
Subject: contour plot at max z of surface in obj. graphics

Posted by [T Bowers](#) on Thu, 20 Jan 2000 08:00:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

I'm adding functionality to D Fanning's xsurface program. What I'm doing is adding the ability to import a different data set and vis. it as a contour positioned at the max z axis value (i.e., on "top" of the surface object, a la Fanning's book p. 100 or the show3 procedure, both in direct graphics). Since my vis. space is normalized with his Normalize procedure, I thought it would be as simple as setting geomZ=0.5, the "top" of z, and maybe the setting planar=1. Doesn't work. 1 data set ranges ~ -300 - +200 in z value, while the other ranges ~ 0 - 5. Screwing around with the geomZ value doesn't give me a good indication of it's behavior because it the contour seems to move up and down in different ways depending on which data I choose as the surface and which I choose to overlay as the contour. Can anybody enlighten me on this?

Also...

Does anybody have a quickie that'll convert data in xyz triplets to "flat" format? e.g.

```
x y z      to      89.5 89.6 89.7 89.8
89.7 20.1 00.1    20.1      00.1
89.6 20.3 00.2    20.2      00.3
89.8 20.2 00.3    20.3  00.4 00.2
89.5 20.3 00.4
```

with x running across the top and y down the first column, blanks are NaN's or whatever. Like it's been interpolated, but without the interpolation. ;)

I've come close, but no cuban. Here's what I was playing around with last night. I gave up cause I just don't see it.

Thanks alot all

```
;//////////
```

```
function colsToFlat, dataCols
```

```
  xData = dataCols[0,*]
  yData = dataCols[1,*]
  zData = dataCols[2,*]
```

```
  sortedXData = xData[sort(xData)]
  sortedYData = yData[sort(yData)]
  sortedUniqXData = xData[uniq(xData,sort(xData))]
  sortedUniqYData = yData[uniq(yData,sort(yData))]
```

```

xSortOrder = sort(xData)
ySortOrder = sort(yData)

numDataPtsInX = n_elements(uniq(xData,sort(xData)))
numDataPtsInY = n_elements(uniq(yData,sort(yData)))

xFlat = sortedXData ;sortedUniqXData
yFlat = sortedYData ;sortedUniqYData
zFlat = fltarr(n_elements(xFlat), n_elements(yFlat))
zFlat[xSortOrder,ySortOrder] = zData[*]

; +1 in next line to make room for x row and y column. dataFlat[0,0] just
unused
dataFlat = fltarr((n_elements(xFlat)+1), (n_elements(yFlat)+1))
dataFlat[*] = !Values.F_NaN

dataFlat[1:*,0] = xFlat
dataFlat[0,1:*= yFlat
dataFlat[1:*,1:*= zFlat

; //Need to remove duplicate x and/or y entries

return, 1
end
;//////////

```
