Subject: Re: Meaning of the expression
Posted by Helder Marchetto on Tue, 20 Sep 2016 09:54:45 GMT
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On Tuesday, September 20, 2016 at 11:39:39 AM UTC+2, Markus Schmassmann wrote:
> On 09/20/2016 10:05 AM, Helder wrote:
>> On Tuesday, September 20, 2016 at 8:05:22 AM UTC+2, Sanu wrote:
>>> exp = 'BYTE(B1 NE 0)*1'
>>>
>>> What is the meaning of this expression???
>> It's not an expression, it's an assignment.
>> It assigns a string to the variable exp.
>> However, the math displayed in the string is somewhat strange:
>> - b1 NE 0 will always give a byte result, so there is no need for the byte function
>> - the *1 will convert the result to an integer or long (depending on the compiler options)
> - B1 NE 0 is of type BYTE with the Boolean flag set, the BYTE() function
> removes that flag
> - the only difference the Boolean flag makes, is to HELP,
> ISA(XXX,/boolean) and implied print
> - once *1 is applied, this does not matter
>
> if compile_opt idl2 or defint32 is set, the math in the string could be
> shortened to 'LONG(B1 NE 0)', otherwise 'FIX(B1 NE 0)'

Hi Markus,
what version of IDL do you use?
I get very different results:

```
IDL> help, 0 NE 0
<Expression>    BYTE      =    0
IDL> help, isa(0b NE 0b, /boolean)
<Expression>    BYTE      =    0
IDL> !version
{
   "ARCH": "x86_64",
   "OS": "Win32",
   "OS_FAMILY": "Windows",
   "OS_NAME": "Microsoft Windows",
   "RELEASE": "8.5.1",
   "BUILD_DATE": "Nov 14 2015",
   "MEMORY_BITS": 64,
   "FILE_OFFSET_BITS": 64
}
```

The only way I can create a boolean is with the boolean function.

```
IDL> help, isa(boolean(0b NE 0b), /boolean)
<Expression>    BYTE      =    1
```

Even this does not return a boolean:

```
IDL> help, isa(boolean(0b) NE boolean(0b), /boolean)
```

<Expression> BYTE = 0

Cheers,
Helder
