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Subject: Re: Convert struct to string and reconstruct a struct from string

Posted by [Didier](#) on Fri, 30 Oct 2020 12:14:33 GMT

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After trying it out,

here is the same exmple with small compilation corrections (compiles on Clang linux)

```
#include <Core/Core.h>
```

```
namespace Upp {
```

```
struct AMessage {  
    virtual void Serialize(Stream& s) = 0;  
    virtual ~AMessage() {}  
};
```

```
typedef Function< void (One<AMessage>&) > MessageMake;
```

```
VectorMap<int, MessageMake> message_maker;
```

```
template <class T>  
void RegisterMessage(int messageid)  
{  
    message_maker.Add(messageid, [](One<AMessage>& m) { m.Create<T>(); });  
}
```

```
// =====  
//   Messages definition  
// =====  
struct TemperatureMessage : AMessage {  
    double altitude, temperature;  
  
    virtual void Serialize(Stream& s) {  
        s % altitude % temperature;  
    }  
};
```

```
struct WarningMessage : AMessage {  
    String text;  
  
    virtual void Serialize(Stream& s) {  
        s % text;  
    }  
}
```

```

};

// =====
//  Message registration
// =====

INITBLOCK {
    RegisterMessage<TemperatureMessage>(1); // do that for all of your messages
    RegisterMessage<WarningMessage>(2); // do that for all of your messages
};

void ProcessRequest(const String& data)
{
    stringstream ss(data); // error handling for now omitted
    int client_id = ss.Get32();
    int message_id = ss.Get32();
    One<AMessage> m;
    int q = message_maker.Find(message_id);
    if(q < 0)
        return;
    (message_maker[q])(m); // create the required concrete message
    ss % *m; // load data to struct
}

}

using namespace Upp;

CONSOLE_APP_MAIN
{
}

```