Subject: Re: Multithreading
Posted by weitkamp on Thu, 21 Mar 2002 10:42:10 GMT
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the_cacc@hotmail.com (trouble) wrote in message
news:<5f9f0a23.0203200332.3d1e3fbf@posting.google.com>...
>
> [...]
>
> Yeah, read it. Just suprised no-one "real" is raving about their performance gains.

Not much to rave about in my case. I mostly do two kinds of numbercrunching. One is Fresnel wave propagation, where the essential operations are FFTs of arrays of size between 1024^2 and 4096^2 pixels. The other is tomographic reconstruction using the RADON function (new in 5.4). I've not had the time to do any systematic investigation on 5.5's multithreading behavior, but here is my experience so far:

For the 2D FFTs, IDL does multithreading, but without a substantial gain in time. Could even be that it takes longer with 5.5 (I tried the same thing with 5.4 and 5.5, the latter being roughly 15 percent faster, but on a CPU with higher clockspeed). Sorry I can't give figures on that and haven't yet tried both 5.4 and 5.5 with the same task on the same machine (had no time) --- I'd be among those who will appreciate if someone else does.

For the backprojection, RADON does not multithread at all (I try this with 2048x2048 slices and 1250 projections for each slice). Given that backprojection is an application where the layman suspects that multithreading should be relatively easy to implement, I was certainly disappointed by that. Seems to be a very commercial decision in that there's definitely more people use FFT than backprojection, and those who don't use any of the two have at least heard about Fourier transforms.

Cheers,

Timm

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