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Subject: Re: minimum intensity projection  
Posted by [Dick Jackson](#) on Fri, 02 Jul 2004 15:01:11 GMT  
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Hi Maarten,

"maarten" <user@domain.invalid> wrote in message  
news:40E56C55.90001@domain.invalid...

> Hello everybody,  
>  
> I am trying to perform a minimum intensity projection on a 3d MRI  
> dataset, and I was hoping if anyone ever wrote an algorithm to  
> perform  
> this. Because I am having some problems implementing this myself.  
>  
> thanks in advance,  
>  
> Maarten

I believe that "maximum intensity projection" is more common, and is found in a few places in IDL. Use IDL Online Help's "Search" function for the words "intensity projection" and you get several routines that might do just what you want: SLICER3, VOXEL\_PROJ, and in IDL 6.0, IVolume.

I suppose if you really wanted minimum intensity projection you could invert your data and then use maximum intensity projection:

```
newData = 255B - oldData ; Assumes that you have 1-byte data
```

I hope this helps you.

Cheers,

--

-Dick

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Subject: Re: minimum intensity projection  
Posted by [David Fanning](#) on Fri, 02 Jul 2004 15:15:10 GMT  
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maarten writes:

> I am trying to perform a minimum intensity projection on a 3d MRI

> dataset, and I was hoping if anyone ever wrote an algorithm to perform  
> this. Because I am having some problems implementing this myself.

When we want a minimum projection image of one of our volumes,  
we simply do this:

```
min_image = Min(volume, Dimension=3)
```

We have had some discussion with doctors about whether  
this \*means\* anything, but it's easy enough to do, so  
why not. :-)

More often they are interested in the maximum intensity  
projection, which--of course--is done like this:

```
max_image = MAX(volume, Dimension=3)
```

If we are calculating a MIP Cine image, we will  
do a bit a weighting of the values, otherwise  
as the image rotates it is very difficult to  
distinguish front from back.

Cheers,

David

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David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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