

art - Bug #24652

A problem remains with selectors in art v3_06_01

07/23/2020 07:23 AM - Rob Kutschke

Status:	Closed	Start date:	07/23/2020
Priority:	High	Due date:	
Assignee:	Kyle Knoepfel	% Done:	100%
Category:	Infrastructure	Estimated time:	0.00 hour
Target version:	3.06.02	Spent time:	1.00 hour
Occurs In:	3.06.01	Experiment:	Mu2e
Scope:	Internal	SSI Package:	

Description

After the work in issue [#24640](#) a problem remains with a selector that contains an operator!(). To reproduce on any mu2egpvm* machine:

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Bug [#24640](#)

```
source /cvmfs/mu2e.opensciencegrid.org/setupmu2e-art.sh
git clone git@github.com:kutschke/Offline
cd Offline
scons -j 8 TrackerMC/src/MakeStrawGasSteps_module.os
```

The error message is:

```
In file included from /cvmfs/mu2e.opensciencegrid.org/artexternals/art/v3_06_01/include/art/Framework/Principal/DataViewImpl.h:11,
                 from /cvmfs/mu2e.opensciencegrid.org/artexternals/art/v3_06_01/include/art/Framework/Principal/Event.h:12,
                 from TrackerMC/src/MakeStrawGasSteps_module.cc:7:
/cvmfs/mu2e.opensciencegrid.org/artexternals/art/v3_06_01/include/art/Framework/Principal/Selector.h: In instantiation of 'std::enable_if_t<is_selector<A>>, art::NotHelper<A>> > art::operator!(A&&) [with A = art::ModuleLabelSelector; std::enable_if_t<is_selector<A>>, art::NotHelper<A>> > = art::NotHelper<art::ModuleLabelSelector>]':
TrackerMC/src/MakeStrawGasSteps_module.cc:147:55:   required from here
/cvmfs/mu2e.opensciencegrid.org/artexternals/art/v3_06_01/include/art/Framework/Principal/Selector.h:278:24: error: cannot bind rvalue reference of type 'art::ModuleLabelSelector&&' to lvalue of type 'art::ModuleLabelSelector'
    return NotHelper<A>{a};
           ^
/cvmfs/mu2e.opensciencegrid.org/artexternals/art/v3_06_01/include/art/Framework/Principal/Selector.h:255:12: note:   initializing argument 1 of 'art::NotHelper<A>::NotHelper(A&&) [with A = art::ModuleLabelSelector]'
    explicit NotHelper(A&& a) : a_{std::forward<A>(a)} {}
           ^~~~~~
scons: *** [TrackerMC/src/MakeStrawGasSteps_module.os] Error 1
scons: building terminated because of errors.
```

Associated revisions

Revision [b6f7c27a](#) - 07/23/2020 11:20 AM - Kyle Knoepfel

Fix issue #24652: Support 'not' rvalue selectors.

History

#1 - 07/23/2020 08:05 AM - Kyle Knoepfel

- Status changed from New to Feedback

- Category set to Infrastructure

Yes, there still appears to be a problem with the selectors. A short-term solution is to forgo the temporary module-label selector and add a private

data member:

```
+ art::ModuleLabelSelector _labelSelector;  
  art::Selector _selector;
```

then in the initialization list of the constructor:

```
  _keepDeltas (config().keepDeltas()),  
+  _labelSelector {config().stepsToSkip()},  
  _selector {art::ProductInstanceNameSelector (config().trackerSteps()) &&  
-          !art::ModuleLabelSelector (config().stepsToSkip()) },  
+          !_labelSelector },
```

It is an acceptable solution, can I mark this bug as Low priority and slate the fix for our next release?

#2 - 07/23/2020 08:58 AM - Rob Kutschke

With that change it compiles. It will take maybe an hour to verify that the output is correct.

How long would it take to solve properly and make art v3_06_02 mu distribution available? I want to run production with this starting no later than Friday evening. If that's off the table we will do the temporary hack but I prefer not to.

#3 - 07/23/2020 09:04 AM - Kyle Knoepfel

I'm unlikely to get a new release of art out this week.

#4 - 07/23/2020 11:25 AM - Kyle Knoepfel

- % Done changed from 0 to 100

- Assignee set to Kyle Knoepfel

- Status changed from Feedback to Resolved

It was a simple, but subtle fix--and now we have the test in place to ensure it doesn't occur again. Fixed with commit [art:b6f7c27](#).

Not certain about the release schedule yet. Stay tuned.

#5 - 07/24/2020 03:31 PM - Kyle Knoepfel

- Target version set to 3.06.02

#6 - 07/27/2020 10:21 AM - Kyle Knoepfel

- Status changed from Resolved to Closed