

## art - Bug #959

### Raw to root files conversion fails

02/11/2011 09:55 AM - Jarek Nowak

<b>Status:</b>	Closed	<b>Start date:</b>	02/11/2011
<b>Priority:</b>	High	<b>Due date:</b>	
<b>Assignee:</b>	Christopher Green	<b>% Done:</b>	100%
<b>Category:</b>	Metadata	<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	0.5.0	<b>Spent time:</b>	0.00 hour
<b>Occurs In:</b>		<b>Experiment:</b>	-
<b>Scope:</b>	Internal	<b>SSI Package:</b>	

#### Description

When I run the conversion of the raw data files to root format some of them fail with an error

```
nova: /home/greenc/work/cet-is/art-devel/art/Framework/Core/EPStates.cc:672: bool statemachine::FirstSubRun::checkInvariant():  
Assertion `context<HandleSubRuns>().currentSubRun().second != INVALID_LUMI' failed.  
Aborted
```

It is done with the DAQ2RawDigit package. Example fcl file for which it fails #####

```
process_name: RawConvert  
services: {TFileService: {fileName: "/nova/data/novaraw/NDOS/2011-02-09/ndos_r00011445_s00.raw" closeFileFast: false }  
Timing: {}  
RandomNumberGenerator: {}  
user: { RandomHandler: { } } }
```

```
source: {  
module_type: NOVARawInputSource  
DAQFile: "ndos_r00011445_s00.raw"  
FilterCorruptedNanoslices: true  
FilterHotChannels: false  
HotChannelList: [0]  
maxEvents: 1 }
```

```
outputs:{  
out1: {  
module_type: RootOutput  
fileName: "ndos_r00011445_s00.raw-development.root"}}}
```

```
physics:{  
stream1:[ out1 ]  
end_paths: [stream1]}  
~ #####
```

the cerr.log is empty and warnings.log contains only:

```
essagelogger initialization complete.
```

```
%MSG
```

```
TimeReport> Report activated
```

```
TimeReport> Report columns headings for events: eventnum runnum timetaken
```

```
TimeReport> Report columns headings for modules: eventnum runnum modulelabel modulename timetaken
```

#### Related issues:

Has duplicate art - Bug #972: nova job crashes on trying to convert a raw dat...

Closed

02/14/2011

#### Associated revisions

##### Revision 8a6a161d - 02/24/2011 11:44 AM - Christopher Green

Implement changes to allow non-zero invalid numbers for RunNumber\_t, SubRunNumber\_t and EventNumber\_t (issue #959).

This is a combined commit including changes authored by both Marc Paterno and Chris Green. Changes to sources and output modules have been separated into a subsequent commit.

**Revision d2d28f8c - 02/24/2011 11:44 AM - Christopher Green**

Issue #959 changes to InputSource.

**Revision 0e7b145d - 02/24/2011 11:44 AM - Christopher Green**

Issue #959 changes to ConfigurableInputSource.

**Revision 750b5a9b - 02/24/2011 11:44 AM - Christopher Green**

Issue #959 changes: retire ExternalInputSource.

**Revision 45d399c0 - 02/24/2011 11:44 AM - Christopher Green**

Issue #959 changes to EDInputSource

**Revision 51ce09ab - 02/24/2011 11:44 AM - Christopher Green**

Issue #959 changes to RawInputSource.

**Revision ae5707e6 - 02/24/2011 11:44 AM - Christopher Green**

Issue #959 changes to RootOutputFile.

**Revision 1b444e2c - 02/24/2011 11:44 AM - Christopher Green**

Issue #959 changes to RootInputFileSequence.

**Revision 9bc9ec1a - 02/24/2011 11:44 AM - Christopher Green**

Issue #959 changes to RootInputFile.

**Revision e094b762 - 02/24/2011 11:44 AM - Christopher Green**

Issue #959 changes to RootInput.

## History

---

**#1 - 02/11/2011 12:55 PM - Jarek Nowak**

The correct fcl file

```
process_name: RawConvert
services: {TFileService: {fileName: "hist_ndos_r00011445_s00.raw" closeFileFast: false }
Timing: {}
RandomNumberGenerator: {}
user: { RandomHandler: { } }
```

```
source: {
module_type: NOvARawInputSource
DAQFile: "/nova/data/novaraw/NDOS/2011-02-09/ndos_r00011445_s00.raw"
FilterCorruptedNanoslices: true
FilterHotChannels: false
HotChannelList: [0]
maxEvents: 1 }
```

```
outputs:{
out1: {
module_type: RootOutput
fileName: "ndos_r00011445_s00.raw-development.root"}}
```

```
physics:{
stream1:[ out1 ]
end_paths: [stream1]}
```

**#2 - 02/11/2011 04:24 PM - Marc Paterno**

- Status changed from New to Accepted

Further information (from Brian) states the problem appears with subrun 0.

The current implementation of event, subrun, and run numbers uses the value 0 to represent an invalid number. Because NOvA can not change the fact that the DAQ uses subrun 0 as a valid value, we will change to using unsigned integers of specified number of bits, and to use the maximum value of that integer type as the invalid value.

**#3 - 02/15/2011 07:03 AM - Christopher Green**

- Category set to Metadata

**#4 - 02/24/2011 12:51 PM - Christopher Green**

- Status changed from Accepted to Resolved

- Assignee set to Christopher Green

- Target version set to 0.5.0

- % Done changed from 0 to 100

Resolved.

Note that this will require a minor change to EventDisplay.cxx to track a change to the interface of EventID, and a change to NOvARawInputSource.cxx to back out the temporary changes made to map subRun 00 to subrun 99.

Thanks,  
Chris.

**#5 - 02/25/2011 02:14 PM - Christopher Green**

- Status changed from Resolved to Reviewed

**#6 - 03/09/2011 01:26 PM - Christopher Green**

- Status changed from Reviewed to Closed