

messagefacility - Bug #19851

messagefacility problem

05/02/2018 09:46 AM - Lynn Garren

Status:	Closed	Start date:	05/02/2018
Priority:	Normal	Due date:	
Assignee:	Kyle Knoepfel	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:	2.11.02	Spent time:	2.00 hours

Description

The following code in larsoftalg produces an error when compiled against messagefacility v2_02_01.

```
LOG_DEBUG("Geometry") << "detector total volume is " << fTotalVolume->GetName();
```

The debug build is fine, but the prof build reports this error.

```
[ 64%] Building CXX object larcorealg/larcorealg/Geometry/CMakeFiles/larcorealg_Geometry.dir/AuxDetGeo.cxx.o
/home/garren/scratch/larsoft/v06_75_00_01/srcs/larcorealg/larcorealg/Geometry/AuxDetGeo.cxx: In constructor 'geo::AuxDetGeo::AuxDetGeo(std::vector<const TGeoNode*>&, int)':
/home/garren/scratch/larsoft/v06_75_00_01/srcs/larcorealg/larcorealg/Geometry/AuxDetGeo.cxx:41:59: error: no match for 'operator<<' (operand types are 'mf::NeverLogger_' and 'const char*')
    LOG_DEBUG("Geometry") << "detector total volume is " << fTotalVolume->GetName();
```

In file included from /home/garren/scratch/larsoft/v06_75_00_01/srcs/larcorealg/larcorealg/Geometry/AuxDetGeo.cxx:19:0:
/products/messagefacility/v2_02_01/include/messagefacility/MessageLogger/MessageLogger.h:92:5: note: candidate: template<class T> std::enable_if_t<(! std::is_same<T, const char*>::value) && (! std::is_same<T, const char* const>::value)>, mf::NeverLogger_&> mf::NeverLogger_::operator<<(const T&) &
 operator<<(T const&) &
 ^~~~~~
/products/messagefacility/v2_02_01/include/messagefacility/MessageLogger/MessageLogger.h:92:5: note: template argument deduction/substitution failed:
/products/messagefacility/v2_02_01/include/messagefacility/MessageLogger/MessageLogger.h:102:5: note: candidate: template<class T> std::enable_if_t<(! std::is_same<T, const char*>::value) && (! std::is_same<T, const char* const>::value)>, mf::NeverLogger_&&> mf::NeverLogger_::operator<<(const T&) &&
 operator<<(T const&) &&
 ^~~~~~
....

Although a workaround is possible, we request that this bug be fixed since the workaround changes the behavior. Here is the workaround, which may also be needed for other messagefacility macros.

```
//LOG_DEBUG("Geometry") << "detector total volume is " << fTotalVolume->GetName();
mf::LogDebug("Geometry") << "detector total volume is " << fTotalVolume->GetName();
```

History

#1 - 05/02/2018 12:15 PM - Gianluca Petrillo

It should be noted that the workaround does not have the same exact functionality as the original code, and a record should be kept of it so that it can be reverted when the library upstream is fixed.

#2 - 05/02/2018 12:16 PM - Kyle Knoepfel

Correct, Gianluca.

#3 - 05/02/2018 12:22 PM - Lynn Garren

I have found one use of LOG_TRACE in lareventdisplay with the same problem.

#4 - 05/02/2018 07:10 PM - Kyle Knoepfel

- Status changed from New to Resolved
- Assignee set to Kyle Knoepfel
- % Done changed from 0 to 100
- SSI Package messagefacility added

This bug is due to a metaprogramming error that is exposed whenever profile builds are enabled. Fixed with commit [messagefacility:587d896](#).

#5 - 05/03/2018 12:31 PM - Kyle Knoepfel

- Target version set to 2.11.02

#6 - 05/04/2018 11:39 AM - Kyle Knoepfel

- Status changed from Resolved to Closed

#7 - 05/04/2018 12:37 PM - Kyle Knoepfel

- Project changed from cet-is to messagefacility
- Scope deleted (Internal)
- Experiment deleted (LArSoft)
- SSI Package deleted (messagefacility)