Subject: Re: counting bits
Posted by eddie haskell on Tue, 18 Feb 2003 16:10:29 GMT
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Craig Markwardt wrote:

> Okay, here's a problem I've always solved by the brute force method:
>
> * what is the lowest / highest bit position set in an integer?
>
> For example, a the lowest bit position in the binary number 11010100
> is 2 (bit positions are labeled starting with 0 of course). The brute
> force method involves testing each bit in succession using something
> like (VALUE AND 2L^I) for each I, until a set bit is found.

I have not done any checking to see if this is any faster than a brute force method but you could use something like this to get the lowest and highest set bits:

```
IDL> n = 212   ;11010100
IDL> nbits = 8
IDL> print,(indgen(nbits))[(where((n and 2l^lindgen(nbits)) ne 0))[[0,nbits]]]

      2       7
```

An issue with this is that N=0 will return [0,0] (the same as N=1), but checking for a N of zero can easily be done beforehand.

Cheers,
eddie