Subject: Automatic interpolation / smoothing in TV??
Posted by Jakob on Thu, 15 Aug 2013 09:14:11 GMT
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Hello,

I would like to display an image with few pixels. When I use the TV command (either directly or through cgimage) I find the image is being "blurred", as if each pixel was being broken up in 8x8 cells and then values were being interpolated. For my specific purpose I want each pixel to have sharp edges.

I've searched the manuals but was not able to locate the reason for this behavior. I could plot each pixel separately using squares of appropriate size, but this seems unnecessarily clumsy?

 Any hint on what I am missing would be greatly appreciated.
  CJ

pro example

dens = [[7.0, 190.0, 391.0, 166.0, 6.0, 0.0],[0.0, 11.0, 63.0, 92.0, 9.0, 1.0],[0.0, 0.0, 2.0, 1.0, 0.0, 0.0]]

set_plot,'PS'
device, filename='example.ps', /color, /landscape

tv, dens, xsize=20000, ysize=10000

device, /close

end

Subject: Re: Automatic interpolation / smoothing in TV??
Posted by David Fanning on Thu, 15 Aug 2013 12:00:31 GMT
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Jakob writes:

> I would like to display an image with few pixels. When I use the TV command (either directly or through cgimage) I find the image is being "blurred", as if each pixel was being broken up in 8x8 cells and then values were being interpolated. For my specific purpose I want each pixel to have sharp edges.
>
> I've searched the manuals but was not able to locate the reason for this behavior. I could plot each pixel separately using squares of appropriate size, but this seems unnecessarily clumsy?
>
> Any hint on what I am missing would be greatly appreciated.

My guess would be you are looking at your file using Preview on a Mac.
It always shows the wrong thing. But, everywhere else this should look
like you expect it to look. :-)

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: Automatic interpolation / smoothing in TV??
Posted by Jakob on Thu, 15 Aug 2013 13:02:34 GMT
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Hi David,
thanks a lot for the answer.
Indeed, other programs show the right thing on plots generated with TV.
Meanwhile I had coded the same plot using the clumsy approach (loop over polyfill).
This does not trigger the blurring behavior in preview.
So it must have to do with the way the colored squares are described in the ps file and what
preview thinks it has to do to make it "look nice".
Anyway, that solves the question.
 Thanks,
  CJ

Subject: Re: Automatic interpolation / smoothing in TV??
Posted by Phillip Bitzer on Thu, 15 Aug 2013 16:13:22 GMT
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You can also turn off smoothing in Preview to see the "right" thing.

Preferences->PDF->Smooth text and line art.