Subject: Re: Please explain this if you can: (short)
Posted by pjclinch on Mon, 05 Dec 1994 13:46:48 GMT
View Forum Message <> Reply to Message

Russ Welti (rwelti@chroma.mbt.washington.edu) wrote:
: Try this:

: IDL> a=bytarr(20)
: IDL> a(3)=244
: IDL> print,min(a)
:   0
: IDL> print,max(a)
: 244
: IDL> print,abs(max(a)-min(a))
:   12
: IDL> print,max(a)-min(a)
: 244

Whatever it is, it also affects Wave Advantage 4.2... It seems to be a
problem purely with Byte data:

WAVE> b=244
WAVE> c=byte(b)
WAVE> info,b,c
B INT = 244
C BYTE =   244
WAVE> print,abs(b),abs(c)
 244   12

I'd suspect *very* strongly that the ABS routine is deciding that a BYTE
is signed data woth a value from -128 through to 127. If this were
actually the case, the sign bit would be set by our "244", and we'd have
a value of -12 in the system (not entirely coincidental that 244+12=256!).
ABS(-12) is, of course, 12, so to me it looks like there's a bug in ABS
relating to the sign it expects from BYTE data.

As BYTEs are designated as being unsigned, there doesn't seem to be much
point in using ABS with them, and if you're using signed data with
unsigned data... well, "don't" is my advice there, but it doesn't excuse
the bug.

Pete.
--
Peter Clinch   Dundee Teaching Hospitals NHS Trust
voice: 44 1382 660111 x 3637   snail: Directorate of Medical Physics
fax: 44 1382 640177   Ninewells Hospital
email: p.j.clinch@dundee.ac.uk   Dundee DD1 9SY Scotland UK