

CoCoA - Bug #55

Bug # 53 (Closed): MSVC10 compilation

MSVC10 - static member fields

07 Dec 2011 09:29 - Anna Maria Bigatti

Status:	Closed	Start date:	07 Dec 2011
Priority:	Normal	Due date:	
Assignee:	John Abbott	% Done:	100%
Category:	Portability	Estimated time:	0.00 hour
Target version:	CoCoA-5.0.2	Spent time:	3.60 hours
Description			
In many .C files we have const int MantExp::ourDefaultSigFig; // pointless but necessary but Visual Studio complains about it. Who's right?			

History

#1 - 07 Dec 2011 09:34 - Anna Maria Bigatti

- Category set to Portability

#2 - 07 Dec 2011 10:00 - Anna Maria Bigatti

- Subject changed from MSVC10 compilation - static member fields to MSVC10 - static member fields

#3 - 26 Jan 2012 18:01 - John Abbott

Reported under [#58](#) by mistake.

#4 - 27 Jan 2012 17:58 - Anna Maria Bigatti

- Assignee set to John Abbott

- Target version set to CoCoA-5.0.2

- % Done changed from 30 to 40

In some cases we can move the initialization in the .C file
(see [#58](#) ""Moved initializer for const static data member from decimal.H to decimal.C.
Allows compilation with MSVC, and give better decoupling (no need to recompile
many files if we change the value).")

In other cases (e.g. DivMask) the static variable is needed in the .H file to define
the type std::bitset<ourMaskWidth> mask_t

I commented out the (empty) declaration in DivMask.C and it compiled with no errors or warnings under MacOSX and Linux (gcc)... but it **doesn't link** under MacOSX!

It does link under Linux: newer compiler.

So: who is right?

#5 - 09 Feb 2012 17:02 - Giovanni Lagorio

- % Done changed from 40 to 50

It doesn't seem a problem in VC10 SP1 (tried on a toy example).
From my understanding of the standard, it shouldn't give an error in such cases.
To me, it seems that such definition might be useless but not wrong.

#6 - 09 Feb 2012 22:46 - John Abbott

I looked on internet, but did not find an answer which I feel is truly definitive. If the initializer is a constant integer value and the address of the const static member is never needed then it seems that it might be OK not to give a "definition" of the member (but some people report that it is "undefined behaviour" in certain versions of the C++ standard). Regardless, it must be a VC10 **bug** to give an error; perhaps the solution is to install SP1 (is this free, or must one pay for it?)

#7 - 03 Apr 2012 18:58 - John Abbott

- *Status changed from New to Closed*
- *% Done changed from 50 to 100*

Exercising the option not to define static data members if their addrs are not needed, I have removed all such defns, thereby circumventing the MSVC 2010 bug. This did require a minor modification to DivMask.C which used to call `std::min` (which expects references, so requires addrs) but now calls an *ad hoc* private fn called `min`.