

## Re: [RFC, Announce] Unified x86 architecture, arch/x86

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  - *Date:* Sat, 21 Jul 2007 01:58:16 -0400 (EDT)
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On Sat, 21 Jul 2007, Andi Kleen wrote:

On Saturday 21 July 2007 00:32, Thomas Gleixner wrote:

We are pleased to announce a project we've been working on for some time: the unified x86 architecture tree, or "arch/x86" – and we'd like to solicit feedback about it.

Well you know my position on this. I think it's a bad idea because it means we can never get rid of any old junk. IMNSHO arch/x86\_64 is significantly cleaner and simpler in many ways than arch/i386 and I would like to preserve that. Also in general arch/x86\_64 is much easier to hack than arch/i386 because it's easier to regression test and in general has to care about much less junk. And I don't know of any way to ever fix that for i386 besides splitting the old stuff off completely.

I have to say honestly that it is much easier to work in the i386 arch directories than the x86\_64. But that may be my own feelings. You seem to have a nice style that you like and think that it is cleaner. But it doesn't really seem much cleaner to me. Somethings I like better with the x86\_64 code, and there's somethings I like better with the i386 code. But from a comfort level, I have to go with worknig with the i386 code.

Besides radical file movements like this are bad anyways. They cause a big break in patchkits and forward/backwards porting that doesn't really help anybody.

I think it helps a lot of people. Especially those that are trying to add things to `_both_` i386 and x86\_64.

This causes double maintenance even for functionality that is conceptually the same for the 32-bit and the 64-bit tree. (such as support for standard PC platform architecture devices)

Not sure what you mean here? I would think that we have this "double maintenance" anyway. Fixes that are done in x86\_64 probably should also be done in i386. Why have it in two places?

It's not really the same platform: one is PC hardware going back forever with zillions of bugs, the other is modern PC platforms which much less bugs and quirks

hehe, I'm seeing a bunch of bugs and quirks appear. It's just that x86\_64 isn't as old as i386 to have as many of them. But give it time.

To see it otherwise it's more a junkification of arch/x86\_64 than a cleanup of arch/i386 -- in fact you didn't really clean up arch/i386 at all.

That was not the point of this patch. This patch was to unify the two so that we can get started on the unification.

How did we do it?

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As an initial matter, we made it painstakingly sure that the resulting .o files in a 32-bit build are bit for bit equal.

You got not a single line less code duplication then, so i don't really see the point of this.

Did you read what tglx wrote? The point of this patch was to keep everything the \_same\_. The fact that not a single line less code

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duplication is a feature. A great starting point where we can easily trace things back to the current arch separation, as well as move forward in merging the two.

-- Steve

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