Configuration Database (1)

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Existing Database Formats

- Old DAQ uses C structure saved as binary data
- Diagnostics uses Tcl script
- HDMC uses formatted text file
- ATLAS DAQ will use OO database
- Would like to move to one scheme!

Inputs

- Erics list of configuration data
- Existing DAQ -1 database schema
- HDMC class model

Objectives

- Extend/modify DAQ -1 schema for our classes
- Additional schema of level 1 specific classes
- Define Data Access Library (DAL) to read DB objects into runtime objects (different classes)
- All beautifully documented, reviewed etc!

Configuration Database (2)

Diagrams and Tools

- I recently used rather flaky shareware Mac program (ObjectPlant) to make some diagrams
- DAQ -1 used Software through Pictures (StP) in the past but now seem to be moving to Together/C++, Together/Java.
- I have now tried Together: its sophisticated but a bit slow. Theres a free version which may be sufficient for our needs. CERN and RAL have commercial licences (about $3k)

Hardware Configuration

- DAQ -1 schema has Modules and Crates. Can imagine DAL to produce suitable top level Parts for HDMC and evolving DAQ system.
- Lower level Parts still from text files (eg partial Part hierarchies?)
- Questions about Bus vs Crate in HDMC
- Not obvious how to save top level only HDMC Parts back to database. But maybe this is not required...
- ...or perhaps use DAQ -1 database for complete HDMC configuration?

Configuration Database (3)

Other Stuff

- Nothing yet for run parameter type settings.
- Also, little thought on software configuration (but DAQ -1 schema already has a lot of what we need)
- For test activities, we may want hardware configuration to be more dynamic (like run parameters) than final database objects?
- Leave physics trigger settings (thresholds, etc) to the CTP for now?
- Connections between modules, mappings to towers, cells etc. Really not sure how to do this.
- Some vague ideas on organisation of calibration data. . .
- Eric suggested a module inventory, service history database. Should be implemented soonish or probably never. . .

Next Steps

- Turn Erics list into a proper document?
- More thought - eg small brainstorming session?
- Outline requirements for data access library
- Discuss with DAQ -1 people
- Small scale test: replace some configuration/run parameters in the DAQ
- Choice of GUI for run parameter editing: Java, ROOT, Qt, ...