Subject: quickly reassign numbers in large array?
Posted by vlk.astro on Wed, 13 Sep 2006 23:41:22 GMT
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Hello,

I am faced with a need to speed up a program which takes parts of an image and reassigns values to them. I have so far gotten away with a for-loop. Here is an example to illustrate what I am trying to do:

```
;  make up an image
img=shift(dist(512),255,255)
image = 10*(img lt 10) + 20*(img gt 20 and img lt 30) + 50*(img gt 50
and img lt 100)

; this image has these labels and this many distinct regions
labels = image[uniq(image,sort(image))]   ; =[0,10,20,50]
nregions=n_elements(labels)               ; =4

; now I want to make a new image with new labels
newimage=0*image
for i=0,nregions-1 do
  idx=where(image eq label[i])
  newimage[idx]=i  ; now newimage will have labels [0,1,2,3]
endfor
```

There has to be a faster, if not cleverer, way to do this reassignment. Those multiple where()'s and the for-loop are fine for readability, but are a major drain on the cpu and user patience when you have large images and thousands of segments.

Any ideas?

Thanks,
Vinay