Subject: Speed problem
Posted by lloyd on Wed, 23 Feb 2005 18:22:00 GMT
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Hi

Can anyone help me speed up this piece of code. I've hear that using histograms might be good, any ideas?

This piece of code takes a point centered at [pixel_z,pixel_y] and looks for all detections within a 'radius'. The position of these detections are defined by two arrays, z and y, giving their coordinates. After this other things are done but this isn't a problem. The really slow part is the pt1 where section. This identifies from the arrays of 200,000 points, the points which lie in a box +-radius in y and z. Then the coners are removed using then next where condition.

```
for pixel_y=uint(min(y)),roundup(max(y))-1 do begin
  for pixel_z=uint(min(z)),roundup(max(z))-1 do begin
  pt1 = where(y ge pixel_y-radius and y le pixel_y+radius and z ge
pixel_z-radius and z le pixel_z+radius)
  if pt1[0] ne -1 then begin
   b = where((y[pt1]-pixel_y)^2+(z[pt1]-pixel_z)^2 le radius^2)
   if b[0] ne -1 then begin
    a = pt1[b]
    w = weight(SQRT((y[a]-pixel_y)^2+(z[a]-pixel_z)^2),FWHM/3.0)
    m[(pixel_y-uint(min(y))),(pixel_z-uint(min(z)))] = total(w*s[a])
   endif
  endif
 endfor
endfor
```

Any help would be greatly appriciated

Lloyd

Subject: Re: Speed problem
Posted by Vince Hradil on Wed, 02 Mar 2005 18:19:14 GMT
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Why do you even do the first where? Why not just do:

b = where((y-pixel_y)^2+(z-pixel_z)^2 le radius^2)   ?

Anyway, Your code only takes me about 20 ms?

Subject: Re: Speed problem
Posted by Vince Hradil on Wed, 02 Mar 2005 18:41:18 GMT
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Sorry, let me clarify: the "where" statement only takes about 20 ms.