Subject: Re: 3d device coordinates from a 3D polyline....
Posted by George.millward on Fri, 28 Sep 2012 21:31:49 GMT
View Forum Message <> Reply to Message

On Friday, September 28, 2012 3:30:56 PM UTC-6, (unknown) wrote:
> Hi there,
>
>
>
> This must be straightforward but I'm lost in the help system:
>
>
>
> I have am idlgrpolyline which I can rotate in a 3D view (with the trackball).
>
> I want to know the 2D coordinates of this line in the device (ie,the 2D the projection in the window). Can't figure it out.
>
>
>
> Any ideas ?
>
>
>
> Cheers
>
>
>
> George.

sorry, that should say : '2d device coordinates from a 3D polyline....'

Subject: Re: 3d device coordinates from a 3D polyline....
Posted by David Fanning on Mon, 01 Oct 2012 12:31:59 GMT
View Forum Message <> Reply to Message

George.millward@yahoo.com writes:

> I have am idlgrpolyline which I can rotate in a 3D view (with the trackball).
> I want to know the 2D coordinates of this line in the device (ie,the 2D the projection in the window). Can't figure it out.

I'm no expert in this area, but I think the 3D to 2D
conversions of the transformation matrix (which you
can recover from the trackball) are well known. You
can read the answer at the bottom of this article,
for example:

http://math.stackexchange.com/questions/336/why-are-3d-transformation-matrices-4x4-instead-of-3x3

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: 3d device coordinates from a 3D polyline....
Posted by George.millward on Mon, 01 Oct 2012 17:07:21 GMT

On Monday, October 1, 2012 6:32:00 AM UTC-6, David Fanning wrote:
> George.millward@yahoo.com writes:
>
>
>
>> I have am idlgrpolyline which I can rotate in a 3D view (with the trackball).
>
>> I want to know the 2D coordinates of this line in the device (ie,the 2D the projection in the window). Can't figure it out.
>
>
>
> I'm no expert in this area, but I think the 3D to 2D
>
> conversions of the transformation matrix (which you
>
> can recover from the trackball) are well known. You
>
> can read the answer at the bottom of this article,
>
> for example:
>
>
>
>   http://math.stackexchange.com/questions/336/why-are-3d-
>
> transformation-matrices-4x4-instead-of-3x3
>

>
>
> 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.")

Hmm,

So there is nothing in the object graphics system like the 'CONVERT_COORD' routine ?

George.

Subject: Re: 3d device coordinates from a 3D polyline....
Posted by DavidF[1] on Mon, 01 Oct 2012 17:10:14 GMT

View Forum Message <> Reply to Message

George Millward writes:

> So there is nothing in the object graphics system like the 'CONVERT_COORD' routine ?

Not to my knowledge. :-(

Cheers,

David

Subject: Re: 3d device coordinates from a 3D polyline....
Posted by lecacheux.alain on Tue, 02 Oct 2012 09:22:12 GMT

Le lundi 1 octobre 2012 19:07:22 UTC+2, (inconnu) a écrit :
> On Monday, October 1, 2012 6:32:00 AM UTC-6, David Fanning wrote:
>
>>> I have am idlgrpolyline which I can rotate in a 3D view (with the trackball).
>
>>
>
>>> I want to know the 2D coordinates of this line in the device (ie,the 2D the projection in the window). Can't figure it out.
>
>>
>
>>
>
>>
>
>> I'm no expert in this area, but I think the 3D to 2D
>
>>
>
>> conversions of the transformation matrix (which you
>
>>
>
>> can recover from the trackball) are well known. You
>
>>
>
>> can read the answer at the bottom of this article,
>
>>
>
>> for example:
>
>>
>
>>
>
>>
>
>>   http://math.stackexchange.com/questions/336/why-are-3d-
>
>>
>
>> transformation-matrices-4x4-instead-of-3x3
>
>>

```
>
>>
>
>>
>
>> 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.")
>
>
>
>
>
> Hmm,
```

>
>
>
> So there is nothing in the object graphics system like the 'CONVERT_COORD' routine ?
>
>
>
> George.

In Object Graphics and New Graphics you can use "[XYZ]COORD_CONV" and
"ConvertCoord" methods, respectively. The last one being quite similar to the "Convert_Coord"
function in Direct Graphics.
Alain.