Subject: Re: help with reading unsigned 16-bit integers
Posted by David Fanning on Sun, 09 Dec 2007 20:46:54 GMT
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teich@atmsci.msrc.sunysb.edu writes:

> Still not sure what's going on.
>
> If I pick a value:
>
>> myval= FEATURE_CLASSIFICATION_FLAGS(10,20)
>> print,binary(fix(myval))
> 0 1 0 0 0 0 0 0 0 0 0 1 1 1 0 1
>
> Then is it safe to say that bits 1 to 3 represent 1*2^0 + 0*2^1 +
> 1*2^2 = 3. So then I know it's not cloud since cloud is '2'? Bits
> 1-3 can take on any values '0' to '7', '2' being cloud. Documentation
> also says that bits 4 through 5 take on values '0' to '3'. So in the
> above, I would do 1*2^0 + 1*2^1 = 3? Bits 6 to 7 can also take on
> values from '0' to '3', ... bits 14 to 16 can take on values from '0'
> to '5' so in the above, bits 14 to 16 give a value of 2?
>
> For bits 14 to 16, if I do
>
> print,ishft((fix(myval)),-13) I also get a value of 2 so I think this
> is what your saying to do here?

Ok, you have a value:

```
IDL> val = 16413
IDL> Print, Binary(val)
     0 1 0 0 0 0 0 0 0 0 0 1 1 1 0 1
```

You want to know the value of the first three bits:

```
IDL> Print, val AND (2L^3-1)
       5
```

You want to know the value of bits 4 and 5:

```
IDL> Print, ISHFT(val AND (2L^3 + 2L^4), -3)
       3
```

You want to know the value of bits 14-16:

```
IDL> Print, ISHFT(val AND (2L^13 + 2L^14 + 2L^15), -13)
       2
```

Cheers,

David
--
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Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")
