Subject: Re: IDL Matrix Multiply and Dual-Core CPUs
Posted by s.haenger on Fri, 09 May 2008 18:28:58 GMT
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On 9 Mai, 20:20, FÖLDY Lajos <fo...@rmki.kfki.hu> wrote:
> oops, I have written IDL 7 time to the ATLAS test. Corrected below.
>
> lajos
>
> I have run some tests on a quad-core Intel Core2 Q6600 / linux 64 bit
> machine.
>
> On Fri, 9 May 2008, s.haen...@gmail.com wrote:
>
> Hi,
>
> I have a Problem with IDL 7.0
> We have to multiply large matrices. With some matrix sizes, the CPU
> usage is 100% but for most of the matrices it is 50%. (I'm runnning it
> on a Intel T7250 (Dual Core, 2GHz, 2MB L2 Cache))
>
> The CPU System Variable is configured like this:
> IDL> print, !CPU
> {   0   0   2   2
> 100000   0}
>
> Now we do this:
> matA = randomn(42, 2000, 2200)
> matB = randomn(43, 2020, 2000)
> matIdl = matA##matB
>
> So now i've got a CPU usage of 100%
>
>   # of threads   IDL 7 time
>   1   12.476210
>   2   6.5931890
>   3   5.2085290
>   4   4.9191489
>
> it scales well for two cores, so the CPU usage should be near 100% for two
> threads.
>
> but with this:
> matA = randomn(42, 2500, 2500)
> matB = randomn(43, 2520, 2500)
> matIdl = matA##matB
>
> the cpu usage is around 50%-60%

```
>
>    # of threads    IDL 7 time
>       1         22.034877
>       2         11.681226
>       3          9.7771089
>       4          9.3093379
>
> again, CPU usage should be near 100% for two cores.
>
> Just for comparison, ATLAS (http://math-atlas.sf.net) times:
>
>    # of threads    ATLAS time
>       1          4.4285851
>       4          1.1784132
>
> and
>
>    # of threads    ATLAS time
>       1          7.8148808
>       4          2.1345751
>
> regards,
> lajos
>
>
```

Sorry, I forgot to mention... I'm running Windows XP 32bit with 2GB of
Ram
I also tested it on a second machine with a 3GHz Dual Core and it
showed the same cpu usages...

regards,
Samueö