Subject: Re: ishft(-32768,-1) = 2147467264 ?
Posted by George McCabe on Thu, 19 Jun 1997 07:00:00 GMT
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> (Can't remember what the IDL equivilent of info is...)

the IDL equivalent to info is help

> Basically, IDL parses '-' as the unary operator, operating on an
> unsigned constant, not as part of the constant. This problem
> arises in other languages which lack explicit typing of embedded
> constants.

Is it true that IDL interprets the explicitly typed fix(-32768) as a
negative constant and not as an operator and an unsigned constant?

Thanx for the mail.

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VVVVVVVV

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reply to mail message quoted below>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
Basically, because 32768 is a long integer. When IDL parses the
line of code
    x=-32768

it sees it as
    "x becomes equal to the additive inverse of 32768"

Since 32678 is greater than the biggest possible integer, it is
made a long integer. Compare the following

```
WAVE> x=-32768
WAVE> info, x
X           LONG      =      -32768
WAVE> x=-32767-1
WAVE> info, x
X           INT      =   -32768
```

(Can't remember what the IDL equivilent of info is...)

Basically, IDL parses '-' as the unary operator, operating on an
unsigned constant, not as part of the constant. This problem
arises in other languages which lack explicit typing of embedded

constants.

Cheers, Stephen

Stephen Ritcey (902)494-3313 (voice) (902)494-5191 (fax)
Physics Dept., Dalhousie Univ., Halifax, N.S., Canada B3H 3J5

Subject: Re: ishft(-32768,-1) = 2147467264 ?
Posted by George McCabe on Fri, 20 Jun 1997 07:00:00 GMT
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mail message quoted below >>>

On Thu, 19 Jun 1997, George McCabe wrote:

> Is it true that IDL interprets the explicitly typed fix(-32768) as a
> negative constant and not as an operator and an unsigned constant?

I guess I have no way of knowing for sure, but what I'd say is that
when parsing "fix(-32768)" IDL says to itself...

i) Hmm, "32768"... that can't be an ordinary integer, so I'll
make it a long.

ii) There's the unary operator "-", so I'll change the sign.
(value is still a long).

iii) Look here, it's a call to FIX, i.e., a request to convert to
an ordinary integer. The argument is a value I can map into the
set of integers, so I'll do that.

Hope this helps

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On Fri, 20 Jun 1997 09:37:31 -0400, Jack Saba wrote:

> From the user's guide (v3.6,p 3-2):
>
> "Inegers with absolute values greater than 32767 are automatically
> promoted to longword type."
>

Jack,

Thank you for pointing that out. It makes ABS() work, since the absolute value of -32768 is not a member of the short integers. But when definitions are contradictory I get confused. Ultimately, I am going to make mistakes in my code, forgetting one or more of the rules. Still, -32768 is first a short integer and then also a long integer, in my mind at least.

George

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