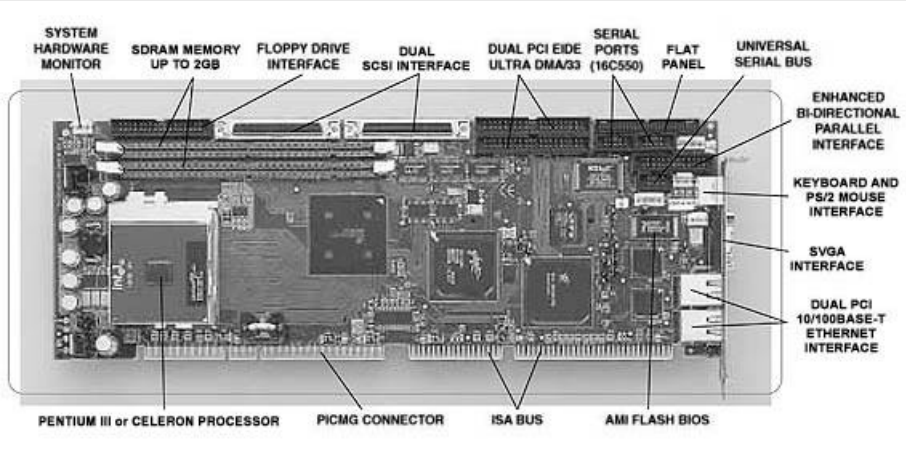
- Advances in link technology:
  - HOLA:
    - "High speed Optical Link for Atlas:
      - "HOLA can transfer with one duplex fibre at the full S-LINK bandwidth of 160 MB/s. Furthermore the HOLA will be cheaper than the ODIN"

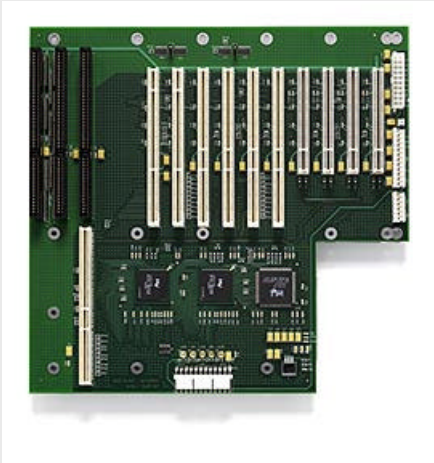


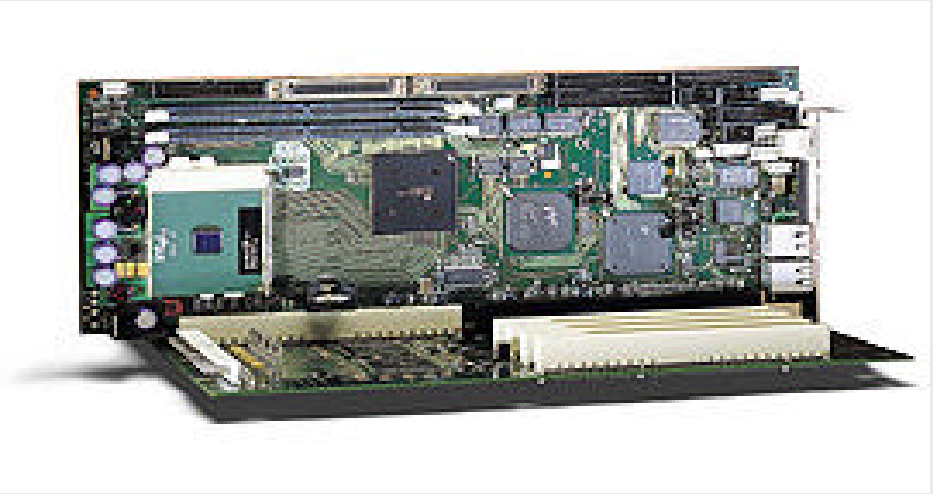
  - PCI-X:
    - "PCI-X, at 133 MHz and 64-bits, will enable data throughput of over 1 Gbyte/sec."
  - More news at ROD Workshop (Annecy)

ROS: h/w (2)

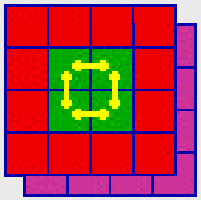
Trenton PICMG platforms:
- 10 PCI slots, in various flavours.
- Satisfactory experience. (Priv. Comm. M. Joos)







SysMan



- RAL Systems:
  - now all running RH7.2 (2.4 kernel) (gcc 2.96)
  - Concurrent PIII machines are all diskless.
    - (some tidying of implementation needed…)
- CERN will certify RH7.3.1 (2002)
  - DAQ-1 s/w v18 will be ported to this,
    - but only available for 2.95.2 (not 2.96) - compiler issues.
  - gcc 3.2 will be available.
    - But porting will be some work due to strictness of complier.
  - We need to decide optimal timing to move to RH7.3 and v18 (from current v17.) (need 2.95.2 compiler…)