
Subject: Xmlize has problem with WithDeepCopy<Array<...

Posted by [nixnixnix](#) on Wed, 31 Oct 2012 01:01:23 GMT

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Hello,

I am trying to use Xmlize to save data to file in human readable format. It appears that I can do this with my own objects so long as I provide Xmlize functions like with Serialize. Also it appears the Array and Vector have Xmlize capability. My problem appears to be that I declare my Arrays and Vectors with WithDeepCopy and Xmlize does not like this. Is there a fix please?

c:\upp\uppsrc\core\Xmlize.h(71) : error C2039: 'Xmlize' : is not a member of

'Upp::WithDeepCopy<T>'

with

[

T=Upp::Vector<double>

]

c:\upp\uppsrc\core\Xmlize.h(82) : see reference to function template instantiation 'void Upp::Xmlize<T>(Upp::XmlIO &,T &)' being compiled

with

[

T=doubleArray

]

d:\AWSOpenWind\trunk\OpenWind\TurbineType.cpp(253) : see reference to function template instantiation 'Upp::XmlIO Upp::XmlIO::operator ()<doubleArray>(const char *,T &)' being compiled

with

[

T=doubleArray

]

doubleArray is declared as

typedef WithDeepCopy<Vector <double> > doubleArray;

Thanks,

Nick

Subject: Re: Xmlize has problem with WithDeepCopy<Array<...

Posted by [Mindtraveller](#) on Wed, 31 Oct 2012 05:36:34 GMT

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I do use xmlization for U++ arrays without a problem.

The error you posted seems to me strange as WithDeepCopy is a pure helper-class and must not lead to any problems of this sort.

Could you post minimal excerpt from your code to show how your "problematic" classes are organized?

Subject: Re: Xmlize has problem with WithDeepCopy<Array<...

Posted by [mirek](#) on Thu, 01 Nov 2012 19:25:04 GMT

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Caused by template matching rules.

Fixed by refactoring Xmlize/Jsonize of containers to methods. Should work now (upptst/ize is a unit test for this issue).

Mirek

Subject: Re: Xmlize has problem with WithDeepCopy<Array<...

Posted by [nixnixnix](#) on Thu, 01 Nov 2012 21:45:51 GMT

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Thanks. I just downloaded version 5503 but still get the same error.

MindTraveller, there really wasn't anything I could add. Every instance of an Array or Vector that I have declared with WithDeepCopy gives the same error when I try to Xmlize with something like

```
void TurbineTable::Xmlize(XmlIO& xml)
{
    DUMP("In TurbineTable::Xmlize");
```

```
    String sType = "TurbineTable";
```

```
    xml
        ("Type",sType)
        ("TI_min",m_fTlmin)
        ("TI_max",m_fTlmax) // these work
    ;
```

```
    xml
        ("Velocity",m_fv) // << this is a double array which is typedef WithDeepCopy < Vector <double> >
        doubleArray
        ("AirDensity",m_fAirDensity) // << this is a double array which is typedef WithDeepCopy < Vector
        <double> > doubleArray
```

;

As a workaround I tried the following for 1 and 2 dimensional arrays.

```
template<class T> static bool XmlizeArray1D(XmlIO& xml,String sCollection,String sltem,T& ar)
{
    DUMP("XmlizeArray1D");

    XmlIO& xmla = xml.Add(sCollection);

    int n;

    if(xml.IsStoring())
    {
        n = ar.GetCount();
        xmla("Count",n);
    }
    else // IsLoading
    {
        xmla("Count",n);
        if(n>=0)
            ar.SetCount(n);
        else
            return false;
    }

    for(int i=0;i<n;i++)
    {
        String s = Format("%s%d",sltem,i);
        xmla(s,ar[i]);
    }

    return true;
}

template<class S,class T> static bool XmlizeArray2D(XmlIO& xml,String sCollection,String
Column,S& ss,T& ar)
{
    DUMP("XmlizeArray2D");

    XmlIO& xmla = xml.Add(sCollection);

    int n1,n2;
```

```

if(xml.IsStoring())
{
    n1 = ar.GetCount();
    xmla("Columns",n1);

    for(int i=0;i<n1;i++)
    {
        String sHeader = Format("%s%f",Column,ss[i]);
        XmlIO& xmlb = xmla.Add(sHeader);

        n2 = ar[i].GetCount();
        xmlb("Rows",n2);

        for(int j=0;j<n2;j++)
        {
            String label = Format("v%d-%d",i,j);

            xmlb(label,ar[i][j]);
        }
    }
}
else // IsLoading
{
    xmla("Columns",n1);
    ar.SetCount(n1);

    DUMP(n1);

    for(int i=0;i<n1;i++)
    {
        String sHeader = Format("%s%f",Column,ss[i]);
        XmlIO& xmlb = xmla.Add(sHeader);

        xmlb("Rows",n2);
        ar[i].SetCount(n2);

        DUMP(n2);

        for(int j=0;j<n2;j++)
        {
            String label = Format("v%d-%d",i,j);

            xmlb(label,ar[i][j]);
        }
    }
}

return true;

```

}

and it appears to write good clear XML but it wont read back in. It could be that I am misusing the Add() as I have never been clear really on how the XML should work.

My XML file looks like the following:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<!DOCTYPE AlstomECOCClassA>
<AlstomECOCClassA>
  <Name>Alstom ECO 80 1.67 Class 2A</Name>
  <HubHeight value="80"/>
  <RotorDiameter value="80"/>
  <VoltageV value="690"/>
  <CapacityKW value="1670"/>
  <IsPitchControlled value="1"/>
  <LowCutIn value="3"/>
  <HighCutOut value="25"/>
  <IEC_adjustment value="1"/>
  <NumBlades value="3"/>
  <LowTemperatureShutDown value="-30"/>
  <HighTemperatureShutDown value="45"/>
  <LowTemperatureUnits value="0"/>
  <HighTemperatureUnits value="0"/>
  <LowTemperatureRestart value="-20"/>
  <HighTemperatureRestart value="30"/>
  <IsVariableSpeed value="1"/>
  <TiltAngleDegrees value="5"/>
  <PeakOutputKW value="1670"/>
  <SpeedClass value="2"/>
  <TiClass value="0"/>
  <SpeedMax value="8.5"/>
  <TiMax value="16"/>
  <Comments>This is not a warrantied power curve. It is for demonstration purposes only. If you
need a warrantied power curve, please contact your turbine manufacturer.</Comments>
  <Power_Tables>
    <Count value="1"/>
    <Power_Table0>
      <Type>TurbineTable</Type>
      <TI_min value="0"/>
      <TI_max value="60"/>
      <Velocities>
        <Count value="26"/>
        <Velocity0 value="0"/>
        <Velocity1 value="1"/>
```

```

<Velocity2 value="2"/>
<Velocity3 value="3"/>
<Velocity4 value="4"/>
<Velocity5 value="5"/>
<Velocity6 value="6"/>
<Velocity7 value="7"/>
<Velocity8 value="8"/>
<Velocity9 value="9"/>
<Velocity10 value="10"/>
<Velocity11 value="11"/>
<Velocity12 value="12"/>
<Velocity13 value="13"/>
<Velocity14 value="14"/>
<Velocity15 value="15"/>
<Velocity16 value="16"/>
<Velocity17 value="17"/>
<Velocity18 value="18"/>
<Velocity19 value="19"/>
<Velocity20 value="20"/>
<Velocity21 value="21"/>
<Velocity22 value="22"/>
<Velocity23 value="23"/>
<Velocity24 value="24"/>
<Velocity25 value="25"/>
</Velocities>
<AirDensities>
<Count value="6"/>
<Rho0 value="1"/>
<Rho1 value="1.05"/>
<Rho2 value="1.1"/>
<Rho3 value="1.15"/>
<Rho4 value="1.2"/>
<Rho5 value="1.225"/>
</AirDensities>
<Values>
<Columns value="6"/>
<Rho1.000000>
<Rows value="26"/>
<v0-0 value="0"/>
<v0-1 value="0"/>
<v0-2 value="0"/>
<v0-3 value="8"/>
<v0-4 value="53"/>
<v0-5 value="129"/>
<v0-6 value="246"/>
<v0-7 value="409"/>
<v0-8 value="626"/>
<v0-9 value="904"/>

```

```
<v0-10 value="1231"/>
<v0-11 value="1522"/>
<v0-12 value="1637"/>
<v0-13 value="1662"/>
<v0-14 value="1670"/>
<v0-15 value="1670"/>
<v0-16 value="1665"/>
<v0-17 value="1614"/>
<v0-18 value="1517"/>
<v0-19 value="1409"/>
<v0-20 value="1300"/>
<v0-21 value="1191"/>
<v0-22 value="1083"/>
<v0-23 value="974"/>
<v0-24 value="867"/>
<v0-25 value="758"/>
</Rho1.000000>
<Rho1.050000>
<Rows value="26"/>
<v1-0 value="0"/>
<v1-1 value="0"/>
<v1-2 value="0"/>
<v1-3 value="8"/>
<v1-4 value="53"/>
<v1-5 value="129"/>
<v1-6 value="246"/>
<v1-7 value="409"/>
<v1-8 value="626"/>
<v1-9 value="904"/>
<v1-10 value="1231"/>
<v1-11 value="1522"/>
<v1-12 value="1637"/>
<v1-13 value="1662"/>
<v1-14 value="1670"/>
<v1-15 value="1670"/>
<v1-16 value="1665"/>
<v1-17 value="1614"/>
<v1-18 value="1517"/>
<v1-19 value="1409"/>
<v1-20 value="1300"/>
<v1-21 value="1191"/>
<v1-22 value="1083"/>
<v1-23 value="974"/>
<v1-24 value="867"/>
<v1-25 value="758"/>
</Rho1.050000>
<Rho1.100000>
<Rows value="26"/>
```

```
<v2-0 value="0"/>
<v2-1 value="0"/>
<v2-2 value="0"/>
<v2-3 value="7"/>
<v2-4 value="49"/>
<v2-5 value="123"/>
<v2-6 value="233"/>
<v2-7 value="390"/>
<v2-8 value="597"/>
<v2-9 value="864"/>
<v2-10 value="1182"/>
<v2-11 value="1480"/>
<v2-12 value="1626"/>
<v2-13 value="1658"/>
<v2-14 value="1670"/>
<v2-15 value="1670"/>
<v2-16 value="1665"/>
<v2-17 value="1614"/>
<v2-18 value="1517"/>
<v2-19 value="1409"/>
<v2-20 value="1300"/>
<v2-21 value="1191"/>
<v2-22 value="1083"/>
<v2-23 value="974"/>
<v2-24 value="867"/>
<v2-25 value="758"/>
</Rho1.100000>
<Rho1.150000>
<Rows value="26"/>
<v3-0 value="0"/>
<v3-1 value="0"/>
<v3-2 value="0"/>
<v3-3 value="8"/>
<v3-4 value="53"/>
<v3-5 value="129"/>
<v3-6 value="246"/>
<v3-7 value="409"/>
<v3-8 value="626"/>
<v3-9 value="904"/>
<v3-10 value="1231"/>
<v3-11 value="1522"/>
<v3-12 value="1637"/>
<v3-13 value="1662"/>
<v3-14 value="1670"/>
<v3-15 value="1670"/>
<v3-16 value="1665"/>
<v3-17 value="1614"/>
<v3-18 value="1517"/>
```

```

<v3-19 value="1409"/>
<v3-20 value="1300"/>
<v3-21 value="1191"/>
<v3-22 value="1083"/>
<v3-23 value="974"/>
<v3-24 value="867"/>
<v3-25 value="758"/>
</Rho1.150000>
<Rho1.200000>
  <Rows value="26"/>
  <v4-0 value="0"/>
  <v4-1 value="0"/>
  <v4-2 value="0"/>
  <v4-3 value="9"/>
  <v4-4 value="56"/>
  <v4-5 value="136"/>
  <v4-6 value="258"/>
  <v4-7 value="428"/>
  <v4-8 value="654"/>
  <v4-9 value="944"/>
  <v4-10 value="1277"/>
  <v4-11 value="1558"/>
  <v4-12 value="1643"/>
  <v4-13 value="1663"/>
  <v4-14 value="1670"/>
  <v4-15 value="1670"/>
  <v4-16 value="1658"/>
  <v4-17 value="1595"/>
  <v4-18 value="1488"/>
  <v4-19 value="1380"/>
  <v4-20 value="1269"/>
  <v4-21 value="1159"/>
  <v4-22 value="1050"/>
  <v4-23 value="939"/>
  <v4-24 value="829"/>
  <v4-25 value="720"/>
</Rho1.200000>
<Rho1.225000>
  <Rows value="26"/>
  <v5-0 value="0"/>
  <v5-1 value="0"/>
  <v5-2 value="0"/>
  <v5-3 value="9"/>
  <v5-4 value="58"/>
  <v5-5 value="139"/>
  <v5-6 value="263"/>
  <v5-7 value="437"/>
  <v5-8 value="669"/>

```

```

<v5-9 value="964"/>
<v5-10 value="1300"/>
<v5-11 value="1580"/>
<v5-12 value="1647"/>
<v5-13 value="1666"/>
<v5-14 value="1670"/>
<v5-15 value="1670"/>
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<v5-18 value="1476"/>
<v5-19 value="1365"/>
<v5-20 value="1254"/>
<v5-21 value="1144"/>
<v5-22 value="1033"/>
<v5-23 value="922"/>
<v5-24 value="812"/>
<v5-25 value="701"/>
</Rho1.225000>
</Values>
</Power_Table0>
</Power_Tables>
<Thrust_Table>
<Type>TurbineTable</Type>
<TI_min value="0"/>
<TI_max value="60"/>
<Velocities>
<Count value="26"/>
<Velocity0 value="0"/>
<Velocity1 value="1"/>
<Velocity2 value="2"/>
<Velocity3 value="3"/>
<Velocity4 value="4"/>
<Velocity5 value="5"/>
<Velocity6 value="6"/>
<Velocity7 value="7"/>
<Velocity8 value="8"/>
<Velocity9 value="9"/>
<Velocity10 value="10"/>
<Velocity11 value="11"/>
<Velocity12 value="12"/>
<Velocity13 value="13"/>
<Velocity14 value="14"/>
<Velocity15 value="15"/>
<Velocity16 value="16"/>
<Velocity17 value="17"/>
<Velocity18 value="18"/>
<Velocity19 value="19"/>
<Velocity20 value="20"/>

```

```

<Velocity21 value="21"/>
<Velocity22 value="22"/>
<Velocity23 value="23"/>
<Velocity24 value="24"/>
<Velocity25 value="25"/>
</Velocities>
<AirDensities>
  <Count value="6"/>
  <Rho0 value="1"/>
  <Rho1 value="1.05"/>
  <Rho2 value="1.1"/>
  <Rho3 value="1.15"/>
  <Rho4 value="1.2"/>
  <Rho5 value="1.225"/>
</AirDensities>
<Values>
  <Columns value="6"/>
  <Rho1.000000>
    <Rows value="26"/>
    <v0-0 value="0"/>
    <v0-1 value="0"/>
    <v0-2 value="0"/>
    <v0-3 value="1.02"/>
    <v0-4 value="0.85"/>
    <v0-5 value="0.74"/>
    <v0-6 value="0.75"/>
    <v0-7 value="0.76"/>
    <v0-8 value="0.76"/>
    <v0-9 value="0.75"/>
    <v0-10 value="0.69"/>
    <v0-11 value="0.64"/>
    <v0-12 value="0.46"/>
    <v0-13 value="0.35"/>
    <v0-14 value="0.27"/>
    <v0-15 value="0.22"/>
    <v0-16 value="0.18"/>
    <v0-17 value="0.15"/>
    <v0-18 value="0.12"/>
    <v0-19 value="0.09"/>
    <v0-20 value="0.07"/>
    <v0-21 value="0.06"/>
    <v0-22 value="0.05"/>
    <v0-23 value="0.04"/>
    <v0-24 value="0.03"/>
    <v0-25 value="0.02"/>
  </Rho1.000000>
  <Rho1.050000>
    <Rows value="26"/>

```

```

<v1-0 value="0"/>
<v1-1 value="0"/>
<v1-2 value="0"/>
<v1-3 value="1.02"/>
<v1-4 value="0.85"/>
<v1-5 value="0.74"/>
<v1-6 value="0.75"/>
<v1-7 value="0.76"/>
<v1-8 value="0.76"/>
<v1-9 value="0.75"/>
<v1-10 value="0.69"/>
<v1-11 value="0.64"/>
<v1-12 value="0.46"/>
<v1-13 value="0.35"/>
<v1-14 value="0.27"/>
<v1-15 value="0.22"/>
<v1-16 value="0.18"/>
<v1-17 value="0.15"/>
<v1-18 value="0.12"/>
<v1-19 value="0.09"/>
<v1-20 value="0.07"/>
<v1-21 value="0.06"/>
<v1-22 value="0.05"/>
<v1-23 value="0.04"/>
<v1-24 value="0.03"/>
<v1-25 value="0.02"/>
</Rho1.050000>
<Rho1.100000>
<Rows value="26"/>
<v2-0 value="0"/>
<v2-1 value="0"/>
<v2-2 value="0"/>
<v2-3 value="1.02"/>
<v2-4 value="0.85"/>
<v2-5 value="0.74"/>
<v2-6 value="0.75"/>
<v2-7 value="0.76"/>
<v2-8 value="0.76"/>
<v2-9 value="0.75"/>
<v2-10 value="0.69"/>
<v2-11 value="0.64"/>
<v2-12 value="0.46"/>
<v2-13 value="0.35"/>
<v2-14 value="0.27"/>
<v2-15 value="0.22"/>
<v2-16 value="0.18"/>
<v2-17 value="0.15"/>
<v2-18 value="0.12"/>

```

```

<v2-19 value="0.09"/>
<v2-20 value="0.07"/>
<v2-21 value="0.06"/>
<v2-22 value="0.05"/>
<v2-23 value="0.04"/>
<v2-24 value="0.03"/>
<v2-25 value="0.02"/>
</Rho1.100000>
<Rho1.150000>
  <Rows value="26"/>
  <v3-0 value="0"/>
  <v3-1 value="0"/>
  <v3-2 value="0"/>
  <v3-3 value="1.02"/>
  <v3-4 value="0.85"/>
  <v3-5 value="0.74"/>
  <v3-6 value="0.75"/>
  <v3-7 value="0.76"/>
  <v3-8 value="0.76"/>
  <v3-9 value="0.75"/>
  <v3-10 value="0.69"/>
  <v3-11 value="0.64"/>
  <v3-12 value="0.46"/>
  <v3-13 value="0.35"/>
  <v3-14 value="0.27"/>
  <v3-15 value="0.22"/>
  <v3-16 value="0.18"/>
  <v3-17 value="0.15"/>
  <v3-18 value="0.12"/>
  <v3-19 value="0.09"/>
  <v3-20 value="0.07"/>
  <v3-21 value="0.06"/>
  <v3-22 value="0.05"/>
  <v3-23 value="0.04"/>
  <v3-24 value="0.03"/>
  <v3-25 value="0.02"/>
</Rho1.150000>
<Rho1.200000>
  <Rows value="26"/>
  <v4-0 value="0"/>
  <v4-1 value="0"/>
  <v4-2 value="0"/>
  <v4-3 value="1.02"/>
  <v4-4 value="0.85"/>
  <v4-5 value="0.75"/>
  <v4-6 value="0.76"/>
  <v4-7 value="0.76"/>
  <v4-8 value="0.77"/>

```

```

<v4-9 value="0.75"/>
<v4-10 value="0.69"/>
<v4-11 value="0.6"/>
<v4-12 value="0.44"/>
<v4-13 value="0.34"/>
<v4-14 value="0.26"/>
<v4-15 value="0.21"/>
<v4-16 value="0.17"/>
<v4-17 value="0.14"/>
<v4-18 value="0.11"/>
<v4-19 value="0.09"/>
<v4-20 value="0.07"/>
<v4-21 value="0.06"/>
<v4-22 value="0.04"/>
<v4-23 value="0.04"/>
<v4-24 value="0.03"/>
<v4-25 value="0.02"/>
</Rho1.200000>
<Rho1.225000>
<Rows value="26"/>
<v5-0 value="0"/>
<v5-1 value="0"/>
<v5-2 value="0"/>
<v5-3 value="1.02"/>
<v5-4 value="0.85"/>
<v5-5 value="0.76"/>
<v5-6 value="0.76"/>
<v5-7 value="0.77"/>
<v5-8 value="0.77"/>
<v5-9 value="0.75"/>
<v5-10 value="0.69"/>
<v5-11 value="0.59"/>
<v5-12 value="0.44"/>
<v5-13 value="0.33"/>
<v5-14 value="0.26"/>
<v5-15 value="0.21"/>
<v5-16 value="0.17"/>
<v5-17 value="0.14"/>
<v5-18 value="0.11"/>
<v5-19 value="0.08"/>
<v5-20 value="0.07"/>
<v5-21 value="0.05"/>
<v5-22 value="0.04"/>
<v5-23 value="0.03"/>
<v5-24 value="0.03"/>
<v5-25 value="0.02"/>
</Rho1.225000>
</Values>

```

```

</Thrust_Table>
<RPM_Table>
  <Type>TurbineTable</Type>
  <TI_min value="0"/>
  <TI_max value="60"/>
  <Velocities>
    <Count value="26"/>
    <Velocity0 value="0"/>
    <Velocity1 value="1"/>
    <Velocity2 value="2"/>
    <Velocity3 value="3"/>
    <Velocity4 value="4"/>
    <Velocity5 value="5"/>
    <Velocity6 value="6"/>
    <Velocity7 value="7"/>
    <Velocity8 value="8"/>
    <Velocity9 value="9"/>
    <Velocity10 value="10"/>
    <Velocity11 value="11"/>
    <Velocity12 value="12"/>
    <Velocity13 value="13"/>
    <Velocity14 value="14"/>
    <Velocity15 value="15"/>
    <Velocity16 value="16"/>
    <Velocity17 value="17"/>
    <Velocity18 value="18"/>
    <Velocity19 value="19"/>
    <Velocity20 value="20"/>
    <Velocity21 value="21"/>
    <Velocity22 value="22"/>
    <Velocity23 value="23"/>
    <Velocity24 value="24"/>
    <Velocity25 value="25"/>
  </Velocities>
  <AirDensities>
    <Count value="1"/>
    <Rho0 value="1.225"/>
  </AirDensities>
  <Values>
    <Columns value="1"/>
    <Rho1.225000>
    <Rows value="26"/>
    <v0-0 value="0"/>
    <v0-1 value="0"/>
    <v0-2 value="0"/>
    <v0-3 value="11"/>
    <v0-4 value="12"/>
    <v0-5 value="13"/>

```

```

<v0-6 value="14"/>
<v0-7 value="15"/>
<v0-8 value="16"/>
<v0-9 value="17"/>
<v0-10 value="18"/>
<v0-11 value="19"/>
<v0-12 value="20"/>
<v0-13 value="20.16"/>
<v0-14 value="20.32"/>
<v0-15 value="20.48"/>
<v0-16 value="20.64"/>
<v0-17 value="20.8"/>
<v0-18 value="20.96"/>
<v0-19 value="21.12"/>
<v0-20 value="21.28"/>
<v0-21 value="21.44"/>
<v0-22 value="21.6"/>
<v0-23 value="21.76"/>
<v0-24 value="21.92"/>
<v0-25 value="22"/>
</Rho1.225000>
</Values>
</RPM_Table>
<TotalCost value="2000000"/>
<FoundationCost value="100000"/>
<PeriodicCosts>
  <Count value="2"/>
  <PeriodicCost0>
    <Type>PeriodicCost</Type>
    <Component>Drive Train</Component>
    <Cost value="300000"/>
    <PeriodYears value="7"/>
    <CostVariable value="0"/>
    <PeriodVariable value="0"/>
    <IsVariablePeriod value="0"/>
    <IsVariableCost value="0"/>
    <CostExponent value="1"/>
    <PeriodExponent value="1"/>
    <CostFactor value="1"/>
    <PeriodFactor value="1"/>
  </PeriodicCost0>
  <PeriodicCost1>
    <Type>PeriodicCost</Type>
    <Component>Blades</Component>
    <Cost value="200000"/>
    <PeriodYears value="15"/>
    <CostVariable value="0"/>
    <PeriodVariable value="0"/>

```

```

<IsVariablePeriod value="0"/>
<IsVariableCost value="0"/>
<CostExponent value="1"/>
<PeriodExponent value="1"/>
<CostFactor value="1"/>
<PeriodFactor value="1"/>
</PeriodicCost1>
</PeriodicCosts>
<TotalNoise value="100"/>
<TonalNoise value="100"/>
<Noise63hz value="0"/>
<Noise125hz value="0"/>
<Noise250hz value="0"/>
<Noise500hz value="0"/>
<Noise1000hz value="0"/>
<Noise2000hz value="0"/>
<Noise40000hz value="0"/>
<Noise80000hz value="0"/>
</AlstomECOCClassA>

```

Which appears exactly as I would want it but for some reason it will not Xmlize back in

It would be good if XmlIO gave more errors when it can't find something. When I debug, it appears to find the Columns variable "....s=6??..." but instead sets my n1 variable in the 2D array to

Any suggestions welcome.

Nick

Update:

It is the Add() function that is causing me problems. When I use

```

template<class T> static bool XmlizeArray1D(XmlIO& xml,String sCollection,String sltem,T& ar)
{
    DUMP("XmlizeArray1D");

    // XmlIO& xmla = xml.Add(sCollection);

    XmlIO& xmla = xml;

    int n;

    if(xml.IsStoring())

```

```

{
    n = ar.GetCount();
    DUMP(n);
    xmla("Count",n);
}
else // IsLoading
{
    xmla("Count",n);

    DUMP(n);

    if(n>=0)
        ar.SetCount(n);
    else
        return false;
}

for(int i=0;i<n;i++)
{
    String s = Format("%s%d",sItem,i);
    xmla(s,ar[i]);
}

return true;
}

template<class S,class T> static bool XmlizeArray2D(XmlIO& xml,String sCollection,String
Column,S& ss,T& ar)
{
    DUMP("XmlizeArray2D");

    // XmlIO& xmla = xml.Add(sCollection);
    XmlIO& xmla = xml;

    int n1,n2;

    if(xml.IsStoring())
    {
        n1 = ar.GetCount();
        xmla("Columns",n1);

        for(int i=0;i<n1;i++)
        {
            String sHeader = Format("%s%f",Column,ss[i]);
            /// XmlIO& xmlb = xmla.Add(sHeader);
            XmlIO& xmlb = xml;

            n2 = ar[i].GetCount();

```

```

xmlb("Rows",n2);

for(int j=0;j<n2;j++)
{
    String label = Format("v%d-%d",i,j);

    xmlb(label,ar[i][j]);
}
}
else // IsLoading
{
    xmla("Columns",n1);
    ar.SetCount(n1);

    DUMP(n1);

    for(int i=0;i<n1;i++)
    {
        String sHeader = Format("%s%f",Column,ss[i]);
//    XmlIO& xmlb = xmla.Add(sHeader);
        XmlIO& xmlb = xml;

        xmlb("Rows",n2);
        ar[i].SetCount(n2);

        DUMP(n2);

        for(int j=0;j<n2;j++)
        {
            String label = Format("v%d-%d",i,j);

            xmlb(label,ar[i][j]);
        }
    }
}

return true;
}

```

instead then it reads back in fine but this means that each object can only contain one 1D array or vector and 1 2D array or vector as the Count variables will overwrite each other. I need to use the Add(sCollection) in the original functions in order to make them properly useful. Is there any alternative that would achieve the same thing please?

Subject: Re: Xmlize has problem with WithDeepCopy<Array<...

Posted by [nixnixnix](#) on Fri, 02 Nov 2012 00:47:20 GMT

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OK got it. Not sure why Xmlize is not working for WithDeepCopy <Vector <double> > but in any case the following two functions give slightly more functionality

```
template<class T> static bool XmlizeArray1D(XmlIO& xml,String sCollection,String sltem,T& ar)
{
    DUMP("XmlizeArray1D");

    int n;

    if(xml.IsStoring())
    {
        XmlIO xmla = xml.Add(sCollection);

        n = ar.GetCount();
        DUMP(n);
        xmla("Count",n);

        for(int i=0;i<n;i++)
        {
            String s = Format("%s%d",sltem,i);
            xmla(s,ar[i]);
        }
    }
    else // IsLoading
    {
        int ii = -1;
        for(int i = 0; i < xml->GetCount(); i++)
        {
            if(xml->Node(i).IsTag(sCollection))
                ii = i;
        }

        if(ii<0)
        {
            DUMP("FAILED IN XmlizeArray1D");
            return false;
        }
        XmlIO xmla = xml.At(ii);

        xmla("Count",n);

        DUMP(n);
```

```

    if(n>=0)
        ar.SetCount(n);
    else
        return false;

    for(int i=0;i<n;i++)
    {
        String s = Format("%s%d",sItem,i);
        xmla(s,ar[i]);
    }

}

return true;
}

template<class S,class T> static bool XmlizeArray2D(XmlIO& xml,String sCollection,String
Column,S& ss,T& ar)
{
    DUMP("XmlizeArray2D");

    int n1,n2;

    if(xml.IsStoring())
    {
        XmlIO xmla = xml.Add(sCollection);

        n1 = ar.GetCount();
        xmla("Columns",n1);

        for(int i=0;i<n1;i++)
        {
            String sHeader = Format("%s%f",Column,ss[i]);
            XmlIO xmlb = xmla.Add(sHeader);

            n2 = ar[i].GetCount();
            xmlb("Rows",n2);

            for(int j=0;j<n2;j++)
            {
                String label = Format("v%d-%d",i,j);

                xmlb(label,ar[i][j]);
            }
        }
    }
    else // IsLoading

```

```

{
    int ii = -1;
    for(int i = 0; i < xml->GetCount(); i++)
    {
        if(xml->Node(i).IsTag(sCollection))
            ii = i;
    }

    if(ii<0)
    {
        DUMP("FAILED IN XmlizeArray2D1");
        return false;
    }

    XmlIO xmla = xml.At(ii);

    xmla("Columns",n1);
    ar.SetCount(n1);

    DUMP(n1);

    for(int i=0;i<n1;i++)
    {
        String sHeader = Format("%s%f",Column,ss[i]);

        int jj = -1;
        for(int j = 0; j < xmla->GetCount(); j++)
        {
            if(xmla->Node(j).IsTag(sHeader))
                jj = j;
        }

        if(jj<0)
        {
            DUMP("FAILED IN XmlizeArray2D2");
            return false;
        }

        XmlIO xmlb = xmla.At(jj);

        xmlb("Rows",n2);
        ar[i].SetCount(n2);

        DUMP(n2);

        for(int j=0;j<n2;j++)
        {
            String label = Format("v%d-%d",i,j);

```

```
    xmlb(label,ar[i][j]);  
  }  
}  
  
return true;  
}
```

Subject: Re: Xmlize has problem with WithDeepCopy<Array<...

Posted by [mirek](#) on Fri, 02 Nov 2012 06:55:47 GMT

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5503 is not enough, 5506 is the commit solving this problem.

No need to bury into this deeper, the reason why it was not working with WithDeepCopy is apparent (WithDeepCopy<Vector<T>> is not the same type as Vector<T> and template specialization for Xmlize was defined for Vector<T> only).

It is now fixed by moving Xmlize as Vector method, thus completely avoiding template specializations.

Mirek
