
Subject: Re: converting ieee-float-format to pw-wave-float-format

Posted by [thompson](#) on Fri, 26 Aug 1994 14:44:35 GMT

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grunes@imsy1.nrl.navy.mil (Mitchell R Grunes) writes:

- > No. IEEE does not define byte order--at least it is in oposite order
- > on PCs from the most common useage on most Unix Workstations (Suns,
- > SGIs,... -- but watch out for Dec Alpha, which someone told me use
- > backwards (least significant byte first, like the PC) byte order.

I've often seen the byte order with the most significant byte first, i.e. that use on most Unix workstations, referred to as the "network" byte order. Most interchange formats, such as FITS, which are meant to be transportable from machine to machine, use that byte order.

- > One thing puzzles me: Most floating point numbers translate between
- > Suns and PCs simply throught BYTEORDER. But NaN values seem to
- > behave differently. Does anyone know why?

If both machines follow the IEEE standard, then both should recognize the same NaN values. However, many bit patterns can represent NaN. Perhaps the two machines use a different *default* NaN value.

Bill Thompson
