
Subject: Re: particle detection - a way to speed up things?

Posted by [Vince Hradil](#) on Fri, 30 Nov 2007 14:02:28 GMT

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On Nov 30, 2:22 am, Ingo von Borstel <newsgr...@planetmaker.de> wrote:

> Hi,

>

>> If I'm reading your program correctly, you have a big image consisting
>> (presumably) of
>> a lot of empty space and numerous particles that you have identified
>> in some way.

>

> Yes, correct. Black image with an arbitrary amount (≤ 1000) of small
> blobs with a value different than zero; those blobs numbered using
> either `label_region` or `watershed`.

>

>> My guess is that the main reason your program is slow is that for each
>> particle you
>> are summing over the entire image.

>

> Probably. Half the time is consumed by the determination of the position
> for each particle in the overall image.

>

>> I can see two ways to speed things up:

>> 1) Create subsets of the image for each particle and only sum only
>> over the subset containing the particle.

>

> In order to calculate the absolute position of a particle, I need to
> know where on an image it resides. I think I'll lose this information
> with this approach.

>

>> 2) Use something like HISTOGRAM or a multi-dimensional histogram with
>> the `REVERSE_INDICES` keyword (or equivalent)
>> to get the indices associated with each particle and sum over those.
>> The histogram command would be applied to your
>> `particle_image` field with a binsize of 1 and starting at 0. See
>> http://www.dfanning.com/tips/histogram_tutorial.html
>> for ideas on how to approach this problem using histograms.

>

> The latter might have potential. I'll give it a try and report back then.

>

> Thanks a lot for your input.

>

> Cheers,

> Ingo

>

> --

- > Ingo von Borstel <newsgro...@planetmaker.de>
- > Public Key:<http://www.planetmaker.de/ingo.asc>
- >
- > If you need an urgent reply, replace newsgroups by vgap.

Have you looked at the LABEL_REGION example in the help?
