Subject: Re: eps output with xplot or fsc_surface Posted by David Fanning on Mon, 28 Jul 2008 15:23:12 GMT

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Justin writes:

- > I'm getting a strange bug with eps output from David's xplot -- and I
- > was wondering if anyone else has found/fixed this issue?
- > Here's the deal, so when I have the size of the window is, for
- > example, 368x264 pixels --> then I choose output->EPS (300 DPI) --
- > then I import it into ImageReady --> and the image size is now
- > 84x48... Err?

>

- > Now, when I make the window size -> 1058x915, at 300 DPI it comes out
- > as 250x205

>

- > What is going on here? I've added additional options to go even
- > higher DPI, and the problem seems to get worse.

>

> Do I need to increase the dimensions that get passed in or something?

Like pretty much everyone else who tries to get PostScript output from object graphics programs, I generally throw my hands up in the air in disgust. There is no rhyme or reason to it. It just flat out sucks.

I've checked all the inputs to the IDLgrClipboard object that is outputting this XPLOT information to the file. It all conforms to the IDL documentation. I can't account for the sizes you see when you input this file. Even Photoshop is totally flummoxed by it.

I've even fooled around this morning trying to write this output directly to a PostScript file using the method outlined in this article:

http://www.dfanning.com/ographics tips/object eps.html

This results in a PostScript file that cannot be opened with either Photoshop or GhostView. (IDL 7.0.1 on Windows.)

I can send the output directly to a printer, but I cannot control the size of the output, etc. It takes up the whole page and, of course, has the wrong aspect ratio.

So, I'm as confused as you are. It is one of the eternal mysteries, I guess. :-(

Cheers,

David

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: eps output with xplot or fsc_surface Posted by humanumbrella on Mon, 28 Jul 2008 16:10:18 GMT View Forum Message <> Reply to Message

```
On Jul 28, 11:23 am, David Fanning <n...@dfanning.com> wrote:
> Justin writes:
>> I'm getting a strange bug with eps output from David's xplot -- and I
>> was wondering if anyone else has found/fixed this issue?
>
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>> then I import it into ImageReady --> and the image size is now
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>> Now, when I make the window size -> 1058x915, at 300 DPI it comes out
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> output directly to a PostScript file using the method outlined
```

> in this article:

```
>
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>
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> the size of the output, etc. It takes up the whole page and, of course,
> has the wrong aspect ratio.
>
> So, I'm as confused as you are. It is one of the eternal mysteries,
> I guess. :-(
>
> Cheers,
> David
>
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:http://www.dfanning.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
```

I have figured it out and fixed the problem, in a few minutes I will make a post about it.

Subject: Re: eps output with xplot or fsc_surface Posted by David Fanning on Mon, 28 Jul 2008 16:34:10 GMT View Forum Message <> Reply to Message

David Fanning writes:

- > I've even fooled around this morning trying to write this
- > output directly to a PostScript file using the method outlined
- > in this article:

> 111 (1113 (11(1010)

> http://www.dfanning.com/ographics_tips/object_eps.html

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Whoops! Pilot error. If I select a PostScript printer, it helps a lot.

I still can't control the aspect ratio of the output, etc. But at least the output is starting to resemble what I see in IDL when I import it into ImageReady. I'm waiting to see what Justin has come up with.

Cheers.

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: eps output with xplot or fsc_surface Posted by humanumbrella on Mon, 28 Jul 2008 16:55:33 GMT View Forum Message <> Reply to Message

On Jul 28, 12:34 pm, David Fanning <n...@dfanning.com> wrote:

- > David Fanning writes:
- >> I've even fooled around this morning trying to write this
- >> output directly to a PostScript file using the method outlined
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>

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>

> Cheers,

>

> David

> -

- > David Fanning, Ph.D.
- > Fanning Software Consulting, Inc.
- > Coyote's Guide to IDL Programming:http://www.dfanning.com/
- > Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Hello,

I'm still working on my portion of the solution, as far as getting what I want out of it, but the problem goes something like this:

Let's say you want to save something to the file at 72 DPI. This is the default resolution of looking at an image on the screen, so if you create a plot, save it at 72 DPI, then import it back into photoshop/ghostview/imageready, it will be the proper proportion, because it's mapping the screen dimensions which are in 72 DPI straight back to 72 DPI, so the aspect ratio is preserved.

However, when you go up in resolution, herein lies the problem. In the XPLOT/FSC_SURFACE code, David is trying to perform the same operation with the same amount of real estate. IE, trying to cram 300 DPI into 640x480 results in a much, much smaller image. However, if before we initialize the clipboard object, we redefine the dimensions of the window to what they SHOULD be, where the screen displaying X DPI where X > 72, all of a sudden magic happens.

I am still refining this fix, but I didn't want you to have to wait forever. (:

So, here's what I've come up with for now:

```
res = 72
IF filename NE "THEN BEGIN
CASE whichFileType OF
  'EPS-72' :begin
   resolution = [2.54/72, 2.54/72] & res=72
  end
  'EPS-150':begin
   resolution = [2.54/150, 2.54/150] & res=150
  end
  'EPS-300':begin
   resolution = [2.54/300, 2.54/300] & res=300
  end
  'EPS-1200':begin
   resolution = [2.54/1200, 2.54/1200] & res=1200
  end
  'EPS-2400':begin
   resolution = [2.54/2400, 2.54/2400] & res=2400
  end
ENDCASE
info.thisWindow->GetProperty, Dimensions=viewDimensions,
Units=viewUnits
viewDimensions*=res/72
```

clipboard = Obj New('IDLgrClipboard', Dimensions=viewDimensions,\$

```
Subject: Re: eps output with xplot or fsc_surface
Posted by humanumbrella on Mon, 28 Jul 2008 17:14:47 GMT
View Forum Message <> Reply to Message
```

```
On Jul 28, 12:55 pm, humanumbre...@gmail.com wrote:
> On Jul 28, 12:34 pm, David Fanning <n...@dfanning.com> wrote:
>
>
>> David Fanning writes:
>>> I've even fooled around this morning trying to write this
>>> output directly to a PostScript file using the method outlined
>>> in this article:
      http://www.dfanning.com/ographics_tips/object_eps.html
>>> This results in a PostScript file that cannot be opened with
>>> either Photoshop or GhostView. (IDL 7.0.1 on Windows.)
>> Whoops! Pilot error. If I select a PostScript printer, it
>> helps a lot.
>
>> I still can't control the aspect ratio of the output, etc.
>> But at least the output is starting to resemble what I see
>> in IDL when I import it into ImageReady.
>> I'm waiting to see what Justin has come up with.
>> Cheers,
>
>> David
>> David Fanning, Ph.D.
>> Fanning Software Consulting, Inc.
>> Coyote's Guide to IDL Programming:http://www.dfanning.com/
>> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
>
> Hello,
> I'm still working on my portion of the solution, as far as getting
> what I want out of it, but the problem goes something like this:
> Let's say you want to save something to the file at 72 DPI. This is
```

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> create a plot, save it at 72 DPI, then import it back into photoshop/
> ghostview/imageready, it will be the proper proportion, because it's
> mapping the screen dimensions which are in 72 DPI straight back to 72
> DPI, so the aspect ratio is preserved.
> However, when you go up in resolution, herein lies the problem. In
> the XPLOT/FSC_SURFACE code, David is trying to perform the same
> operation with the same amount of real estate. IE, trying to cram 300
> DPI into 640x480 results in a much, much smaller image. However, if
> before we initialize the clipboard object, we redefine the dimensions
> of the window to what they SHOULD be, where the screen displaying X
> DPI where X > 72, all of a sudden magic happens.
>
> I am still refining this fix, but I didn't want you to have to wait
> forever. (:
  So, here's what I've come up with for now:
>
  res = 72
  IF filename NE "THEN BEGIN
  CASE whichFileType OF
    'EPS-72' :begin
>
     resolution = [2.54/72, 2.54/72] & res=72
>
>
    end
    'EPS-150':begin
>
     resolution = [2.54/150, 2.54/150] & res=150
>
    end
>
    'EPS-300':begin
>
     resolution = [2.54/300, 2.54/300] & res=300
>
>
    'EPS-1200':begin
>
     resolution = [2.54/1200, 2.54/1200] & res=1200
>
>
    'EPS-2400':begin
>
     resolution = [2.54/2400, 2.54/2400] & res=2400
>
    end
> ENDCASE
  info.thisWindow->GetProperty, Dimensions=viewDimensions,
 Units=viewUnits
>
  viewDimensions*=res/72
>
  clipboard = Obj_New('IDLgrClipboard', Dimensions=viewDimensions,$
    Resolution=resolution,Quality=2, units=viewUnits)
>
     clipboard->Draw, info.plotView, /Postscript, /vector,
> Filename=filename
```

The above code creates a bigger image, and it comes back as the same size as what you initially saved it as, but it is not necessarily more detailed. I am continuing work on this and will report some more findings (:

Subject: Re: eps output with xplot or fsc_surface Posted by David Fanning on Mon, 28 Jul 2008 17:45:30 GMT View Forum Message <> Reply to Message

humanumbrella@gmail.com writes:

- > The above code creates a bigger image, and it comes back as the same
- > size as what you initially saved it as, but it is not necessarily more
- > detailed. I am continuing work on this and will report some more
- > findings (:

Actually, I think this is correct, if you have one more step. I try something like this:

```
'EPS-600': BEGIN
resolution = [2.54/600, 2.54/600]
viewDimensions = 600/72.
END
```

Then,

info.thisWindow->GetProperty, \$
 Dimensions=theDimensions, Units=theUnits
clipboard = Obj_New('IDLgrClipboard', \$
 Dimensions=viewDimensions*theDimensions, \$
 Resolution=resolution, Units=theUnits, Quality=2)

That produces a (gigantic!) PostScript file, but I think it is of the correct dimensions, at least.

Cheers.

David

--

David Fanning, Ph.D. Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: http://www.dfanning.com/

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: eps output with xplot or fsc_surface

```
On Jul 28, 1:45 pm, David Fanning <n...@dfanning.com> wrote:
> humanumbre...@gmail.com writes:
>> The above code creates a bigger image, and it comes back as the same
>> size as what you initially saved it as, but it is not necessarily more
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> Actually, I think this is correct, if you have one more step.
> I try something like this:
>
    'EPS-600': BEGIN
>
       resolution = [2.54/600, 2.54/600]
       viewDimensions = 600/72.
>
       END
>
 Then,
>
>
    info.thisWindow->GetProperty, $
>
       Dimensions=theDimensions, Units=theUnits
>
    clipboard = Obj New('IDLgrClipboard', $
>
       Dimensions=viewDimensions*theDimensions, $
>
       Resolution=resolution, Units=theUnits, Quality=2)
>
  That produces a (gigantic!) PostScript file, but I think
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> Cheers,
>
> David
> David Fanning, Ph.D.
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> Coyote's Guide to IDL Programming:http://www.dfanning.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
It appears that if you pass the /vector keyword as well, it will
drastically reduce the filesizes.
Cheers,
--Justin
```

Subject: Re: eps output with xplot or fsc_surface Posted by humanumbrella on Mon, 28 Jul 2008 19:03:48 GMT View Forum Message <> Reply to Message

```
On Jul 28, 2:44 pm, humanumbre...@gmail.com wrote:
> On Jul 28, 1:45 pm, David Fanning <n...@dfanning.com> wrote:
>
>
>> humanumbre...@gmail.com writes:
>>> The above code creates a bigger image, and it comes back as the same
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>
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>>
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>>
        END
>>
>> Then,
>
     info.thisWindow->GetProperty, $
>>
        Dimensions=theDimensions, Units=theUnits
>>
     clipboard = Obj_New('IDLgrClipboard', $
>>
        Dimensions=viewDimensions*theDimensions, $
>>
        Resolution=resolution, Units=theUnits, Quality=2)
>>
>> That produces a (gigantic!) PostScript file, but I think
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>> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
> It appears that if you pass the /vector keyword as well, it will
> drastically reduce the filesizes.
> Cheers.
> --Justin
```

Finally, for my application I believe I will use the /vector keyword with the /postscript, so the filesize will be smaller. This will allow for the postscript reader to rasterize its own vectors instead

of saving all of that information in the file.

Hope that helps some people =P

Cheers, --Justin