Subject: Centroid computation for a 3D array in PV-Wave
Posted by Nagesh Mallugari on Fri, 09 Jan 1998 08:00:00 GMT
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Hi!

Can anybody suggest an efficient way to compute a centroid for 3D array in PV-Wave?

Thanks to David Foster of UCSD, he forwarded a couple of methods of centroid computation for a 2D array in IDL which he saved from the discussions on this news group. The following are the methods:

```
>   sz = size(array)
>   xcoors = indgen(sz(1)) # replicate(1,sz(2))
>   ycoors = replicate(1,sz(1)) # indgen(sz(2))
>
>   xcg = total(array*xcoors)/total(array)
>   ycg = total(array*ycoors)/total(array)
```

```
sz = size(array)
tot = total(array)

xcg = total(total(array,2)*indgen(sz(1)))/tot
ycg = total(total(array,1)*indgen(sz(2)))/tot
```

But PV-Wave does not allow the usage of 'Total' function as in the second form of the code. And though I understood how the first form of code works for 2D centroid computation, I could not extend it to work for a 3D array. Any suggestions will be appreciated.

thanks,
Nagesh