Subject: circles
Posted by lady of the elves on Wed, 09 Jul 1997 07:00:00 GMT
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[incidentally, I'm new to this language :)]

I'm trying to create a two-dimensional array, such that tvscl of the
array will show a filled circle. So far, my best idea has not
worked--but here it is:

x and y are one-D arrays of 200 elements such that plot,x,y produces a
circular shape, but not filled.

```
for round1=0,199 do begin
   for round2=0,199 do begin
    if (y(round1) eq y(round2)) then begin
 circle(y(round1),x(round1):x(round2))=2
    endif
   endfor
endfor
```

A circle is composed of boundary points such that: for each x, there are
two y's and for each y, there are two x's--right? If I fill between the
y's, I should have a circle....right?

I would really like to have a circularly-filled array; if anyone has
better knowledge, please let me know :)
Thanks.
-gzb

Subject: Re: circles
Posted by pit on Mon, 14 Jul 1997 07:00:00 GMT
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In article <33C6A55C.E92FBB0D@kprwww.na.astro.it>,
 Kevin Reardon <kreardon@kprwww.na.astro.it> writes:

```
>  ;for a circle centered at (150,50)
>  xx = rebin(findgen(201,201) - 150,201,201)
                  ^^^
                  must be 1

>  yy = rebin(findgen(1,201) - 50,201,201)

>  radial_distance = sqrt(xx^2 - yy^2)
                    ^^^
                    must be a +
```

> tvscl,radial_distance le 50 ; displays a white filled circular mask

> The previous suggestion by Peter Suetterlin (pit@uni-sw.gwdg.de) of:
> img = (shift(dist(X,Y),x0,y0)) LT R
> doesn't seem to work if x0 and y0 are not equal to X/2 and Y/2
> (i.e. the circle is not centerted) because of wrapping problems when
> the array is shifted.

Strange, what system/version are you using?
I checked it before posting, and just again on three different systems
(Linux, SunOS, HP-UX) with IDL 4.01 and 3.0.0:
tvscl, (shift(dist(201,201),150,50)) lt 50
exactly does what it is expected to do???

Peter

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-- * -- * ...-- * -- * ...-- * -- * ...-- * -- * ...-- * -- * ...-- * --
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Subject: Re: circles
Posted by pit on Wed, 16 Jul 1997 07:00:00 GMT
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In article <5qd140ckk1@gwdu19.gwdg.de>,
pit@re.uni-sw.gwdg.de (Peter Suetterlin) writes:
> In article <33C6A55C.E92FBB0D@kprwww.na.astro.it>,
> Kevin Reardon <kreardon@kprwww.na.astro.it> writes:

>> The previous suggestion by Peter Suetterlin (pit@uni-sw.gwdg.de) of:
>> img = (shift(dist(X,Y),x0,y0)) LT R
>> doesn't seem to work if x0 and y0 are not equal to X/2 and Y/2
>> (i.e. the circle is not centerted) because of wrapping problems when
>> the array is shifted.
>

> Strange, what system/version are you using?
> I checked it before posting, and just again on three different systems
> (Linux, SunOS, HP-UX) with IDL 4.01 and 3.0.0:

Yes, Kevin was right, my suggestion doesn't work in all cases, as he wrote me by email:
The radius R of the circle has to be smaller than the shift amounts x0 and y0, and also smaller than (X-x0) and (Y-y0), or the edge-wraping of the SHIFT function will produce strange results. Sorry :-/

Peter

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-- * -- * ...-- * -- * ...-- * -- * ...-- * -- * ...-- * -- * ...-- * --
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