Subject: advise for saving a for-loop
Posted by Bernhard Reinhardt on Mon, 14 Sep 2009 15:52:34 GMT
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Hi,

I don't know if there's a special term for what I'm trying to do:

I have two 2D arrays of the same size (msg_x and msg_y) which contain x- and y-values. So msg_y consists of rows which contain mainly the same values and msg_y consists of columns which contain mainly the same values. But it has to mentioned that values are slightly changing in a row or column. That's what make's things nasty.
For msg_y it means, it may look like:
1000 1000 1000 1000 [..] 1001 1001 1001 1001 [..] 1002 1002
1001 1001 1001 1001 [..] 1002 1002 1002 1002 [..] 1003 1003
1002 1002 1002 [..] 1003 1003 1003 1003 [..] 1004 1004 1004

I also have two linear arrays li_x and li_y of the same size. I now want to make a map with the same dimensions of msg_x with a 1 where the points in the linear arrays match into the pseudo-grid and 0 elsewhere.

Here's how I do it at the moment:

```
for i=0, N_ELEMENTS(li_x)-1 do begin
  ind=WHERE(msg_x eq li_x[i] AND msg_y eq li_y[i])
  if ind[0] ne -1 then ligrid[ind] = 1
endfor
```

The 2-D arrays have sizes of 600x600 or 1800x1800 and the linear arrays are of size 10000.

This means where has to search 10000 over the two 2D-arrays which takes some time.

I guess there must be a smarter way to do. I thought about some solutions involving sort and histogram but so far I couldn't come up with a solution without for-loops.

I'd be pleased if someone of you could enlighten me.

Regards,

Bernhard