Subject: IDLgrWindow, IDLgrVolume and alpha channel
Posted by s[1] on Fri, 24 Jan 2003 12:37:28 GMT
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Hi all,

I am rendering an IDLgrVolume into a IDLgrWindow. When I get the image data from the Window, the image has only 3 channels. How can I get the alpha channel of this image? The alpha channel information surely must be somewhere, because volume rendering needs it.

I include a small test program that generates a volume, renders it into a window and gets the buffer.

Does anybody have an idea how to get the alpha channel? Are there any settings I forgot?

Thanks for all tips,

Sebastian

```
FUNCTION CREATE_SIMPLE_VOLUME
  ;; create a simple volume containing one big red object and two small
cubes
  voldim = 128
  vol = OBJ_NEW('IDLgrVolume')
  ;; create a volume data array of size dim^3
  volData = BYTARR(voldim,voldim,voldim)
  FOR i=0,(voldim-1) DO volData[*,i,0:i] = 64
  volData[15:45, 15:45, 65:95] = 128 ;; small cube #1
  volData[85:115, 85:115, 65:95] = 255 ;; small cube #2

  ;; set opacity for vol
  opac = BYTARR(256)
  opac[0:127] = BINDGEN(128)/8
  opac[255] = 120
  opac[128] = 255

  ;; set colors
  rgb = bytarr(256, 3)
  rgb[0:127,0] = 255           ; main cube is red
  rgb[128, *] = [0, 255, 0]    ; small green cube
  rgb[255, *] = [0, 0, 255]    ; small blue cube

  vol->SETPROPERTY, data0=volData, RGB_TABLE0=rgb, OPACITY_TABLE0=opac, $
    ZBUFFER=1, ZERO_OPACITY_SKIP=1

  ;; center volume at 0,0,0 and fit it into a unit cube
```

```
  cc = [-0.5, 1.0/float(voldim)]
  vol->SETPROPERTY, XCOORD_CONV=cc, YCOORD_CONV=cc, ZCOORD_CONV=cc
  RETURN, vol
END ;; of: CREATE_SIMPLE_VOLUME

PRO CHECK_VOLUME_TRANSPARENCY
  ;; create a simple volume
  vol = CREATE_SIMPLE_VOLUME()

  ;; create the view for the volume
  volView = OBJ_NEW('IDLgrView', VIEWPLANE_RECT=[-1,-1,2,2], $
                ZCLIP=[2.0, -2.0], COLOR=[150,150,150])
  volModel = OBJ_NEW('IDLgrModel')
  volModel->ADD, vol
  volView->ADD, volModel

  ;; create the window and draw
  volWin = OBJ_NEW('IDLgrWindow', RETAIN=2, DIMENSIONS=[300,300])
  volWin->DRAW, volView

  ;; get the rendered image and check for alpha
  volWin->GETPROPERTY, IMAGE_DATA=image
  help, image
END
```