Software Context and Themes

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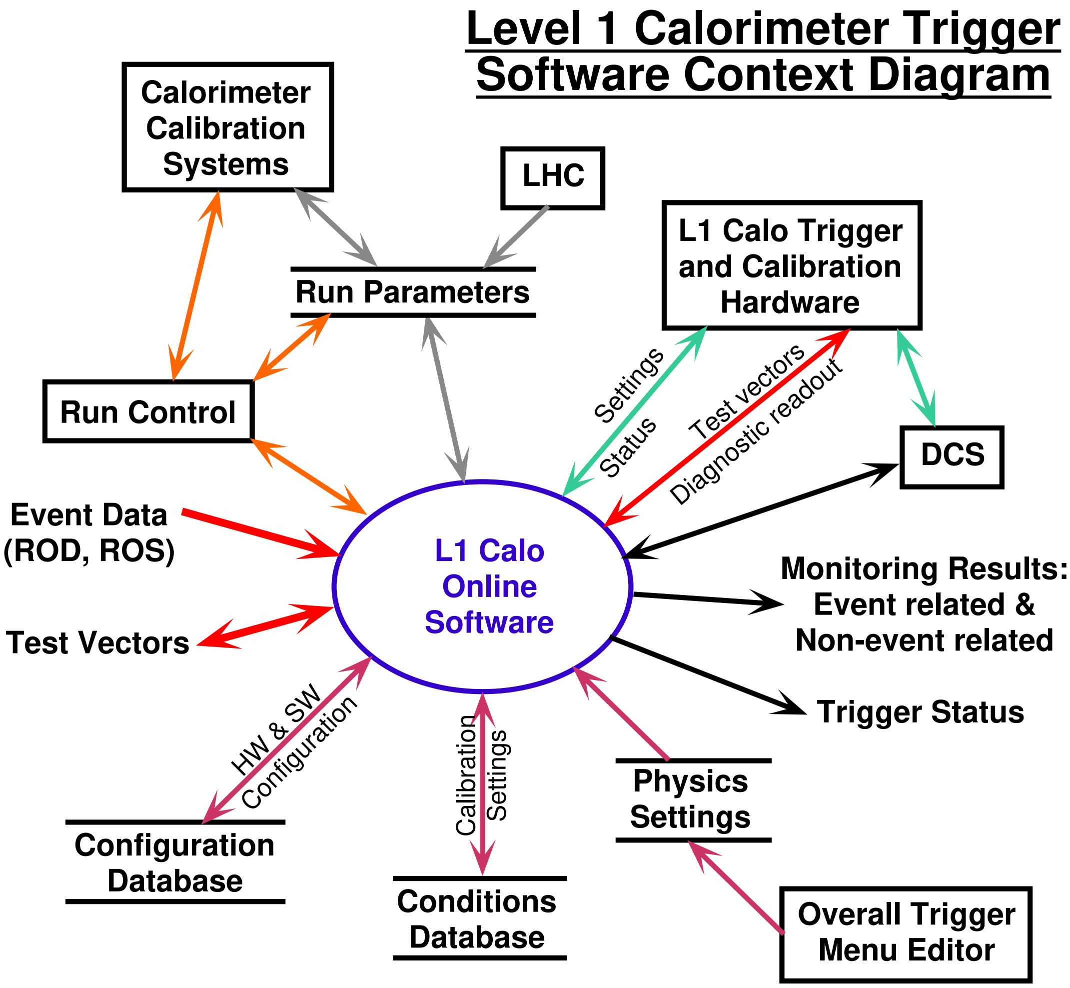
http://www.hep.ph.qmw.ac.uk/~landon/talks

Software Context Diagram

The following diagram and suggested decomposition into "software themes" was the result of a brainstorming meeting between Bruce, Murrough and Norman.

This was intended as part of a (periodic?) revisiting of the big picture, rather than continually concentrating on detailed day to day work.



Software Themes

L1Calo Online Software includes:

- Histogram collection and presentation, archive and reference
- Event collection (recording possible, but not planned)
- Event analysis
- Calculate and display status information
- Collection, monitoring, presentation and archiving of non-event information; periodic checking of hardware settings
- Calibration: derive settings, archive, retrieve, examine trends, set initial values
  - Internal
  - Calorimeters and LHC
- Generate test vectors
- Inject, readout, verify test vectors (Q: is this offered as a service, eg to LVL2, CTP)
- Testing hardware with test vectors
- HDMC-style interactive module test
- Trigger menu processing [editing menu, generating files]
- Edit and display trigger hardware and software configuration
- Load and verify all hardware settings
- Edit and display run control parameters
- Process run control commands

Software Non-Themes

L1Calo Online Software excludes:

- Offline trigger simulation and reconstruction
- LVL1-LVL2-EF trigger performance (but does include LVL1 hardware performance)
- Physics analysis
- Firmware?

ML Notes

- The above “Themes” perhaps correspond more to use cases than to software packages or components
- There is clearly some overlap between the themes
- Software packages/components which underlie all or many themes are not mentioned above, eg:
  - The famous hardware access library
  - ATLAS Online and Dataflow libraries

Next Steps

- Discuss, modify and document
- Identify priorities
- Expand requirements and use cases for high priority items
- Map to required software packages/components