Subject: Re: Point of intersection
Posted by kishore1818 on Thu, 31 Jul 2008 13:44:09 GMT
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On Jul 31, 5:51 am, Wox <nom...@hotmail.com> wrote:
> On Wed, 30 Jul 2008 08:46:30 -0700 (PDT), kishore1...@gmail.com wrote:
>> ...how to find out that
>> particular interesection x and y value.
>
> The could below works for any x and y values but might be simplified
> in your case (special y values).

```
>
> function segmentintersect,L1x,L1y,L2x,L2y,xy=xy
>
> ; code:
> ; 0: no intersecting
> ; 1: intersect in 1 point
> ; 2: parallel
> ; 3: coincident
>
>  denom=float(L2y[1]-L2y[0])*(L1x[1]-L1x[0])-(L2x[1]-L2x[0])*( L1y[1]-L1y[0])
>  numa=(L2x[1]-L2x[0])*(L1y[0]-L2y[0])-(L2y[1]-L2y[0])*(L1x[0] -L2x[0])
>  numb=(L1x[1]-L1x[0])*(L1y[0]-L2y[0])-(L1y[1]-L1y[0])*(L1x[0] -L2x[0])
>
> if denom eq 0 then code= (numa eq 0 and numb eq 0)+2 $
> else begin
>        ua = numa / denom
>        ub = numb / denom
>
>        code= ua ge 0 and ua le 1 and ub ge 0 and ub le 1
>        if code then $
> xy=[L1x[0]+ua*(L1x[1]-L1x[0]),L1y[0]+ua*(L1y[1]-L1y[0])]
> endelse
>
> return,code
> end;function segmentintersect
>
;%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%%%%%%%%%%%%% %%%%%%%%%%%
>
> pro segtest
>
> x1=[0.1,0.2,0.6,0.7]
> x2=[0.5,0.4,0.5,0.3]
> y1=[1,2,3,4]
> y2=y1
>
> window
```

```
> plot,x1,y1,psym=-2
> oplot,x2,y2,psym=-2
>
> n=n_elements(x2)
> y2_1=interpol(y1,x1,x2)
> b=y2_1 gt y2
> interval=where(b[0:n-2]-b[1:*],ct)
> if ct ne 0 then begin
>       xy=fltarr(2,ct)
>       for i=0,ct-1 do begin
>             j=interval[i]
>             L2x=x2[j:j+1]
>             L2y=y2[j:j+1]
>             j=value_locate(x1,L2x)
>             k=0
>             repeat begin
>                   L1x=x1[j[k]:j[k]+1]
>                   L1y=y1[j[k]:j[k]+1]
>                   code=segmentintersect(L1x,L1y,L2x,L2y,xy=tmp)
>                   b=code eq 1
>                   if b then begin
>                         xy[*,i]=tmp
>                         plots,[tmp[0],tmp[0]],[0,tmp[1]],/data
>                   endif
>                   k++
>             endrep until b or (k eq 2)
>       endfor
> endif
>
> end;pro segtest
>
;%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%%%%%%%%%%%% %%%%%%%%%
```

Hi,

Thanks for your program. This is useful for multiple intersection of
two lines. It is very interesting.

Kishore