Subject: Re: counting bits
Posted by JD Smith on Thu, 20 Feb 2003 15:24:26 GMT
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On Wed, 19 Feb 2003 22:31:32 -0700, Craig Markwardt wrote:

> JD Smith <jdsmith@as.arizona.edu> writes:
>>
>> Here's a reasonably fast implementation of your proposed method for
>> arrays of unsigned longs, to count the highest bit (or rather, the
>> number of leading 0 bits).
>>
>> function leading_zeroes_reg,num
>> num=[num]
>> zeroes=make_array(/BYTE,DIMENSION=size(num,/DIMENSIONS),VALU E=255b)
>> for i=0,31 do begin
>> shft=ishft(num,-(31-i)) AND 1
>> zeroes=(zeroes ne 255b)*zeroes+(zeroes eq 255b)* $
>> ((shft eq 1)*i+(shft ne 1)*255b)
>> endfor
>> return, (zeroes eq 255b)*32+(zeroes ne 255b)*zeroes
>> end
>
> Thanks. Thinking about it further, one could probably do a pretty fast
> look up table on a byte-by-byte basis, similar to the counting-bits
> lookup that you presented initially.
>

Yes, but it wouldn't have the street cred of '7dcd629'XUL.

JD