
Subject: Re: Color Printer limitations - Postscript resolution

Posted by [sigut](#) on Fri, 13 May 1994 14:36:15 GMT

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In article <2qtlak\$im1@spool.cs.wisc.edu> frp@ssec.wisc.edu (Francois Pomport) writes:

I am trying to print some filled contour graphics on a color printer, but the printer seems to ignore them. Each time IDL warns us that the number of polygon vertices may exceed some printer capabilities when it is generating the postscript file. I have tried to reduce the number of contour levels up to 7 (which is not very much) in order to be below the limitations but it doesn't work. Does anyone have encountered this warning message before? How did you succeed in printing your files? I know that my problem is related to the printer (Tektronix Pahser II). Do you have any other references for new color printers with an estimated price?

Francois
frp@ssec.wisc.edu
University of Wisconsin

Hi there,

I believe that your problem is NOT related to your printer, but to the POLYFILL routine used by CONTOUR,/FILL or POLYCONTOUR.

This routine takes each closed contour as a polygon and sends it to the PostScript device to be filled. When the POLYFILL routine was developed, there was (and perhaps still is) a limit as to the number of vertices the PostScript device would be able to handle. If it is larger than 750 (or somesuch), it gives you a warning and might do anything between ignoring the request and breaking off, depending on the software version.

I wrote a hack to avoid this problem in the PV-Wave version of the POLYCONTOUR routine, which could be reworked easily for IDL. The only problem is, that in IDL you are discouraged to use POLYCONTOUR, because it was replaced by the /FILL option to CONTOUR. Of course, the source for CONTOUR is not available...

Anyway, since I started let's have a look. The tested change for PV-Wave looks as follows:

```
pro polycontour, ...
```

```
...
```

```
if col ge 100 then col = 199-col ;Drawing index = 1 less than orig
```

```
col = color_index(col+1)
```

```
; This add-on was written to avoid the problem with  
; "Too many vertices for PostScript polygon fill."  
; The solution is to "thin out" the polygon and hope  
; that it will still look the same.
```

```
    sec_dim=size(xyarr)  
    gms_siz=sec_dim(2)  
    if gms_siz gt 750 then begin  
        gms_siz = gms_siz/2  
        while gms_siz gt 750 do gms_siz = gms_siz/2  
        xyarr=congrid(xyarr,2,gms_siz)  
    endif
```

```
; end-of-the-hack
```

```
if n_elements(pat) ne 0 then begin  
    s = size(pat)  
    if s(0) ne 3 then message, 'Pattern array not 3d.'
```

```
...
```

(you can find easily where to plug it in)

The UNTESTED version for IDL would look as follows:

```
pro polycontour, ...
```

```
...
```

```
if col ge 100 then col = 199-col ;Drawing index = 1 less than orig  
col = color_index(col+1)
```

```
; This add-on was written to avoid the problem with  
; "Too many vertices for PostScript polygon fill."  
; The solution is to "thin out" the polygon and hope  
; that it will still look the same.
```

```
    sec_dim=size(xyarr)  
    gms_siz=sec_dim(1)  
    if gms_siz gt 750 then begin  
        gms_siz = gms_siz/2  
        while gms_siz gt 750 do gms_siz = gms_siz/2  
        xyarr=congrid(xyarr,gms_siz,2)  
    endif
```

```
; end-of-the-hack
```

```
if n_elements(pat) ne 0 then begin  
    s = size(pat)  
    if s(0) ne 3 then message, 'Pattern array not 3d.'
```

```
...
```

The file polycontour.pro can be found for Wave in ../wave/lib/std
and for IDL in ../idl/lib/userlib

Well, that's all.

Good luck,

George

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