Subject: Re: Byte to Real conversion
Posted by Larry Busse on Tue, 23 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

This is less elegant than structures, but it works...
If you've read the header into a byte array, then you can convert as
follows assuming you know the location (offsets) of the bytes of
interest:

var1 = fix(header,10)
var2 = long(header,12)
var3 = float(header,16)

var1 will be a short integer consisting of the 2 bytes header(10) and
header(11).

var2 will be a long integer consisting of the 4 bytes header(12:15).
var3 will be a float consisting of the 4 bytes header(16:19).

Depending on the archetecture of your machine and the MRI scanner you
might also need to use swap_endian; e.g.,
var3 = swap_endian(float(header,16))
will be needed if you are using a PC version if IDL (Linux or Win) to
analyze data from a GE or Bruker imager.

Good Luck

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