artdaq Utilities - Feature #21044

DAQInterface should support fragment generators which return more than one fragment per event

10/05/2018 02:21 PM - John Freeman

Status:	Resolved		**Start date:**	10/05/2018
Priority:	Normal		**Due date:**	
Assignee:	John Freeman		**% Done:**	100%
Category:			**Estimated time:**	0.00 hour
Target version:	artdaq_daqinterface v3_03_01		**Spent time:**	0.00 hour
Experiment:	-		**Co-Assignees:**	

Description

When bookkeeping, DAQInterface sets expected_fragments_per_event in the EventBuilder FHiCL to the number of BoardReaders (*). The underlying assumption here is that each BoardReader sends one fragment per event. However, this is not always the case; SBND, for example, sends multiple fragments per BoardReader per event, which has necessitated their commenting out some of the bookkeeping logic in DAQInterface. It should be possible for experiments to be able to explicitly specify how many fragments a given BoardReader will send per event via the BoardReader's FHiCL document (similar to how it's possible to tell DAQInterface what the max fragment size a BoardReader can send is via the FHiCL document, see Issue #20580). Or, even slicker, it could perhaps deduce this from a fragment_ids FHiCL list.

(*) Or more technically, the number of BoardReaders whose FHiCL documents don't include the line "sends_no_fragments: true"

Associated revisions

Revision f0c4eb32 - 10/12/2018 04:54 PM - John Freeman

JCF: modify bookkeeping functionality s.t. if a line of the form
"generated_fragments_per_event: <N>" appears in a BoardReader FHiCL,
then DAQInterface will use that value when calculating
"expected_fragments_per_event" in the EventBuilder FHiCL. Default
assumption is that each BoardReader sends one and only one fragment
per event. Satisfies Issue #21044.

History

#1 - 10/08/2018 03:47 PM - John Freeman

- Assignee set to John Freeman

#2 - 10/12/2018 01:52 PM - John Freeman

- Target version set to artdaq_daqinterface v3_03_01

#3 - 10/12/2018 05:00 PM - John Freeman

- Status changed from New to Resolved

- % Done changed from 0 to 100

Requirements satisfied by commit f0c4eb32924669187107dbbc2818323a43b9fa08 on the develop branch. When calculating "expected_fragments_per_event" in the EventBuilder, DAQInterface will assume a BoardReader sends 1 fragment per event UNLESS in the BoardReader FHiCL it sees either (A) a line of the form "generated_fragments_per_event: <N>", <N> an integer, or (B) "sends_no_fragments: true". Here, (A) is the feature which satisfies this Issue, and (B) is an old feature left in for backwards compatibility purposes.