
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),VALUE=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
