Subject: Maximum ROI within an ROI
Posted by Messon Gbah on Tue, 12 Sep 2000 16:05:22 GMT
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Here is a problem which may be trivial for some of you IDL gurus. I will be VERY grateful for any help, help, direction, or pointers.

Take 2 regions (ROIs) of an image: One outer ROI and one inner ROI. The inner ROI fits entirely inside the outer. For example:

```
;inner ROI, call it oROI
ix = [100, 150, 150, 100, 100]
iy = [70, 70, 120, 120, 70]
;outer ROI, call it iROI
ox = [100, 200, 150, 150, 200, 200, 100, 100]
oy = [70, 70, 95, 120, 145, 170, 170, 70]

;and a simple image
image = dist(256)

tv, image               ;display the image
plots, ox, oy, /device ;display oROI
plots, ix, iy, /device ;display iROI
```

Now the problem: Search ONLY the sub-image inside the oROI and find:
1) The number N of possible positions where iROI fits inside the oROI.
2) The optimal ROI (call it maxROI) characterized by the largest total(image(maxROI))/n_elements(iROI)
amongst all N possible iROI positions inside oROI. The average value of the sub-image inside maxROI is the is highest of all N possible.

Thanks in advance.

Messon Gbah