1	UNITED STATES DISTRICT COURT
2	NORTHERN DISTRICT OF CALIFORNIA
3	SAN FRANCISCO DIVISION
4	
5	
6	ORACLE AMERICA, INC.,)
7	Plaintiff,)
8	vs.) No. CV 10-03561 WHA
9	GOOGLE, INC.,)
10	Defendant.)
11	
12	
13	HIGHLY CONFIDENTIAL, ATTORNEYS' EYES ONLY
14	
15	Videotaped Federal Rule 30(b)(6), Topic 7,
16	deposition of PATRICK BRADY, taken at the Law
17	Offices of King & Spalding LLP, 333 Twin Dolphin
18	Drive, Redwood Shores, California, commencing at
19	9:36 a.m., Thursday, July 21, 2011, before
20	Leslie Rockwood, RPR, CSR No. 3462.
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22	
23	
24	
25	PAGES 1 - 133
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1	THURSDAY, JULY 21, 2011; REDWOOD SHORES, CALIFORNIA	
2	9:36 A.M.	
3	000	
4	THE VIDEOGRAPHER: Good morning. We are on	
5	the record, Ladies and Gentlemen, at 9:36 a.m. on	09:36:33
6	July 21st, 2011. This is the videotaped deposition of	
7	Patrick Brady representing Google, Incorporated, pursuant	
8	to Federal Rule of Procedure 30(b)(6), Topic 7.	
9	My name is Benjamin Gerald, here with our	
10	court reporter Leslie Rockwood. We are here from	09:37:01
11	Veritext National Deposition and Litigation Services at	
12	the request of counsel for the plaintiff.	
13	This deposition is being held at 333 Twin	
14	Dolphin Drive in the City of Redwood Shores, California.	
15	The caption of this case is Oracle America, Incorporated,	09:37:25
16	versus Google, Incorporated. Case Number is CV 10-03561	
17	WHA.	
18	Please note that audio and video recording	
19	will take place unless all parties agree to go off the	
20	record. Microphones are sensitive and may pick up	09:37:58
21	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. MUINO: Daniel Muino of Morrison &	09:38:08
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1	Foerster for the plaintiff Oracle America.	
2	MR. NORTON: Fred Norton of Boies, Schiller &	
3	Flexner for plaintiff Oracle America.	
4	MR. KAMBER: Matthias Kamber of Keker & Van	
5	Nest for Google, Inc.	09:38:22
6	MR. HWANG: Renny Hwang of Google.	
7	THE VIDEOGRAPHER: Thank you.	
8	Will the reporter please swear in the	
9	witness.	
10	THE REPORTER: Raise your right hand, please.	
11	You do solemnly state that the evidence you	
12	shall give in this matter shall be the truth, the whole	
13	truth and nothing but the truth so help you God.	
14	THE WITNESS: Yes.	
15	THE REPORTER: Thank you.	
16	THE VIDEOGRAPHER: Thank you.	
17	Please proceed.	
18	EXAMINATION	
19	BY MR. MUINO:	
20	Q. Good morning, Mr. Brady.	09:38:40
21	A. Good morning.	
22	Q. Can you please state your full name for the	
23	record.	
24	A. Patrick Brady.	
25	Q. And what is your home address?	09:38:46
		Page 6

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		Page 6

1	point there was tests written for those API's by a third	
2	party. I couldn't say for sure if that was if those	
3	were included in this version of CTS or if they're in the	
4	now current version of CTS.	
5	Q. BY MR. MUINO: Are you familiar with an API	12:05:04
6	package called java.security?	
7	A. I've heard of that API package before, yes.	
8	Q. Do you know if that API package is tested	
9	under the CTS?	
10	A. I do not.	12:05:16
11	MR. KAMBER: Objection to form.	
12	Q. BY MR. MUINO: With respect to the last row	
13	on this page, anyway, of this table, it says, "Dalvik VM	
14	tests." And the description says, "The tests focus on	
15	testing the Dalvik VM."	12:05:33
16	Do you see that?	
17	A. I do.	
18	Q. Do you know what those tests covered?	
19	A. I don't know specifically. These are	
20	generally, these are also black box tests. So we my	12:05:45
21	understanding of these tests is that they send in Dalvik	
22	executable bytecode both, you know, valid and invalid,	
23	and make sure that whatever virtual machine is executing,	
24	that DEX bytecode responds according to how we would	
25	expect them to respond.	12:06:09
		Page 90

1	So again, black box testing, but passing in,	
2	you know, bytecode expecting a response or a, you know,	
3	certain failure.	
4	Q. Can you explain what you mean when you say	
5	"black box testing"?	12:06:23
6	A. So the purpose of the CTS, we've written the	
7	CTS because we know that OEMs make extensive	
8	modifications to the platform. If they didn't or if they	
9	were prevented from doing so in some way, we wouldn't	
10	need the CTS; right? You don't need to test it if the	12:06:41
11	same information is compatible with itself.	
12	So black box testing makes the assumption	
13	that they're making changes under the hood. And that	
14	we need to ensure that applications that would be written	
15	with the Android SDK could run could execute on these	12:06:55
16	varying implementations of Android.	
17	So from a black box testing, what I mean by	
18	that is you have no knowledge, and you assume no	
19	knowledge, of the internal workings of a system, but you	
20	pass at inputs and you test the outputs. I hope that	12:07:15
21	answers it.	
22	Q. If a device did not have a Dalvik Virtual	
23	Machine, can it pass the Dalvik Virtual Machine test?	
24	MR. KAMBER: Objection to form, improper	
25	hypothetical.	12:07:31
		Page 91

1	THE WITNESS: I think you know, when we	
2	say it's tough to say when we say "the Dalvik Virtual	
3	Machine." So if what is required by these tests is	
4	that you have a virtual machine. Or I suppose you could	
5	design actual assembly machine code that would be able to	12:07:49
6	interpret DEX bytecode, Dalvik executive bytecode. I	
7	don't think there is one implementation of the Dalvik	
8	Virtual Machine. And I think you could have a different	
9	virtual machine that was capable of running this DEX	
10	bytecode. And I would assume that you could pass a CTS	12:08:10
11	here.	
12	It's much the same way in that we have media	
13	framework API's. And we have a default or upstream	
14	implementation of a media framework called Stagefright.	
15	But many of our partners swap out that version and put in	12:08:25
16	some commercial version or an internally-developed	
17	version that passes CTS. That's kind of the point of a	
18	CTS is to make sure that, you know, the inputs and	
19	outputs are expected but that you can swap in different	
20	components.	12:08:47
21	Q. BY MR. MUINO: Are you aware of any OEMs that	
22	modified their Android devices to replace the Dalvik	
23	Virtual Machine with another virtual machine and the	
24	device passed the Dalvik Virtual Machine's tests of the	
25	CTS?	12:09:02
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I declare under the penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed on <u>September 1st</u>, 2011, at Mountain View, CA SIGNATURE OF THE WITNESS Page 130

•	Highly Confidential - Attorneys' Eyes Only
1	STATE OF CALIFORNIA) ss:
2	COUNTY OF MARIN)
3	
4	I, LESLIE ROCKWOOD, CSR No. 3462, do hereby
5	certify:
6	That the foregoing deposition testimony was
7	taken before me at the time and place therein set forth
8	and at which time the witness was administered the oath;
9	That testimony of the witness and all
10	objections made by counsel at the time of the examination
11	were recorded stenographically by me, and were thereafter
12	transcribed under my direction and supervision, and that
13	the foregoing pages contain a full, true and accurate
14	record of all proceedings and testimony to the best of my
15	skill and ability.
16	I further certify that I am neither counsel
17	for any party to said action, nor am I related to any
18	party to said action, nor am I in any way interested in
19	the outcome thereof.
20	IN WITNESS WHEREOF, I have subscribed my name
21	this 26th day of July, 2011.
22	
23	$1 n - \Omega + \alpha = 1$
24	Lesli Rockwood
25	LESLIE ROCKWOOD, CSR. NO. 3462
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	Veritext National Deposition & Litigation Services

ERRATA SHEET Patrick Brady - TOPIC 7 Deposition date: July 21, 2011

I, PATRICK BRADY, hereby certify that I have carefully read the foregoing transcript, and that the same is a true and correct transcription of my deposition, except:

Page	Line	Change	Reason
46	14	"adjustment time compiler" should read "AOT compiler"	Transcription error
47	23	"duel core processor" should read "dual-core processor"	Spelling
65	14	"skew" should read "SKU"	Spelling
72	13	"Goggle" should be "Google"	Transcription error
75	6	"Java in the name set" should be "java in the namespace"	Misheard
85	15	"Android" should be "droid"	Misheard
91	11	"information" should be "implementation"	Misheard
93	10	"understand" should be "understanding"	Misheard
99	8	"dexopt implementation" should be "DEX optimixation"	Misheard
120	21	"Is it – the high quality" should be "is it high quality"	Misheard
120	25	"better than not up-stirring" should be "better to not upstream"	Misheard
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Witness Signature:

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