

From: Dan Bornstein

Sent: 7/19/2008 7:15 PM

To: [-] Patrick Brady

Cc: [-] Hiroshi Lockheimer

Bcc: [-]

Subject: Re: Beta Delivery and Invoices

On Fri, Jul 18, 2008 at 7:04 PM, Patrick Brady <pbrady@google.com> wrote:

> Dan -- can you help me understand why we need to test the actual Dx tool for CTS? Can't we just run tests with expected dex bytecode (or actual apps) against the VM implementation and if they fail to run, the test case fails.

There are a couple reasons to test dx, one technical and one political (in order):

(1) It is important to test the full path from source code to execution. Without testing dx, we might not be able to easily tell if a particular bug in the system is due to a fault in the vm or a fault in the translation from the Java Programming Language. We still do run into dx bugs on occasion.

(2) Although we don't have a relationship with Sun, we've been trying to be good "Java citizens" nonetheless, and testing dx falls under that umbrella, since it's *the* piece that bridges the divide. I believe credibly being able to say "We would *love* to be called Java, if only Sun would work with us" puts us in a much better position than (effectively) saying "Screw that Java crap."

> I'd rather have Noser focus on the core library tests and do the Dx testing later, if it is necessary at all. Noser's schedule calls for delivering the complete core library unit tests in mid-December, which is almost 2 months after we plan to open source. I'd love to find a way to improve our test coverage (or, our confidence in being able to determine whether an implementation is compatible) if at all possible. What do you think?

I think that Noser has a relatively large number of employees (at least compared to the number currently working on Google's behalf) and has been known to add staff or sub-contract on an as-needed basis; they did so for the libcore development work, for example. I think a better thing to do rather than cut requirements is to encourage them — probably with \$\$ — to adjust their short-term staffing.

That being said, my understanding is that they *already* have different teams doing libcore vs dex format vs dx testing, which is what I'd expect anyway, given that the different types of testing require different skillsets. It's fine to ask them to reprioritize, but my expectation would be that this wouldn't actually result in a tremendous shift in delivery.

I also think it reflects poorly on Google to decide this late in the game that the contractually agreed-upon schedule isn't actually acceptable. Again, though it is perfectly reasonable to ask them to adjust things, we shouldn't exert so much pressure that our vendor-partner — who I should add has been very valuable to us so far — is forced to operate in panic mode, cut corners, and deliver a sub-par result. This is exactly what happened with the original libcore effort, and we are *still* dealing with the repercussions of that. Though arguably the CTS effort couldn't possibly have the same adverse effect on the project as a whole that the libcore development effort could, I am still underwhelmed at the prospect of a repeat.

Basically, we dragged our feet getting the CTS going (by several months at least), and we should just suck it up and deal. It's really not the end of the world if the CTS doesn't get released until a couple months after the Big Open Source Event.

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

TRIAL EXHIBIT 1001

CASE NO. 10-03561 WHA

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-dan

