

Re: Announcing Intel Fortran Compilers 9.0

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Richard E Maine wrote:

In article <1119804438.088479.252910@xx>, hchu@xxxxxxxxxxxxxxxxxxx wrote:

I know perfectly well about parallel computng. I brought double precision up only because it's natural for 64 bit computing.

This is a common misconception. There is little relationship between so-called 64-bit systems and 64-bit floating point. Terms like 64-bit systems have been largely used as marketing buzz words to the extent that they mean different things at different times. You need to ask precisely what the the term means in order to get any technical use out of it.

Intel processors starting with the first Pentium have a 64 bit data bus, so that 64 bit floating point data can be loaded or stored in one bus cycle.

But faster 64-bit floating-point arithmetic is **NOT** directly related to so-called "64-bit computing". If you have been lead to think otherwise, then you are headed for disappointment.

It is not so obvious what determines 64 bit floating point performance. It seems to me that scientific computing is gaining a lot from the economy of scale of floating point processor built for people who don't really need them. That is also likely true for 64 bit addressing.

Still, I have been told that the AMD x86-64 processors have better floating point than comparable IA32 processors. It is also possible that 64 bit processors are slightly more efficient moving data to and from

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memory, which can also help 64 bit floating point.

With Athlon 64 below \$200, it is hard to argue against 64 bit processors!
(Fry's price for processor, fan, and motherboard
in recent weeks.)

-- glen

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