Subject: Re: Q: How to scroll image quickly in IDL 2.4.0?
Posted by sterner on Fri, 12 Mar 1993 18:14:05 GMT
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mayor@vaxine.larc.nasa.gov writes:

> Does anybody know how to move (slide) an image (or a portion of the image)
> around in a window without using the TV command in IDL 2.4.0?

> We want to develop a display where new real-time image data enters on the
> right side and old image data scrolls to the left. This can be done by
> building a loop that shifts the whole image array, replaces the profile
> on the right and reTVs the whole image to the window, but of course it
> takes a lot of time. We hope there is a way to just move the data in the
> window by a certain amount without having to shift and reTV whole image.

> Any ideas would be greatly appreciated. Thanks.

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> Shane D. Mayor, Lidar Applications Group, NASA Langley Research Center,
> Mail Stop 401A, Hampton, Virginia 23681-0001
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There is a way. Here is an experiment.

Generate a byte image, z, that is 500 by 200.

First method:
Load the first part: tv,z(0:199,*)
for i=200,499 do begin tv,z(i-199:i,*) & endfor
This is the method that first comes to mind. It works, but not
very fast.

Second method.
Load the first part: tv,z(0:199,*)
for i=200,499 do begin device,copy=[1,0,199,200,0,0] & tv,z(i,*),199,0
& endfor (this is meant to be one long line).

The second method uses the copy option of the device procedure. It is
about 7 or 8 times faster on my computer. In the new manuals (Vers 3.0)
device,copy= is documented on page 3-6 of the IDL Reference Manual.

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Subject: Re: Q: How to scroll image quickly in IDL 2.4.0?
Posted by zawodny on Fri, 12 Mar 1993 18:17:41 GMT
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In article <1nq3cgINNbed@rave.larc.nasa.gov> mayor@vaxine.larc.nasa.gov writes:
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>

As far as I know, there is no way to pan and scan a TVed image on a device that does not support that feature in hardware. I do have a suggestion that might increase the speed of what you are doing. Create a pixmap window (or you could do this with an array in memory) equal in size to the portion of the display where the image scrolling will take place (I assume this might be specified by the box defined by !P.CLIP). Initially the pixmap will be empty. As profiles come in add them one by one to the right side of the pixmap and use DEVICE,COPY=... to place the partial image in the display area. Continue this until the pixmap becomes full. When you are ready to start scrolling the image, do so in the following manner. Simply reset a pointer (use the math function MOD) to the first profile in the pixmap (this is now the oldest profile) and overwrite it with the new data. Then use DEVICE,COPY=... twice to place the image in the display area in two pieces (Right most portion of the pixmap goes into the lefthand portion of the display and the leftside of the pixmap goes to the right). Increment the pointer by one and continue this process indefinitly (resetting to the beginning each time you reach the end of the pixmap). This eliminates the need to move each profile one step to the left in an array and uses DEVICE,COPY=... which is very fast for imaging.

Any further questions ask via email.

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