Subject: Fast shear
Posted by the_cacc on Tue, 05 Feb 2002 13:00:51 GMT
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Hi,

Anyone know a way of doing the following as fast as possible:

for i = 0, n-1 DO array[*,i] = SHIFT(array[*,i],i)

or, even better,

for i = 0, n-1 DO array[*,i] = SHIFT(array[*,i],delta[i])

where delta is an INTARR.

Ciao.

(NB. using IDL5.5 - when it works ;))

Subject: Re: Fast shear
Posted by Martin Downing on Thu, 07 Feb 2002 12:53:32 GMT
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> Wayne Landsman <landsman@mpb.gsfc.nasa.gov> wrote in message
news:<3C60199D.E4810C70@mpb.gsfc.nasa.gov>...
>>
>> "Avoid the use of an asterisk on the left-hand side of an assignment."
>>
>> which in this case means to rewrite the assignment as
>>
>> for i = 0, n-1 DO array[0,i] = SHIFT(array[*,i],delta[i])
>>
>> For a fltarr(2048,2048) on my Solaris machine running V5.5, I find a
>> factor of 15 improvement in speed.
>>
>
> WOW! Wayne, that's magic. I get 10-15X speed-up. The world *has* to be
> told about this. One drawback - the code does not strictly make sense,
> hell who cares !?
>
I second that WOW! I had not realised that by specifying a single cell of
an image on the left hand side allows intelligent access to the elements
mapped by the dimensional shape of the right hand side. Offset assignments
in 2/3d images become a breeze.

e.g. to set image[100:109,100:129] = 255:
 image[100,100] = replicate(255, 10, 30)

I had stupidly assumed that the assignment would follow C language rules and
fill in a raster ordering.
Thanks for the tip - I will be using this method from now on

Martin
