

artdaq - Idea #6793

Think about ways to read data from front-ends and discard it between runs

08/13/2014 11:46 AM - Kurt Biery

Status:	New	Start date:	08/13/2014
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:	Additional Functionality	Estimated time:	0.00 hour
Target version:			
Experiment:			

Description

This topic came up in discussions about the LBNE 35t detector, however it is not currently believed to be a requirement for 35t running. So, there is no need to work on it now. But, I wanted to jot down some notes so that we have a record of this issue.

Some DAQ systems have front-end boards that are free-running. That is, the front-end boards start producing data as soon as they are configured (presumably as part of the *artdaq* Initialization step). In these cases, it may be necessary to have some sort of entity within *artdaq* to read out the front-end boards and discard the data until a run starts. This functionality would also be needed between runs and when runs are paused.

One option might be to use the same `FragmentGenerator` class that is used during data taking to acquire the data between runs, but then not send it anywhere within *artdaq*. Another option would be to have the ability for the user to specify a different `FragmentGenerator` class that is used between runs.

Another consideration is whether to use separate threads for data taking and data discarding. Or to modify the current `processFragments()` method to handle both cases.

History

#1 - 08/13/2014 11:49 AM - Kurt Biery

- Target version set to 577

#2 - 01/13/2017 04:04 PM - Eric Flumerfelt

- Category set to *Additional Functionality*

- Target version deleted (577)

Some of this might actually be covered by the Buffer or Window modes of `CommandableFragmentGenerator`. We definitely shouldn't casually throw away data unless we're absolutely sure it is not valid.