Subject: Re: Segfault when smoothing image
Posted by thoeger on Mon, 15 Feb 2010 15:08:29 GMT
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On Feb 15, 1:36 pm, Jeremy Bailin <astroco...@gmail.com> wrote:
> 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.

Jeremy, that looks very interesting and promising. Waiting in
anticipation. :-)
