Subject: IEEE Standard 754 floating point number
Posted by bso on Sun, 14 May 1995 07:00:00 GMT
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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/

-----BEGIN PGP SIGNATURE-----
Version: 2.6.2

 iQCVAwUBL7ZE81lxq0cK9TLZAQFiqwP+JWomk95PHWhGUdZuO/2RTSrIgMD2 1Xc7
 +TmPYl0Vkq2uOoWJUQDbaRpKZZWq7NIhrPc5mnOXw7qQwLbajMyospVARZ9n rAZh
 xc2nIbsG1uf7Vl9g8Hhe2mtuGE5xg3e4+eNBLCNeci7Ba8otAcgbgjX3kiIg xr3z
p1ITINJDrEI=
=oskH
-----END PGP SIGNATURE-----

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-----
>
>
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>
> Bosco So | bso@acm.org
> PGP public key | http://www.ultranet.com/~bso/pgp/>

The most obvious option would be to use IDL's bolean 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 probablly 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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