

## artdaq Utilities - Bug #21234

### DAQInterface should decouple the routingmaster from fragment generators which send no fragments

10/25/2018 04:08 PM - John Freeman

<b>Status:</b>	Resolved	<b>Start date:</b>	10/25/2018
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	John Freeman	<b>% Done:</b>	100%
<b>Category:</b>	artdaq-daqinterface	<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>		<b>Spent time:</b>	0.00 hour
<b>Experiment:</b>	-	<b>Co-Assignees:</b>	
<b>Description</b>			
<p>Currently on the develop branch of DAQInterface, even if a fragment generator by design doesn't send any fragments, its boardreader's rank is still registered in the routingmaster's sender_ranks list. This is unnecessary and provides an additional "moving part" where things can go wrong, as recently seen at the protoDUNE cluster when a crashing WIBReader brought down the system on start despite its not sending any fragments. Already addressed at the protoDUNE cluster by the release of DAQInterface v3_00_06j, this feature should be made generally available to all experiments. A good approach would be to ensure that if a boardreader FHiCL either has sends_no_fragments: true or generated_fragments_per_event: 0, DAQInterface leaves its rank out of the routingmaster logic.</p>			

#### Associated revisions

##### Revision 99279464 - 12/16/2018 12:54 PM - John Freeman

JCF: Addressing Issue #21234: in bookkeeping, don't include boardreaders which don't send in the routingmaster's sender\_ranks

This was influenced by our experience with WIB boardreaders on ProtoDUNE: if DAQInterface determines that a boardreader doesn't send fragments, either because it has "sends\_no\_fragments: true" or "generated\_fragments\_per\_event: 0", then it will leave that boardreader's rank out of the routingmaster's sender\_ranks list.

To test this (see, e.g., mu2edaq01:/home/jcfree/run\_records/1782), I've added component1000 and component1001, ToySimulators which don't send fragments.

#### History

##### #1 - 12/16/2018 01:12 PM - John Freeman

- Category set to artdaq-daqinterface
- Status changed from New to Resolved
- % Done changed from 0 to 100

With commit 992794646b06ac1704040cae30e520de230fda22 on DAQInterface's develop branch, I've satisfied this requirement. If DAQInterface knows that a fragment generator doesn't send fragments (either because the boardreader FHiCL contains "sends\_no\_fragments: true" or "generated\_fragments\_per\_event: 0") then it will leave the rank of the fragment generator's boardreader out of the routingmaster's sender\_ranks list.

To test this, I've added component1000 and component1001 to DAQInterface's subconfigurations. The bookkeeping works correctly, as can be seen in, e.g., run 1785 on mu2edaq01 (see in particular /home/jcfree/run\_records/1785/RouterMaster1.fcl and /home/jcfree/run\_records/1785/ranks.txt).