
Subject: Re: rotating 3d array: help for the braindead!
Posted by [Fergus Gallagher](#) on Wed, 15 Feb 1995 11:48:28 GMT
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pjclinch@dux.dundee.ac.uk (Pete Clinch) wrote:

>
> I have a stack of MRI images that make up a 3d array, and I want to turn
> all the constituent images over.
> At the moment, I've got a FOR loop that goes through using
>
> ROTATE(image(*,*,i),2)
>
> on each one, but I'm convinced there must be a better way to do it in a
> oner without the FOR loop to slow things down.

Off the top of my head, the following might work :-0

```
s = (size(image))(1:3)
image = reform(image,s(0),s(1)*s(2),/overwrite)
image = rotate(image,2)
image = reform(image,s(0),s(1),s(2),/overwrite)
```

BUT only for the case where you want to flip the images up-down.

I haven't tried this, so take it with a PINCH of salt.....

Fergus Gallagher
British National Space Centre

Subject: Re: rotating 3d array: help for the braindead!
Posted by [Fergus Gallagher](#) on Wed, 15 Feb 1995 12:03:18 GMT
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Fergus Gallagher <f.Gallagher@nerc.ac.uk> wrote:

> Off the top of my head, the following might work :-0
>
> s = (size(image))(1:3)
> image = reform(image,s(0),s(1)*s(2),/overwrite)
> image = rotate(image,2)
> image = reform(image,s(0),s(1),s(2),/overwrite)
>
> *BUT* only for the case where you want to flip the images up-down.
>
> I haven't tried this, so take it with a PINCH of salt.....
>
> Fergus Gallagher

> British National Space Centre

On second thoughts, it probably won't - it would if your "bands" were in the the first index, i.e.,

```
image(i,*,*)
```

and then

```
s = (size(image))(1:3)
image = reform(image,s(0)*s(1),s(2),/overwrite)
image = rotate(image,7)
image = reform(image,s(0),s(1),s(2),/overwrite)
```

should work.

Fergus

P.S. Bill Thompson (NASA) recently posted his REARRANGE.PRO (with fast CALL_EXTERNAL call) in this newsgroup: you might find this useful to rearrange (!) your image into the above format.

See thread "Inner product of multi-dimensional arrays"

Subject: Re: rotating 3d array: help for the braindead!

Posted by [mark_cadwell](#) on Mon, 20 Feb 1995 18:12:03 GMT

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> I have a stack of MRI images that make up a 3d array, and I want to turn
> all the constituent images over.
> At the moment, I've got a FOR loop that goes through using
>
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>
> on each one, but I'm convinced there must be a better way to do it in a
> oner without the FOR loop to slow things down.

There is a method of animation called double buffering where you plot an image to a virtual window, copy the virtual window to your main window, and while that is going on, you're drawing the next image to the virtual window again. The advantage of doing it this way is that plotting to virtual windows is much faster (at least in my machine) than plotting to visible windows, and copying from a virtual window to a visible window is also much faster than plotting. The result is a nice, smooth, and reasonably fast image rotation.

