

## NemoMath - Bug #1558

### nemo::IntVector constructor is ambiguous

07/12/2013 11:40 AM - Anonymous

<b>Status:</b>	Resolved	<b>Start date:</b>	07/12/2013
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>		<b>% Done:</b>	100%
<b>Category:</b>		<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	NemoMath 0.4		
<b>Description</b>			
Calling the nemo::IntVector constructor nemo::IntVector(1, 2)			
results in a <a href="#">clang error</a> and gcc warning about ambiguity:			
warning: ISO C++ says that these are ambiguous, even though the worst conversion for the first is better than the worst conversion for the second: [enabled by default] /usr/share/NemoMath0.4/././include/NemoMath0.4/nemo/Vector.h:239:11: note: candidate 1: nemo::MathVector<T>::MathVector(const T&, const T&) [with T = int] /usr/share/NemoMath0.4/././include/NemoMath0.4/nemo/Vector.h:220:11: note: candidate 2: nemo::MathVector<T>::MathVector(const nemo::VectorDimension&, generatorType) [with generatorType = unsigned int, T = int]			

## History

### #1 - 08/27/2013 05:20 PM - Anonymous

Where g++ warns, clang produces an error. From a downstream project ([cca on macos](#)):

```
In file included from /Users/jenkins/workspace/cca-trunk-macos/label/MAC_OS_lion_64bit/cca/test/cca/SplitterTest.cpp:7:  
/Users/jenkins/workspace/cca-trunk-macos/label/MAC_OS_lion_64bit/cca/src/cca/nodes/Splitter.h:173:49: error: call to constructor of  
'nemo::IntVector' (aka 'MathVector<int>') is ambiguous
```

```
    new Splitter<DTOTYPE>(nodename, nemo::IntVector(first, second));  
                                ^ ~~~~~
```

```
/Users/jenkins/workspace/cca-trunk-macos/label/MAC_OS_lion_64bit/upstream/NemoMath-0.4.0-Darwin/share/NemoMath0.4/././include/NemoMath0.4/ne  
oMath0.4/nemo/Vector.h:220:11: note: candidate constructor [with generatorType = unsigned int]
```

```
    explicit MathVector(const VectorDimension &dim, generatorType gen)  
    ^
```

```
/Users/jenkins/workspace/cca-trunk-macos/label/MAC_OS_lion_64bit/upstream/NemoMath-0.4.0-Darwin/share/NemoMath0.4/././include/NemoMath0.4/ne  
oMath0.4/nemo/Vector.h:239:11: note: candidate constructor
```

```
    explicit MathVector(const T &x, const T &y)  
    ^
```

```
/Users/jenkins/workspace/cca-trunk-macos/label/MAC_OS_lion_64bit/upstream/NemoMath-0.4.0-Darwin/share/NemoMath0.4/././include/NemoMath0.4/ne  
oMath0.4/nemo/Vector.h:200:11: note: candidate constructor
```

```
    explicit MathVector(const VectorDimension &dim, const T &val)  
    ^
```

1 error generated.

### #2 - 10/02/2013 10:44 AM - S. Wrede

Any updates to this problem?

This is currently a blocker to use the AMARSi software on MacOS.

**#3 - 10/02/2013 02:36 PM - M. Rolf**

I added a new compile test here:

<https://code.cor-lab.org/projects/nemomath/repository/revisions/304/entry/trunk/nemomath/test/compile/IntVectorConstructorOverload.cpp>

This one builds successfully on jenkins MacOS.

A closer look on the error message above reveals, it's not an int given to the IntVector constructor, but an unsigned int. In that case it makes sense that it's ambiguous: the IntVector constructor requires an int, and is explicit, which forbids auto-casting to allow different constructors with (dim, value) and (value,value).

Try providing explicitly an int.

**#4 - 10/02/2013 05:08 PM - Anonymous**

- Status changed from *Feedback* to *Resolved*

- % Done changed from 0 to 100

This fixes the issue. Thanks very much for digging into this.

Will fix this downstream.