Subject: Re: FFT and ROTATE
Posted by Kenneth P. Bowman on Sun, 07 Sep 2008 12:59:58 GMT
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In article
<0fc5b913-ae5d-4a1c-afb3-ba1184f174ce@c58g2000hsc.googlegroups.com>,
 wheinz@gmail.com wrote:

> Thanks for the suggestions. I am still confused by a few things, but
> with Wox's code I think I can clarify my question. The problem is that
> although Wox's code shows that the FFT of the rotated image and the
> rotated FFT of the original image give you back images that look like
> the original when inverse -transfored, the values of the coefficients
> in those two FFTs are not the same. I added some print statements to
> Wox's code to show what is confusing me.

I find that the only way to really understand FFTs is to work with a
example where I know the answer exactly. I suggest that you create
a highly simplified image by combining a few harmonic components
in the x- and y-directions, then look at the FFTs with and
without rotation.

For example

```
  f(x,y) = sin(2 * !pi * x)  #  sin(4 * !pi * y)
```

where x = y = FINDGEN(16)/16.0

You can use try different (distinct) sine and cosine components
to investigate how they translate into real and imaginary
parts.

Also, you can look at dimensions sizes that are not powers of 2.

Ken Bowman