Subject: Re: Plot into an array
Posted by Dennis Boccippio on Tue, 03 Jul 2001 15:42:15 GMT
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In article <MPG.15a62d86f1dbe18d989e18@news.frii.com>,
david@dfanning.com (David Fanning) wrote:

> Dominik Paul writes:
>
>> does somebody know, how I can plot a function into an array, not into a
>> window? Or can I get the array of the image of a window for saving as a jpeg
>> or gif?
>
> Write into a pixmap window (a window in memory):
>
> Window, /Pixmap, /Free
> Plot, myfunction
> array = TVRD() ; or TVRD(True=1) on 24-bit display
>

Warning: if you plan to do this repeatedly, and/or with very large
windows, TVRD() from graphics or pixmap windows is surprisingly slow,
even for pixmaps. (this from the IDL profiler; I once tried this on a
large looped calculation involving geolocation of satellite instrument
pixels, polyfilling the vertices, tvrd()'ing to an array, then summing
the arrays to estimate the spatial field of view - in all of that, the
tvrd() was by and large the bottleneck, not the math)

IIRC, David's suggestion below of using the Z buffer is more efficient
(don't know why) and greatly reduced the bottleneck, though I could be
wrong...

> Or, write into the Z-graphic buffer, if you want
> to be assured of having a 2D array:
>
> thisDevice = !D.Name
> Set_Plot, 'Z'
> Plot, myfunction
> array = TVRD()
> Set_Plot, thisDevice
>