Subject: Re: array subscripting problem
Posted by Benjamin Luethi on Mon, 11 Apr 2005 15:11:54 GMT

Hi Martin,

You could also extract a 3x3 sub-array first and then do the comparisons
on it. This way you don't need any if checks at all:

```
s = Size(data, /Dimensions)
subarray=data[ ((i-1)>0):((i+1)<(s[0]-1)), ((j-1)>0):((j+1)<(s[1]-1)), k ]
f=f+total(ABS(cd-subarray) LE mg)-1
```

Notice that the subarray is not 3x3 if i or j are at the border.
Also notice the -1 in the third line: it's because the [i,j]-element is
always part of the subarray and counts as well.

Ben

On 11 Apr 2005 06:00:14 -0700, Martin Doyle <m.doyle@uea.ac.uk> wrote:

```
> Hi Guys,
>
> I've got a gridded dataset and I'm searching the grid trying to find
> those points which have a certain value. Once I've found this point, I
> want to check all points around it to see if they have the same value
> plus a little bit. This is what I've come up with:
>
>   If (data(i,j,k) GE p) THEN begin
>
>     cd = data(i,j,k)
>
>     If(ABS(cd-data[i-1,j-1,k]) LE mg) then f = f+1
>     If(ABS(cd-data[i,  j-1,k]) LE mg) then f = f+1
>     If(ABS(cd-data[i+1,j-1,k]) LE mg) then f = f+1
>     If(ABS(cd-data[i-1,j,  k]) LE mg) then f = f+1
>     If(ABS(cd-data[i+1,j,  k]) LE mg) then f = f+1
>     If(ABS(cd-data[i-1,j+1,k]) LE mg) then f = f+1
>     If(ABS(cd-data[i,  j+1,k]) LE mg) then f = f+1
>     If(ABS(cd-data[i+1,j+1,k]) LE mg) then f = f+1
>
>         endif
>
> However, array subscripting with negative numbers isn't allowed by
> IDL.
>
> Has anyone any ideas how I might get around this?
>
```

> Many thanks!
>
> All the best
> Martin

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