Subject: Compute Euclidean distances
Posted by lbusett@yahoo.it on Fri, 25 May 2007 07:46:41 GMT
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Hi all,

I have the following problem: given an image of about 700000 pixels, i need to calculate the distance between each pixel and about 150 points of known coordinates. Actually, I'm actually using a simple for loop like that:

```
            ; map_x = array of east coordinates of each pixel (n =
700000)
            ; map_y = array of north coordinate of each pixel  (n
= 700000)
            ; east = array of east coordinates of the each point
(n= 150)
            ; north = array of north coordinates of the each
point  (n= 150)
            ; dist_pt ="results" array (n = 700000*150)
            ;
            for point= 0, n_points-1 do begin

  dist_x =  (map_x - East [point])^2
  dist_y =(map_y - North [point])^2
  dist_pt [*,point]  = sqrt ( dist_x + dist_y)

 endfor
```

but the processing is quite slow (more than one minute on my PC), so i'd like to ask you if there is a way to increase the speed of the process.

Thanks in advance for the help,

Lorenzo Busetto

Subject: Re: Compute Euclidean distances
Posted by greg.addr on Tue, 29 May 2007 07:40:56 GMT
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Are you sure you want all those values? Do you use every one of them?
It might be faster and more elegant to calculate them on demand.

many greetings,
Greg