Subject: Re: Float procedure
Posted by eddie haskell on Wed, 02 Dec 1998 08:00:00 GMT
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Charlie Solomon wrote:
>
> Can anyone shed some light on how this byte array is converted into a
> floating point number?
> two_words = bytarr(4)
> two_words = [244, 232, 165, 64]

first off, the second assignment statement makes two_words an intarr,
not a bytarr as intended.
to keep two_words as a bytarr do something like:
two_words = byte([244,232,165,64]) -or maybe-
two_words[*] = [244, 232, 165, 64]

> IDL> print, float(two_words, 0)
> 2.13062e-038

when you use the offset in the float procedure, IDL takes the first 32
bits it finds from the point
specified in the offset, in this case, the beginning of the array.

you can see this if you look at the binary representation of the numbers
(i.e. using kevin ivory's
binary program):

```
IDL> print,binary(float(two_words,0))
  0   0   0   0   0   0   0   0   1   1   1   1   0   1   0   0
  0   0   0   0   0   0   0   0   1   1   1   0   1   0   0   0
IDL> print,binary(244),binary(232)
  0   0   0   0   0   0   0   0   1   1   1   1   0   1   0   0
  0   0   0   0   0   0   0   0   1   1   1   0   1   0   0   0
```

as to the difference between machines, that could be a big/little endian
thing but i really don't
know for sure (can anybody verify this?)

cheers,
eddie

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