

Learned in Seattle

- ***Silicon 10% test***
 - moving from *electronics* test to *detector* test
 - moving from Lab B to Lab C
 - seen as an opportunity to do full vertical slice operation
 - *real, but varying # and orientation of detector elements*
 - *HDI, but possibly not final version*
 - *interface card ?*
 - *Sequencer, VRB*
 - *Level 3 nodes, with possibility of running filter code*
 - *network transport to Online host*
 - data logging
 - EXAMINE
 - seen as an urgent and near-term effort
 - **My view is that we should pursue this effort in addition to the muon and calorimeter activities**

Learned in Seattle

- ***Calibration / Database Issues***
 - **D00M interface to database objects is well along**
 - *detailed talk from Herb*
 - *in use by Ela for offline Silicon calibration efforts*
 - *seems to be the model which all other uses of database storage of objects should follow*
 - **other calibration activities seem to have not progressed**
 - *Requirements not updated since ~ year ago*
 - *Online infrastructure not available*
 - **My view is that we should be pursuing the merging of the Silicon online and offline efforts in an attempt to define the model from which other detectors will follow**

Learned in Seattle

- ***Data unpacking***
 - Hot topic...
 - Mike Fortner has unpacking classes which include knowledge of various detector readout elements
 - *operation depends upon input detector configuration settings*
 - We will need to pursue this for the active commissioning efforts
- ***Trigger commissioning***
 - Learned locations, numbers for Level 2 processors

Online Databases

- ***Permanent residence:***
 - **EPICS Hardware Database**
 - *represents current state of hardware*
 - **Detector Configuration Sets**
 - *represent collections of resources assigned to types of runs*
 - **Trigger Sets**
 - *as defined in trigger list*
 - **Download Sets**
 - *as generated from Calibrations*

Online Databases

- ***Transient residence:***
 - **Event metadata**
 - *run / file info*
 - *event lists*
 - *migrated via SAM to Offline with event data*
 - **Configuration history**
 - *record of all defined detector configuration sets*
 - *all but currently relevant sets migrated*
 - **Trigger history**
 - *record of all defined trigger sets*
 - *all but currently relevant sets migrated*
 - **Calibration data**
 - *per detector type*
 - *all but currently relevant sets migrated*

Online Databases

- ***More transient residence:***
 - **Luminosity data**
 - *correlated with luminosity blocks, which match event data file info*
 - **Hardware monitoring history**
 - *catch-all for slowly changing but possibly relevant detector parameters*
 - **Alarms and error logs**
 - *record of complete detector state*

Database Contents

- ***Detector Configuration Sets***
 - **Set ID**
 - **List of Geographic Sectors (ie crates)**
 - ***Geographic Sector ID***
 - ***List of cards per Geographic Sector***
 - **Card ID**
 - **Card type**
 - **Card parameters?**

Database Contents

- ***Trigger Sets***
 - Set ID
 - List of Level 1 Triggers
 - *Trigger bit*
 - *Trigger name*
 - *Trigger definition...*
 - List of Level 2 Triggers
 - *Trigger bit*
 - *Trigger name*
 - *Trigger definition...*
 - List of Level 3 Triggers
 - *Trigger bit*
 - *Trigger name*
 - *Trigger definition...*
 - Stream definitions

Database Contents

- *Download Sets*

Database Contents

- ***Event metadata***
 - Store info ?
 - Run info
 - *Run ID (Run #)*
 - *Detector configuration set ID*
 - *Trigger set ID*
 - *Start date*
 - *End date*
 - *Min File ID*
 - *Max File ID*

Database Contents

- ***Event metadata (cont'd)***

- **File info**

- ***File ID (Run # & Partition #)***
 - ***File name ?***
 - ***Run ID***
 - ***Start date***
 - ***End date***
 - ***Stream***
 - ***Start luminosity block ID***
 - ***End luminosity block ID***
 - ***Min Event ID***
 - ***Max Event ID***
 - ***Event list name***

- **Event info**

- ***Event ID (132ns clock counter)***
 - ***File ID***
 - ***L1, L2, L3 trigger bits***
 - ***Luminosity block ID***

Database Contents

- ***Configuration history***
 - **Configuration set ID**
 - **Start validity date**
 - **End validity date**

Database Contents

- *Trigger history*

Database Contents

- *Calibration data*

Database Contents

- *Luminosity data*
 - Luminosity block ID
 - Start date
 - End date
 - various scalars
 - various derived quantities

Database Contents

- *Hardware monitoring history*

Database Contents

- *Alarms and error logs*