
Subject: Re: map_proj_inverse question

Posted by [David Fanning](#) on Wed, 12 Jan 2011 18:15:27 GMT

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nata writes:

```
> I'm setting a projection using MAP_SET (IDL 7.1), after that I want to
> retrieve the lat/lon values of the mouse position.
> What I'm doing is the following :
>
> 1) I retrieve the mouse position, using event.X and event.Y
> 2) After that, I normalize the X,Y position, taking in account the
> UV_BOX of the map structure
>
>   uv_box_lenght=[!map.UV_BOX[2]-!map.UV_BOX[0],!map.UV_BOX[3]- !
>   map.UV_BOX[1]]
>
>   X=event.X/dim[0]*uv_box_lenght[0] + uv_box_lenght[0]
>   Y=event.Y/dim[1]*uv_box_lenght[1] + uv_box_lenght[1]
>
> 3) And I calculate the lat/lon values using map_proj_inverse
>
>   PRINT, MAP_PROJ_INVERSE(X,Y,MAP_STRUCTURE=!map)
>
> Mmmmh !!!! Something is not working well because the values I obtain
> are incorrect.
> What am I missing ?
```

If you have a map coordinate system set up, just use `Convert_Coord` to convert your device coordinates to data coordinates. If these are in projected meters (I hope so!), then just use `Map_Proj_Inverse` to convert these to lat/lon.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: map_proj_inverse question

Posted by [natha](#) on Wed, 12 Jan 2011 18:53:53 GMT

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Thank you David, I can get the lat/lon values of the mouse position doing:

```
result=CONVERT_COORD(event.X,event.Y,/DEVICE,/TO_DATA)
```

The problem I have is that my map coordinate system is not set up. So when I call CONVERT_COORD I obtain the following message :
% CONVERT_COORD: Window is closed and unavailable.

I'm creating my images in a Z-buffer and when I restore the X device I lose the map coordinate system. However, I have a copy of the !map structure.

Is there a way to retrieve the lat/lon without using CONVERT_COORD ?

Thank you,
nata

Subject: Re: map_proj_inverse question

Posted by [natha](#) on Wed, 12 Jan 2011 19:00:11 GMT

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Sorry guys,

There is a mistake on my formula :

```
X=event.X/dim[0]*uv_box_lenght[0] + !map.UV_BOX[0]  
Y=event.Y/dim[1]*uv_box_lenght[1] + !map.UV_BOX[1]
```

Now, this is correct ! :P

nata

Subject: Re: map_proj_inverse question

Posted by [David Fanning](#) on Wed, 12 Jan 2011 19:10:33 GMT

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nata writes:

```
> Thank you David, I can get the lat/lon values of the mouse position  
> doing:  
>  
> result=CONVERT_COORD(event.X,event.Y,/DEVICE,/TO_DATA)
```

>
> The problem I have is that my map coordinate system is not set up. So
> when I call CONVERT_COORD I obtain the following message :
> % CONVERT_COORD: Window is closed and unavailable.

Yes, this is one reason I created the MapCoord object in the Catalyst Library. I was doing a lot of map projections in widget programs and I needed to be able to make sure the map data coordinate system was "alive" when I needed it. Simply calling the Draw method on the MapCoord object restores the data coordinate system without actually drawing anything.

```
WSet, info.mapWindow  
info.mapCoord -> Draw
```

Cheers,

David

--

David Fanning, Ph.D.
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