

Re: Porting Binary Files

Source: <http://www.tech-archive.net/Archive/VC/microsoft.public.vc.language/2005-04/msg00643.html>

- *From:* "Severian [MVP]" <severian@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Wed, 13 Apr 2005 17:18:35 GMT
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On Wed, 13 Apr 2005 08:09:06 -0700, "Maynard"
<Maynard@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote:
>"Severian [MVP]" wrote:
>> On Tue, 12 Apr 2005 12:35:01 -0700, "Maynard"
>> <Maynard@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote:
>>
>> >I would like to be able to read a ported binary file (populated only by
>> >single precision floating point values) from a 32-bit OS that doesn't run
>> >Windows, to a Windows XP PC with a simple FTP. When I read the data from the
>> >file on my PC (using fstream object), I can see that the data appears in the
>> >right locations (I am reading 4 floats...the first and last 4-bytes are the
>> >same, and the middle 2 4-bytes are the same), but the values are incorrect.
>> >Does anybody know what might be going on here? Is this a lost cause?
>>
>> This depends on:
>>
>> 1) The format of floating point numbers on the originating machine.
>> 2) The byte-order of the originating machine.
>>
>> If the originator uses IEEE floating point, it may just be the second
>> issue, which you can correct by swapping the 4 bytes in each float:
>>
>> #include <assert.h>
>>
>> float GetFloat(BYTE *pf) /* pf is pointer to input buffer */
>> {
>> assert(sizeof(long) >= sizeof(float);
>> return (float)((long)pf[3]|(pf[2]<<8)|(pf[1]<<16)|(pf[0]<<24));
>> }
>>
>> If the format is completely different, though, you'll need to find out
>> more about it and synthesize an IEEE floating point number.
>
>I think I follow now (Big Endian vs. Little Endian)...one stupid question
>though...how do I create a pointer to the leading byte in a float?

I wouldn't read the data directly into floats; the reversed bytes may produce an NaN. I would recommend reading into a byte buffer, then converting 4 bytes at a time to a float.

—
Phillip Crews aka Severian
Microsoft MVP, Windows SDK
Posting email address is real
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- **References:**

- ◆ **[Porting Binary Files](#)**

- ◇ *From:* Maynard

- ◆ **[Re: Porting Binary Files](#)**

- ◇ *From:* Severian [MVP]

- ◆ **[Re: Porting Binary Files](#)**

- ◇ *From:* Maynard

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