Subject: Re: Byte to Real conversion Posted by David Foster on Fri, 19 Feb 1999 08:00:00 GMT

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## Michael A. Wirth wrote:

>

> Hi,

>

- > I am reading some data in from an Magnetic Resonance image which stores
- > information about the image in
- > a 14336 byte header. I want to extract some of the data from this header
- > and am having a problem
- > with converting data to integers and reals. The integers are 2-bytes and
- > the reals 4-bytes in length. How does
- > one convert 4 bytes into a real number?

>

> many thanks,

>

> Michael

Michael -

For some reason our nameserver can't find your host, so my email bounced. If you want the C code for a MR\_HEADER program, you can get it from:

ftp://bial1.ucsd.edu/pub/mr\_header.tar.gz

Dave

--

David S. Foster Univ. of California, San Diego Programmer/Analyst Brain Image Analysis Laboratory foster@bial1.ucsd.edu Department of Psychiatry (619) 622-5892 8950 Via La Jolla Drive, Suite 2240 La Jolla, CA 92037

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## Michael -

Hmm, that number 14336 sure looks familiar! Are you working with GE Signa images by any chance? I have C code that has routines to pull out integer, byte, and float information from the header. The main routine prints out a listing of important information from the header. There is also a .h file that lists the offsets for every entry in the file.

The conversion of floats does \*not\* look straightforward!

I'll send you an email with this code attached. I haven't had time to port the code to IDL, so I wrote a short wrapper that spawns the C program and returns the info in a structure. Let me know if you're interested in this.

Hope this helps.

Dave

--

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Subject: Re: Byte to Real conversion
Posted by Liam Gumley on Fri, 19 Feb 1999 08:00:00 GMT
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```
An easy way is to use a structure. For example, let's say the header format is:
Bytes 0:9 are junk
Bytes 10:11 are a signed 16 bit integer
Bytes 12:15 are a 32 bit float
Bytes 16:14335 are junk
```

## To read the header:

Cheers, Liam.

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Liam E. Gumley http://cimss.ssec.wisc.edu/~gumley