Experience with DAQ -1 Software

Murrough Landon – December 1999

Contents

Summary

Back end

- So far only evaluation of (most) core components
- Favourable impression of the software and support (rapid response to email questions, suggestions and self inflicted problems!)
- Hope to start serious use soon...

Dataflow

- Useful discussions with members of dataflow group
- But lack of progress towards “ROD crate DAQ” is very disappointing

Back end Components

General Comments

- Most work done with version 0.0.5 CDROM.
- Some problems with libraries: incompatible “Motif” on RedHat 6.0 Linux systems at CERN and QMW
- A few other “rough edges” with scripts etc

Configuration Database

- Schema seems OK; docs are very comprehensive
- OKS editor is a bit cumbersome for anything other than small changes

Message Reporting System

- Fine: easy to use; good documentation

Information System

- Fine: easy to use; good reference docs (but introductory overview could be expanded)

Run Control

- Docs very good: detailed overview, reference, tutorials and example code all very helpful
- Like the dataflow, we may need extra (private) substate for setup of communication?
- Suggested extension to allow continuous monitoring of the controlled component (ie outside of state transition). Included in 0.0.7?

Integrated GUI

- Good start but we want more!

Wishlist

Back end Software

- More convenient database tools → new partition editor
- Integrated GUI needs to be extendable by subdetectors: eg calibration run parameters, subdetector specific information displays. Java bean concept suggested by DAQ group...
- New partition editor (still under development?) should also be extendable to subdetector database classes
- IGUI should be responsible for complete startup of a DAQ partition and allow dynamic choice of partition to use. (At the moment all the servers for a partition must be started first via a script)
- Component docs contains many short examples: in the absence of DAQ source code, some more substantial integrated example code would be useful
- We will probably want advice and hand holding for design and implementation of subdetector database and data access library...

ROD Crate DAQ Requirements

- Need a **framework** we can extend to read our RODs and other modules
- Compatible with (evolving) ROB/EF DAQ environment for monitoring
- Must run in a single processor
- Later need to read data from many crates (via network: high performance is not essential)
- We (and others) need the initial functionality **soon**!