Subject: Reducing size of vector EPS / PDF output
Posted by Fabzi on Thu, 16 Jul 2015 09:39:20 GMT
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Folks,

I draw many glacier outlines on a plot (using old-school graphics and cgPolygon and stuff). The EPS/PDF output looks great but the file size is too large (> 6 Mb), simply because the level of precision of my shapefiles is very high (much higher than necessary for the plot itself).

Do you know of any way to tell IDL's postscript to reduce the precision of the vectorized output? Or, as a workaround, any external tool that could do the job?

Thanks,

Fabien

Subject: Re: Reducing size of vector EPS / PDF output
Posted by Craig Markwardt on Thu, 16 Jul 2015 18:38:07 GMT
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On Thursday, July 16, 2015 at 5:39:23 AM UTC-4, Fabien wrote:
> Folks,
>
> I draw many glacier outlines on a plot (using old-school graphics and
> cgPolygon and stuff). The EPS/PDF output looks great but the file size
> is too large (> 6 Mb), simply because the level of precision of my
> shapefiles is very high (much higher than necessary for the plot itself).
>
> Do you know of any way to tell IDL's postscript to reduce the precision
> of the vectorized output? Or, as a workaround, any external tool that
> could do the job?

Probable the most portable way to do it, is convert to PDF. PDF includes compression.

Subject: Re: Reducing size of vector EPS / PDF output
Posted by David Fanning on Fri, 17 Jul 2015 01:53:52 GMT
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Fabien writes:

> I draw many glacier outlines on a plot (using old-school graphics and
> cgPolygon and stuff). The EPS/PDF output looks great but the file size

> is too large (> 6 Mb), simply because the level of precision of my
> shapefiles is very high (much higher than necessary for the plot itself).
>
> Do you know of any way to tell IDL's postscript to reduce the precision
> of the vectorized output? Or, as a workaround, any external tool that
> could do the job?

I've done this before to make lower resolution shape files. I don't remember the details, exactly, but I think I used the always-useful ArcSample program in the Coyote Library to sample the polygon at approximately equally space intervals.

Cheers,

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

Subject: Re: Reducing size of vector EPS / PDF output
Posted by Fabzi on Fri, 17 Jul 2015 08:54:14 GMT
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On 07/16/2015 08:38 PM, Craig Markwardt wrote:
>> Do you know of any way to tell IDL's postscript to reduce the precision
>>> of the vectorized output? Or, as a workaround, any external tool that
>>> could do the job?
> Probable the most portable way to do it, is convert to PDF. PDF includes compression.
>

Hi Craig,

thanks! I forgot to mention that the eps file is 22Mb large, and PDF manages to reduce it to a more handable 6Mb.

I guess I have no other way as suggested by David: reduce the precision of my vectors *before* plotting. sigh...

Fabien

Subject: Re: Reducing size of vector EPS / PDF output
Posted by Fabzi on Fri, 17 Jul 2015 09:19:02 GMT
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On 07/17/2015 03:53 AM, David Fanning wrote:
> I've done this before to make lower resolution shape files. I don't
> remember the details, exactly, but I think I used the always-useful
> ArcSample program in the Coyote Library to sample the polygon at
> approximately equally space intervals.

Ha! Thanks, David. The code is quite crytpic to me (3 calls to spl_interp!?), but it works and makes beautiful curves ;-)

Cheers,

Fabien

Subject: Re: Reducing size of vector EPS / PDF output
Posted by David Fanning on Fri, 17 Jul 2015 12:59:29 GMT
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Fabien writes:

> Ha! Thanks, David. The code is quite crytpic to me (3 calls to
> spl_interp!?), but it works and makes beautiful curves ;-)

I don't understand it either. Craig wrote it for me. I do know it has been one of the most useful utility routines in the Coyote Library for me. :-)

Cheers,

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

Subject: Re: Reducing size of vector EPS / PDF output
Posted by Fabzi on Fri, 17 Jul 2015 13:31:21 GMT
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On 07/17/2015 02:59 PM, David Fanning wrote:
>>> Ha! Thanks, David. The code is quite crytpic to me (3 calls to
>>> spl_interp!?), but it works and makes beautiful curves;-)
> I don't understand it either. Craig wrote it for me. I do know it has
> been one of the most useful utility routines in the Coyote Library for
> me.:-)

It seems to be quite close to SPLINE_P, I just found out. Howver, with SPLINE_P you have to estimate the tangent at the junction point by yourself. See the following example:

```
pro test_curvature

   x = [0.5, 1.5, 1.5, 0.5, 0.5]
   y = [0.3, 0.3, 1.3, 1.3, 0.3]

   ArcSample, x, y, xas, yas
   spline_p, x, y, xsp, ysp
   t = [1., -1]
   spline_p, x, y, xsp2, ysp2, TAN0=t, TAN1=t

   cgPlot, [0, 2], [0, 2], /NODATA, /WINDOW
   cgPlots, x, y, color='black', /WINDOW
   cgPlots, xas, yas, color='red6', /WINDOW
   cgPlots, xsp, ysp, color='blu6', /WINDOW
   cgPlots, xsp2, ysp2, color='blu4', /WINDOW
   cgLegend, Titles=['ArcSample', 'spline_p', 'spline_p tangent'], $
         LINESTYLES=[0,0,0], COLORS=['red6', 'blu6', 'blu4'], $
         /ADDCMD, LOCATION=[0.2, 1.8], /DATA

end
```