Subject: Re: Problem writing SCATTERPLOT() with more than 4096 points to PDF file
Posted by chris_torrence@NOSPAM on Mon, 10 Apr 2017 18:18:38 GMT
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On Thursday, June 11, 2015 at 5:26:22 PM UTC-6, Chris Torrence wrote:
> On Thursday, June 11, 2015 at 1:00:50 PM UTC-6, Helder wrote:
>> On Thursday, June 11, 2015 at 8:19:37 PM UTC+2, wlandsman wrote:
>>> I am having problems writing a SCATTERPLOT() to a PDF file.
>>>
>>> The following plot displays correctly in a window.
>>>
>>> x = randomn(seed,4096)
>>> y = randomn(seed,4096)
>>> p = scatterplot(x,y,/sym_filled,sym_color='blue',symbol='circle')
>>>
>>> But when I then try to save to a PDF file, I get the error message:
>>>
>>> % SAVE: Error in PDF creation: INVALID_SHADING
>>>
>>> I have no problems when saving the plot in other data formats.
>>>
>>> There also is no problem if I plot less than 4096 points.
>>>
>>> Finally, the problem still exists if I first open a window with /BUFFER and write directly to a PDF file.
>>>
>>> Thanks, --Wayne
>>>
>>>
>>> w = window(dimen=[800,1100],/buffer)
>>> x = randomn(seed,4096)
>>> y = randomn(seed,4096)
>>>
>>> p = scatterplot(x,y,/current,/sym_filled,sym_color='blue',symbol ='circle')
>>> w.save,'test.pdf'
>>>
>>> IDL> print,!version
>>> { x86_64 darwin unix Mac OS X 8.4 Sep 27 2014 64 64}
>>
>> Just to add some statistics: I get the same results.
>> IDL> !version
>> {
>> "ARCH": "x86_64",
>> "OS": "Win32",
>> "OS_FAMILY": "Windows",
>> "OS_NAME": "Microsoft Windows",
>> "RELEASE": "8.4.1",

>>   "BUILD_DATE": "Feb 17 2015",
>>   "MEMORY_BITS": 64,
>>   "FILE_OFFSET_BITS": 64
>> }
>>
>> Cheers,
>> Helder
>
> I can confirm that this is indeed a bug. I doubt it will get fixed for IDL 8.5. As a workaround, you can use the /BITMAP keyword when saving to the PDF.
>
> Cheers,
> Chris

It's been a while, but I did some more digging. This is actually a limitation of the PDF 1.4 specification. You can only have up to 4095 shading elements. See the spec here:
http://www.adobe.com/content/dam/Adobe/en/devnet/pdf/pdfs/pdf_reference_archives/PDFReference.pdf

So unfortunately there's no way for us to fix this. The best workaround is to use /BITMAP.

Cheers,
Chris
