Subject: Re: Eigen and UPP? (STL question?)
Posted by dolik.rce on Fri, 13 May 2011 06:43:22 GMT
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Hi GaroRobe!

Welcome to U++ Forum!

First, regarding your remark: Not using STL in past will actually make it simpler for you to get familiar with U++, since you won't have to get rid of the old habbits

Now to the code: Simply put, the operator<< in U++ uses by default function AsString(), which transform the given object to Upp::String. This is in most cases done by just calling the objects ToString() method, but in cases of foreign types, like those from Eigen, you have to make a specialization of AsString, which would understand it. The simplest posible code to make this work (altough not the best, but I didn't have much time to study Eigen internals) can be this: #include <Core/Core.h>
#include <Eigen/Dense>

```
using namespace Upp;
using Eigen::MatrixXd;

NAMESPACE_UPP
template<>
String AsString(const MatrixXd& m) {
 std::stringstream tmp;
 tmp << m; // we just use eigen classes capability to write to std::ostream
 return tmp.str(); // here the std::string is 'magicaly' converted to Upp::String
}
END_UPP_NAMESPACE

CONSOLE_APP_MAIN
{
 MatrixXd m ( 2, 2 );
 m ( 0, 0 ) = 3;
 m ( 1, 0 ) = 2.5;
 m ( 0, 1 ) = -1;
 m ( 1, 1 ) = m ( 1, 0 ) + m ( 0, 1 );
 Cout() << m << '\n';
}
```

Hopefully this will give you an idea

Best regards,
Honza