Subject: Re: 2D to 3D Array
Posted by Paul Van Delst[1] on Fri, 07 Apr 2006 20:21:22 GMT
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rafaloos@gmail.com wrote:
> I have a Band Interleaved Image (BIL):
> samples = 300
> lines = 316
> bands = 481
>
> I can read this image as a 2D array of (144300, 316) Where 144300 will
> be the product of samples by bands.
> I would like to reformat the image so that I can put the data into an
> array such as (300, 316, 481).
>
> For example: I have this array (6,2)
>
> array[*,0] = [1, 2, 1, 2, 1, 2]
> array[*,1] = [3, 4, 3, 4, 3, 4]
>
> What I want is a result as:
>
> array[*,*,0] = 1, 2
> 3, 4
>
> array[*,*,1] = 1, 2
> 3 ,4
>
> array[*,*,2] = 1, 2
> 3, 4
>
> so that my array will be (2,2,3)

REFORM your [144300,316] array to [300,481,316], and then use TRANSPOSE to swap the last two indices. E.g.

```
IDL> array=lonarr(8,2)
IDL> array[*,0] = [1, 2, 1, 2, 1, 2, 1, 2]
IDL> array[*,1] = [3, 4, 3, 4, 3, 4, 3, 4]
IDL> help, array
ARRAY           LONG      = Array[8, 2]
IDL> a=reform(array,2,4,2)
IDL> help, a
A               LONG      = Array[2, 4, 2]
IDL> print, a[*,*,0]
          1           2
          1           2
          1           2
```

```
           1           2
IDL> print, a[*,*,1]
           3           4
           3           4
           3           4
           3           4
IDL> b=transpose(a,[0,2,1])
IDL> help, b
B               LONG      = Array[2, 2, 4]
IDL> print, b[*,*,0]
           1           2
           3           4
IDL> print, b[*,*,1]
           1           2
           3           4
IDL> print, b[*,*,2]
           1           2
           3           4
IDL> print, b[*,*,3]
           1           2
           3           4
```

paulv

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Paul van Delst
CIMSS @ NOAA/NCEP/EMC