
Subject: Re: IEEE Standard 754 floating point number
Posted by [lmudge](#) on Thu, 18 May 1995 07:00:00 GMT
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In article 1405951400220001@bso.tiac.net, bso@acm.org (Bosco Y. So) writes:

> -----BEGIN PGP SIGNED MESSAGE-----

>

>

> I'm using the Macintosh version of IDL that supports 32-bit floats and 64-bit
> double precision floats. I need to read some 80-bit IEEE Standard 754 floats
> from a binary file. If I read those 10 bytes with a READU into a BYTARR(10),
> how do I get a floating-point value out of that byte array?

>

> Bosco So | bso@acm.org

> PGP public key | <http://www.ultranet.com/~bso/pgp/>>

The most obvious option would be to use IDL's boolean algebra capabilities (e.g. not or and ishift etc.) to create a routine that converts this data to a double precision value. This would result in a loss of precision because this is only 64 bit IEEE floating point. The next version of IDL (v4.0) will support double precision complex data type which you could also use to store your values in but you would need to create your own routine to perform basic operations on this data e.g. addition. This is probably not feasible.

On a brighter note I have written a routine to convert values read from Turbo Pascal files using the word data type (16 bit unsigned integers) to IDL longword variables. If anyone would like it send me email.

Leith Mudge.

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