The DAQ Gui

MAPS Group Meeting, RAL

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Starting the Gui

- ► Gui will be distributed with DAQ code release from Paul
- ► Requires java version 1.5 or above - highly recommend Sun's JRE

```
$ java -version
java version "1.6.0_03"
Java(TM) SE Runtime Environment (build 1.6.0_03-b05)
Java HotSpot(TM) Server VM (build 1.6.0_03-b05, mixed
mode
```
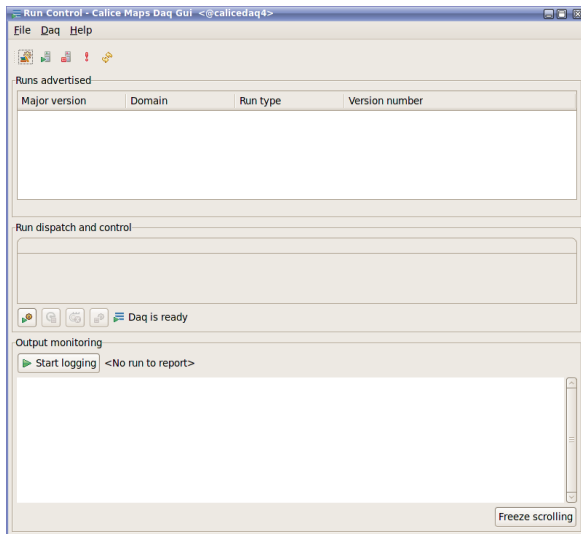
  This is NOT the default on the `calicedaqX` machines
- ► To start it:

```
$ cd
$ cd online
$ startGui
```
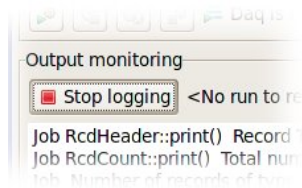
Starting the DAQ

- ▶ DAQ Startup, Shutdown, Status Refresh at the top
- ▶ A table of runs the DAQ can perform
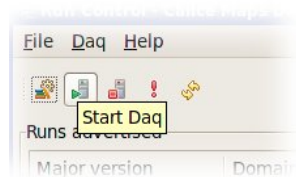- ▶ Run dispatch and control
- ▶ Logging

All buttons have tool tips

Start the DAQ

Start Logging system: press "Start Logging"

Output monitoring

Stop logging <No run to re...

Job RcdHeader::print() Record
Job RcdCount::print() Total nu...

(Just pipes output of `runMonitor` command to window)

If `runMonitor` reports *shutDown* then press "Start Daq"

File Daq Help

Start Daq

Runs advertised

Major version   Domai...

`runMonitor` then reports *slowReadout*

Configure a run

Open run descriptions
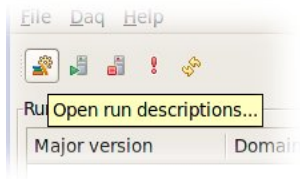
Open `RunControlTypes.txt` in the `online` directory

Double click on a run in the table, it will load in *Run dispatch and control*
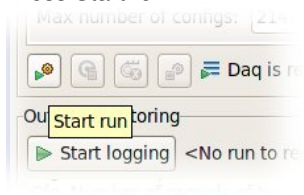
Configure a run

Important Options

- ► `Create output file:` Writes file to disk.
- ► `Interrupt runner:` Stops current run if true, otherwise queues this run up.
- ► `Create output file:` Writes file to disk
- ► `Print level:` Debug output, vary between 0 and 100 – logs are not currently displayed; I expect to implement these in the next release.
- ► `Create output file:` Writes file to disk

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Start a run

Press *Start run*

During a run

Controls

- *Start run*
- *End configuration*
- *End sequence*
- *Stop run*

Status

- ► Daq status is shown on the right of the run control buttons
  - ► Daq is unavailable
  - ► Daq is ready
  - ► Daq is busy
- ► The run number of a run being written to disk is shown on the right of *Start logging*

Shutting down

- ▶ The Gui is detached from the Daq programmatically - closing the Gui won't stop the Daq and v.v. (I hope!)
- ▶ To shut down the Daq, press *Shut down* at the top - the run monitor should report shutDown after a few moment, and the Daq status should change to *Daq not available*
- ▶ Close gui with button at top right.

Technical notes

- ▶ Gui sends its own log output to console: If it crashes, freezes and/or misbehaves, I'll need to see this.
- ▶ Daq commands are executed as system processes: The gui is detached from Paul's code - neither cares for the other. It is possible that a state will arise where the Gui closes, but system processes linger; this may need an eye kept on it.
- ▶ Documentation: A side of A4 with a summary of the operation is on its way. Code is javadoc'd and the API is on my work website, http://www.hep.ph.ic.ac.uk/~jballin/DAQControl
- ▶ Future: Call Daq code with JNI, rather than system processes