
Subject: Re: Zooming in Object Graphics
Posted by [btt](#) on Wed, 20 Dec 2000 18:08:49 GMT
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Hello,

I don't want to open a can of worms, but...

This topic always reminds me of Randall Frank's recommendation to use natural data coordinates rather than normalized data coordinates. I have only done the graphics in natural coordinates a couple of times, so I'm skating on thin ice with wobbly ankles. Zooming seems like a place where it might be especially useful; of course, it's just a hunch and I've yet to try it.

The ViewPlane_Rect would have to change as well as the location of the axes/annotations (unless you didn't care to see them when zooming, kind of like zooming on a bitmap.) The data ranges can be controlled by the [XYZ]RANGE keywords. The tricky part is setting up the ViewPlane_Rect so there will be enough room for the axes, etc. I know I build in the border when making object graphics in normalized coordinates (ViewPlane_Rect = [-.2,-.2, 1.4,1.4] or some such thing.) In natural coordinates maybe the following could be done:

```
xMin = Min(ZoomedDataX, Max = xMax)
yMin = Min(ZoomedDataY, Max = yMax)
```

```
xSpan = xMax-xMin
ySpan = yMax-yMin
```

```
oView->SetProperty, ViewPlane_Rect = [xMin-0.2*xSpan, yMin-0.2*ySpan,
xSpan*1.4, ySpan*1.4]
```

```
oGrAtom->SetProperty, xRange = [xMin,yMin], yRange = [yMin,yMax]
```

```
oXaxis->Location = [xMin,yMin,0], Range = [xMin,xMax]
```

```
oYaxis->Location = [xMin,yMin,0], Range = [yMin,yMax]
```

Well, it's the holiday season, perhaps I'm having visions of sugared plums...

Ben

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