
Subject: Re: how to do bitwise operation in IDL???

Posted by [Stein Vidar Hagfors H](#) on Fri, 25 Jul 1997 07:00:00 GMT

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William Thompson wrote:

```
>
> jyli@redback.gsfc.nasa.gov (Jason Li) writes:
>
>> Hi,
>
>> I need to read and set a series of image processing flags which are
>> packed into byte size variables. Except the ISHIFT, I could not find
>> any other bitwise operators in IDL language.
>
>> OK, I can always call C or FORTRAN routines from IDL to accomplish this
>> task. But, is there a simpler way to read set bits in IDL ? After all,
>> IDL is built on C, isn't it?
>
> As well as the ISHFT function, IDL also contains the bitwise logical operators
> AND and OR. For example, if you wanted the value of the 3rd bit from the right
> in a byte value, then you could say
>
>     VALUE = ISHFT(INPUT,-3) AND 1
>
> or
>
>     VALUE = (INPUT AND '8'X) NE 0
>
```

And even though you can implement any logical operation with AND, OR and NOT (I seem to remember that the pairs NOT+AND or NOT+OR will do as well?), there's also an operator for exclusive or - called XOR, as in

```
VALUE = A XOR 1
```

which will flip the least significant bit of A..

Stein Vidar
