
Subject: find_boundary routine

Posted by [brian_frizzelle](#) on Thu, 18 Mar 2004 22:06:49 GMT

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Let me apologize if this post is a bit lengthy. And in case it's important, I'm using IDL 6.0 on a Windows machine.

I need help calculating the perimeters of regions. I have an input array of roughly 900 by 1200 cells which contains 15 different categories (coded 1 through 15). For each category, I need to find the total perimeter length among all of its regions.

I found David Fanning's FIND_BOUNDARY routine and ran it on this array, but it seemed to stop at the first region that it found. So I wrote a script that subsetted each array first by category, then by region within the category (regions were created with LABEL_REGION). Running FIND_BOUNDARY again, I got an output for each category, but the numbers seemed off.

So I resorted to creating a simple 5x5 array with two categories, one region each, to test the perimeter output of FIND_BOUNDARY.

- Category 1 has 16 cells and a perimeter of 18.

- Category 2 has 9 cells and a perimeter of 18.

- * FIND_BOUNDARY output a perimeter of 2 for each category.

- * FIND_BOUNDARY also only give me an output array with 2 X/Y coordinates.

Has anyone else found this to be a problem? Maybe I'm passing in the wrong parameters. Here are the details of what I've done so far. Any help would be greatly appreciated.

Brian Frizzelle

```
arrayTest:  regCat1:  regCat2:
1 1 1 2 2  1 1 1 0 0  0 0 0 1 1
1 1 1 2 2  1 1 1 0 0  0 0 0 1 1
1 1 1 1 2  1 1 1 1 0  0 0 0 0 1
1 1 1 1 2  1 1 1 1 0  0 0 0 0 1
1 1 2 2 2  1 1 0 0 0  0 0 1 1 1
```

```
IDL> bndry = find_boundary(regCat1, XSize=5, YSize=5, Perimeter=perim)
```

```
IDL> print, perim
```

```
2.0000000
```

```
IDL> print, bndry
```

```
0 0
```

```
0 1
```
