

## Re: structs for data transfer?

**Source:** [http://coding.derkeiler.com/Archive/C\\_CPP/comp.lang.cpp/2004-09/2374.html](http://coding.derkeiler.com/Archive/C_CPP/comp.lang.cpp/2004-09/2374.html)

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Date: Sun, 19 Sep 2004 20:14:18 +0100

"Oliver Gerlich" <[olig9\\_blocker\\_@gmx.de](mailto:olig9_blocker_@gmx.de)> wrote in message  
news:cikc2c\$set\$01\$1@news.t-online.com...

> *Hello,*  
> *I want to transfer messages between a client and a server (over TCP*  
> *sockets). A message consists of a message type (like a message "subject"*  
> *), the size of the attached data, and the data itself. The data part*  
> *should then be able to contain some information whose layout depends on*  
> *the message type...*  
> *So now I thought I could define some structs which represent the layout of*  
> *the additional information, like this:*  
>  
> *typedef struct*  
> *{*  
> *char versionString[30]*  
> *bool paused;*  
> *int uptime;*  
> *} MsgCoreInfoStruct;*  
>  
> *And then I use something like this:*  
>  
> *MsgCoreInfoStruct myData;*  
> *strcpy(myData.versionString, "Server V1.0");*  
> *myData.uptime = getUptime();*  
> *myData.paused = false;*  
>  
> *Message m;*  
> *m.setData( (char\*)&myData , sizeof(myData) );*  
>  
> *The Message object then sends the data to the other side.*  
>  
> *Question: When I receive such a message, can I just cast the char\* (which*  
> *points to the data) into MsgCoreInfoStruct\* myRecvData?*  
> *And can I then use myRecvData->uptime to get the value I sent out?*  
> *And, last but not least ;), can I use this concept if client and server*  
> *are running on different platforms (in this case, Linux and Win)?*  
>  
> *I have doubts about this (because of data packing, and because*

comp.lang.c++. Re: structs for data transfer?

- > *sizeof(bool) might be inconsistent between compilers...), but I'm not*
- > *sure...*

You are right to doubt.

- >
- > *Can someone tell me if this concept is right or wrong? Or has someone a*
- > *better solution for this problem (maybe something else than structs)?*
- >

Write some code to convert the struct you want to send into a char array.  
Write some code to turn that char array back into a struct. Use the first  
piece of code when you send, the second when you receive. Trying to send  
anything more complicated than char arrays between different types of  
computers is asking for trouble.

- > *Thanks in advance,*
- > *Oliver Gerlich*

john