
Subject: Re: Accelerating a one-line program doing matrix multiplication

Posted by [pgrigis](#) on Thu, 30 Sep 2010 14:59:59 GMT

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```
>  
> FUNCTION vc2rc_accel, v0,v1,v2,v3,vc  
>   npoints = (SIZE(vc, /DIMENSIONS))[1]  
>   for i=0L, npoints-1 DO BEGIN  
>       vc[:,i] = vc[0,i] * v1 + vc[1,i] * v2 + vc[2,i] * v3 + v0  
>   endfor  
>   RETURN, vc  
> END
```

No, that's using a for loop - that's why it is slow.

You want something like this (no loops):

```
vc0=vc[0,*]  
vc1=vc[1,*]  
vc2=vc[2,*]  
vc[0,*]=vc0*v1[0]+vc1*v2[0]+vc3*v3[0]  
vc[1,*]=vc0*v1[1]+vc1*v2[1]+...  
vc[2,*]=vc0*v1[2]+...
```

Ciao,
Paolo
