Subject: Re: Beginner Question: PlotS rasterization info?
Posted by David Fanning on Wed, 07 Nov 2001 23:18:26 GMT
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Ted (sehgal@oasis.rad.upenn.edu) writes:

> It's Ted--Sandy is just the default name on this computer.

I hate it when those computers start doing that~ :-(

> It is important to have the same pixels on the screen. I'm using a modified
> CW_DefRoi function to draw multiple regions of interests on multiple frames
> of QuickTime movies. The modified function only returns the vertices of the
> region of interest (instead of the subscripts of the interior).

You could get the interior pixels easy enough,
though, with POLYFILLV.

> These ROIs
> may overlap one another, but I want to be able to select and erase one or
> some of them without erasing any pixels of the others from the screen. So I
> can't just use Device, Copy, the way I understand it. I also need to
> extract data from the frames at the pixel coordinates of the boundaries in
> order to analyze them, not just to replace/erase the ROI data with the
> original image data.

The trouble with CW_DEFROI, and the reason I have never
really used it, is that it doesn't do just what you want
it do it. It seems to do *almost* just what you want it to do.

I always end up writing my own ROI code. It's not always
pretty, but I do end up knowing how to control it. I'm afraid
you may end up with something like that here, although I have
to admit it sounds like you are going to a lot of trouble
for little benefit. (At least it seems that way to me.)

> I've thought about just plotting everything with the Bresenham like Craig
> suggests, but that would require further modifications to the CW_DefRoi
> function, since it almost surely uses the IDL Plot algorithm. It would also
> mean that for the sake of consistency future versions of the program could
> not use IDL's plot function either, and I'm not comfortable with that, since
> IDL's Plot is certainly much more reliable than my 15 lines of Bresenham
> code.

You are probably right about the PLOT command, but
I wouldn't even give you even money on the CONTOUR
command. On the other hand, when something doesn't work
most of us can find it if we only have to look in 15

lines of code. :-)

> But what algorithm is IDL using to plot lines, anyway?

This is exactly the kind of question most of us are
using IDL to avoid answering. High level languages
are suppose to shield you from these kinds of questions.
It's probably the Dithered-Biffle Algorithm found in
any good "Computer Graphics in C" text book.

> I don't have that strong computer programming background--LabVIEW and one C
> programming course. I get the feeling I'm re-inventing the wheel. Now that
> I've described the program in greater detail, is there a better way?

I'm sure there is. I just don't have a clear enough
picture of the problem to know what it is. :-(

Cheers,

David

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