

Exhibit B

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

ORACLE AMERICA, INC.,)
 Plaintiff,)
 vs.) No. CV 10-03561 WHA
GOOGLE, INC.,)
 Defendant.)
_____)

CONFIDENTIAL TESTIMONY - ATTORNEYS' EYES ONLY

VIDEOTAPED DEPOSITION OF ROBERT GRIESEMER
THURSDAY, JUNE 23, 2011

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Videotaped Deposition of ROBERT GRIESEMER,
taken at 333 Twin Dolphin Drive, 4th Floor,
Redwood Shores, California, commencing
at 9:32 p.m., Thursday, June 23, 2011,
before Kelli Combs, CSR No. 7705.

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1 APPEARANCE OF COUNSEL:

2
3 FOR PLAINTIFF ORACLE AMERICA, INC.:

4
5 MORRISON & FOERSTER

6 BY: MICHAEL A. JACOBS, ESQ.

7 JESSICA TIPTON, ESQ. (Palo Alto office)

8 ADELA GOTZ, Summer Associate

9 425 Market Street

10 San Francisco, California 94105-2482

11 (415) 268-7455

12 mjacobs@mofo.com

13 jtipton@mofo.com

14
15 FOR DEFENDANT GOOGLE, INC.:

16
17 KING & SPALDING

18 BY: MARK FRANCIS, ESQ.

19 BRUCE W. BABER, ESQ. (Atlanta, Georgia office)

20 1185 Avenue of the Americas

21 New York, New York 10036-4003

22 (212) 556-2227

23 mfrancis@kslaw.com

24 bbaber@kslaw.com

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1 APPEARANCES OF COUNSEL CONTINUED:
2

3 FOR THE WITNESS:
4

5 KRIEG, KELLER, SLOAN, REILLEY & ROMAN, LLP
6 BY: GARTH A. ROSENGREN, ESQ.
7 555 Montgomery Street, 17th Floor
8 San Francisco, California 94111
9 (415) 249-8330
10 grosengren@kksrr.com
11

12 ALSO PRESENT:
13

14 NICK KASAMATIS, videographer
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1 ROBERT GRIESEMER,
2 after having been duly sworn, testified as follows:

3 ---o0o---

4
5 THE VIDEOGRAPHER: Good morning. We're 9:32AM
6 on the record at 9:32 on June 23rd, 2011.

7 This is the videotaped deposition of
8 Robert Griesemer. My name is Nick Kasamatis, here
9 with our court reporter, Kelli Combs. We are here
10 from Veritext National Deposition & Litigation 9:33AM
11 Services at the request of counsel for Plaintiff.

12 This deposition is being held at King &
13 Spalding, 333 Twin Dolphin Drive in the City of
14 Redwood Shores.

15 The caption of this case is Oracle of 9:33AM
16 America versus Google, Inc., Case Number CV 10-03561
17 WHA.

18 Please note that audio and video recording
19 will take place unless all parties agree to go off
20 the record. Microphones are sensitive and may pick 9:33AM
21 up whispers, private conversations, and cellular
22 interference.

23 At this time, will counsel and all present
24 please identify themselves for the record.

25 MR. JACOBS: Michael Jacobs, Morrison & 9:33AM

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1 policies at Sun that specifically related to 2:38PM
2 retention by Sun of, for example, notebooks of
3 individuals who had been named as inventors on any
4 patents?

5 A I don't remember. 2:38PM

6 Q Okay.

7 I'd like to go back to some of your
8 earlier testimony, Mr. Griesemer, about the '205
9 patent, so if you could get it back in front of you.
10 It's PX164. 2:38PM

11 And I just want to be sure that the
12 testimony you have given is clear for both The Court
13 and a jury to the extent they ever hear your
14 testimony about this patent.

15 In response to Mr. Jacobs' questions, you 2:39PM
16 identified at least three different techniques for
17 optimizing performance of a virtual machine,
18 correct?

19 A Yes.

20 Q One of them was the so-called snippet 2:39PM
21 technique that is described in the '205 patent,
22 correct?

23 A Correct.

24 Q You also testified to some length about
25 in-line caching, correct? 2:39PM

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1 A Correct.

2:39PM

2 Q And you also testified about something
3 called on-stack replacement, correct?

4 A Correct.

5 Q I'd like you to go back in time with me
6 for a second to the time when you were working at
7 Animorphic and then when you were working at Sun, up
8 until the time the first patent application that
9 became the '205 patent was filed, which would be
10 June 30th of 1997, okay?

2:39PM

2:39PM

11 A Yes.

12 Q The timeframe I want to focus on is your
13 time at Animorphic up until June 30th, 1997 at Sun,
14 okay?

15 A Yes.

2:39PM

16 Q During that time period, do you believe
17 that what you came up with in terms of the snippet
18 technique was something new?

19 A I must have, but I don't recall.

20 Q Okay.

2:40PM

21 During that same time period, do you
22 believe that you came up with anything new that
23 related to techniques for in-line caching?

24 A They were very, very platform-specific
25 variations of it.

2:40PM

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1 Q When you say "platform-specific 2:40PM
2 variations," what do you mean?

3 A I found that on the X86 platform, you
4 could use an instruction that was not doing
5 anything, so to speak, in the code to store -- to 2:40PM
6 store some in-line cache information.

7 Q Okay.
8 And during that same time period we're
9 talking about now, your Animorphic days and then
10 through June 30th of 1997 at Sun, do you believe you 2:41PM
11 came up with anything new with respect to on-stack
12 replacement?

13 A I don't recall.

14 Q Okay.
15 And now I'd like you to look at the '205 2:41PM
16 patent.

17 The '205 patent does describe and explains
18 the snippet technique, correct?

19 A Correct.

20 Q And it describes the snippet technique 2:41PM
21 both can be used with in-line caching and without
22 in-line caching, correct?

23 A Correct.

24 Q Okay.
25 You mentioned a few minutes ago some very 2:41PM

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1 specific platform-specific techniques for in-line 2:41PM
2 caching that you believe you developed during those
3 days.

4 Are any of those platform-specific
5 techniques for in-line caching described in the '205 2:41PM
6 patent?

7 A I believe they are not.

8 Q Okay.

9 And do you believe that any techniques
10 that you were using or came up with for on-stack 2:41PM
11 replacement during that time period are described in
12 the '205 patent?

13 A No.

14 Q Okay.

15 I believe you also testified that at one 2:42PM
16 point, there was a use in the HotSpot Virtual
17 Machine of the snippet technique that's described in
18 the '205 patent, correct?

19 A Yes.

20 Q And if I recall, your testimony is you're 2:42PM
21 not sure when that was taken out, whether it was
22 still at Animorphic or whether it was at Sun; is
23 that right?

24 A Correct.

25 Q Okay. 2:42PM

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1 If you had available to you today the 2:42PM
2 source code for the HotSpot Virtual Machine going
3 back into that time period, would it be easy or
4 difficult for you to determine when the snippet
5 technique was discontinued? 2:42PM

6 A It would be very easy.

7 Q How would you do it?

8 A There -- in this patent, there is a
9 specific bytecode described. It's called go_native,
10 which was used to invoke those snippets. 2:42PM

11 In the HotSpot Virtual Machine, there is a
12 table of all the bytecodes. And if that bytecode is
13 in that table, then -- and active -- it could be in
14 the table, but is deactivated. But if it's in a
15 table and active, then the technique is in use. If 2:43PM
16 it's not -- if it's not in a table at all, it's for
17 certain not there. If it's in a table, one would
18 have to make sure it's actually invoked, but that
19 would be fairly easy.

20 Q Okay. 2:43PM

21 And you testified that the use of this
22 snippet technique that's described in the '205
23 patent was discontinued in the HotSpot Virtual
24 Machine, correct?

25 A I believe that's correct. 2:43PM

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1 Q Why was it discontinued? 2:43PM

2 A Because when you have a system where you
3 both have an interpreter, but also a compiler or a
4 JIT, then the benefit of having snippets is unclear
5 and maybe actually counterproductive because of the 2:43PM
6 complexity it introduces into the system.

7 Q Okay.

8 And what experience did you have or
9 what -- what happened during the time period that
10 the snippet technique was in use in the HotSpot 2:44PM
11 Virtual Machine that led you to conclude that it was
12 not beneficial?

13 A I believe we had measurements that show it
14 didn't make a difference.

15 Q Okay. 2:44PM

16 Did you have --

17 When you say -- you say you had
18 measurements that it didn't make a difference, are
19 you saying you had measurements that there was no
20 improvement of performance or that any improvement 2:44PM
21 of performance was offset by the cost of having it
22 in there in the first place?

23 A I don't recall, but they seem to be the
24 same at the end of the day, yeah.

25 Q Okay. 2:44PM

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1 And during your testimony with Mr. Jacobs, 2:44PM
2 you referred several times -- and again, I just want
3 to make sure your testimony is clear to a
4 layperson -- you talked about the cost of something,
5 doing something in a program, and you also talked 2:45PM
6 about overhead.

7 Could you explain what those two concepts
8 are when you use them in terms of the performance of
9 a virtual machine?

10 A So this is all about making programs run 2:45PM
11 faster.

12 And so by cost, one usually refers to, in
13 this context, the extra time it takes to run a
14 program. So if it takes more time, then it means
15 that there is an extra cost. 2:45PM

16 Overhead goes into the same direction.
17 Implementing the snippets causes some extra
18 machinery to be executed, which one might casually
19 refer to as overhead. So if that overhead is not
20 offset by performance gains that are at least as 2:45PM
21 large, then you end up with an extra cost at the
22 end.

23 Q Okay.

24 And again, just on these different
25 techniques that we talked about -- make sure we're 2:46PM

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1 clear -- the snippet technique you felt was 2:46PM

2 something new that you came up with, correct?

3 A That Lars and I came up with.

4 Q In-line caching was old and known and
5 people had been doing for quite some time? 2:46PM

6 A That is correct.

7 Q Is the same true of on-stack replacement?

8 A I don't recall when on-stack replacement
9 was introduced the first time. It may have been at
10 Animorphic. 2:46PM

11 Q How about use of a just-in-time compiler?
12 Was that something that was new with Animorphic?

13 A No.

14 Q That had been done for many years before
15 that? 2:46PM

16 A In fact, we had a paper that referred to
17 it.

18 Q Now, during the time that you were at Sun
19 from approximately February of 1997 until November
20 of 2001, right, that was your time at Sun? 2:47PM

21 A Yes.

22 Q Were you familiar with the different
23 virtual machines that were being offered by Sun or
24 any licensees of Sun?

25 A I did not follow any of Sun's offerings. 2:47PM

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1 Q Okay. 2:47PM

2 Were you familiar with the HotSpot Virtual
3 Machine during that time period?

4 A I was familiar because I was familiar with
5 it in the past, but I have not followed its 2:47PM
6 development.

7 MR. JACOBS: I think you disconnected on
8 that.

9 MR. BABER: Yeah, I think we did, too.

10 BY MR. BABER: 2:47PM

11 Q I'm talking about during the time you were
12 at Sun.

13 A Oh, during the time at Sun. Okay.

14 Of course I was familiar with the HotSpot
15 Virtual Machine, yes. 2:47PM

16 Q Were you also familiar, during that same
17 time, with other virtual machines that were being
18 developed or commercialized at Sun or by Sun's
19 licensees?

20 A I have heard of other virtual machines, 2:47PM
21 yes.

22 Q And during your time at Sun, you worked
23 not just on the HotSpot Virtual Machine, but you
24 worked on other Sun virtual machines for the Java
25 language, correct? 2:48PM

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1 I, ROBERT GRIESEMER, do hereby declare under penalty of
2 perjury that I have read the foregoing transcript; that
3 I have made any corrections as appear noted, in ink,
4 initialed by me; that my testimony as contained herein,
5 as corrected, is true and correct.

6 EXECUTED this _____ day of _____, 2011, at

7 _____, _____.

8 (city)

(State)

9
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12 _____
13 ROBERT GRIESEMER
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1 STATE OF CALIFORNIA)
) :ss
2 COUNTY OF SAN FRANCISCO)
3

4 I, KELLI COMBS, CSR No. 7705, a Certified Shorthand
5 Reporter of the State of California, do hereby certify:

6 That the foregoing proceedings were taken before me
7 at the time and place herein set forth; that any
8 witnesses in the foregoing proceedings, prior to
9 testifying, were placed under oath; that the verbatim
10 record of the proceedings was made by me using machine
11 shorthand which was thereafter transcribed under my
12 direction; further, that the foregoing is an accurate
13 transcription thereof.

14 I further certify that I am neither financially
15 interested in the action nor a relative or employee of
16 any attorney of any of the parties.

17 IN WITNESS WHEREOF, I have this date subscribed my
18 name.

19
20 Dated: June 27, 2011
21

22
23 _____
24 KELLI COMBS, CSR No. 7705
25