
Subject: Re: (more) Efficient way to generate an array whose elements are the distance from the center

Posted by [Lajos Foldy](#) on Fri, 06 Jul 2012 20:53:29 GMT

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On Friday, July 6, 2012 10:37:35 PM UTC+2, Mike F. wrote:

> Hello all.

>

> I'm new to IDL (and coding in general), and I'm looking to find a more efficient way to generate an nxn array where each element is the distance from the center of the array.

>

> 3 x 3 Ex: 1.4 1 1.4

> 1 0 1

> 1.4 1 1.4

>

> All I can think of on my own is a nested FOR loop as such:

>

> FOR i = 0!, (n - 1) DO BEGIN

> FOR j = 0!, (n - 1) DO BEGIN

>

> plane[i,j] = SQRT((i-n/2.)^2 + (j - n/2.)^2)

>

> ENDFOR

> ENDFOR

>

> From what I've read on IDL forums, nested FOR loops are the pinnacle of sin, and I'd like to be a bit more pious if possible.

>

> Any tips would be appreciated!

Look up DIST and SHIFT in the docs:

```
IDL> print, shift(dist(3),1,1)
```

```
1.41421 1.00000 1.41421
```

```
1.00000 0.00000 1.00000
```

```
1.41421 1.00000 1.41421
```

regards,

Lajos
