
Subject: Vector a user defined struct for XML persistency

Posted by [sinpeople](#) on Sat, 17 Oct 2020 08:20:12 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hi folks,

I am trying to put a user-defined Phase struct into a vector before using XML for persistency. It worked fine before I put it into a vector.

The code is below:

```
struct Phase
{
    int      id;
    double   split;
    Vector<int> signal_groups;
    int      min_green;
    int      all_red;
    int      amber;
    int      skip;
    void Xmlize(XmlIO& xml);
};

void Phase::Xmlize(XmlIO& xml)
{
    xml
        ("id", id)
        ("split", split)
        .List("signal_groups", "signal_group", signal_groups)
        ("min_green", min_green)
        ("all_red", all_red)
        ("amber", amber)
        ("skip", skip)
    ;
}

struct JunctionCFG {
    Size          sz;
    int           lang;
    String        text;
    Vector<Size>    vector;
    VectorMap<String, int> score;
    VectorMap<String, String> map;
    ArrayMap<int, Size> sizemap;
    double        number;
    bool          option;

    Phase phase;
```

```

// Comment here, other compiling error
// Vector<Phase> phase_grp;

void Init();
void Load();
void Save();
//void Dump();
void Xmlize(XmlIO& xml);
};

void JunctionCFG::Xmlize(XmlIO& xml)
{
    xml
        ("Dimension", sz)
        ("text", text)
        .List("vector", "size", vector)
        ("Scores", score)
        ("map", map)
        ("sizemap", sizemap)
        ("number", number)
        ("option", option)
        ("phase", phase)
    // .List("phase_group", "phase", phase_grp)
    ;
    XmlizeLang(xml, "Language", lang);
}

```

After the `Vector<Phase>` is added into the code, it has compiling error like the following:

Quote:

Core/Topt.h line 171 required from 'void Upp::AssertMoveable(T*)[with T= Phase]'

Core/Topt.h line 157 error: no match for 'operator*' (operand type is 'Phase')

Ideally, I want the XML looks like

```

<phases>
  <phase>
    <id value="2"/>
    <split value="0.25"/>
    <signal_groups>
      <signal_group value="25"/>

```

```
<signal_group value="50"/>
</signal_groups>
<min_green value="-986896"/>
<all_red value="20"/>
<amber value="4"/>
<skip value="-1"/>
</phase>
<phase>
<id value="2"/>
<split value="0.25"/>
<signal_groups>
<signal_group value="25"/>
<signal_group value="50"/>
</signal_groups>
<min_green value="-986896"/>
<all_red value="20"/>
<amber value="4"/>
<skip value="-1"/>
</phase>
<phase>
<id value="2"/>
<split value="0.25"/>
<signal_groups>
<signal_group value="25"/>
<signal_group value="50"/>
</signal_groups>
<min_green value="-986896"/>
<all_red value="20"/>
<amber value="4"/>
<skip value="-1"/>
</phase>
<phase>
<id value="2"/>
<split value="0.25"/>
<signal_groups>
<signal_group value="25"/>
<signal_group value="50"/>
</signal_groups>
<min_green value="-986896"/>
<all_red value="20"/>
<amber value="4"/>
<skip value="-1"/>
</phase>
</phases>
```

Thank you very much for your support!

Best Regards

David WANG

[File Attachments](#)

1) [Capture.JPG](#), downloaded 393 times

Subject: Re: Vector a user defined struct for XML persistency

Posted by [Oblivion](#) on Sat, 17 Oct 2020 08:33:53 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hello,

You have to mark the struct as Moveable. (Vector requires its elements to be moveable. Array doesn't.)

```
struct Phase : Moveable<Phase> // <--  
{  
    int id;  
    double split;  
    Vector<int> signal_groups;  
    int min_green;  
    int all_red;  
    int amber;  
    int skip;  
    void Xmlize(XmlIO& xml);  
};
```

Best regards,
Oblivion

Subject: Re: Vector a user defined struct for XML persistency

Posted by [mirek](#) on Sat, 17 Oct 2020 12:59:05 GMT

[View Forum Message](#) <> [Reply to Message](#)

Oblivion wrote on Sat, 17 October 2020 10:33Hello,

You have to mark the struct as Moveable. (Vector requires its elements to be moveable. Array doesn't.)

Actually, I guess the first reply should be "use Array instead of Vector"... :)

Mirek
