Subject: Re: MacTel
Posted by JD Smith on Tue, 07 Jun 2005 21:16:39 GMT
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On Tue, 07 Jun 2005 15:04:57 -0500, Kenneth Bowman wrote:

> In article <d84ngk$r9f$1@news.nems.noaa.gov>,
> Rick Towler <rick.towler@nomail.noaa.gov> wrote:
>
>> As far as IDL on OS X is concerned it's hard to say (this is
>> comp.lang.idl-pvwave, isn't it?) The next 18-24 months will be
>> difficult as Apple transitions. I don't think anyone is going to run
>> IDL using the binary translation layer so what does RSI do? We know they
>> are reticent to support IDL on the OS X PPC architecture. Now are they
>> going to support both? I think we can only hope that the claims that
>> most applications can be recompiled in a few hours with just "minor
>> tweaks" are true.
>
> Since the OS X version is basically the Unix version (i.e., runs from the
> command line under X Windows) the port should be straightforward, if not
> trivial. It is not so much an OS X application as a FreeBSD application. ;-)
> Altivec optimizations will need to be replaced with sorta-equivalent Intel
> optimizations, but maybe the compiler will take care of that.

Well, the current OSX IDL really doesn't have too much in the way of Altivec optimizations; they had put some effort into that before pulling the plug on a Mac-native IDL several years ago, but that didn't pan out. Looks like they made the right call after all.

Personal anecdote: I got my shiny new Powerbook G4 several months ago, and decided to put IDL to a speed test. Not that I bought it for hard-core cruching, but I figured it should at least keep up with my 3 year old desktop. Sadly, my 3 year old PIII Dell laptop fully bested it by about a factor of 2 in TIME_TEST3. When normalized to clock speed, the slower PIII actually was 3x faster per clock. Ouch! When I queried RSI on this, it seems the consensus opinion is that GCC, which RSI uses to compile IDL under OSX (and Apple recommends), produces fairly slow PPC code. In fact, between OS9 and OSX, there was a general slowdown of IDL on the same hardware, when they switched compilers. I fully believe had the time been invested to optimize IDL for the G4/G5, it would have handily trounced equivalent processors on a clock for clock basis, but that was not to be. Altivec was/is widely acknowledged as the most capable of the consumer-grade SIMD units. That said, GCC is much more mature and robust for x86. So really, our Altivec units are sitting there quietly twiddling their thumbs when IDL runs, so, in terms of IDL performance, IDL/MacTel is actually a fairly big win, assuming it ever sees the light of day. I suspect their port will be similarly trivial to Mathematicas, which

took editing 20 lines of code, checking one box, and waiting 2 hours.
It's programs which have invested significantly in the Mac/PPC
platform exclusively that will have trouble. Natively cross-platform
apps should be fine.

>> You have to wonder what the Macatistas are thinking. Some of the cachet
>> of the Mac platform was it's mysterious RISC based PPC architecture.
>> Now you guys will be so ordinary. :) And <gasp> what if you could walk
>> into your local apple store and buy a copy of OS X to run on your home
>> built x86 PC? Then how would you discern yourself from the slobbering
>> masses? You say it won't happen... And they said OS X would never run
>> on x86 too.
>
> Apple said yesterday that OS X will not run on generic PC hardware, although how
> they will accomplish that has yet to be revealed. Apple is still mostly a
> hardware company and can't afford to lose their hardware business.
>
> The new machines may have Pentia inside, but they will still *look* cooler than
> wintel machines outside. ;-)   (And still cost more, no doubt.)
>
> It has been an open secret that Apple has maintained a parallel x86 version of
> OS X.

Yes, definitely no OSX on the beige box, but the RISC cachet issue may
prove damaging to more than just the egos of Mac fanatics. Imagine
this scenario: one of the x86 emulators, like VMWare, gets ported to
OSX/Intel, and runs at nearly full speed (since it no longer needs to
emulate the x86 underneath). Company X (e.g. RSI) tries out the
Windows version of their program under VMWare and finds that, indeed,
it runs at perfectly acceptable speed with just a few interface
glitches, and some general ugliness. They declare this "good enough",
and the Mac port is quietly dropped. (You could argue RSI has already
done this, dumping the native Aqua IDL port in favor of the Unix/X11
flavor). Something to think about.

JD
