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.

George McCabe (HSTX) NASA / GSFC

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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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

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

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VVVVVVV

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NASA / GSFC

Code 693, B2 R151 Greenbelt, MD 20912 Subject: Re: ishft(-32768,-1) = 2147467264 ? Posted by George McCabe on Fri, 20 Jun 1997 07:00:00 GMT

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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

VVVVVVV

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