Subject: Re: Intel iMac IDL performance
Posted by JD Smith on Mon, 27 Feb 2006 22:35:31 GMT
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On Mon, 27 Feb 2006 15:09:53 -0600, Kenneth Bowman wrote:

> Apple loaned us an Intel Dual-Core iMac for a few days for testing. Here is a
> quick comparison:
>
> Intel system specs:
>   2 GHz Intel Core Duo (2 cpus)
>   2 GB DDR2 SDRAM
>   667 MHz bus
>   OS X 10.4.5
>
> PowerPC system specs:
>   2.5 GHz PowerPC G5 (4 cpus)
>   2 GB DDR2 SDRAM
>   1.25 GHz bus
>   OS X 10.4.5
>
> We installed the Mac (PowerPC) version of IDL on both. The Intel runs IDL via
> emulation software (Rosetta).
>
> My IDL benchmark code (dominated by 3-D interpolation, random memory access):
>   PowerPC   31 s
>   Intel iMac 61 s
>
>
> I played with the IDL demo programs on the Intel iMac and everything that I
> tried ran fine. Basic interactive IDL performance is very quick.
>
> All in all, IDL seems to run fine. Performance is quite respectable for an
> emulated system. Native IDL performance (when available) could be comparable to
> the G5.

Good news. Can you try running your benchmark a few time, Ken?
Rosetta is not an emulator, but a caching code translator. When it
encounters code it has already translated, it simply uses its cached
version of that, which should run somewhat faster, so it's not unusual
to have the second and later runs of a given benchmark speed up. Can
you also run:

IDL> time_test3

a few times? On my PB G4, that takes 3.6s/0.13s total/geom. mean.
Sadly, I expect the iBook Intel/MacBook Pro to beat these numbers even
under Rosetta. One other good one to try:

IDL> a=randomu(sd,100L*!CPU.TPOOL_MIN_ELTS)
IDL> t=systime(1) & a=sqrt(a)/(a>0.5) & print,systime(1)-t

which shows how well the threading is working on ~40MB of data. On my
PBG4, this takes 1.8s.

Thanks,

JD