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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 example 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
{
}

```

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