

Software Status

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<http://www.hep.ph.qmul.ac.uk/~landon/talks>

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Status summary

Overview

- Mainz/Stockholm visit was useful in forcing development and clarifying what needed to be done before their proposed second visit....
- Some of this has been achieved (or nearly so)
- Meanwhile software developers effort continues to be expended on hardware tests
- And spending lots of time in meetings...

Work and priorities since the “JEM visit” (1)

Multistep runs

- Aim: implement multistep runs for (a) loading a succession of test vector files or (b) stepping through calibration parameters
- Module services interface to support pause/resume run control state transitions [done]
- Run controllers to invoke them automatic [done]
- Database to support stepping through calibration parameters [done, but not committed]
- Database/run control to support loading new test vectors [not yet done]

Work and priorities since the “JEM visit” (2)

Broadcast TTCrx settings

- Aim: set TTCrx parameters via TTC (until I2C versions ready)
- Database and module services changes [done]

Module status

- Aim: read and report module status (links, errors, etc) during a run
- Module services interface to fill status variables [done]
- Run controllers to provide and store them to IS [done]
- IGUI panel(s) to display them [not yet done]

Work and priorities since the “JEM visit” (3)

“Kicker”/run control evolution

- Aim: better convergence of the standalone “kicker” programs with run control and database
- Common initialisation of HDMC infrastructure between module services standalone programs and the run control [not yet done]
- Convert some “kicker” programs to monitoring tasks using event data [not yet done]

Run types

- Aim: allow sets of parameters to be chosen as a group
- Database changes to support this [done, but not committed]

Package highlights

Module Services

- Significant interface changes (affecting many classes)
- Improved DSS daughtercard support

Simulation

- JEM simulation still required!

Databases

- A lot of internal code changes to enable support for new features
- Also corresponding changes required to all datafiles

Event dump

- Latest Online software release (which we are not yet using) allows the event dump to be customised to produce meaningful displays of detector ROD fragments
- Dave Kant at QMUL has started looking at this (in his spare time as system manager)
- He has produced a short requirements document for comment before starting an implementation

To Do List

Software

- Calibration and setup procedures: collect data from multistep runs to produce calibration files
- Use Online Monitoring framework
- Use (some of) the ROS software?

Systems

- We are standardised on what is increasingly old software (about to be three Online software versions behind the one that is currently being supported)
- Its never a good time to migrate – but we cant put it off forever...

Workshops and working groups

More details at Mainz... hopefully

Briefly

- 2–3 days database workshop: mostly on the conditions database. Plenty of issues raised, convergence less clear
- Monitoring workshop during recent ATLAS week, feedback required to (via) the monitoring working group
- Error handling and fault tolerance working group also interested in feedback on ideas for distributed error handling being suggested in the DAQ/HLT TDR
- ROD crate DAQ workshop on 26 March: Im asked to talk about our experience with the Online database