
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