Subject: Re: Segfault when smoothing image
Posted by Jeremy Bailin on Mon, 15 Feb 2010 12:36:10 GMT
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On Feb 15, 6:05 am, thoeger <lusepus...@gmail.com> wrote:
> Sorry if I'm not precise enough;
>
> The data I have is an array that is later to be exported to an image.
> The array is generated by simply making a 2200x2200 float array of
> 0's, and then changing the values to 1.0 at certain coordinates that
> are given in a list of objects in a different image. That gives a 2D
> array of 0's with a few 1's here and there, which is then to be
> smoothed, so each pixel gets a value between 0 and 1, depending on how
> far they are from the pixels originally of value 1.
>
> The code line I have used is:
>
> imgdata2 = filter_image( imgdata, FWHM_GAUSSIAN=300, /
> ALL_PIXELS)
>
> imgdata being the name of the array I've previously generated.
> From GDL, I receive the messages
>
> % Compiled module: FILTER_IMAGE.
> % Compiled module: FACTOR.
> % Compiled module: PRIME.
> % Compiled module: PSF_GAUSSIAN.
> % Compiled module: GAUSSIAN.
> % Program caused arithmetic error: Floating underflow
> % Compiled module: CONVOLVE.
> Segmentation fault
>
> and then it exits. In real IDL, it simply stalls indefinitely after "%
> Compiled module: GAUSSIAN."
>
> On Feb 14, 6:51 pm, Gianguido Cianci <gianguido.cia...@gmail.com>
> wrote:
>
>
>
>> What is your input for all this, a bunch of x,y coords? And you want a
>> certain value at each coord in a "fake" 2200x2200 iamge?
>> Could you post examples of input and especially the code you are
>> using?
>
>> --Gianguido
>
>> On Feb 14, 4:54 am, thoeger <lusepus...@gmail.com> wrote:

>
>>> Hello newsgfroup;
>
>>> I hope this question isn't too basic.
>
>>> As part of my master thesis in astronomy, I have to make an image
>>> consisting of 2200x2200 pixels having the value zero except certain
>>> pixels, representing each the center of tan astronomical objects,
>>> having the value one. The goal is to get an idea of the number density
>>> of objects in the field, so I try to do a gaussian smoothing using
>>> the filter_image function, but end up with a segfault and IDL
>>> quitting due to floating underflow. (To be precise, this is GDL on my
>>> laptop. True IDL on the university computers just stalls
>>> indefinitely). So it seems I'm doing something wrong here. Does anyone
>>> have an idea how to implement the smoothing, if not by filter_image?

I'm not sure what FILTER_IMAGE is doing internally, but depending on
what method it uses it could be very memory-intensive. In
POINT_CONVOLVE, you can pick from a few different methods, some of
which will be more efficient in different circumstances.

Unfortunately, I forgot to renew the domain name... I'll post a link
to POINT_CONVOLVE when it's back up and running. ;-) But if you
already have JBIU, it's in there.

-Jeremy.

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