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Subject: Re: AMD CPU - pentium way faster? (should be IDL on win2000 faster than IDL on linux)

Posted by [Robert Stockwell](#) on Thu, 31 Jan 2002 20:35:50 GMT

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Rick Towler wrote:

> How much of this is from differences in processor architecture, platform  
> configuration, and OS? You are comparing apples and oranges. Install Win2k  
> on your AMD system (or linux on your laptop) and try again.  
>  
> -Rick  
>

Of course you are right, so I went to a dual boot machine.  
Both running idl 5.5 (in demo mode, we don't have a license on it)  
I ran the time tests about 15 times each, and took an average  
(after it read from file and compiled the code)  
the computer: 1.4 Ghz AMD athlon, 512 Ram.

OS 1) Win2000 SP 2

Average time for time\_test.pro = 0.596 seconds

OS 2) Slackware 8 2.4.17 kernel with X3864.1 running fw2

Average time for time\_test.pro = 0.725 seconds

OS 3) Slackware 8 2.4.17 kernel with no xwindows (i.e. command line only)

Average time for time\_test.pro = 0.721 seconds

So, that is  $.725/.596 = 23.5\%$  longer on linux.  
(and the command line version is slightly quicker, probably in  
printing out the 10 or twenty lines of text)

The difference that I attributed to the pentium over the athlon,  
is the same as the difference from win2000 to linux, so it seems  
that it is merely the OS, and not the processor that causes the  
difference.

I do satellite data crunching on this machine, so the code runs  
for about 120 days of CPU time to do the entire set (spread  
over many machines of course). The difference is 120 days on linux,  
or 100 days on win2000. I would prefer the 100 days.

I'd guess that there are compiler optimizations or different math libraries available on win2000 that are not used in linux under my current version and kernel options. I'll take this up with RSI.

Cheers,  
bob

PS anyone else see this difference in speed between operating systems?

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Subject: Re: AMD CPU - pentium way faster? (should be IDL on win2000 faster than IDL on linux)

Posted by [Mark Hadfield](#) on Thu, 31 Jan 2002 21:04:38 GMT

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"Robert Stockwell" <[rgs1967@hotmail.com](mailto:rgs1967@hotmail.com)> wrote in message  
news:3C59AAA6.4040802@hotmail.com...

> Average time for time\_test.pro = ...

Isn't time\_test deprecated these days in favour of time\_test2? (The reason being, I believe, that the tests in the former are too small to be meaningful.) Time\_test2 is the only one mentioned in the help file. There's also a time\_test3 that seems to be the same as time\_test2 except that some tests have been increased in size. JD's IDLSPEC2 benchmark uses time\_test3 so perhaps we should standardise on this.

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Mark Hadfield  
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National Institute for Water and Atmospheric Research

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Subject: Re: AMD CPU - pentium way faster? (should be IDL on win2000 faster than IDL on linux)

Posted by [Robert Stockwell](#) on Fri, 01 Feb 2002 14:23:13 GMT

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Mark Hadfield wrote:

> "Robert Stockwell" <[rgs1967@hotmail.com](mailto:rgs1967@hotmail.com)> wrote in message

> news:3C59AAA6.4040802@hotmail.com...

>

>> Average time for time\_test.pro = ...

>>

>

- > Isn't time\_test deprecated these days in favour of time\_test2? (The reason
- > being, I believe, that the tests in the former are too small to be
- > meaningful.) Time\_test2 is the only one mentioned in the help file.

I did both sets of tests. Same results. I only mentioned the time\_test ones because I am lazy.

- > There's
- > also a time\_test3 that seems to be the same as time\_test2 except that some
- > tests have been increased in size. JD's IDLSPEC2 benchmark uses time\_test3
- > so perhaps we should standardise on this.

Sure, I'll find that and get the results.

Cheers,  
bob

- > ---
- > Mark Hadfield
- > m.hadfield@niwa.co.nz <http://katipo.niwa.co.nz/~hadfield>
- > National Institute for Water and Atmospheric Research
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Subject: Re: AMD CPU - pentium way faster? (should be IDL on win2000 faster than IDL on linux)

Posted by [John-David T. Smith](#) on Tue, 05 Feb 2002 23:14:39 GMT

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Mark Hadfield wrote:

- >
- > "Robert Stockwell" <rgs1967@hotmail.com> wrote in message
- > news:3C59AAA6.4040802@hotmail.com...
- >> Average time for time\_test.pro = ...
- >
- > Isn't time\_test deprecated these days in favour of time\_test2? (The reason
- > being, I believe, that the tests in the former are too small to be
- > meaningful.) Time\_test2 is the only one mentioned in the help file. There's
- > also a time\_test3 that seems to be the same as time\_test2 except that some

- > tests have been increased in size. JD's IDLSPEC2 benchmark uses time\_test3
- > so perhaps we should standardise on this.

The problem with time\_test3 is that it's already antiquated. I've several times sounded the battle cry for developing an updated IDL benchmark which taxes machine subsystems adequately and independently (not that it shouldn't use time\_test\* as a basis). For instance, the sole I/O test in time\_test\* amounts to 256KB array read/writes -- well within the cache of all modern drives and OS's. An entire dimension on the IDLSPEC2 graph is thus rendered almost useless. I have collected a list of volunteers for constructing this community benchmark, and eagerly solicit more. Depending on interest, an expanded 3D Graphics benchmark might also be developed in parallel.

IDLSPEC3 has been dragging along primarily due to this stumbling block. If people are interested in contributing their thoughts and ideas concerning a more robust, community-developed test suite, then by all means, contact me.

Having just completed a 3000 mile move, it may be some time yet before you see the light in IDLSPEC3's eyes, but if we pull together, it will be worth it. And for those whose arms I twisted as volunteers, don't think I've lost your names ;)

JD

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