

Volume 23

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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

BEFORE THE HONORABLE WILLIAM H. ALSUP

ORACLE AMERICA, INC.,)	
)	
Plaintiff,)	
)	
VS.)	No. C 10-3561 WHA
)	
GOOGLE, INC.,)	
)	
Defendant.)	San Francisco, California
)	May 15, 2012

TRANSCRIPT OF JURY TRIAL PROCEEDINGS

APPEARANCES :

For Plaintiff:

MORRISON & FOERSTER
755 Page Mill Road
Palo Alto, California 94304

BY: MICHAEL A. JACOBS, ESQUIRE
KENNETH A. KUWAYTI, ESQUIRE
MARC DAVID PETERS, ESQUIRE
DANIEL P. MUINO, ESQUIRE

BOIES, SCHILLER & FLEXNER
333 Main Street
Armonk, New York 10504

BY: DAVID BOIES, ESQUIRE
ALANNA RUTHERFORD, ESQUIRE

(Appearances continued on next page)

Reported By: Katherine Powell Sullivan, RPR, CRR, CSR #5812
Debra L. Pas, RMR, CRR, CSR #11916
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Katherine Powell Sullivan, CSR, CRR, RPR
Debra L. Pas, CSR, CRR, RMR
Official Reporters - US District Court - 415-794-6659

APPEARANCES (CONTINUED):

For Plaintiff:

BOIES, SCHILLER & FLEXNER
1999 Harrison Street, Suite 900
Oakland, California 94612

**BY: WILLIAM FRED NORTON, ESQUIRE
STEVEN C. HOLTZMAN, ESQUIRE**

ORACLE AMERICA, INC.
500 Oracle Parkway
Redwood Shores, California 94065

**BY: ANDREW C. TEMKIN, CORPORATE COUNSEL
DORIAN DALEY, GENERAL COUNSEL**

For Defendant:

KEKER & VAN NEST
633 Battery Street
San Francisco, California 94111-1809

**BY: ROBERT ADDY VAN NEST, ESQUIRE
MATTHIAS ANDREAS KAMBER, ESQUIRE
DANIEL PURCELL, ESQUIRE
EUGENE MORRIS PAIGE, ESQUIRE
CHRISTA MARTINE ANDERSON, ESQUIRE
MICHAEL S. KWUN, ESQUIRE**

KING & SPALDING LLP
1185 Avenue of the Americas
New York, New York 10036-4003

**BY: BRUCE W. BABER, ESQUIRE
SCOTT T. WEINGAERTNER, ESQUIRE**

GOOGLE, INC.
1600 Amphitheatre Parkway
Mountain View, California 94043

BY: RENNY HWANG, LITIGATION COUNSEL

Also Present:

SAFRA CATZ, President and CFO
Oracle Corporate Representative

CATHERINE LCAVERA
Google Corporate Representative

P R O C E E D I N G S

1
2 **MAY 15, 2012**

7:25 a.m.

3
4 (Proceedings held in open court, outside
5 the presence and hearing of the jury.)

6 **THE COURT:** Okay. On the record. Good morning.

7 (Good morning by all counsel.)

8 **THE COURT:** Any issues for the Court?

9 **MR. PURCELL:** Good morning, your Honor. We had filed
10 a couple of motions last night, mainly asking for some
11 guidance, some clarification on what Phase 3 is going to look
12 like.

13 As you know, copyright damages are about
14 disgorgement, if any, for nine lines of code and eight test
15 files that didn't make it onto a phone, and it's clear now that
16 Oracle's strategy for litigating that is to bring our CEO and
17 our chairman here and ask them a lot of questions about big
18 numbers, projections, aspirational documents, and not to focus
19 on the nine lines of code, not to focus them on the eight test
20 files --

21 **THE COURT:** All right. Those are all good issues,
22 but why don't we -- we'll have time after the closings and
23 while the jury is deliberating, most likely, to address those.

24 **MR. PURCELL:** Fair enough.

25 **THE COURT:** You're right to bring it up because I

1 asked, but that can be postponed.

2 **MR. PURCELL:** We'll talk about that later. Thank
3 you.

4 **THE COURT:** We'll put that off for future agenda.
5 Anything else that relates to what we've got to do
6 this morning?

7 **MR. VAN NEST:** I don't believe so, your Honor.

8 **THE COURT:** All right. Well, that's great. I don't
9 think all members of the jury are present yet. Do you have the
10 courtroom set up the way you want it?

11 **MR. VAN NEST:** Close to it.

12 **THE COURT:** How about the plaintiff, since you go
13 first? Don't you want to get your easels ready?

14 **MR. JACOBS:** I like what's up there, your Honor.

15 **THE COURT:** So you can put as many easels up as you
16 want. Get your computerized screens ready.

17 You agreed on an hour and 15 minutes.

18 **MR. JACOBS:** That's correct, your Honor.

19 **THE COURT:** You have to save some of that for your
20 rebuttal.

21 **MR. JACOBS:** You bet, and I'll be keeping track.

22 **THE COURT:** How come we have two Elmos? Where did
23 that one come from?

24 **MR. JACOBS:** I think this is one that we can switch
25 to.

1 **THE COURT:** What about that?

2 **MR. JACOBS:** I think one time we tried to switch to
3 it and it didn't switch, so we brought in a backup.

4 **MR. VAN NEST:** Do we need that one up there?

5 **MR. JACOBS:** This one is easier to use for us.

6 **THE COURT:** Well, you set it up the way you want.
7 This illustrates -- see, we here at the court had a debate over
8 whether to spend federal tax dollars on fancy equipment for the
9 courtroom, and I was of the view that we were spending too much
10 money and it was better -- in no time whatever we bought would
11 be out of date and the lawyers wouldn't want to use it. I rest
12 my case.

13 **MR. VAN NEST:** I actually think what your Honor has
14 works very well.

15 **THE COURT:** It does. I think if you had been here
16 for the MS-13 trial, you wouldn't think so, because we had at
17 least a dozen times in six months where the equipment failed
18 and we had to put everything on hold while the technical people
19 came in and figured out where the glitch was.

20 **MR. VAN NEST:** That's a long time with use every
21 single day.

22 **THE COURT:** It's five-and-a-half months.

23 Dawn, are the jurors present?

24 **THE CLERK:** I don't think they are all year yet, no,
25 Judge.

1 **THE COURT:** We sent out yesterday the final charge.
2 Did everyone get that?

3 **MR. JACOBS:** Yes, your Honor.

4 **THE COURT:** I propose to read the first third as
5 before and then turn it over to the plaintiffs for their
6 closing, and probably at that point it will be time for a
7 break. We'll come back and do all of the closings for the
8 defense. Then we'll do the rebuttal and then I will finish off
9 the instructions. So that's kind of my tentative thought.

10 **MR. VAN NEST:** So the first third you read, through
11 seven or so; seven or eight?

12 **THE COURT:** Yes. Page 4, that will be seven.

13 (Brief pause.)

14 **THE COURT:** All right. While we have a moment, let
15 me ask you this: I have been working hard on the order dealing
16 with copyrightability and I don't think I'm going to have that
17 in the next week for sure, But I don't want anyone to think --
18 I'm willing to have an oral argument on it if that's what you
19 want.

20 I think we have already had so many oral arguments
21 that relate to it that perhaps it's unnecessary, but give me
22 your views on whether you want to have a stand-alone oral
23 argument on copyrightability issues.

24 **MR. VAN NEST:** I think that's really up to your
25 Honor. As you know, we've briefed it several times. If you

1 believe that would be helpful to you in drafting your order,
2 fine, we're happy to do it.

3 But I kind of agree with your first comment, that
4 we've had a number of briefs. We've had a number of arguments
5 on it. Again, if it would be helpful to your Honor, that's
6 fine, but otherwise I think we would submit on what we filed.

7 **THE COURT:** How about plaintiff?

8 **MR. JACOBS:** In the action, your Honor.

9 **THE COURT:** All right. Thank you for your guidance.
10 Do we have the exhibit boxes ready to go in the jury
11 room?

12 **THE CLERK:** The exhibits are pulled, your Honor.
13 They are ready.

14 **THE COURT:** How about the index? Did you lawyers
15 agree to an index?

16 **MR. JACOBS:** We have an agreed joint list of admitted
17 trial exhibits, Phase 2.

18 **THE COURT:** Is that correct, on that side.

19 **MR. VAN NEST:** Yeah. I believe so, your Honor.

20 **THE COURT:** Mr. Jacobs will hand that to the clerk
21 and the clerk will include that in the exhibits when they go
22 into the jury room.

23 (Whereupon document was tendered
24 to the clerk.)

25 **THE COURT:** No disputes over things you want to show

1 the jury in the closing arguments, I gather.

2 **MR. VAN NEST:** We haven't exchanged slides, your
3 Honor, which was our practice for Phase 1 as well. So we will
4 be taking them all by surprise.

5 **THE COURT:** Ambush, a tried and true method.

6 Years ago -- I didn't see it, but years ago Joe
7 Cochette -- some of you are old enough to remember the 1980s
8 and the S&L crisis, remember that? Anyway, Joe Cochette had a
9 trial, a securities case, where it was against some accounting
10 firms that rose out of the S&L's, how come the accounting firms
11 didn't detect the failures in progress. So in his closing
12 argument he played a clip from a movie where it was the Titanic
13 going down.

14 (Laughter.)

15 **THE COURT:** I bet every member of that jury remembers
16 to this day that closing argument.

17 Okay. Let's see if the jurors are present.

18 (Brief pause.)

19 **THE CLERK:** Judge, no.

20 **THE COURT:** Well, I'll let you relax for a minute and
21 I'll step off the bench and come back when they are all here.

22 (Whereupon there was a recess in the proceedings
23 from 7:35 a.m. until 8:21 a.m.)

24 **THE COURT:** Please be seated.

25 I am informed by the clerk that Ms. Gonzales, who is

1 our second juror on the front row, is not coming. She's had an
2 auto wreck or something and -- not a wreck, but her car broke
3 down on the Bay Bridge, and that the first message was
4 ambiguous as to whether or not she was going to get here. She
5 was going to try to get her husband to come, but now she's
6 informed Dawn that she's just not coming.

7 So we have three options. If you want me to send the
8 U.S. Marshal out to track her down and arrest her and bring her
9 back, that would be one option.

10 Second option would be to just dismiss her and move
11 on. We can go with 11.

12 Or, we can wait til tomorrow. Maybe we would inform
13 her that she needs to come back.

14 I won't tell you what my judgment is yet -- I will
15 tell you, my judgment is we ought to dismiss her. I won't rule
16 this. I want your agreement. We should dismiss her and do the
17 arguments now.

18 **MR. JACOBS:** We agree with that, your Honor.

19 **MR. VAN NEST:** That's fine, your Honor.

20 **THE COURT:** So at this time I'm going to dismiss
21 Ms. Jacqueline Gonzales from the jury. She will be notified,
22 but Dawn I want you to please notify her she is not to talk to
23 anybody, including the press, the lawyers, anyone, until this
24 case is over, because I don't want her revealing what's been
25 going on inside the jury room until this case -- the jury is

1 fully discharged. Would you please get ahold of her and tell
2 her that?

3 And I hereby order everyone in the courtroom, all the
4 lawyers, all members of the press, you will be in violation of
5 a direct order if you in any way approach her and try to work
6 her for information until after the entire jury is discharged.
7 Then you can do it all you want, I guess, but not now. I don't
8 want there to be any compromise of the integrity of this trial
9 by the lawyers or the press for the time being.

10 So she is not discharged from her obligations and
11 admonitions, but she is discharged from further participation
12 in the jury.

13 So at this time, Dawn, let's see if the other 11
14 members of the jury are present.

15 **THE CLERK:** Okay.

16 (Brief pause.)

17 (Jury enters the courtroom at 8:26 a.m.)

18 **THE COURT:** All right. Welcome back. Please be
19 seated.

20 May I make a suggestion that the four of you scoot
21 down one chair, unless you think that will disorient you.

22 Ms. Gonzales, who is our -- one of our jurors had an
23 unfortunate -- not an accident, her car started to break down
24 on the Bay Bridge and has created such a problem that she is
25 just not going to be able to be here today period. So we hate

1 to lose someone who's worked this hard on the case, but really
2 we have no choice. Otherwise, it would be a huge inconvenience
3 to the rest of you on the jury. So we have discharged her.
4 She is no longer on the jury.

5 Now, I need to say to you. You're not supposed to be
6 talking with anyone about the case, period, but now you cannot
7 talk with her at all. She is now an ordinary civilian. If you
8 ran into her on the street, you cannot talk to her in any way,
9 just like you couldn't talk to anyone else. Whenever you
10 deliberate on the case it will be you 11; just you 11 now, not
11 12.

12 So she will not be part of the jury going forward.
13 She is completely gone from the case.

14 All right? We got that part?

15 (Jury nodding affirmatively.)

16 **THE COURT:** Good. So we have lost 45 minutes on
17 account of this, but I think we are still okay on time.

18 We're going to have the closing arguments in a moment
19 and then the instructions, but there is a short set of the
20 instructions I want to give you first, then we will go to the
21 closings. We will have appropriate breaks along the way. It
22 will be just the same drill as before, and in some ways shorter
23 because many of the instructions I gave you before I'm going to
24 just trust that you remember them. A few I will restate. So
25 what I will do now is start with the first third. It's really

1 only four pages. It will take less than 10 minutes, and then
2 we'll go to the closing statement.

3 **JURY INSTRUCTIONS**

4 **THE COURT:** Members of the jury, it is now my duty to
5 instruct you on the law that applies to this phase. A copy of
6 these instructions will be available in the jury room for you
7 to consult as necessary. It is your duty to find the facts
8 from all the evidence and to decide whether the side with the
9 burden of proof has carried that burden applying the elements
10 of proof required by the law, elements I will provide you in a
11 moment.

12 In following my instructions, you must follow all of
13 them and not single out some and ignore others. You must not
14 read into these instructions or into anything the Court may
15 have said or done as suggesting what verdict you should return.
16 That, of course, is a matter entirely up to you.

17 I will repeat only part of the instructions I
18 previously gave you regarding what is and is not evidence and
19 the burdens of proof.

20 Now, the evidence from which you are to decide what
21 the facts are consists of:

22 One, the sworn testimony of witnesses, whether
23 presented in person or by deposition.

24 Two, the exhibits received into evidence.

25 And, three, any stipulated facts and pretrial

JURY INSTRUCTIONS

1 discovery items read into evidence, such as responses to the
2 requests for admissions.

3 Certain things are not evidence and you may not
4 consider them in deciding what the facts are. I will list them
5 for you.

6 First, arguments, statement and objections by lawyers
7 are not evidence. Not evidence. The lawyers are not
8 witnesses. What they have said in their opening statements,
9 closing arguments and at other times is intended to help you
10 interpret the evidence, but it is not evidence itself. If the
11 facts as you remember them differ from the way the lawyers have
12 stated them, your memory of them controls.

13 Two, a suggestion in a question by counsel or the
14 Court is not evidence unless it is adopted by the answer. A
15 question by itself is not evidence. Consider it only to the
16 extent it was adopted by the answer.

17 Three, testimony or exhibits that have been excluded
18 or stricken or that you have been instructed to disregard are
19 not evidence and must not be considered. In addition, some
20 testimony and exhibits have been received only for a limited
21 purpose. Where I have given a limiting instruction, you must
22 follow it.

23 Finally, anything you may have seen or heard when the
24 Court is not in session is not evidence.

25 Now, evidence may be direct or circumstantial. You

JURY INSTRUCTIONS

1 should consider both kinds. The law makes no distinction
2 between the weight to be given either direct or circumstantial
3 evidence. It is for you to decide how much weight to give any
4 evidence. You will remember that example I gave you about the
5 rain, about the water on the sidewalk. Well, that's
6 circumstantial evidence. I won't repeat that example. But
7 it's up to you to decide how much weight to give circumstantial
8 evidence. Both kinds, direct and circumstantial, weigh in as
9 evidence.

10 Now, certain charts and summaries have been shown to
11 you in order to help explain facts disclosed by books, records
12 and other documents which are in evidence in the case. They
13 are not themselves evidence or proof of any facts. If they do
14 not correctly reflect the facts or figures shown by the
15 evidence in the case, you should disregard these charts and
16 summaries and determine the facts from the underlying evidence.

17 Now, I will address the burden of proof. In this
18 phase the preponderance of the evidence standard applies to all
19 issues except one. When a party has the burden of proof on an
20 issue by a preponderance of the evidence, it means you must be
21 persuaded by the evidence that the allegation is more probably
22 true than not true. More probably true than not true.

23 To put it differently, if you were to put the
24 evidence favoring a plaintiff and the evidence favoring a
25 defendant on opposite sides of the scale, the party with the

JURY INSTRUCTIONS

1 burden of proof on the issue would have to make the scale tip
2 somewhat toward its side. If the party fails to meet this
3 burden of proof, then the party with the burden of proof loses
4 on the issue.

5 Preponderance of the evidence basically means more
6 likely than not. For one issue the standard is higher and is
7 called proof by clear and convincing evidence.

8 Now, let me just stop here and say, you didn't -- I
9 don't think you heard about this in the first phase, so this is
10 a new term for you.

11 For one issue the standard is higher and is called
12 proof by clear and convincing evidence. When a party has the
13 burden of proving any claim by clear and convincing evidence,
14 it means you must be persuaded by the evidence that the claim
15 is highly probable. Highly probable. This is a higher
16 standard of proof than proof by a preponderance of the
17 evidence.

18 Just to skip forward for a moment. You will find
19 that the clear and convincing standard applies to the
20 willfulness issue, which I will tell you about in due course.

21 Okay. On any issue if you find that plaintiff
22 carried its burden of proof as to each element of a particular
23 issue, your verdict should be for plaintiff on that issue. If
24 you find that plaintiff did not carry its burden of proof as to
25 each element, you must find against plaintiff on that issue.

JURY INSTRUCTIONS

1 So at this point I've read the first one-third of the
2 instructions and when I resume later on, I will get right into
3 the substance of the law that applies to the case; but I wanted
4 to stop, give you that first one-third.

5 On behalf of Oracle America, at this time Mr. Jacobs
6 will give the opening part of his closing argument.

7 Mr. Jacobs, the floor is yours.

8 **CLOSING ARGUMENT**

9 **MR. JACOBS:** Thank you very much, your Honor. Thank
10 you very much.

11 I know we've said that, both sides, throughout this
12 trial. It is easy to say "thank you." I hope you have seen
13 evidence of our appreciation. Both sides, with the guidance of
14 Judge Alsup, have tried to streamline the case, narrow the
15 issues for your decision making. Both sides have had to make
16 compromises along the way to accomplish that. So I hope you
17 see that through the parties' actions, we really do appreciate
18 the sacrifice you've made to serve on this jury.

19 You watch us. We watch you. We see that you're
20 working hard. You have been taking lots of notes. You have
21 been paying attention even to some highly technical testimony.
22 It's honestly hard for me to follow it sometimes and I have
23 been living with this case a couple of years. I can only
24 imagine what it's like to step into this trial and follow Java
25 bytecode. Java bytecode. We talked about Java bytecode in

1 this trial. Even Java programmers don't learn Java bytecode.
2 Java bytecode is down here (indicating). Java programmers
3 write-up here (indicating) in the source instructions that you
4 saw in the top of that chart. So we really dug deep, and we
5 really got into it, and we really mixed it up. And I think
6 you'll conclude at the end of this set of presentations to you,
7 that the evidence on our side, that Google infringed and that
8 infringes willfully is more than -- more likely than not. It's
9 just overwhelming. So let's get into it.

10 (Document displayed)

11 There are really three points that the evidence that
12 we'll be talking about circles around. Does Google infringe
13 the '104 patent? Does Google infringe the '520 patent? And is
14 Google's infringement willful?

15 And we will explain to you why the evidence, the
16 exhibits and the testimony show that the answer to all of those
17 questions is yes.

18 But that's the focus. One of the things I'm going to
19 be focusing on is focus. What the issues are that really need
20 to be decided; how the evidence relates to those issues; and
21 how some of the distractions from the Google side are designed
22 to divert from that focus. Because if we focus, if we look
23 closely at what we have to decide, then the evidence lines up.
24 We have proved our case. And we'll ask you for a finding of
25 liability.

1 So on infringement that, in turn, boils down to a set
2 of focused questions. In the case of the two patents: Does
3 Android meet the claims? You heard this already from Judge
4 Alsup at the beginning. It's all a question of looking at the
5 claims, at the metes and bounds of the property in deciding
6 whether Android infringes based on that claim language. Not
7 based on ancillary issues. Not based on surroundings. Not
8 based on things like whether Android is open or not or whether
9 Java was dedicated to the public some day. That's just not the
10 question. The question is: Is the claim language met? And so
11 that's what we'll be focusing on very heavily in this
12 presentation.

13 As I suggested to you at the outset of this phase,
14 this process we're now engaged in is more focused itself than
15 Phase 1, because in Phase 1 we had our question of
16 infringement, the jury was able to decide; and then we had the
17 question of Google's affirmative defense, that was a question
18 you split on.

19 In this case we just have a question of infringement.
20 There are no affirmative defenses that Google has to present to
21 you to justify or excuse its infringement.

22 And when we look at the claims, it turns out that
23 although there is a bit of underlining, when you actually look
24 closely at what needs to be underlined, the disputed elements
25 are very narrow. So as we focus in, we'll be looking very

1 closely at what exactly what is in dispute.

2 And as to those disputed elements, Google's arguments
3 just aren't credible. They are fighting with their own
4 documentation. They are fighting with their source code.
5 We'll show you that they are fighting with their own software
6 developers. They are even quarreling through and with their
7 own expert.

8 There is no license. No license. We know that from
9 Phase 1, relevant to Phase two. We'll be talking about -- in
10 the willfulness section we'll be talking about the license
11 issue again. But Google has no defense that they were
12 permitted, authorized, granted the right by Oracle or Sun to
13 infringe these patents.

14 Free use is out. The clean room is irrelevant. You
15 heard testimony from Mr. Rubin on that. Open source is
16 irrelevant. It's just the question does Google infringe the
17 claims of these patents.

18 (Document displayed)

19 One of the distractions might be: Look at Android.
20 It's huge. 15 million lines of code. They are only focusing
21 on one little portion. All the added stuff. How can an
22 Android infringe? That would be a Google argument. I can
23 imagine one of you going back into the jury room after this
24 phase and saying, "You know, they are just focusing on this one
25 little feature, but Android is big. How can they possibly

1 infringe?" Again, that is not the issue. The issue is whether
2 Android infringes the claims.

3 And there's actually an important instruction that
4 you're going to get in a few minutes from Judge Alsup, which
5 says specifically:

6 "If all elements of an asserted claim have
7 been proven, it is not a defense to
8 infringement that the accused product or
9 method includes an additional element not
10 called out in the patent claim."

11 So you don't avoid infringement by doing other stuff.
12 You don't avoid infringement because Android is big. And we're
13 focusing on some particular functions. Google does not avoid
14 infringement by that argument.

15 (Document displayed)

16 For infringement purposes what is important is the
17 ways in which Android is relevant. And it starts with the
18 fact, the reason these patents -- there's a reason these
19 patents are infringed. It's not random. There is a reason
20 these patents are infringed. And the reason this these patents
21 are infringed is that Google started out by adopting the basic
22 Java architecture, the basic Java design.

23 We talked about some of the specific elements of
24 this, on the left side, the Java side, and on the right side.
25 Importantly, on both sides of this stack diagram is the Java

1 compiler. And Google specifically tells developers to go to
2 the then Sun/now Oracle, website and download the Java
3 development kit. That is why on both sides of this stack we
4 have a Java compiler.

5 And if you have any doubt on that question, take a
6 look at Trial Exhibit 741, which says, "Download the JDK" --
7 JDK is the Java Development Kit -- "it's on the Oracle
8 website."

9 So what is being output from both sides of the stack
10 is something called bytecode. Yes, Google does a translation
11 into something called dex code. And then what is running on
12 both computers is a virtual machine. And so starting with the
13 compiler and ending with the virtual machine Google confronted
14 the same problems that the Sun Java developers confronted some
15 years ago. And that is why there's infringement. There's a
16 reason for it. There was a conscious adoption of the Java
17 architecture and that led Google to infringe.

18 We'll talk about that how that unfolded in the second
19 half of this presentation.

20 (Document displayed)

21 We may hear again from Google that virtual machines
22 have long been in existence. We heard it in the opening
23 statement. Once again, it's a distraction and it's irrelevant.
24 We're not claiming a patent on all virtual machines. The
25 question of prior art that you heard about in the video is not

1 before you. There is no invalidity defense.

2 The question once again: Does Android infringe the
3 claims of the patent? It doesn't matter that virtual machines
4 have been known for many decades.

5 (Document displayed)

6 It doesn't matter that symbolic and numeric
7 references have been known for many decades. Our patent claims
8 involve numeric reference. It claims resolving the symbolic
9 reference the first time around and then using the numeric
10 reference afterwards.

11 It claims that -- it claims like Courtroom 8.
12 Courtroom 8 is the symbolic reference. Once you know where
13 Courtroom 8 is, you don't have to go to the directory and see
14 where Courtroom 8 is. You come right to the courtroom.

15 That's what the invention is all about. This is
16 just -- this is a distraction.

17 (Document displayed)

18 You just heard the instruction on our burden on this
19 issue, our burden of proof. And it's called a preponderance of
20 the evidence. And the question is whether it's more likely
21 than not that Google infringes the claims of these patents.
22 And the question is whether the scales tilt just a bit in favor
23 of Oracle. If it does, then you decide, yes, Google infringes.
24 That's our burden on this issue. Tip the scales a bit in
25 Oracle's favor. We'll tip them a lot, but the burden is just

1 tip a bit.

2 (Document displayed)

3 That brings us to the '104 patent. And you've seen
4 now a lot about the '104 patent. Just to remind you that the
5 inventor was James Gosling, the father of Java. That the
6 original application -- if you look down at the bottom of the
7 screen, the original application was filed in 1992. You may
8 think to yourself, Wow, Android, that's pretty modern. 1992,
9 that's a long time ago. Somebody might think back -- when you
10 go back and deliberate, how can a patent that was first
11 described in a document in an application in 1992 be relevant
12 to Android, which is undoubtedly a modern cell phone platform.
13 And the answer is, as we saw in trial, they confronted on the
14 cell phone the very same problems that the Java developers were
15 confronting then on desktops.

16 You heard the testimony about this kind of cycle of
17 the computer industry and how the same problems keep on
18 recurring as we shrink the technology, take what was a desktop
19 and put it in our pockets.

20 (Document displayed)

21 The only issue on all of the claims of the '104
22 patent is symbolic references. The amount of highlighting is
23 small. We'll show you it can be even smaller. The amount of
24 underlining, showing you the disputed element. And we will
25 explain why, as to the four patents on the left -- the four

1 claims on the left the Dalvik interpreter aspect of Android
2 infringes and as to the two claims on the right, dexopt,
3 another component of Android infringes.

4 (Document displayed)

5 And just to make clear what the issues are in each
6 case, to divide it up a little bit, with respect to Resolve.c
7 in the Dalvik interpreter, the first set of claims, the only
8 issue is whether the symbolic references are -- qualify as
9 symbolic references because they are contained in the
10 instruction stream. That is the issue over here on whether
11 this "field@CCCC," this "01" (indicating), is a symbolic
12 reference because it's undoubtedly contained in the instruction
13 stream. No dispute about that.

14 And then for dexopt there is this additional issue of
15 whether the resolution of a symbolic reference is a dynamic
16 one. So we'll cover both.

17 (Document displayed)

18 Let's talk first "contained in the instruction
19 stream" and whether that limitation, that element of the claims
20 is met.

21 Now, we start with what was up disputed. Android
22 resolved symbolic references. You saw this in the source code
23 in the comments. At 46.15 in the trial exhibits:

24 "This converts symbolic references into
25 pointers."

1 It's exactly what we're talking about in the
2 invention of the '104 patent. And it specifically said
3 "resolved." And if you look at some of the claims the claim
4 language is "determined." In other cases it's "resolved."
5 This is not disputed. Google admits that Android resolves
6 symbolic references.

7 And then the description of it was dead on to what
8 we're talking about. At 46.14:

9 "When a class, method, field, or string
10 constant is referred to from Dalvik bytecode,
11 the reference takes the form of an integer
12 index value."

13 That's exactly what this is (indicating), an integer
14 index value.

15 "This value indexes into an array of these
16 various types."

17 So it's indexing into the array, and then that is
18 converted.

19 "The resolver uses those to convert the
20 instruction stream index into a pointer to
21 the appropriate object or struct."

22 And you'll recall that the object is over here
23 (indicating).

24 So this is almost a word-for-word description of
25 what's going on in the claims right here in the Dalvik source

1 code.

2 (Document displayed)

3 So Google focused on a very narrow aspect of the
4 claim language.

5 And, Mr. Lee, if I could just have Claim 11 up for a
6 minute?

7 (Document displayed)

8 So again, Google has to acknowledge that symbolic
9 references are converted into numeric references. So,
10 actually, the underlining on Claim 11 is a little overstated.
11 The real question is whether the instructions "contain one or
12 more symbolic references."

13 So we can -- for present purposes just to focus the
14 discussion, we can delete the underlining on the rest of these
15 because, again, Google concedes that Dalvik converts symbolic
16 references. It's just a question of whether said instructions
17 are contained in the -- said references are contained in the
18 instructions.

19 (Document displayed)

20 Again, the definition of "symbolic reference." You
21 saw this frequently through the Court -- through the trial, but
22 we're going to focus closely on it as we discuss this
23 infringement issue.

24 "A reference that identifies data by a name
25 other than the numeric memory location of the

1 data, and that is resolved dynamically rather
2 than statically."

3 Now, the word "name" is in there for symbolic
4 reference and the word "numeric" is in there for the numeric
5 memory location. That created the potential for confusion that
6 Google exploited until we were able to nail it down through
7 their expert.

8 (Document displayed)

9 The question was: Is the fact that this field index
10 is a number, does that mean it can't be a symbolic reference?
11 We know in every day life that's just wrong. Numbers are
12 symbolic references all the time. Whether it's a number on the
13 back of an athletic uniform or a Social Security number or all
14 the ID cards we carry around or even a driver's license number,
15 all of these are symbols. And in order to find out what all of
16 them mean, you would have to trace them through a data base, to
17 ultimately a data object (indicating), and find out what is the
18 person associated with the Social Security number. If it was
19 an athlete, you would look at the program and you would say,
20 okay, who has number 20 on his back? That's a symbolic
21 reference.

22 (Document displayed)

23 And, finally, Dr. August admitted that a number can
24 be a name and, therefore, a symbolic reference for purposes of
25 this analysis. So we can clear away that confusion. A number

1 can be a symbolic reference. The fact that this (indicating)
2 position here, the "field@CCCC" is a number doesn't matter
3 because a number can be a symbolic reference.

4 (Document displayed)

5 Now, there was another potential source of confusion
6 which we clarified also through Dr. August and through
7 Professor Mitchell. What's the data that this claim is talking
8 about? Is it talking about what Google wanted to focus on,
9 which is the constant pool information (indicating), or is it
10 talking about the data in the data object (indicating), the
11 actual field value, the actual data?

12 And the key lies in the claim language. Because what
13 it what it talks about at the end of the claim is:

14 "...obtaining data in accordance to said
15 numerical references."

16 Mr. Lee, can we have Claim 11 up again?

17 (Document displayed)

18 And can you highlight the last fragments?

19 (Document highlighted)

20 "...obtaining data in accordance with said
21 numerical references."

22 So the whole goal of this exercise is to obtain
23 meaningful data, the actual data. And we proved that, again
24 through Professor August, when we asked him to walk us through
25 Fig. A -- 1A and Fig. 1B of the patent, and he confirmed that

1 when talking -- when we're talking about the patent, the data
2 that we're obtaining, the data we're talking about is the data
3 in what the patent calls the "data object," over here on the
4 right (indicating), and what ultimately we labeled the "data
5 object" or the "instance object" on the Dalvik representation,
6 on the dex representation.

7 So what we're talking about when we talk about a
8 symbolic or numeric reference is retrieving the actual value of
9 the data. And that's, of course, what the programmer wanted to
10 do when the programmer wrote the program in source code.

11 So that's the setup for understanding, then, the way
12 this in Android (indicating) actually works. And it started to
13 become clear with Mr. McFadden's testimony when we examined
14 him.

15 (Document displayed)

16 And this was the magic moment. This was when, it
17 seemed to me, I almost had a Perry Mason moment. They were
18 almost going to get up and say, "Yes, we infringed." But it
19 didn't happen. We had to go through a couple more steps.

20 Mr. McFadden acknowledged that the role of this
21 instruction here (indicating) in the instruction stream, 52,
22 the role of the IGET instruction is to "obtain actual field
23 data from an object." That's the role of the IGET instruction.

24 Of course, the IGET instruction is what is given
25 meaning (indicating) by the value in the instruction stream

1 below it. So we have to understand what the IGET instruction
2 is doing in order to understand whether 01 is a symbolic
3 reference.

4 (Document displayed)

5 Next step in the chain was realizing -- presenting to
6 you the realization that Google was not depicting a complete
7 representation of what's going on. Because this Slide 20,
8 which you saw many times and many hours were spent on by
9 Google, doesn't depict the actual field value. It doesn't
10 depict the actual -- the data object from which the data is
11 being retrieved.

12 What Google's slide showed you was some intermediate
13 steps along the way to getting that value. Intermediate steps
14 along way to getting that value. It's as if what they were
15 focusing on was this: You get a notice that says, "Go to
16 Courtroom 8." And then it says to you, "Look at the directory
17 on the wall," and it pinpoints the location of the directory on
18 the wall. You still have to look at the directory to find out
19 where Courtroom 8 is. And that is your goal, to get to
20 Courtroom 8, to get the actual field value. That there might
21 be a little intermediate step along the way is completely
22 irrelevant to the question of infringement here.

23 (Document displayed)

24 And this became clear also when we examined
25 Mr. McFadden. So we asked him:

1 **"QUESTION:** In this particular case, the
2 illustration you gave to the jury" -- we were
3 referring to Slide 20 -- "fun is a symbol for
4 a field that has a value?

5 **"ANSWER:** Yes.

6 **"QUESTION:** And what's the value of that
7 field in your illustration?

8 **"ANSWER:** The value of that field is not
9 shown in the illustration.

10 **"QUESTION:** But it was shown; wasn't it, sir?

11 **"ANSWER:** I don't believe so."

12 And then again:

13 **"QUESTION:** That value, the actual field data
14 in an object -- this is the point you were
15 making before -- that's not even shown here
16 on Slide 20, is it?

17 **"ANSWER:** No.

18 **"QUESTION:** In my example, where the actual
19 value of the field in an object was 17, the
20 number 17 would not appear on this slide the
21 way you drew it?

22 **"ANSWER:** Correct."

23 (Document displayed)

24 And then, of course, we walked through it first with
25 Dr. August and Dr. August acknowledged that in order to

1 properly understand the role of the IGET instruction, we have
2 to show -- or we have to represent the data object over here on
3 the right (indicating).

4 Now, this is Dr. Mitchell's slide. What I have up --
5 this is Dr. Mitchell's chart over here (indicating). What I
6 have up for you is what we developed with Dr. August, and he
7 acknowledged that we needed to show the data object or the
8 instance object in order to show what IGET does, what we're
9 actually retrieving within the meaning of the claim language.

10 (Document displayed)

11 And so we asked him:

12 **"QUESTION:** The IGET instruction finds the
13 instance of an object and retrieves the data
14 from a specified field?

15 **"ANSWER:** Yes.

16 **"QUESTION:** And the object that we've
17 depicted here on this chart is the instance
18 object; true, sir?

19 **"ANSWER:** True."

20 So Google had presented a slide focused -- Slide 20
21 focused on some intermediate steps that left out the most
22 important step of the process: What is IGET's role in life?
23 What is IGET's mission? What is its purpose? It's purpose is
24 to get data from something that Google left off.

25 And if you're trying to figure out -- if maybe some

1 of the code -- after several days the code is still a little
2 mysterious, there's a little clue lurking in this to
3 understanding which side can meet its burden under the
4 instructions. The fact that Google left off the actual data
5 object from its presentation and that we had to add it is a
6 little bit of a tip that maybe they weren't telling the whole
7 story because if you tell the whole story, the infringement is
8 clear.

9 (Document displayed)

10 And, of course, Professor Mitchell then explained
11 that in his testimony. He walked through how one writes source
12 code and how that source code is compiled. The variable was
13 "y" in the source code, and then it was compiled, and there was
14 this constant pool created, and the constant pool has various
15 descriptors of "y."

16 But, again, the role of IGET, the role of the
17 instruction in the instruction stream and the role of the 01 in
18 the instructions, contained in the instructions, is to get data
19 from the data object. And that's exactly what it does, and
20 that's exactly why it's a symbolic reference, because it
21 doesn't point exactly to the numerical location of that data.

22 Now, let me just spend one moment on Professor
23 Mitchell. There were errors in his report. You saw in the
24 video of his deposition how it was pointed out to him, and he's
25 looking at his report and the wheels are turning and right

1 there on the spot he says, "Oh, yeah, that's a mistake." And
2 he just acknowledged it in his deposition like that. He didn't
3 quarrel with it. He didn't try to justify it. "Oh, yeah.
4 That's a mistake."

5 How do we know it's a mistake? Well, the way he
6 reacted in that deposition. And, also, that we showed that in
7 other portions of his report he had accurately stated his
8 opinion that these indices in the instructions, such as 01
9 (indicating), are symbolic references. So it was an honest
10 mistake. He's a professor for 30 years at Stanford University.
11 He is a noted computer scientist and there was a bug in his
12 report.

13 But there's another clue as to how that was used
14 at the trial. Because 90 percent of Google's examination of
15 Dr. Mitchell was about the error in his report. What does that
16 tell you? What that tells you is that if you analyze the
17 report as -- that did not have the errors in it, they don't
18 have an argument, because the portions of the report that
19 accurately stated his opinion are unassailable.

20 This field (indicating) "@CCCC," the "01" in Chart 20
21 in Google's Chart 20 is a symbolic reference, and the fact that
22 Google was not able to elicit testimony from Dr. Mitchell that
23 was inconsistent with that reinforces that we're right and they
24 are wrong.

25 Now, there are a couple other bits of testimony that

1 help take the clouds from our eyes about what this "instant
2 field" is -- sorry, what this "index" is over here
3 (indicating), and that is a symbolic reference.

4 So, again, we asked Mr. McFadden:

5 **"QUESTION:** Can you explain what the IGET
6 instruction is?

7 **"ANSWER:** That is the instance field GET
8 instruction. What that means is there is an
9 object somewhere" -- over here (indicating)
10 -- "and you need to get a piece of data out
11 of it. The data is stored in fields. So
12 somewhat this instruction does is it finds
13 the instance of the object" -- again, over
14 here (indicating). Remember, Google uses the
15 term instance object -- "and retrieves the
16 data from the specified field."

17 Again, the clouds part. What's the specified field?
18 It's the field specified by 01. It gets you to that point in
19 data.

20 Remember that discussion with Dr. August, who was
21 resisting the obvious technical point here, which is that 01
22 doesn't specify some random location. It specifies a
23 particular location, a unique location.

24 (Document displayed)

25 Now, there is another way to understand, sort of

1 another proof, that this index over here (indicating) is a
2 symbolic reference.

3 And, again, let's go back to the definition:

4 "A reference that identifies data by a name
5 other than the numeric memory location and
6 that is resolved."

7 Hold the dynamic versus static issue for a minute.

8 "And that is resolved."

9 So one way to know that a reference is a symbolic
10 reference is if it's resolved into a numeric memory location.

11 There are two parts to this argument. One is that,
12 as I said earlier, this over here (indicating) itself is not a
13 numeric memory location.

14 And so we got that out of Dr. August:

15 **"QUESTION:** The object from which the actual
16 field data has been retrieved in the patent
17 is called a data object; true, sir?

18 **"ANSWER:** That's correct."

19 **"QUESTION:** So we put the '104 patent down
20 here. We call this a data object. The
21 actual field values are like the 17 in the
22 data object; true, sir?

23 **"ANSWER:** The values in the object are like
24 the 17.

25 **"QUESTION:** And 01 is not the numerical

1 memory location of actual field data in the
2 instance object?

3 **"ANSWER:** That's right. There is no arrow
4 that directly connects 01 to the first field
5 in the instance object."

6 This does not directly connect to the data object
7 because there has to be a resolution process (indicating). Am
8 I just telling you that? No. That's what Mr. McFadden told
9 us.

10 (Document displayed)

11 He told us that this instruction (indicating) never
12 contains the actual location of the actual field data.

13 **"QUESTION:** So the IGET instruction, the role
14 of the IGET instruction is to obtain actual
15 field data from an object; true, sir?

16 **"ANSWER:** True.

17 **"QUESTION:** The field index in the IGET
18 instruction is not the numerical memory
19 location of the actual field data in an
20 object; is it, sir?

21 **"ANSWER:** It is not.

22 **"QUESTION:** True or false? The Dalvik IGET
23 instruction never contains the numerical
24 memory location of the actual field data that
25 it is supposed to get and ultimately store it

1 in a Dalvik register?

2 **"ANSWER:** True."

3 So first step in the logic. This is not a numerical
4 memory location to the actual data in the object (indicating).

5 (Document displayed)

6 Recall the claim language.

7 "The symbolic reference is resolved or
8 determined into a numerical reference."

9 Question for Mr. McFadden:

10 **"QUESTION:** And then the resolver converts
11 the instruction stream index" -- it converts
12 this (indicating) -- "into a pointer to the
13 appropriate object or struct?

14 **"ANSWER:** Yes.

15 **"QUESTION:** Would you agree that in this
16 context the pointer -- that which the
17 symbolic reference has been converted into --
18 is a numeric reference?

19 **"ANSWER:** Yes.

20 **"QUESTION:** Well, the Dalvik VM resolves a
21 Dalvik bytecode reference to a class, method,
22 field or string constant into a pointer to
23 the appropriate object or struct?

24 **"ANSWER:** Yes."

25 So, once again, confirming that what happens is this

1 index is ultimately resolved into a numeric reference.

2 And then the clincher, again, from Mr. McFadden who
3 answered the technical questions accurately.

4 (Document displayed)

5 **"QUESTION:** The instruction stream index is
6 not the numeric memory location of the
7 appropriate object or struct, is it?

8 **THE WITNESS:** No.

9 **"QUESTION:** No, it is not the numeric memory
10 location; correct?

11 **"ANSWER:** It is not the address of that item.

12 **"QUESTION:** Because if it were, there would
13 be no reason to convert it into a pointer;
14 true?

15 **"ANSWER:** Correct."

16 So what have we established? We have established
17 that the role of the IGET instruction is to retrieve data from
18 the data object.

19 We established that 01 specifies fluid and indirect
20 process the location of the data object.

21 We have established that 01 has to be resolved into
22 numeric memory location.

23 We have established that a number can be a symbol.

24 We have now established that 01 is a symbolic
25 reference contained in the instructions. That is all the claim

1 language requires with this additional topic for one aspect of
2 our infringement claim of dynamic that I'll address in a
3 moment.

4 All the experts, all the witnesses agree on how this
5 works. There was no technical disagreement about the operation
6 of this code. At the end of the day, this poster from Dr.
7 Mitchell and the poster from Dr. August are, for all intents
8 and purposes, identical. It's just that it took Oracle's
9 examination to develop the existence of this data object, the
10 misleading nature of this chart, which obscured the true
11 meaning of 01. The true meaning of 01 is Courtroom 8. It is a
12 symbolic reference. It is not the actual numeric memory
13 location. It has to be resolved into that and that's what
14 Dalvik does.

15 Now, remember there are two categories of claims, two
16 accusations of infringement.

17 (Document displayed)

18 For Dalvik, Google conceded that the resolution
19 process is dynamic. The only issue was for this other
20 infringement target, which was dexopt. And that's -- there is
21 an issue. Google contests whether the resolution is dynamic
22 within the meaning of the Court's claim construction.

23 (Document displayed)

24 So laying out this chart again where dexopt in Dalvik
25 claims 27 and 29 there is this additional dynamic issue.

1 (Document displayed)

2 Lots of witnesses referred to what dexopt does as
3 resolving symbolic references. So just the plain language of
4 "symbolic reference" seems to -- everybody seems to understand
5 what that is and agree that dexopt resolves symbolic
6 references.

7 And so Mr. McFadden said when I asked him:

8 **"QUESTION:** Dexopt resolves what even you
9 concede are symbolic references?

10 **"ANSWER:** True.

11 **"QUESTION:** And it resolves them into
12 numerical references?

13 **"ANSWER:** True."

14 And then I asked him to clarify this dynamic point:

15 **"QUESTION:** Because that resolution process
16 depends on the conditions actually existing
17 on the handset, when those conditions change
18 by way of a system update, dexopt needs to
19 rerun?

20 **"ANSWER:** True."

21 And so then I said to him:

22 **"QUESTION:** If I mean by dynamic, by the word
23 dynamic, depending on conditions on the
24 handset which can change from time to time,
25 then it is dynamic; true, sir?

1 **"ANSWER:** True."

2 Now, the Court's claim construction doesn't say
3 anything particular about "dynamic." It simply says "dynamic."
4 And "dynamic" means changing, "dynamic" means active.

5 Now, Mr. Bornstein did use the phrase "static
6 linking" in his description of what's going on. So Google has
7 a word argument, since Bornstein calls it static linking.
8 We're talking about dynamic resolution. It's not dynamic
9 because Bornstein called it static.

10 (Document displayed)

11 But it is dynamic. The fact that you label this side
12 green doesn't make it blue. And when we talked with Dr. August
13 about this, he struggled. He squirmed, but ultimately we
14 elicited what we needed to get.

15 Bornstein had written in this previous slide:

16 "When a dex file arrives on a device, it will
17 have symbolic references to methods and
18 fields, but afterwards it might just be a
19 simple integer vtable offset."

20 He had testified right on the stand in this courtroom
21 that he meant to be conveying that in many cases the symbolic
22 reference will be resolved by dexopt. That's right.

23 So I asked Dr. August:

24 **"QUESTION:** Do you disagree with Bornstein?"

25 And he's looking at the screen and he says:

1 **"ANSWER:** Well, he's not applying the Court's
2 construction here. He is using the ordinary
3 meaning of the words.

4 **"QUESTION:** The ordinary meaning of symbolic
5 reference?

6 **"ANSWER:** Well, the parts that describe the
7 symbolic reference as being resolved
8 dynamically rather than statically is not
9 something he has in mind in this question --
10 in this answer.

11 **"QUESTION:** Because he was using symbolic
12 references the way one ordinarily would;
13 true, sir?

14 **"ANSWER:** Outside the context of the '104
15 patent, you might use symbolic reference in
16 that way.

17 **"QUESTION:** You weren't suggesting he was
18 using the phrase improperly; were you, sir?

19 **"ANSWER:** No."

20 What is really going on here is Professor August is
21 applying a special meaning of dynamic.

22 (Document displayed)

23 Google would argue that "dynamic" requires doing
24 these steps at runtime. And you heard that through the
25 testimony and I expect you will hear it through Google's

1 closing argument. But nothing in the Court's construction says
2 "dynamic" means "runtime." It simply says "dynamic."

3 And so we apply what we all understand "dynamic" to
4 mean, which is changing, in motion, active. We ask ourselves:
5 Is that the way dexopt resolves it? We look at the evidence.
6 The evidence is, every time you got new system software on your
7 device, dexopt had to rerun because it needed to know what was
8 going on on that device. That's all we need to show in order
9 to show that the resolution process was dynamic.

10 (Document displayed)

11 And we elicited this testimony from several
12 witnesses. We elicited testimony from Mr. Bornstein that.

13 "Dexopt processes dex files while the Dalvik
14 Virtual Machine is running."

15 So things are going on in the device. It's not just
16 a dumb device with some kind of conversion going on.

17 And then we asked him:

18 **"QUESTION:** Well, why don't you do the
19 optimization at the developer's side rather
20 than on the handset?"

21 And Mr. McFadden told us that the reason they chose
22 not to do that is:

23 **"ANSWER:** Because there is information that
24 Google needs -- Android needs in order to run
25 dexopt that's required to get from the device

1 on which the application is installed."

2 That's exactly what dynamic means. It means getting
3 information about the real device that the software is on and
4 incorporating that into the resolution process.

5 (Document displayed)

6 So you'll get a verdict form like you did last time.
7 I want to make sure we are clear about what we think the
8 evidence proves and, therefore, what your verdict should be.

9 And on each of these claims, Claim 11, 27, 29, 39, 40
10 and 41, we ask that you look at the evidence, evaluate it
11 fairly, and conclude that Google is infringing each of those
12 claims of the '104 patent.

13 Confusion avoidance point. You have to look at it
14 claim-by-claim, but the language -- the disputed language is
15 the same underlining. I've highlighted for you where there is
16 a dynamic dispute that is different for certain of the claims.
17 We think we have proven that it is dynamic, and so this
18 shouldn't tarry long on that. But you do need to put a
19 checkmark as to each claim and each claim needs to be
20 evaluated.

21 That brings us to the '520 patent. This was, recall,
22 the static initialization patent. It's also a Sun patent.

23 (Document displayed)

24 And, remember, that the actual dispute here is over
25 whether pattern matching is simulation. And recall my analogy

1 that it's like -- the way the bytecodes come out of the
2 compiler, it's like standing outside the grocery store and
3 going back in and out each time. And afterwards, after you do
4 the simulation in your head of your grocery shopping, it's a
5 quick path through the grocery store.

6 So this is the heart of this dispute: Whether
7 Android simulates execution.

8 (Document displayed)

9 Whether the dx tool on the developer's side simulates
10 extrusion.

11 (Document displayed)

12 Once again, it's all in the source code. Trust the
13 source code. If you trust what the Google developers were
14 saying to each other and saying to themselves about what their
15 code does, there is only one answer because what -- they are
16 doing that outside the litigation context. They are not
17 creating arguments to try to avoid infringement in court. They
18 are telling technical truths to themselves and to their code
19 readers.

20 And simulator.java is the file in Android that is the
21 kind of the main file and it says, we're going to simulate the
22 effects of executing bytecode. Again, almost aligns directly
23 with the claim language.

24 (Document displayed)

25 So Google comes up with a couple of arguments. There

1 was the stack argument. Well, if I look at Android, I don't
2 see it manipulating a stack. But even Dr. Parr, Google's
3 expert, had to acknowledge that the word "stack" appears
4 nowhere in the asserted claims.

5 Now, confusion avoidance point. If you look at the
6 patents closely, you will see some other claims that are not
7 asserted that do mention "stack." Those claims do mention
8 "stack," but we didn't assert those claims. We asserted the
9 claims that don't -- that aren't narrowed to "stack."

10 And so Google is making a noninfringement argument
11 against claims that are not asserted here because all we had to
12 show is that they simulate execution.

13 So what was the bottom line argument for Google on
14 simulating execution? Well, it's pattern recognition. It's
15 not simulating execution.

16 Okay. So I'm looking at my grocery list. I'm
17 standing outside the store. There are two ways I can shop.
18 I can shop in and out, or I can make a nice path through the
19 grocery store. Two ways that I can simulate execution. I can
20 look at each individual item, or I can look for patterns in my
21 grocery list. I could look to see whether somehow I was going
22 around the dairy counter repeatedly.

23 It's a little artificial, I acknowledge, but we're
24 talking about computers here. That still is simulating
25 execution. I'm not actually going in and out of the store.

1 I'm looking at the grocery list to figure out if there is a
2 more direct path through the shopping list. So pattern
3 recognition is a category of simulation.

4 Then there was this argument about parseNewarray,
5 which actually does the pattern recognition. This is the file
6 that -- simulates up here (indicating) and it's doing its thing
7 to simulate execution of the bytecode. It examines the first
8 part of the bytecode -- we'll show that in a minute -- and then
9 it calls parseNewarray, and Google's argument is parsing is not
10 simulation.

11 (Document displayed)

12 And then they ask this question, another kind of
13 misdirection, another instance of trying to create fusion.
14 They ask Dr. Mitchell:

15 **"QUESTION:** Well, do other files call
16 parseNewarray?"

17 He says:

18 **"ANSWER:** I don't know. That's not really
19 the question here. The question here is does
20 simulate Java call parseNewarray as part of
21 simulation. That's the issue. And, of
22 course, it does."

23 And then there was Dr. Mitchell's clear and
24 unequivocal testimony that simulation can include pattern
25 matching.

1 It's a false dichotomy. Simulation parsing,
2 simulation pattern matching, it's all of a piece.

3 (Document displayed)

4 If you examine the code closely, you will see what at
5 46.16 simulator.java that it's the class which knows how to
6 simulate the effects of executing bytecode, it's the public
7 class simulator, it calls parseNewarray as part of its process,
8 but it is simulating. It is called simulator. The developers
9 knew what they were doing when they labeled the main function,
10 the main routine simulation.

11 (Document displayed)

12 Have we proven that it is more likely than not that
13 the scales tip ever so slightly in Oracle's favor on the '520
14 patent? Yes, we have. Claims 1 and 20, all the elements of
15 those claims are met. Google infringes.

16 Now, let me turn to the next topic. We actually made
17 it through the technical part of this presentation and we've
18 seen a couple of things. We've seen that Google's arguments
19 are really weak; that they can't tip the scales down because
20 the source code in the documentation and the admissions of
21 their own developers and the clear testimony of Dr. Mitchell
22 show that the limitations are met.

23 So now we're going to change topics a little bit and
24 go to willfulness. And here we do have a slightly higher
25 burden of proof. For CSI watchers, it's still not proof beyond

1 a reasonable doubt. It's in between. It's clear and
2 convincing evidence. Got to tilt the scales more than ever so
3 slightly.

4 And the question is: Did Google willfully infringe
5 one or more claims of an asserted patent?

6 (Document displayed)

7 And the way the verdict works is you look to what you
8 answered "yes" to on the '104 and '520 patents and then you
9 turn to the question, okay, was it willful?

10 (Document displayed)

11 And you will get an instruction on how you decide
12 whether infringement is willful. So we have to show two
13 things. Again, we have to show them by this somewhat higher
14 standard; that Google acted despite a high likelihood that
15 Google's actions infringed a patent, and that Google actually
16 knew or should have known that its actions constituted an
17 unjustifiably high risk of infringement of a patent.

18 And what's the -- what is this a part of? It's a
19 part of an instruction that says that you have to decide
20 whether Google acted recklessly. Was Google reckless in the
21 way that it approached it's development of Android given all
22 that it knew or should have known about Oracle, earlier Sun's,
23 intellectual property rights and patents?

24 Now, let me pause for a minute here to just remind us
25 all what we're talking about. We talked about this at the

1 beginning. Patents are right there in the constitution.
2 Patent protection is a vital part of an idea in an
3 innovation-driven economy. You can tell by the level of
4 resources being given to this trial how important this dispute
5 is, and how important your role is, and how important these
6 patents are to Oracle.

7 You heard about Oracle's acquisition of Sun. You
8 heard about how important Java was. These patents are part of
9 the protection of that investment.

10 You heard from Dr. Reinhold how in the last year
11 Oracle has dramatically expanded its investment in Java, nearly
12 doubling the number of Java programmers. How in our society do
13 we protect that? A variety of ways. A critical way is patent
14 protection.

15 So when we ask whether Google acted recklessly, we
16 ask ourselves, knowing how important patents are, knowing that
17 Sun had lots of patents, knowing that they were copying aspects
18 of Java into Android, did they hide their head in the sand,
19 pretend there was no risk, or, as we'll see once again, simply
20 risk making enemies along the way and this particular lawsuit.

21 (Document displayed)

22 When you think of recklessness, what is recklessness?
23 Recklessness is driving the wrong way down a one-way street.

24 Google's argument is something of the form: We never
25 knew which car would hit us until very late, until July 2010.

1 Therefore, we can't be reckless.

2 I think we'll show you -- first of all, that doesn't
3 make any sense. We know that reckless driving, you don't have
4 to know which car you're going to run into. I think we'll show
5 you Google acted recklessly, even though until July 2010 they
6 weren't on notice from Oracle or Sun of these particular
7 patents-in-suit.

8 (Document displayed)

9 Let's just set the base line here. What's the basic
10 environment in which Google was walking when they started to
11 develop Android? Everybody else has a license. You heard
12 about the different forms of licenses. They licenses are not
13 just for code or copyrights. They also contained within them
14 grants of patent rights.

15 So what's the basic environment that Google is
16 stepping into? It's a world in which everyone else is
17 licensed.

18 (Document displayed)

19 And what does Google decide to do early on in Android
20 development? They decide to make Java central. They decide to
21 make a Java-based system. That decision is final.

22 This is a message, an email you saw in Phase 1.
23 You'll be seeing a mix over the next few minutes of emails
24 from -- that you saw before and that are part of the background
25 and additional evidence that you will have in the jury room

1 this time around.

2 (Document displayed)

3 And they adopted Java Platform components and
4 concepts in Android. So they could have gone off in a
5 completely different direction, but they didn't. They decided
6 to make it Java-based.

7 Recall that the Java compiler is part of the Android
8 development package. The Android SDK says, "Go to the Oracle
9 website. Download the Java compiler."

10 Now, I'm -- we're not arguing that that act alone
11 represents infringement of our intellectual property rights.
12 There are other Java compilers out there. That's not the
13 point.

14 The point is when Google set out to develop Android,
15 they didn't set out to develop something completely independent
16 where the risk of patent infringement would have been more or
17 less random. They set out to develop something that adopted
18 key components of Java.

19 (Document displayed)

20 And all the way through the development process they
21 have this in mind. You may recall the admission from Mr. Rubin
22 on the stand this time in Phase 2:

23 **"QUESTION:** Mr. Rubin, true or false: As of
24 all of 2009, you were referring to Dalvik as
25 a Java Virtual Machine?"

1 Because he had an email where he said it's Java
2 Virtual Machine.

3 He said:

4 **"ANSWER:** Umm, we were using it
5 interchangeably to describe our work at the
6 time internally."

7 So as of 2009 when they have already decided to
8 change the instruction set, the instruction format and go down
9 the dex path that's illustrated here, they are still thinking,
10 it's so similar to Java that we're going to call it a Java
11 Virtual Machine.

12 (Document displayed)

13 What was their motive for infringing these patents?
14 What was Google's motive? They had these basic problems as
15 they were developing Android. They needed to overcome the
16 performance and memory problems that the Java developers faced
17 10 years before.

18 And so in TX 23 we have an email to Mr. McFadden in
19 which Brian Swetland, who you saw in Phase 1 said, "We've got
20 to be fast and stable."

21 And then we elicited testimony from Mr. McFadden in
22 Phase two in this trial about the challenges they faced.

23 "Mobile devices are a lot less capable than
24 desktops. They have less storage. They are
25 lower. They are running off a battery.

1 Everything needs to be more efficient and
2 more exact."

3 (Document displayed)

4 And then, of course, this basic realization
5 throughout the development of Dalvik and of Android that speed
6 matters on cell phones. Milliseconds matter to users.

7 (Document displayed)

8 They implemented these features, the feature of the
9 '104 and the '520 patent, because it makes the device run
10 faster.

11 This is what Bornstein said when he described
12 reference resolution, symbolic reference resolution. He said
13 specifically:

14 "When it comes time to run, we can run that
15 much faster."

16 This is in TX 816.

17 "And so that's why we do reference
18 resolution."

19 And, recall, in this presentation he's describing
20 again almost word-for-word the claim language.

21 "A dex file arrives on a device. It will
22 have symbolic references to methods and
23 fields. Afterwards it might be just a simple
24 integer of vtable offset, a numeric
25 reference."

1 Why did they do it? Because it made the device run
2 fast.

3 (Document displayed)

4 We showed our benchmark test and there was a lot of
5 debate about benchmark testing and whether it was accurate and
6 fair until Dr. August was on cross-examination.

7 (Document displayed)

8 And Dr. August acknowledged that the benchmarks that
9 Oracle had used to test the '104 patent were standard
10 benchmarks. He said CaffeineMark is a standard benchmark. He
11 said that Scimark is a standard benchmark. And he even
12 acknowledged that those are benchmarks that Google uses to
13 evaluate performance. And then, of course, he had done no
14 performance testing of his own.

15 (Document displayed)

16 And Google's own documents showed that their
17 performance improved by about 20 percent from optimizing by:

18 "...converting the constant pool indices in
19 instance" --

20 Once again, almost the claim language.

21 "...converting constant pool indices into
22 instance field GET/PUT and virtual calls" --

23 Sorry. Let me start over. This is TX 258. The
24 document says:

25 "The optimizations convert constant pool

1 indices" -- remember, these are the indices
2 (indicating) -- "in instance field GET/PUT
3 and virtual method calls to byte offsets and
4 vtable indices, respectfully. They allow us
5 to skip a couple of lookups."

6 That's an example what the patent describes and
7 claims.

8 What result? Short version, the stuff that you'd
9 expect to get faster got faster by about 20 percent. Worth
10 having an email about. Worth reporting that it was about
11 20 percent.

12 (Document displayed)

13 And then even for the '520, which is a smaller gain.
14 The '104, pretty dramatic. The '520, a somewhat smaller gain.
15 But even here for the '520 it was important enough for
16 Mr. Bornstein to report out at a conference and say:

17 "We save about 100k in memory by doing this
18 static initialization of an array."

19 And he acknowledged, significant enough to put in the
20 presentation. Of course, he had to acknowledge that developing
21 the code was worthwhile, otherwise it was wasted development
22 effort.

23 (Document displayed)

24 Why did Google do this? Why did Google adopt these
25 techniques? This is the goal. 750,000 activations a day of

1 Android phones. This was the motive to adopt these techniques.
2 This was the motive to not look along the way at Sun patents to
3 see whether adopting these techniques, knowing that we're kind
4 of targeting Java and Java's architecture, whether those
5 patents might be infringed.

6 (Document displayed)

7 That is acting recklessly. And what we know is that
8 Google did everything it possibly could have done to avoid
9 finding out the specifics of these patents.

10 (Document displayed)

11 First of all, they employed the key inventors,
12 Lindholm and Yellin. Yellin is on one of our patents.
13 Lindholm had coauthored a book in which one of the chapters
14 notes that the predecessor to the '104 patent covers the
15 technology that's described in that chapter.

16 It was so important to alert the world when that book
17 was written that there is a footnote. And you can see in TX
18 25, you can see in Chapter 9 the '685 patent mentioned. And if
19 you look at the '104 patent, you'll see that the '685 is the
20 predecessor to that patent.

21 (Document displayed)

22 And they worried about the Java patent along the way.
23 And so we asked Mr. Rubin in his deposition, and you heard the
24 videotape:

25 **"QUESTION:** When you wrote in an email, 'They

1 still have patents and trademarks,' what was
2 in your mind about what patents Sun had?

3 **"ANSWER:** Look, like I said before, I assume
4 they're running a business. They are
5 inventing intellectual property. They are
6 protecting it through the patent system.

7 Through GPL, I didn't know what they were,
8 but I knew it was dangerous to use the stuff
9 without knowing exactly what it was.

10 "So effectively you'd have to go back to Sun,
11 ask them what they considered their
12 intellectual property and, you know, try to
13 figure out what the trick was if you wanted
14 to use the technology."

15 (Document displayed)

16 Email after email, reports, concerns about Sun's
17 patents and about patent protection around the virtual machine
18 and the Android product. And they are looking at various
19 licenses and they are worrying about patent protection under
20 those licenses.

21 So TX 2714, they want to make sure they have patent
22 protection.

23 TX 22, they want to make sure they have patent
24 protection. And, of course, don't forget Rubin had this prior
25 life at Danger, that company that he founded in the early

1 2000s, and there was a license from Sun at Danger and it
2 included a grant of patent rights.

3 (Document displayed)

4 And then he's warning others, Watch out about Sun
5 patents.

6 In TX 18 he says:

7 "I don't see how you can open Java without
8 Sun since they own the brand and the IP."

9 And then there's is an announcement:

10 "Sun open sources Java Platform."

11 And Rubin says:

12 "Watch out. They still have patents."

13 And Rubin acknowledged that he had discussions with
14 Sun about patents relating to the virtual machine:

15 **"QUESTION:** You had discussions with Sun
16 about patents relating to the virtual
17 machine?

18 **"ANSWER:** Yes."

19 Now, in Phase One Google emphasized clean room and
20 independent development. And so you may have in your mind,
21 well, they had the clean room and the independent development.

22 You'll read the instructions. There's nothing in the
23 instructions that says a clean room matters when it comes to
24 patents. You can infringe patents even if you don't have them
25 over here, even if you're not studying them while you implement

1 your software.

2 And Mr. Rubin had to acknowledge this in testimony
3 you heard in this courtroom:

4 "A clean room approach doesn't protect
5 against claims of patent infringement;
6 correct, sir?"

7 "I don't think so. No, it doesn't."

8 Google went out of its way to avoid figuring out
9 which car would hit it as it drove down the wrong way on the
10 one-way street.

11 Mr. Lindholm was asked:

12 **"QUESTION:** Now, despite your experience,
13 your knowledge, your role as a project
14 advisor for Android, your role in the
15 licensing discussions, your participation in
16 meetings with Java engineers from Sun,
17 despite all those things, Mr. Rubin never
18 asked you to conduct any investigation to see
19 whether Android technology infringed any of
20 those patents; is that right?

21 "As far as I recall, no, he never did."

22 And then, of course, Google says, well, Mr. Lindholm
23 didn't actually develop code for Android.

24 Recall that he's a legal advisor to the team, among
25 other thing. But Google's argument, uhm, why are you focusing

1 on Lindholm? He didn't write any code.

2 **"QUESTION:** My question isn't whether you
3 participated in the design, development or
4 architecture, but whether Mr. Rubin ever
5 asked you, 'Tim, given all you know about
6 Java virtual machines and Sun technology,
7 could you please check and see whether we
8 have done anything that might infringe one of
9 those patents that you or one of your
10 colleagues had over at Sun'?

11 **"ANSWER:** Absolutely not. I don't recall
12 such a thing."

13 And then, of course, Mr. Rubin never conducted a
14 review of Sun patents. He never asked anyone on his team to do
15 a review of Sun patents.

16 And, so, their defense on willfulness is, we didn't
17 know. And it is a head-in-the-sand defense. And so here's the
18 ostrich with its head in the sand, not seeing the patents that
19 are all around, not seeing the '104 and '520 patents.

20 Google had choices. They could have taken one of the
21 licenses that Sun offered. And those licenses would have
22 included grants of the patent rights.

23 Google's argument in phase one was, well, we when we
24 were talking about license, we were talking about licensing
25 Sun's code.

1 Okay. They didn't do that. They didn't take Sun's
2 code. That was a choice they made. But there were other
3 choices. They could have taken the specification license.

4 And if you look at the Java Virtual Machine
5 specification, TX 25, it says that the virtual machine
6 specification is protected by patents, and the license includes
7 a grant of patent rights.

8 They didn't do that either.

9 They could have taken the GPL version of Java. That
10 would have granted patent rights.

11 There was a little back and forth with Mr. Rubin of
12 concern on his part that Sun might say the GPL didn't grant
13 patent rights, but he acknowledged that Sun had never said, oh,
14 the GPL, there's a gotcha, patent rights aren't included.

15 That wasn't why Google refused a GPL option. The
16 reason Google refused a GPL option, the open source option, the
17 Sun open source option, was because the GPL is viral, said
18 Rubin, and there's no way for the OEMs or carriers to
19 differentiate; we're building a platform where the entire
20 purpose is to let people differentiate on top of it.

21 Now, true or false doesn't really matter. We think
22 he's wrong about that. That's not the issue. The point is, he
23 had a GPL option. For business reasons, he didn't take it.

24 Now, there was a little confusion in Phase One about
25 the word "open," and so I want to just take this opportunity to

1 be really clear that the testimony of everyone on this point
2 was consistent. Mr. McNealy said it the most clearly:

3 "'Open' does not mean throw it over the wall
4 in a public domain rights equivalent to
5 ownership perspective."

6 You have to understand the hyphens in that sentence.
7 In a public domain rights-equivalent-to ownership perspective.

8 "We offered lots of our technology for free.

9 We offered it in terms of no revenue charge.

10 But it was almost -- in every case that I
11 know, of it was accompanied by a license.

12 And that license has certain conditions and
13 restrictions."

14 So if one of you is confused back during
15 deliberations, say, you know what, I heard all that testimony
16 about how Java was open, so how could Google infringe these
17 patents? I hope another one of you will say, yeah, but
18 remember, open doesn't mean like you own it. It doesn't mean
19 without restrictions. It's another way of making software
20 available under a license that grants rights and imposes
21 obligations.

22 **THE COURT:** Mr. Jacobs, I know you have an hour and
23 15 minutes total, but you have used an hour and five minutes.

24 **MR. JACOBS:** Thank you, Your Honor.

25 And so what did Google choose to do? They decided in

1 advance what their options were.

2 If Sun doesn't want to work with us, we will do Java
3 anyway and defend our decision, perhaps making enemies along
4 the way.

5 Did Google try to cover up its infringement? That's
6 one of the factors you'll see in the instructions.

7 You recall many of these from Phase One. They were
8 messages internally to the team about not showing Android to
9 Sun employees or lawyers. Take a look at TX 29.

10 There was an impression left in Phase One that
11 through 2008 and 2009, Sun was not trying to get Google
12 licensed up.

13 There are more exhibits available in Phase Two. In
14 2008, take a look at TX 530. Take a look at TX 1058 or
15 TX 1002. As late as November 24, 2008, Rubin writes that Sun
16 asked him to certify Android through the Java process and
17 become licensees of Java.

18 And then there were messages that you saw, such as
19 TX 406 in 2009, in which Google is worrying about lawsuits
20 relating to Java. And they are specifically thinking, you
21 know, maybe we better buy Sun and get the patents so our risk
22 of Java lawsuits goes away.

23 And then this fascinating exchange which you didn't
24 see in Phase One, but I urge you to take a look at it closely,
25 TX 531 and TX 1029.

1 You have both ends of the equation. You have the Sun
2 guys on the left, Cizek and Gupta, saying, you guys got to
3 get -- you, Google, got to get licensed up.

4 And Lindholm and Bornstein, people you have seen in
5 this trial, they e-mail each other and they say, you know, we
6 should step away from this discussion and only respond further
7 if Sun chases after us.

8 And then there were the meetings with Oracle in 2010.
9 You heard about that through testimony. The acquisition occurs
10 in January. Larry Ellison meets with Eric Schmidt in March,
11 and then later with Larry Page. Thomas Kurian meets with Andy
12 Rubin and Alan Eustace in May. Safra Catz meets with Alan
13 Eustace.

14 And then you heard the stipulation that on July 20,
15 2010, Oracle told Google that Oracle believed Google was
16 infringing the '104 and '520 Patents, in a meeting held between
17 the two companies.

18 And then I asked Mr. Rubin: Right after that meeting
19 in which these patents are brought to your attention, you
20 didn't make any changes; right, sir?

21 He said: I didn't instruct the team to make changes.

22 And, instead, they looked at what their choices were.
23 And Mr. Lindholm told the executives, senior-most executives of
24 the company, that their only choice was to negotiate a license.

25 So now you know the whole story. Now you know that

1 on July 20, 2010, there was a meeting. And these patents were
2 presented. And two and a half weeks later, Mr. Lindholm wrote
3 the message that said, we need to negotiate a license for Java.

4 When you look at the instructions, you'll see some
5 factors that go into willfulness. You know the facts that
6 underpin each of these factors.

7 Did Google act in accordance with industry standards?
8 They did no review of Sun patents.

9 You're going to hear how hard it was for Google to
10 look at all the patents in the world. But that's not the
11 issue. They were targeting Java. They should have looked at
12 Sun patents.

13 Did they intentionally copy? They were targeting
14 Java.

15 Did they present to you a reasonable defense in this
16 trial? They hid the facts from you. They hid the data object,
17 which is central to the operation of the software.

18 Did they make a good faith effort to avoid? You see
19 they didn't negotiate seriously for a license. They said, make
20 Sun chase us. And they tried to cover up.

21 That amounts to clear and convincing evidence that
22 Google acted willfully in infringing the '104 and '520 patents.

23 And so we hope that when you look at the verdict form
24 you will think about all this evidence and you will think about
25 how Google acted, and you will think to yourselves, you know,

1 they really did drive down a one-way street the wrong way.
2 They should have been -- they should have been more cautious.
3 They shouldn't have acted recklessly. And you will answer yes
4 to the questions of willful infringement.

5 Thank you.

6 **THE COURT:** All right. Thank you.

7 This is a good time to take a 15-minute recess.

8 Please remember the admonition. No talking about the case yet.

9 **THE CLERK:** All rise.

10 (Jury out at 9:45 a.m.)

11 **THE COURT:** Please be seated.

12 Any issues for the Court?

13 **MR. VAN NEST:** I don't believe so, Your Honor.

14 **MR. JACOBS:** Nothing from us, Your Honor.

15 **MR. VAN NEST:** How much time do you have left on
16 rebuttal?

17 **THE COURT:** Six minutes.

18 All right. We'll take our recess now.

19 (Recess taken from 9:46 to 10:02 a.m.)

20 **THE COURT:** Thank you. Please be seated. Shall we
21 bring in the jury?

22 (Jury enters at 10:04 a.m.)

23 **THE COURT:** Please be seated.

24 Now, on behalf of Google, Mr. Van Nest will give the
25 closing argument.

CLOSING ARGUMENT

1
2 **MR. VAN NEST:** Thank you, Your Honor.

3 Good morning.

4 (Jurors respond.)

5 **MR. VAN NEST:** On behalf of everyone at Google, I
6 want to thank you all for your service as jurors. We talk
7 about sacrifice. And you made a big sacrifice, particularly a
8 long trial like this, with days like some of the days we've
9 had.

10 And I'll have to fess up to something. I have to
11 take indirect responsibility for Ms. Gonzalez not being here.
12 Just this morning, on the way here, I said to the team, guys,
13 it is unprecedented to be in a five-week trial and have not one
14 day anyone absent or anyone late. And so I should have knocked
15 on wood, but I didn't do that.

16 I want to thank, also, Ms. Lacavera and Mr. Hwang for
17 giving me the chance to stand up and present our evidence,
18 along with the rest of the team, on behalf of Google, because
19 that's a big thrill for us, too. And it's a real privilege to
20 represent a company like Google.

21 The evidence that you heard in Phase Two is clear-cut
22 and largely undisputed.

23 The features in Android that are accused are
24 fundamentally different from any of the claims of the '104 or
25 the '520 patents. They are fundamentally different.

1 They were designed from scratch by the Google
2 engineers, Mr. Bornstein, Mr. McFadden, and others. They were
3 built to work in a smart phone. They were designed without any
4 reference at all to the Sun patents. And that's now admitted.

5 The Sun patents weren't known by, shown to, no one
6 was aware of those Sun patents when Android was developed, when
7 Dalvik, dexopt, Resolve.c were built. None of them.

8 And, as a result of the differences between the
9 features and the patents, Oracle simply failed to meet its
10 burden to prove the strict test required for patent
11 infringement.

12 Now, Judge Alsup has told us over and over, this case
13 is not about Java versus Android. And that's absolutely right,
14 especially here in Phase Two, where we're dealing with two
15 specific patents, with some very narrow literal requirements
16 that have to be met, every one of them, and we're dealing with
17 some specific features in Dalvik and dexopt that are accused.

18 I'm not sure why Oracle is still talking about Java.
19 Anybody can use Java. The language is free. The compiler is
20 free. We know all that. This case is not about Java.

21 The '104 Patent doesn't even mention the word Java
22 once. Take a look. Not in there.

23 Now, you know by now, because Judge Alsup has
24 mentioned it several times, that the requirements here are very
25 strict.

1 In order to prove infringement, Oracle has to show
2 that every single element in the claims they're asserting is
3 found in Android. Every single one. I think we've heard:
4 Three out of four, not enough. Four out of five, not enough.
5 Four and a half out of five, not enough.

6 And you know now from the evidence that there are
7 really only three issues. And I want to get to them right
8 away.

9 One, the '104 Patent requires that symbolic
10 references be used in the instructions. It requires they be
11 used in the instructions.

12 And Android never uses symbolic references in
13 instructions. Never. Android uses numeric references, indexes
14 to locations in memory. We've proven that with every witness,
15 with every document, with every chart.

16 And I'm going to show you, take you through the
17 evidence one step at a time. There are no symbolic references
18 in the instructions in Android.

19 Two, the '104 Patent has a second strict requirement.
20 It requires that if you're going to resolve symbolic references
21 to numeric references outside of the instructions, that has to
22 be done dynamically. Not statically.

23 That's what the words of the claim have been
24 interpreted to mean. Dynamic not static.

25 Well, dexopt, as you saw over and over, is a static

1 operation. It's done during installation of the application on
2 your phone. It doesn't run when you're running the application
3 itself. It runs before. It optimizes the code. It's finished
4 when install-time is done. It never runs dynamically.

5 And the third key point has to do with the '520
6 Patent. The '520 Patent, everyone acknowledges, every step in
7 the method has to be there. And the method required of the
8 '520 includes simulating execution of the bytecode if you want
9 to identify the values in an array. Simulate execution.

10 Android doesn't use simulated execution. Android
11 uses pattern matching.

12 There isn't a word about pattern matching in the
13 patent. Pattern matching and simulating execution are two
14 different things. And it's now undisputed that what Android
15 uses in the dx tool is pattern matching. So there's no
16 infringement of the '520 Patent, either.

17 And we shouldn't be surprised that Android is
18 different. There isn't a shred of evidence that anyone at
19 Google or on the design team had any access to these patents.
20 There's not a single document. There's not an e-mail. Not a
21 memo. Not a presentation. The patents weren't found in
22 Google's files.

23 And they've now, essentially, admitted that until
24 July of 2010, July of 2010, even Oracle didn't mention these
25 patents to anybody at Google.

1 This entire time period when Google was negotiating
2 with Sun, talking with Sun, developing Android, publishing the
3 source code on a website, putting the software development kit
4 on a website, all this time, no evidence of any awareness,
5 knowledge, or discussion of these patents.

6 And, at the end of the day, I think you'll find that
7 Oracle gave you very little to work with in the evidence. They
8 didn't bring a single Sun engineer or witness to talk about why
9 these patents were invented, what they do, how they work, any
10 of that. They rested their entire case -- their entire case
11 rested on Dr. Mitchell.

12 And Dr. Mitchell's testimony is simply not reliable.
13 Why? Not because he made mistakes. That's not the point. He
14 changed his opinion on the most fundamental issue in the case.

15 His opinion was that Android uses numeric references
16 in the instructions. After he saw Dr. August's report he
17 changed his opinion. His opinion changed on a fundamental
18 issue.

19 Now, he's said in court that was a mistake, but we'll
20 see, and you saw yesterday, he did it over and over and over
21 and over in his report. Why? Because these indexes that
22 Android uses are numeric references. They are references to a
23 location in a memory. They are not symbolic references, as
24 required by the patent.

25 So based on the evidence you've heard, I'm going to

1 walk through patent by patent, feature by feature in Android,
2 and demonstrate that the only verdict that is supported by the
3 evidence in Phase Two is a verdict of non-infringement for
4 Google on both of the patents.

5 So here's the key points, and these are the same
6 points that I mentioned in the opening. I've expanded them a
7 little because we have more evidence.

8 The first one is that Google made fundamentally
9 different design choices for Android.

10 What's relevant here are the patents. You don't need
11 to talk about licenses. We don't need to talk about Java. We
12 don't need to talk about that. It's all about infringement.

13 Point one: The Dalvik does not infringe the '104.
14 Why? Two reasons. One, Dalvik does not use symbolic
15 references in the instructions. It always use numeric
16 references. And, two, when dexopt resolves outside the
17 instructions, it does it statically, not dynamically.

18 Two, the dx tool does not infringe the '520. Why? I
19 just said it. Pattern matching is different. The code is
20 different. The file that's used is different. The source code
21 is different. The operation is different. And Dr. Parr's
22 experiments prove that. So the '520 isn't infringed either.

23 Google independently developed Android, not knowing
24 of the Sun patents. That's virtually undisputed now, too.
25 They want to talk about a book Mr. Lindholm wrote ten years

1 ago, a footnote in a book? Come on.

2 And, three, Android does not use Sun's technology.
3 Android uses its own technology, developed by all the engineers
4 at Google over a three-year period, costing hundreds of
5 millions of dollars. And that's what's given us this Android
6 platform.

7 All right. Let's get to work, first, on what the
8 standard is in this phase of the trial. Very clearly, here it
9 is. You'll hear it from Judge Alsup when we're all done
10 talking. Oracle has the burden of proof on infringement.

11 They have the burden on every issue in Phase Two.
12 They have to prove it. If the evidence is evenly balanced, the
13 plaintiff loses. They haven't proven their case.

14 As I'm about to show, the evidence is not evenly
15 balanced. We proved to a fairly well that there is no
16 infringement because, again, Dalvik is different. We're using
17 a different technology.

18 Second key point: To decide whether the accused
19 product or method infringes, you have to compare that product
20 with the claim of the patent.

21 And what do you have to show? Every limitation of
22 the claim must be included in the accused product or method.
23 Every single one. If one is missing, that's it.

24 Let's start with the '104, because I want to get
25 right into the evidence and what the '104 is all about. And

1 I'll say right upfront, Question 1 on the verdict form is the
2 most important question in Phase Two. Question 1 is the most
3 important question in Phase Two.

4 What's the '104 Patent about? You have your
5 handouts. Here's -- here's what you've had since day one. And
6 they make clear -- it's not disputed -- the instruction set in
7 the accused device must use symbolic references in the set.
8 Said instructions containing one or more symbolic references.
9 Said instructions containing one or more symbolic references.

10 There's no dispute about that requirement.

11 Dr. Mitchell conceded it. I asked him last week:

12 You'd agree with me whether you're talking about
13 Resolve.c -- that's one of the features they accuse of
14 infringement -- or dexopt, you've got to find a symbolic
15 references in the instructions, right?

16 Right.

17 Now, notice here, Resolve.c, that's a method in
18 Dalvik. Dexopt, that's a method in Dalvik.

19 There's no accusation here of a Java compiler. I'm
20 not sure why they're talking about the Java compiler.

21 Everybody can use a Java compiler. They are made by IBM. They
22 are made by GNU. They are made by Sun.

23 There is no accusation. Not even Dr. Mitchell claims
24 that using a Java compiler is anything wrong. That's not in
25 the case. I'm not sure why they even brought it up.

1 Now, what's the flip side of requiring using a
2 symbolic reference? The flip side is, if you use numeric
3 references only, you don't infringe. If you're using numeric
4 references in the instructions, you don't infringe. That's
5 pointblank concession from Dr. Mitchell.

6 If the instructions use only numeric references, that
7 doesn't infringe the '104 Patent, right?

8 Right.

9 That's established.

10 All right. What is a symbolic reference? Judge
11 Alsup has told us what a symbolic reference is. Now, this
12 definition -- and this is critical -- this is binding on the
13 parties in this lawsuit. It's binding on the experts in this
14 lawsuit. And it's binding on you as jurors in your
15 deliberations.

16 Oracle is playing fast and loose with this
17 definition, as we'll see in a minute. But what it is, in
18 simple terms, a symbolic reference is something -- a reference
19 that identifies data by a name other than the numeric memory
20 location of the data. It identifies data by a name other than
21 the memory location of the data.

22 So, a name. Remember in the opening, "The White
23 House," that's a name. "Y," that's a symbol. That counts as a
24 name. "X," that's a symbol. That counts as a name. But "1600
25 Pennsylvania Avenue," that's an address. That's a location.

1 If you're using locations in your instructions, you
2 do not infringe the '104. Why that? The '104 didn't invent
3 symbolic references or numeric references. It didn't even
4 invent resolving them. It's a very specific patent focused on
5 a very specific type of resolution. It requires that the
6 symbolic reference, before it's resolved, be in the
7 instructions itself.

8 And this is the definition that we all have to apply.
9 The patent gives us some background for that. In this
10 illustration in the patent, we see symbolic reference described
11 as "y."

12 Notice where it is. It's in the instruction
13 sequence. It's in the instructions. It's a "y." It's a
14 symbol. It's a name. It's a symbol. Why is that? It doesn't
15 tell you where the data is. You have to search.

16 As Dr. August said, if you get a "y" or an "x" or a
17 name, you've got to check all the references. Here it would be
18 all these boxes in the data object (indicating). Are you "y"?
19 Are you "y"? Are you "y"? And, finally, you find it.

20 That's resolution. That's different from a numeric
21 reference.

22 A numeric reference, there is no resolution required.
23 Why? Because all the numeric reference tells you is, where is
24 the location in memory? It doesn't tell you what data is
25 there. It makes no reference to the data there, other than

1 slot 2.

2 Here, the numeric reference is 2. It's in the
3 instruction sequence. It's to slot 2. It's 1600 Pennsylvania
4 Avenue. It's a location in a table.

5 You don't have to guess where it is. And that's one
6 of the reasons why that's what they used in Android. It's
7 simple. It's faster. It's better.

8 Let's look at the next slide.

9 Now, Dr. Mitchell, before he got up here yesterday
10 talking about all these different -- the data is this value and
11 that value, it's really only the instance table value, and this
12 and that, this is what he said last week. Very simple. I
13 asked him:

14 As a matter of fact, that's what the Court's claim
15 construction does, it distinguishes between using names to
16 represent data and using numeric memory locations, right?

17 Yes. That's the distinctions.

18 That's about as clear as you get. All that's
19 required by the definition is, the symbolic reference has to
20 refer to data. It has to refer to data. Any data. Not
21 specific data. Not meaningful data. Not -- not the data we
22 ultimately want, but data. And that's what Dr. Mitchell said
23 last week.

24 All right. Now that we know what the rules are for
25 '104, let's go to the Dalvik bytecode.

1 Here's the key point.

2 Let's go back, Ben. Let's go back one.

3 Key point. They do not use symbolic references, the
4 bytecode instructions in Dalvik. And all the documents and all
5 the testimony and all the charts absolutely back that up.

6 Now, what are we talking about here with these
7 instructions? They are run in the dex file. The dex file are
8 Dalvik executable files that programmers write and compile into
9 code. And they are the applications that come onto your phone.
10 And they are run by the Dalvik Virtual Machine.

11 The point of this slide is just to tell you where
12 those are. They are not libraries. They are not in the
13 application framework. It's the dex files. And it's a very
14 specific part of the dex files: the instructions, the program
15 commands. That's what we're talking about when we're talking
16 about the '104.

17 All right. Here's Mr. Bornstein. He's the one that
18 created the architecture. He was shown a presentation. This
19 is an important one:

20 You've said in the presentation that dex files
21 contain symbolic references, correct?

22 I did.

23 Are the symbolic references in the bytecode
24 instructions themselves?

25 No, they are not.

1 Now, that's important because they're been waving
2 around a lot of documents saying, oh, boy, they admit that the
3 dex files have symbolic references. They admit that the dex
4 files have symbolic references.

5 That's irrelevant. The question is, do the
6 instructions themselves have symbolic references?

7 We conceded in the opening statement that Android
8 does resolve symbolic references to numeric references. That's
9 done in Android. It's done in Dalvik. It's done in Resolve.c.

10 Our point is, the symbolic references are never found
11 in the instructions. And that's the requirement of the patent.
12 That's what Mr. Bornstein, here, is saying.

13 And why? Because the way he designed the
14 instructions -- let's go to the next slide, Ben -- he wanted to
15 have a fixed width to his instruction registers. He wanted to
16 be able to predict what would be in there.

17 If you're using addresses, you're using numbers as
18 addresses. You can determine, I'm only going to need one, two,
19 three, or four slots.

20 If you're going to use names, like these string data
21 names, fill array data, block, character, you have all sorts of
22 things of different lengths. And using a name doesn't work in
23 your instruction set if what you want is something really
24 efficient, where you can predict how many slots you've got.
25 That's exactly what Mr. Bornstein testified about.

1 So let's take a look at some of the documents.

2 Now, this is testimony under oath, but the documents
3 that were written at the time back it up. This first one is
4 Trial Exhibit 737. These are the Dalvik VM instruction
5 formats. These are written back in 2007. They existed in the
6 day. And they outline how the instructions work.

7 And there's really no question about it. You guys
8 will have this in the jury room. And page 3 has what we have
9 up on the screen. And this shows you that what is being used
10 in the instructions is an index. There's an operand B and an
11 operand A. And there's an operand listed here as CCCC. And
12 we'll see in a minute, that's always a number.

13 In the instructions that's a number. What is it?
14 You see it on the right. It's a reference. It's an index to a
15 location in a field. The number represents the location.
16 Field@CCCC means location CCCC in the field table. That's what
17 these instructions are telling us. That's how they work.

18 And Dr. Mitchell is not disputing that. If you'll
19 look at his slide, this is one that he prepared and I showed
20 him during my examination.

21 In his example, the instructions contain the numbers
22 0000. What is that? That's an index to a location in the
23 field table. He shows it himself in the slide. He's pointing
24 to 0. That's the location in the field table where whatever
25 data is there will be found.

1 It's not symbolic because it's not representing any
2 particular data. It's only representing a numeric location.
3 Here, location 0 in that particular table.

4 Let's look at another exhibit. Again, from back in
5 the day. This is some of the source code. Now, gosh, I don't
6 expect you to pour over the source code, but the source code
7 here, which is 46.106, has the format of the Dalvik
8 instructions.

9 And at line 57, you see the same format that we saw
10 in Trial Exhibit 737. "Thing@CCCC." Why does it say "@"?
11 "Thing@." It says "@" because it's a location. It's a
12 location in a memory table. Why else would you use "@"?
13 "Thing@CCCC."

14 Now, Mr. McFadden explained these. He's explaining
15 22c. That's the set of instructions you just saw. They can be
16 used for different types. They both take three arguments. And
17 some of them will take a type index. Some of them will take a
18 field index. And, again, an index is a location in a table in
19 memory, correct? Yes.

20 Now, what's critical about indexes? Indexes aren't
21 symbolic references. You heard Mr. Jacobs say one of the
22 hallmarks of a symbolic reference is it has to be resolved.
23 That's because you have to search for it.

24 Indexes never have to be resolved. That's what
25 you're seeing here from Mr. McFadden. They don't have to be

1 resolved because they point you to a memory location and you go
2 right there. There's no ambiguity. There's no guessing. This
3 is what he says:

4 Are indexes in this process being resolved?

5 No.

6 Why not?

7 Well, resolution implies something is unknown,
8 something is ambiguous. If you have an index, you know exactly
9 where you're going. You have the location.

10 You have the location. That's the point of
11 Mr. McFadden's slide. And we stand behind every word on this
12 slide.

13 And to say something was concealed, remember, Android
14 is open source. Anybody can look at this anytime. This is all
15 part of the source code that can be found by anyone.

16 What's the point of this? Everyone concedes that in
17 Dalvik the instruction set always contains numbers.

18 Now, is it our point that numbers can't be symbols?

19 No. We've never argued it. That's not the point.

20 The numbers in the instructions are indexes to memory
21 locations in a table. Just like Mr. McFadden's chart shows.
22 The "01" is the position 1 in the Field ID table. That's what
23 it is. As you'll see in a minute every witness has confirmed
24 that.

25 And when you go to Field ID 01, you don't know what

1 you'll find. This is not a reference to any particular data.
2 It's a reference only to this location (indicating).

3 When you get to the location, guess what? You find
4 more data that is numeric references, because this "2" in the
5 Field ID table is a location in the String ID table. That's
6 where you go next. And the "76" is a location in the String ID
7 table. These are numeric references.

8 You don't know -- when you get the 2, that doesn't
9 tell you what the data is, what information you're going to
10 get. It just tells you go to position 2 in the String ID
11 table.

12 And when you get there, guess what happens? When you
13 get there, you're given an offset. This is an offset 8 in the
14 String Data table. And you go to offset 8, you get a name.

15 Now, the point is that in the instructions, right
16 here, the only thing that Dalvik ever uses -- and we see this
17 in the formats, in the source code, and we'll see it again in
18 some dexopt docs -- the only thing they ever use are indexes to
19 locations in memory. That's a numeric reference, not a
20 symbolic reference.

21 Now, why did I fade this out? I faded it out because
22 the only relevant question is, what does this instruction do?
23 That's the only relevant question.

24 This stuff is all in the data. This stuff is all
25 happening in the data.

1 What you're told in the claim, in Claim 11 and every
2 other claim, is that the instructions must contain symbolic
3 references. So this is the question you ask, right here. You
4 don't need to ask about any of these (indicating).

5 Now, Mr. McFadden showed you the whole thing. This
6 is what you saw in Mr. McFadden's presentation. We didn't blow
7 this up, but you certainly saw this.

8 Eventually, "fun" is resolved because it is a name.
9 It is a symbol. But it's never in the instructions. And it's
10 resolved to another reference, which is then put in this field
11 table.

12 But, again, in order to infringe the patent, you have
13 to use something like "fun" or some other symbolic reference;
14 "x," "y," "fun," "byte," "character." You have to use them in
15 the instructions. Right here (indicating).

16 They're not there. They are never there. And every
17 witness confirmed that.

18 Let's take a look at some of the additional -- let's
19 go back to a document here.

20 This is a set of instructions for dexopt. This is
21 Trial Exhibit 47.2. This is some of the source code. Look at
22 it again. It says the same thing. Dexopt instructions are the
23 same as Resolve.c.

24 Field@CCCC, you see it right there in line 621, these
25 all have the form op vA, op vB, field@. And then they tell you

1 what it is. CCCC is the field reference constant pool offset.
2 CCCC is a number. It will be a number in the instructions,
3 like this number, and like the field reference that
4 Dr. Mitchell showed, 0000.

5 These are comments in the code. These aren't made up
6 for the litigation. This has existed for years. This was
7 written back in 2007, when Dalvik was created.

8 Here's another one. This was -- this was from Trial
9 Exhibit 739. This was written by Mr. McFadden back in 2008.
10 Again, this has been around. You'll have this in the jury
11 room. This describes Dalvik optimization. This is dexopt.

12 If you look through this, you'll also find what we
13 now have on the slide, that in the instructions in the dexopt,
14 it's the same thing. We replace a method index with a vtable
15 index. We replace a field index with a byte offset.

16 Indexes are these numbers that reference a location
17 in a table. That's what an index is. That's the only thing
18 that these instructions use. And they use them because that's
19 the way they were designed to work. They wanted something in
20 the instructions that could point you quickly to a specific
21 location, and then to another.

22 And, finally, the resolution happens outside of the
23 instructions, and that's the way Dalvik was set up to work.
24 That's different than what is required in the patent.

25 Now, here's the testimony. This is a question that

1 Dr. August answered on Friday, in response to a question from
2 Judge Alsup. He said:

3 Are you saying that in the Android instructions,
4 you've looked at them and you never find an "x" or a "y," it's
5 always a number?

6 I've looked at every implementation of the
7 instructions, and I can say with certainty that there is not a
8 symbolic reference in the instructions.

9 You'll never see "y" or "x" or "z" referring to data
10 by name other than a memory location, in the instructions
11 themselves.

12 He said it again on the stand yesterday. Let's look
13 at the next one.

14 Are there symbolic references ever in instructions?

15 No. I've looked at all the formats.

16 The formats he's talking about are the formats that
17 you'll have, too. It's these exhibits that we looked at, 739,
18 735. These show the same thing that he looked at. I have
19 looked at all the implementation of the instructions, and I can
20 say with certainty that the instructions do not contain
21 symbolic references.

22 Let's look at what Dr. Mitchell says, because he
23 admitted that the indexes that Dalvik uses are references to
24 locations in tables. Here was the first example he put up in
25 his direct exam. And I put it up the way he did, but I put a

1 red circle around "classIdx" because that's what he defined as
2 the infringing feature in Resolve.c, was classIdx. He says
3 resolve.c finds class name using classIdx. ClassIdx is in the
4 instructions.

5 Well, I asked him -- next slide -- doesn't that give
6 you a location in another table?

7 Yes. It's a location in another table, just like
8 this instruction gives you a location in the Field ID table.
9 That's what it is.

10 He said it in his report. He said it in his report.
11 Let's take a look at the report. He said it over and over.
12 This is in his opening report. He says:

13 The function dvmResolveClass determines or resolves
14 symbolic references, class names -- that's what he said in the
15 report -- to numerical references like indexes.

16 That's not a mistake. You can understand why he
17 would say that. These indexes are numeric references. That's
18 how computer scientists think of them. That's what they are.
19 Because they're references to locations in tables. That's what
20 he said in his report.

21 And I asked him -- next slide -- it didn't happen
22 just once. It's over and over and over in his opening report.
23 And I'm not saying it's a mistake. He's saying it's a mistake.
24 I'm saying he changed his opinion.

25 Take a look at this. The first one, classIdx. The

1 second one, methodIdx. The third one, stringIdx. These are
2 all indexes.

3 These are the things that Android uses in the
4 instructions. And if your instruction is a numeric reference,
5 you don't infringe.

6 That's why he had to change his opinion. After he
7 understood from Dr. August's opinion that these references have
8 to be in the instructions, he realized he was dead in the water
9 with this. And, hence, he came in here and said, no, no, no
10 they're symbolic references. That's just a mistake.

11 It happened repeatedly in his opening report.

12 Let's look at another example. This isn't from his
13 report. This is from his testimony. Another example he gave
14 of so-called infringement was, you're using the ifieldIdx.
15 That's another index. He said, Android is using that in its
16 instructions, and that's a symbolic reference.

17 Well, an index is not a symbolic reference. It's a
18 location in a table.

19 Next slide, please. This is what he said. And look
20 at the graphic that I used with him. This was his graphic. He
21 chose not to show it, but I asked him:

22 What you're showing here is the field Idx -- that's
23 field index; idx means index -- pointing to a specific location
24 called 0000 in the field table, right?

25 Yes.

1 Position 0, that's a position in a table?

2 Yes.

3 His graphic backs it up. Those zeroes are pointing
4 somewhere. Symbolic references don't point anywhere. They
5 have to be resolved. They require a search.

6 A location reference like this is numeric. That's
7 how the Court has defined it. That's crystal clear.

8 More examples from the report. I wouldn't criticize
9 someone for making a single mistake. My point is, these are
10 not mistakes. These are his opinion, that references like
11 indexes that are what Android uses are numerical references.

12 If these indexes are numerical references, there is
13 no infringement of the '104 by either dexopt or Resolve.c.

14 Here's three more examples we haven't seen yet.
15 Method ID. Field ID, we've seen that. String ID index. All
16 considered numeric references.

17 What's going on with this switch, and what are they
18 doing with these statements about meaningful data?

19 Here's the claim construction. The claim
20 construction says, a reference that identifies data by a name
21 other than the numeric memory location of the data, that is a
22 symbolic reference.

23 If you're using the numeric memory location, then you
24 are a numeric reference.

25 They don't want to accept that. Dr. Mitchell can't

1 live with that because he's called these indexes numeric
2 references. He wants to take the word "data" out and rewrite
3 it. He wants to say, no, no, no, data actually means the
4 actual field data in the instance object.

5 He's changed the claim construction in order to fit
6 his opinion in with the evidence. The evidence doesn't worth
7 this. He wants to replace the word "data" in the Court's claim
8 construction with something else.

9 This reference only points to here (indicating). And
10 he's admitted that. And every witness, every document, every
11 presentation at the time proves this. And the only way he can
12 escape that is by saying, well, wait a minute, we're not just
13 talking about this data, we're talking about something really
14 specific, the actual field data in the instance object.

15 What would that do if that were accepted? If that
16 were accepted, there would never be a numeric reference.
17 Everything here would be symbolic because there's only one
18 place where this actual field data is found. You would turn
19 computer science on its head with this.

20 But there's another reason why this is unacceptable,
21 and that's, the instructions from Judge Alsup don't allow it.
22 If a witness has based his view on meanings of the terms
23 contrary to my stated definitions, you should discount that
24 part of his testimony accordingly.

25 That's what's going on with all this talk about

1 meaningful data or the actual field data.

2 Let's resolve it back to the Court's claim
3 construction, if we can, please. That's the claim construction
4 that we're all bound to follow.

5 Dexopt. Dexopt, just like Resolve.c, only uses
6 indexes in the instructions. So for the same reason that
7 Resolve.c does not infringe, dexopt doesn't infringe.

8 But there's a second reason that applies to dexopt.
9 There's another reason. And that is that dexopt, when it does
10 resolve symbolic references outside of the instructions, does
11 it statically. And that doesn't count. That doesn't infringe.

12 Let's take a look at the next slide. Here's the
13 judge's construction of symbolic reference. Now, we're focused
14 on the second half of it. A symbolic reference has to be
15 resolved dynamically rather than statically.

16 And, by the way, they're the ones that want to claim
17 that dynamic equals runtime. That's exactly what Dr. Mitchell
18 said.

19 Our point is that dexopt is a static operation
20 because it runs before you actually run the application on your
21 device. It's static, not dynamic. It's done before you
22 actually run it on the device.

23 So let's look at what Dr. Mitchell says about this.
24 He concedes that if a function is performed statically, then
25 dexopt doesn't infringe either. Right? Right.

1 So if it's static, no infringement.

2 What's going on with dexopt? Let's bring this back
3 to how we would use a phone.

4 Now, I don't have my Amazon application. Remember my
5 Amazon application? I had an example in Phase One. A
6 programmer wrote an application. So we can shop Amazon and
7 compare prices.

8 I don't have it on my phone, but I would like to get
9 it. So I go to the Android Market. A little advertising,
10 obviously, but I'm going to do just a little bit here.

11 Go to the Android Market, and I'm going to download
12 this application. What gets downloaded on my phone?

13 Well, you get a dex bytecode file from the Android
14 store. And that comes on to my phone through dexopt. And
15 dexopt optimizes it right then and there, before anyone is
16 using it. It's optimized during install-time.

17 And Mr. McFadden explained why this was the case. We
18 asked him:

19 At a high level can you please explain to the jury
20 what dexopt does?

21 It generally prepares a dex file for execution.

22 Dynamic means when you're executing the file. It
23 prepares a dex file for execution. This requires extracting
24 it, downloading it from the Android Market, attempting to
25 verify the codes there, and then performing a set of static

1 optimizations.

2 This is the best explanation we have anywhere in the
3 record of what dexopt does. It works on the application when
4 it first lands on your phone and is being installed.

5 Let's finish the -- let's go back to the animation.

6 Then dexopt finishes its work, and the program, the
7 dex file is put into your memory. You may use it a week later,
8 a day later, a month later. You may never use it. Some of
9 these apps are free. You get them. You never use them.

10 Now, that is install-time. That's when dexopt runs.
11 That's why every single document that we'll look at in just a
12 minute says it's a static operation. It's not running when
13 you're running this application.

14 Now, let's take -- now we've got it on our phone with
15 all my other apps. I implement it, bring it up. And memory
16 puts it through the Dalvik Virtual Machine into my processor,
17 and I can use my application.

18 Dexopt never comes into play there. Dexopt has
19 already finished its work. It is not a dynamic operation in
20 any meaning of the term, whatsoever. And the testimony and the
21 documents back that up, too.

22 Here is what Dr. August said about it:

23 Why do you characterize dexopt as doing resolution
24 statically rather than dynamically?

25 Dexopt is doing static linking. It runs and must run

1 before the program executes. That is static, before the
2 program executes.

3 Mr. Bornstein, he's the one who was involved in
4 developing dexopt along with Mr. McFadden.

5 Does static linking occur when the program is
6 running?

7 No. It happens during install-time, which is before
8 it would run.

9 McFadden is the author of dexopt. He says the same
10 thing.

11 Does dexopt ever run at runtime?

12 It doesn't run at runtime.

13 Let's go back to in the day. Let's go back to 2008.
14 What did Mr. Bornstein tell us? When he describes dexopt,
15 which is what he's describing here in Trial Exhibit 816, he
16 describes it as an example of static linking.

17 The resolution, that's the linking. The resolution
18 of references from symbolic to numeric in dexopt -- which,
19 again, happens outside the instructions -- is done statically.
20 That's what he said.

21 And the slide that he was discussing that was created
22 back in '08 is this slide right here: Install-Time Work.

23 What's install-time work? Static linking is one of
24 the things done at install-time, not runtime.

25 Now, they tried to show you a partial quote. The

1 lawyers did this. This is the quote they showed you during
2 Dr. Mitchell's examination. This is the same quote. They
3 started it with the words "when a dex file arrives." Let's see
4 what they left out.

5 That's what they left out. The most important phrase
6 in the presentation. "So as an example of static linking."

7 That's not fair. And the evidence all supports that
8 dexopt is static.

9 Here's Trial Exhibit 735. This is bytecode for the
10 Dalvik VM. Boy, there's a thriller.

11 (Laughter)

12 You'll have this one back in the jury room. It was
13 written in 2007. It existed in the day. Nobody made it up for
14 this case. And it explains exactly that dexopt is an
15 install-time static linking optimization.

16 That's what it is. That's what it is. That's what
17 it is.

18 This is better than reading source code, I can tell
19 you that.

20 Now, that's not the only one. If you go to page 6 on
21 735, you see some more examples. Here's some of the
22 instructions that they use in dexopt.

23 What are they? The opt codes are recognizable -- I'm
24 sorry, these opcodes are reasonable candidates for static
25 linking. Static linking is what happens in dexopt.

1 There's actually a letter for it. There's a letter.
2 The letter "s" stands for static. This is Trial Exhibit 737.
3 We saw that a little bit earlier. It actually says right on
4 the first page, "Suggested static linking formats have an 's'
5 in the suffix." Have an "s" in the suffix. "S" means static.

6 So you can see there the instruction in the
7 instruction line has a "cs." And to the right it says,
8 "Suggested format for statically linked field access."

9 Mr. McFadden puts a point on it.

10 Does dexopt operate when the Dalvik bytecode is
11 actually executing?

12 No.

13 Is that why you use the term -- why you say it's not
14 a dynamic process?

15 That's right.

16 Now, Dr. Mitchell relied on one document, and,
17 really, one document only. But he misinterpreted that. Here
18 it is. This is Trial Exhibit 739. There's the sentence. This
19 is talking about the ways in which we optimize code.

20 And it says, "Some of these require information only
21 available at runtime." And that's what Dr. Mitchell relied on.

22 But look at the rest of the sentence, "Others can be
23 inferred statically when certain assumptions are made."

24 That's dexopt. That's what Mr. McFadden explained in
25 the next slide, during his testimony. We asked him:

1 "'Others can be inferred statically when certain
2 assumptions are made,' what does that referring to?" That was
3 Mr. Kamber's question, not mine. What does that referring to?

4 That's referring to the things dexopt can do. That's
5 referring to the things dexopt can do. So let's not take
6 documents out of context.

7 What does this add up to? I'm going to leave this up
8 for a minute.

9 There is overwhelming evidence on Question 1 that the
10 Android features don't come close to infringing the '104
11 because they do not use symbolic references in the instructions
12 and because dexopt is static.

13 What am I talking about? On the left, I have
14 Dr. Mitchell. That was the entirety of the Oracle testimony on
15 infringement on the '104. It's all on Dr. Mitchell.

16 Look at what's on the right. Dr. August explained
17 how this works in detail. Andy Bornstein came in here and
18 explained how it worked. Mr. McFadden came in here and
19 explained how it worked.

20 I'm showing up here Trial Exhibits 46.6, 46.12,
21 46.106. Those are all source code that you're welcome to look
22 at. They all show that indexes are what are being used in the
23 instructions. Indexes are references to locations in memory.

24 Trial Exhibit 47.2. Trial Exhibit No. 47.6. More
25 documentation written back in the day. These are all

1 documentation of how the source code works.

2 735. 737. 739. Those were the three that I held up
3 because they are something other than source code that we can
4 actually read and is in English. That confirms how these
5 instructions work. Every single one of these.

6 Even Dr. Mitchell's expert report, which you don't
7 have in evidence but which you saw repeatedly, his expert
8 report takes a position that indexes like field index, class
9 index, string index, are all numeric references that equals
10 non-infringement.

11 And that's why I say the evidence supports only one
12 verdict on Question 1, whether you're talking about dexopt or
13 whether you're talking about Resolve.c. Since there are no
14 symbolic references in the instructions, and since dexopt is
15 not a dynamic operation, Oracle failed to meet their burden of
16 proof. And they failed by a mile. They failed to meet their
17 burden of proof.

18 The evidence not evenly balanced.

19 Let's go back a slide, Ben.

20 The evidence is overwhelmingly, through the exhibits,
21 the presentations, the slide decs, the source code and the
22 witness testimony, overwhelmingly supports a verdict that there
23 is no infringement.

24 And if there is no infringement, you don't need any
25 other defense. I don't know why they are talking about fair

1 use, licenses, open source. That's irrelevant.

2 If there's no infringement, there's no infringement.
3 It's an absolute defense to a claim of patent infringement they
4 have the burden of proof on.

5 I never got up and talked in the opening about open
6 source. I never got up and talked in Phase Two about licenses
7 that we did or didn't have. You guys know the story about
8 that. We dealt with all that in Phase One.

9 Let's talk about the '520. The parties both spent
10 less time on the '520. It involves a very sort of
11 insignificant feature. The '520 deals with only one thing.

12 You heard about these arrays that are a list of
13 numbers. They have to be organized so that they don't slow the
14 whole system down.

15 If you've got a long list of arrays with lots of
16 values in them, they've got to be initialized. So someone --
17 the device, your dx tool in this case, something has to
18 initialize that array.

19 This patent is focused on and limited to a very
20 specific form. It's the form called simulating execution of
21 the bytecodes by the clinit method.

22 Now, again, as Dr. Mitchell testified yesterday, in a
23 method claim like this one -- it says a method -- every single
24 step in the method has to be met.

25 It's not good enough that you get the same result.

1 It's not good enough to get the same result, because both
2 systems admittedly initialize arrays. The patent does and
3 Dalvik does. The dx tool does. That has to be done in a
4 system using bytecodes where there are arrays.

5 The issue is, how do you do it? What's the process?
6 The process in the dx tool is different.

7 Dr. Parr was the lead witness on this, along with
8 Mr. Bornstein. And we asked him:

9 What's the core requirement you need in order to have
10 simulation of execution of a -- on a stack machine?

11 A Java-based device is a stack-based device.

12 And that's what the '520 is talking about. And he's
13 testified there's no meaningful definition -- let's go back --
14 no meaningful definition of a stack machine, of simulating
15 execution of a stack machine without manipulation of a stack.
16 And that means pushing, popping, and things like that.

17 And the examples in the patent confirm it.

18 You'll have the patent. It's TX 4011. It's the '520
19 Patent. I'm showing you something here from Column 6. That's
20 in the discussion of the invention.

21 **MR. JACOBS:** Objection, Your Honor.

22 **THE COURT:** What's the objection?

23 **MR. JACOBS:** I think we're reading the specification
24 into the claim.

25 **THE COURT:** What is your answer to that?

1 **MR. VAN NEST:** I haven't said a word about that, Your
2 Honor. I called this an example. It's an example in the
3 patent. That's all I'm -- it's certainly background relevant
4 for the determination of this claim.

5 **THE COURT:** Well, here's the basic rule on that. The
6 patents -- most patents have examples. The law is quite clear
7 that the patent cannot be limited just to the examples. But
8 what is allowed to be the claimed invention for which the
9 patent holder has protection is what's stated in the claims
10 themselves.

11 So with that understanding, you can go ahead and
12 refer to the parts of the patent that are in evidence. And the
13 jury is entitled to read them in the jury room. But the jury
14 will keep in mind that they are only examples, and that the
15 patent claims are not limited to the examples.

16 Please, go ahead.

17 **MR. VAN NEST:** Now, you'll notice that there's no
18 reference anywhere in the '520 Patent, in the examples, in the
19 claims, or anywhere, to the phrase "pattern matching." Pattern
20 matching never appears anywhere in the '520.

21 What does appear is the words "simulated execution."
22 And in this example of simulated execution, it's talking about
23 creating a stack, starting with an empty stack and pushing on
24 to the stack. That's what this example discusses.

25 And Dr. Mitchell confirmed exactly that, that this

1 example talks about using the stack as part of the play
2 execution performed?

3 Yes.

4 Now, this isn't what goes on in Android. You know
5 that now because it's conceded that Android's dx tool uses
6 pattern matching.

7 Simulated execution is what the patent requires.
8 That's on the left. And Android uses pattern matching. That's
9 how Android identifies the values in an array.

10 And Dr. Mitchell conceded that Android does appear to
11 use pattern matching. I said:

12 The dx tool uses pattern matching, right? There's an
13 element of that.

14 Yes.

15 There's an element of the dx tool that uses pattern
16 matching?

17 Yes, I would say there's an element of the dx tool,
18 an element of pattern matching in the tool.

19 So their own expert confirms that Android uses
20 pattern matching and so does the source code.

21 Trial Exhibit 46.17 is from parseNewarray. And
22 parseNewarray describes what it's doing as trying to match the
23 array initialization's idiom.

24 It's matching. We are looking. We are expecting the
25 following pattern repeatedly. That's what we're looking for.

1 This is in the source code that was written at the time.

2 And Mr. Bornstein came in and explained what that
3 means. He picked up on that line:

4 Try to match the array initialization idiom. I see
5 that.

6 Does that simulate anything by manipulating a stack?

7 It doesn't.

8 What does it do?

9 It does a pattern match.

10 Dr. Parr confirmed this. He actually ran some code
11 through the dx tool. He created some code that was in the form
12 of an array. And he analyzed it. And he found no stack
13 operations.

14 He testified that that means we are not simulating
15 execution of the bytecode, because that's the only way to do it
16 in a stack-based system.

17 He did another experiment, which I want to touch on
18 for a minute, that absolutely proves that pattern matching is
19 what the dx tool does.

20 What was he doing here? In pattern matching, you are
21 looking for a pattern of these images (indicating).

22 For example, if we're going to create an array with
23 1, 3 and 5 as our values, the pattern knows to look for a 1, a
24 3, and a 5.

25 Simulated execution doesn't care what's there. It

1 just simulates whatever shows up. So his test was the
2 following: Let's put a dummy variable in there with a value of
3 0.

4 Well, there is no 0 on this array. If you're
5 simulating execution, which is what the patent requires, this
6 will work just fine. It will simulate the whole thing. It
7 will throw out this 0. And it will put the 1, the 3, and the 5
8 right there in the register, which is where you want it.
9 That's what simulated execution does.

10 If this is pattern matching, he said, it won't work.
11 It will fail.

12 Why will it fail? The pattern is looking for a 1, a
13 3, and a 5. It can't handle 0. It fails.

14 Remember the word he used? It's in the source code.
15 "Punt." It punts. When a pattern match fails to find the
16 right pattern, it punts.

17 And that's exactly what happened in his experiment.
18 It punted. That means it's not simulating execution of the
19 bytecode. It is pattern matching.

20 And that was unrebutted. Dr. Mitchell, unrebutted.
21 No experiments on his part. No response to this, other than
22 hand waving about a simulator class, which I'll get to in a
23 minute.

24 This is the exhibit that we showed with Dr. Parr.
25 Mr. Paige presented this. On the left, when the pattern

1 matcher works, you get a nice, neat row of values, 5, 4, 3, 2,
2 1.

3 That didn't happen with his experiment because the
4 pattern matching failed, and, therefore, it didn't generate
5 what you'd expect.

6 Now, I want to talk about hand waving. You saw a lot
7 of hand waving with the simulator class. Simulator class.

8 Next slide, please.

9 Dr. Parr and Mr. Bornstein concede that there is
10 simulation going on in the dx tool. Just in interpreting
11 bytecode, dx uses simulation. It uses simulation a lot.

12 The one place it doesn't use simulated execution,
13 though, is the only one that's relevant. When it comes to
14 simulated execution, the simulator class calls into a different
15 class, parseNewarray.

16 Let's look at the next slide.

17 ParseNewarray is 46.16, TX 46.16. The simulator
18 class -- I'm sorry. The simulator class is 46.16.
19 ParseNewarray is 46.17.

20 The code is different. Dr. Mitchell said it
21 yesterday. Different method, different code, different file.

22 So the one place in the dx tool where simulation does
23 not occur is in finding the values, identifying the values in
24 an array. And that's why there's no infringement.

25 The '520 requires simulated execution. That's what

1 is required. Simulated execution of the bytecode.

2 Android uses pattern matching. Pattern matching is
3 mentioned nowhere, not a word of it, anywhere in the patent.
4 And it's done in Android in a completely separate file from the
5 simulator file, which is what Dr. Mitchell admitted yesterday,
6 again, and last week as well.

7 So what's the score on the '520? Again, the evidence
8 strongly favors, strongly favors non-infringement. It's not
9 balanced.

10 Again, the only testimony that was presented by
11 Oracle was Dr. Mitchell.

12 You have on the other side the patent itself, which
13 doesn't mention pattern matching. Not a word about it.
14 Mr. Bornstein's testimony. Dr. Parr's testimony. Dr. Parr's
15 first experiment, where he checked to see whether there were
16 any stack operations. The second experiment which we just
17 visited. The trial exhibits, 46.16. That's the simulator
18 class that they want to talk about. But the pattern matching
19 goes on in Trial Exhibit 46.17.

20 Again, the only verdict supported on the '520, based
21 on this evidence and the application of the law, is not proven.
22 Failed to prove that the dx tool meets every limitation, every
23 step in the method described in the '520.

24 Now, I think that's where your deliberations will
25 end, because if you answer Question 1 "no" and question 2 "no,"

1 you don't even go on to Question 3. There can't be willful
2 infringement unless there's infringement in the first place.

3 As I said, the evidence that you've seen through the
4 witnesses and trial exhibits is overwhelming that they didn't
5 prove their infringement case to start with.

6 But, like I said in Phase One, as Google's lawyer, I
7 can't leave any stone unturned. I'm going to spend a few
8 minutes talking about willful infringement in case you get
9 there.

10 My first point is, willful infringement is a very
11 high bar. Judge Alsup mentioned it a moment ago. It requires
12 you to determine by clear and convincing evidence that Google
13 was reckless. Clear and convincing evidence. That's a higher
14 standard than a preponderance. So here the standard is high.
15 Higher than a preponderance. The evidence has to be crystal
16 clear.

17 Now, let's think about this for a minute because you
18 have some information about what went on between these parties,
19 to evaluate this already.

20 Nothing about Android was ever secret. Google
21 negotiated for about a year with Sun and described all along
22 the way exactly what Android was going to be. Java Language.
23 Java APIs. That was clear as a bell.

24 Android was public. Published on a website in
25 November of '07. The source code was published when the

1 handsets came out. Everybody in the world could look at it.

2 But what was Sun's reaction when Android came out?

3 Well, we all remember that. The rocket. The rocket. Come on.

4 These are the people now claiming that somehow we willfully
5 infringed?

6 They have known about every detail of Android for
7 years. And when it was first launched, their reaction wasn't,
8 Oh, you're a terrible infringement. Oh, my gosh, you're using
9 our technology. Oh, this is awful. It was, Congratulations.
10 Welcome. Thank you. You've put a rocket on to Java.

11 How could you possibly meet even a preponderance
12 standard to prove willfulness with that kind of evidence and
13 that kind of history?

14 That doesn't stop there. We now know -- let's go
15 back one. We now know, by the way, this blog is the official
16 page of Sun.

17 Remember the 10-K? The 10-K is Exhibit 974. It's
18 too heavy to bring up here so I didn't bring it up.

19 But 974, through Mr. Sutphin we established that they
20 actually represent to the United States government that
21 Mr. Schwartz' blog and any blog that their CEO publishes is a
22 material statement of the company. So this was nothing --
23 nothing personal for Mr. Schwartz.

24 Not just that, they worked with Google to build their
25 own products on Android. Remember the demonstration that Eric

1 Klein did at JavaOne in '08, where he said, We're going to run
2 JavaFX on Android?

3 I mean, if you're infringing technology and somehow
4 you're wrong, or you're willfully ignoring something, why in
5 the world would they be in there working with Google to put
6 JavaFX on Android?

7 These patents weren't even discussed -- they've
8 admitted that -- until July 20, 2010.

9 Look at this history. They've stipulated to this.
10 And Mr. Jacobs referred to it in the opening.

11 How can you willfully infringe something that you're
12 unaware of, that no one has called out? That's the whole point
13 of willful infringement. Right?

14 '05, '06, '07, '08, '09. Parties were working
15 together. Parties are talking. Everybody knows what Android
16 is.

17 It isn't until July 20, 2010, that they first, for
18 the very first time, said, here's these two patents that you're
19 violating. And then they filed their lawsuit three weeks
20 later. That's it. Three weeks later.

21 And they don't -- they're not taking a position that
22 the '104 was known to Google, or the '520 was known to Google.
23 Their position is, oh, no, you had your head in the sand.
24 Should have known. Should have checked. Should have gone out.

25 Well, we have a lot of evidence on that, too. Why

1 would someone who has made a product public and is giving it
2 away, and it's known to Sun exactly what it is, why would
3 someone go search Sun patents when Sun itself is saying,
4 welcome to the Java community?

5 Does that make any sense? Why would you go out and
6 search for patents when the patent holder has already told you,
7 hey, we love to have you as part of the Java community?

8 Now, it's more than that. Virtual machines weren't
9 new. They don't have a patent on a virtual machine. They
10 weren't new when Sun did Java in the first place. Virtual
11 machines weren't rare, and they weren't invented by Sun.

12 Those -- those few snippets of e-mail you saw in the
13 opening, about patent protection, that had nothing to do with
14 patent protection for Google.

15 Mr. Rubin explained that. If you're going to make
16 Sun technology and Google technology open source for people to
17 use, you want them to have patent protection so you're not
18 trapping them. That's the point of patent protection.

19 It wasn't Google worried about Sun technology. If
20 Google were using Sun technology, they would have paid for it.
21 That was the whole idea.

22 The patent protection in those snippets is for
23 members of the developer community, OEMs, handset makers,
24 carriers, other people.

25 Now, you know exactly, having seen Mr. Rubin, what

1 his position was. His position was, We at Google, we innovate.
2 We innovate. I don't tell my engineers to go look at everybody
3 else's patents. I tell my engineers, do your own work.

4 And you know they did. Took them three years to do
5 it. And the work we're defending now, here in court, was a
6 long time coming at Google, and a lot of money, and a lot of
7 people.

8 Let's hear from what -- from Mr. Rubin about this
9 issue.

10 (Video deposition clip played in open court; not
11 reported.)

12 **MR. VAN NEST:** Can we start it again, Ben.

13 Let me just mention, this was played during Phase
14 Two, not Phase One. So you saw this testimony just a few days
15 ago, last week.

16 (Video deposition clip played in open court; not
17 reported.)

18 **MR. VAN NEST:** So Mr. Rubin and the engineers at
19 Google did it the right way. They did it their own way. They
20 built Android from scratch, based on the needs and requirements
21 of the smart phone.

22 They didn't rely on patents like these, that were
23 issued in the '90s and were used in connection, if at all, with
24 desktop computers.

25 So, now, as Judge Alsup likes to say, you know the

1 drill.

2 I'm going to put one more slide up to remind you that
3 when I sit down, I won't get a chance to get up again.

4 I have tried to summarize the most important evidence
5 and the most relevant evidence. I'm sure I missed something.
6 I'm sure I overlooked something. I'm sure I made a couple of
7 mistakes along the way. I'm sure Mr. Jacobs will have an
8 opportunity to point those out.

9 But this is what I'd like you to be thinking about as
10 Oracle makes their final presentation, because we've proved
11 every single word of this. Google made fundamentally different
12 design choices for Android. And that means three things.

13 We don't use symbolic references in our instructions,
14 and we never have. And every witness confirmed that the
15 indexes in there are locations in memory, not symbolic
16 references.

17 Dexopt isn't now, never was, never has been a dynamic
18 operation. It runs at install time.

19 '520 covers only one very narrow specific way of
20 dealing with an array, simulated execution of the bytecode.
21 There is no evidence, other than the testimony of Dr. Mitchell,
22 which is inconsistent with the source code, with the
23 experiments Dr. Parr did, with the testimony of the people that
24 designed it, and with the testimony of Dr. Parr, that Android's
25 dx tool does not simulate execution. It uses pattern matching,

1 which is never mentioned in the patent and falls outside.

2 I think now it's undisputed this next point:

3 "Independently developed Android not knowing
4 of the Sun patents."

5 They can see that nobody on the Android design team
6 looked at, saw, was aware of, used copied, or otherwise had
7 access to either of these two patents.

8 And:

9 "Android does not use Sun's technology."

10 I guess -- I guess that's the capper. Android uses
11 Android technology built by Google developed by Google
12 engineers.

13 And it's been a great privilege to appear here in
14 this case, and good luck on your deliberations.

15 I've got one more slide.

16 (Document displayed)

17 Thank you.

18 (Laughter.)

19 And thank you, your Honor.

20 **THE COURT:** Since I'm going to need to give the jury
21 the instructions, I think it's best to take our break now.
22 When we come back, Mr. Jacobs will have his rebuttal and I will
23 give you the instructions and then the case will go to you.

24 Please don't deliberate yet. 15 minutes, remember
25 the admonitions.

1 testimony that we will now put on are the screen from 3754,
2 Lines 13 to 16 that the Field ID table is not stored in the
3 data area of a dex file.

4 **"ANSWER:** It's not stored in the section
5 that's labeled 'Data.'"

6 The whole argument collapses.

7 Now, Mr. Van Nest agreed that the distinction between
8 this is at least the distinction between meaningful data and
9 unmeaningful data. We're relying on meaningful data. Google
10 is relying on unmeaningful data.

11 When you go back and look at the patent and look at
12 the claims and look at the Fig. 1A and 1B, ask yourselves: Is
13 this patent about obtaining meaningful data or non-meaningful
14 data? A noninfringement argument that relies on non-meaningful
15 data makes no sense.

16 There were other things that came up in Google's
17 argument that bear addressing quickly.

18 Number one. They had more witnesses. They had more
19 documents. There is kind of a physical measurement of the
20 weight of the evidence test.

21 We called those witnesses. We called Mr. McFadden in
22 our case, because we knew as a technical guy, as a software
23 developer, Mr. McFadden would tell us how the code worked.

24 We called Mr. Bornstein in our case. He's a little
25 more evasive on the stand, but even he had to acknowledge what

1 his own documents and code said. Trust the code. Trust the
2 documents. We brought that information to you in our case
3 because it proves our case.

4 Recklessness. I think the definition of
5 "recklessness" is relying on a blog post. And you answered
6 this question in 4-B of the jury verdict form in Phase 1.

7 But there is document after document that I showed
8 you a few minutes ago. One more I'm going to highlight again
9 now that reveals that Google knew it was dangerous what it was
10 doing.

11 And so let's take a quick look again at 1029.

12 (Document displayed)

13 And this is an exchange that I reported to you
14 briefly on in my initial comments. And look what Tim Lindholm
15 is saying to Dan Bornstein:

16 "Actually, having said that -- which is
17 whether we should engage with Sun -- I wonder
18 whether this is too close to dangerous
19 territory."

20 Too close to dangerous territory. This is two years
21 after the blog post.

22 And I don't want to go over the whole history of the
23 blog post again, but recall that the blog post is before the
24 release of the code on the website and that shortly after the
25 blog post, there is a statement from Sun about great concerns

1 about fragmentation.

2 Last point. It is true that Oracle brought specific
3 patents to Google's attention on July 20th, 2010. That is not
4 the same as Google engineers did not have access to Sun patents
5 before that. And we know that Mr. Lindholm not only had access
6 to, but specifically wrote about the predecessor to one of the
7 patents-in-suit in his textbook.

8 Can I have TX 25, please?

9 (Document displayed)

10 Lindholm and Yellin, the *Java Virtual Machine*
11 *Specification*. Page 389:

12 "The technique documented in this chapter is
13 covered by U.S. Patent 5,367,685."

14 Look at the '104 patent. You'll see that number
15 right on there.

16 It's one thing to say that they weren't specifically
17 on notice by communication from Oracle. It's another thing for
18 Google to argue they didn't even have access to these patents.
19 Access. Google organizes the world's information. They have
20 access to all of the information, and they certainly had access
21 to Sun patents. They, as I recall, could have gone to search.
22 They could have studied. They could have done an independent
23 development in which they invested to diverge. They could have
24 done their own design and not infringe these patents, and they
25 didn't, and that was recklessness.

1 Thank you again for your attention.

2 **THE COURT:** Thank you.

3 The judge invites any member of the public who wishes
4 to excuse themselves during the reading of the jury
5 instructions to exit now. Otherwise, please stay here til the
6 bitter end so that there will be no distractions while you get
7 up and down.

8 (Brief pause.)

9 **THE COURT:** All right. Thank you.

10 I need to do that because as you now know, you get to
11 hear the official reading of the instructions and this is the
12 time that the jury under the law learns what the law is. It's
13 an important moment.

14 Often members of the public treat it as a non-event,
15 but this part of the trial is just as important as all the
16 evidence that you've heard because you need to take the
17 evidence that you have learned in this trial over many days and
18 weeks and apply it precisely, or at least apply the law
19 precisely. So I remind you of the importance of following the
20 law.

21 All right. This will only be about 10 to 12 minutes
22 because it's a shorter set of instructions. I will reread the
23 part that I had read just at the end just two sentences for
24 context.

25

FINAL JURY INSTRUCTIONS**FINAL JURY INSTRUCTIONS**

1
2 **THE COURT:** On any issue, if you find that plaintiff
3 carried its burden of proof as to each element of a particular
4 issue, your verdict should be for plaintiff on that issue. If
5 you find that plaintiff did not carry its burden of proof as to
6 each element, you must find against plaintiff on that issue.

7 I will now turn to the law that applies to this case.
8 As you know, in this lawsuit Oracle seeks relief from Google
9 for allegedly infringing Claims 11, 27, 29, 39, 40, and 41 of
10 the United States Patent Number RE38,104 ("Method And Apparatus
11 For Resolving Data References In Generated Code"); and Claims 1
12 and 20 of the U.S. Patent Number 6,061,520 ("Method And System
13 For Performing Static Initialization"). I will refer to these
14 claims as the "asserted claims." The products that allegedly
15 infringe the asserted claims are certain Android mobile devices
16 and software and the Android Software Development Kit. The
17 Android SDK is a set of development tools that a programmer can
18 use to develop applications for Android. The Android SDK
19 includes a set of libraries, documentation, an emulator for
20 emulating an Android device on a computer, a debugger, and a
21 sample set of code. Google denies that it infringes. Your job
22 is to decide the issues of infringement.

23 As you know, the patent claims of the numbered
24 paragraphs at the end of the patent. The claims are important
25 because they specifically define the exclusive rights granted

1 by the Patent Office. The figures and the rest of patent
2 provide a description and/or examples of the invention and
3 provide a context for the claims, but the claims define how
4 broad or narrow the patentholder's rights are. It is often the
5 case that a patent specification and its figures disclose more
6 than the specific matter claimed as inventions, so it is
7 important to keep straight what the specification says versus
8 what the claims say.

9 I should pause here and just say the specification is
10 the description, the basic write-up in the patent. It's what
11 the lawyers often call that part of the patent. So I'll read
12 that again.

13 So it is important to keep straight what the
14 specification says versus what the claims say.

15 In a patent, an independent claim is one that is a
16 stand-alone claim and does not incorporate any other claim. A
17 dependent claim is one that depends on an earlier claim by
18 incorporating it by reference and then adding one or more
19 additional elements. Such incorporation imports the entirety
20 of the incorporated claim, including all of its elements, into
21 the dependent claims. For the '104 patent, all of the asserted
22 claims are independent claims. For the '520 patent, Claim 1 is
23 an independent claim. Claim 20 is a dependent claim. Claim 20
24 incorporates independent Claim 18.

25 I am now going to instruct you on the meaning of some

1 of the words and phrases in the claims of the '104 patent. You
2 must accept and use these meanings in your deliberations.

3 Intermediate form code and intermediate form object
4 code. Both intermediate form code and intermediate form object
5 code mean executable code that is generated by compiling source
6 code and is independent of any computer instruction set.

7 Symbolic reference. The term symbolic reference
8 means a reference that identifies data by a name other than the
9 numeric memory location of the data, and that is resolved
10 dynamically rather than statically.

11 Resolve and resolving. The term resolving a symbolic
12 reference means at least determining the numerical
13 memory-location reference that corresponds to the symbolic
14 reference.

15 You must accept these definitions as established for
16 purposes of your deliberations and verdict. You may, however,
17 consider all of the evidence in the case as to whether or not
18 the accused product or method meets these definitions. If a
19 witness has based his view on meanings of the terms contrary to
20 my stated definitions, you should discount that part of his
21 testimony accordingly.

22 Oracle has the burden of proof on infringement.
23 Oracle must persuade you that it is more likely than not that
24 Google has infringed.

25 A patent's claims define what is protected by the

FINAL JURY INSTRUCTIONS

1 patent. A product or method infringes a patent if all
2 limitations of an asserted claim are present in the product or
3 method. Each claim asserted must be separately analyzed.

4 Oracle accuses Google of infringement. Deciding
5 whether a claim has been infringed is a two-step process. The
6 first step is to decide the meaning of the patent claim. I
7 have already instructed you as to the meaning of some of the
8 terms in the asserted patent claims. The second step is to
9 decide whether Google has made, used, sold, or offered for sale
10 within the United States a product or method covered by the
11 asserted claim. Distributing or offering a product for free
12 constitutes a use or sale. If Google has, it infringes. You,
13 the jury, must make this decision.

14 You must consider each of the asserted claims of a
15 patent individually and decide whether Google infringes that
16 claim.

17 To decide whether an accused product or method
18 infringes an asserted claim, you must compare the accused
19 product or method with the particular patent claim and
20 determine whether every limitation of the asserted claim is
21 included in the accused product or method. If so, then the
22 maker, user, or seller of the product or method infringes that
23 claim. If, however, the accused product or method does not
24 meet every requirement in the particular asserted claim, then
25 the maker, user, or seller does not infringe that claim. You

1 must decide infringement for each asserted claim separately.
2 Oracle must prove infringement of the claim by a preponderance
3 of the evidence.

4 If all elements of an asserted claim have been
5 proven, it is not a defense to infringement that the accused
6 product or method includes an additional element not called out
7 in the patent claim. For infringement to be proven, the
8 elements must all be present as per the claim language. For
9 example, if a patented method claim calls out three steps to
10 paint a wall, it would be infringed by a method including the
11 same three steps in the claim and it would be no defense that a
12 fourth step is also done.

13 To prove infringement, it is not necessary to prove
14 that any infringement was intentional or willful. Innocent
15 infringement would still be infringement. The fact, if true,
16 that the accused product or method was independently developed
17 without any copying of the patent owner's product or method is
18 not a defense to infringement. All that matters for purposes
19 of infringement is whether all limitations of the claim are
20 present in the accused product or method.

21 To assist you on the infringement issue, counsel gave
22 you a handout that identified the limitations in dispute and
23 underlined in red the elements disputed. Oracle contends that
24 the accused products and methods satisfy all the limitations of
25 the asserted claims. Google concedes that the elements not

1 underlined are present in the accused products, but contends
2 the underlined items are absent.

3 You have heard reference during opening statements to
4 something called "indirect infringement." In order to simplify
5 your work, the parties have agreed that the only issue for you
6 to decide is whether Google infringes and if so, whether it was
7 willful.

8 If you have decided that Google has infringed, you
9 must go on and address an additional issue of whether or not
10 this infringement was willful. For this willful inquiry, you
11 can only consider events that occurred prior to the filing of
12 this lawsuit on August 12, 2010.

13 Willfulness requires you to determine by clear and
14 convincing evidence that Google acted recklessly. Again, when
15 a party has the burden of proving any claim by clear and
16 convincing evidence, it means that you must be persuaded by the
17 evidence that the claim is highly probable. This is a higher
18 standard of proof than proof by a preponderance of the
19 evidence. To prove that Google acted recklessly, Google [sic]
20 must prove two things by clear and convincing evidence. The
21 first part of the test is objective: Google [sic] must
22 persuade you by clear and convincing evidence that Google acted
23 despite a high likelihood that Google's actions infringed a
24 patent --

25 **MR. VAN NEST:** Your Honor, could you reread that? I

FINAL JURY INSTRUCTIONS

1 think you -- you switched "Oracle" and "Google" a couple times.

2 **THE COURT:** All right. Starting with the first part,
3 or earlier?

4 **MR. VAN NEST:** I think starting maybe -- the bottom
5 of seven, the last sentence.

6 **THE COURT:** All right. I will be happy to.
7 I will start with this part two.

8 To prove that Google acted recklessly, Oracle must
9 two things by clear and convincing evidence. The first part of
10 the test is objective. Oracle must prove -- no, Oracle must
11 persuade you by clear and convincing evidence that Google acted
12 despite a high likelihood that Google's actions infringed a
13 patent. In making this determination, you may not consider
14 Google's state of mind. Legitimate or credible defenses to
15 infringement, even if not ultimately successful, demonstrate a
16 lack of recklessness. Only if you could be conclude that
17 Google's conduct was reckless do you need to consider the
18 second part of the test.

19 The second part of the test does not -- sorry.

20 The second part of the test does depend on the state
21 of mind of Google. Oracle must persuade you by clear and
22 convincing evidence that Google actually knew or should have
23 known that its actions constituted an unjustifiably high risk
24 of infringement of a patent.

25 To determine whether Google had this state of mind,

FINAL JURY INSTRUCTIONS

1 consider all facts which may -- all facts which may include,
2 but are not limited to:

3 1. Whether or not Google acted in accordance with
4 the standards for commerce for its industry;

5 2. Whether or not Google intentionally copied a
6 product of Oracle that is covered by the asserted patents;

7 3. Whether or not there is a reasonable basis to
8 believe that Google did not infringe or had a reasonable
9 defense to infringement;

10 4. Whether or not Google made a good faith effort to
11 avoid infringing the asserted patents, for example, whether
12 Google attempted to design around the asserted patents; and

13 5. Whether or not Google tried to cover up its
14 infringement.

15 I will again give you a special verdict form to guide
16 your deliberations. Although the special verdict form presents
17 the questions in numerical order, you may consider the
18 questions out of sequence so long as your answers conform to
19 the directions on the form concerning which questions you must
20 ultimately answer and which questions are only conditional
21 depending on your other answers.

22 When you retire to the jury room to deliberate you
23 will soon receive the following things:

24 1. All the exhibits received in evidence, including
25 those from Phase 1;

FINAL JURY INSTRUCTIONS

- 1 2. An index of the exhibits;
- 2 3. A work copy of these instructions for each of
- 3 you;
- 4 4. A work copy of the verdict form for each of you;
- 5 5. An official verdict form.

6 Remember that none of these items are evidence except
7 the exhibits.

8 When you recess at the end of a day, please place
9 your work materials in the brown envelope provided and cover up
10 any easels with your work notes so that if my staff needs to go
11 into the jury room, they will not even inadvertently see any of
12 your work in progress.

13 In your deliberations it is usually premature to take
14 a straw vote early on. This is due to the risk of jury members
15 expressing a premature opinion and then, out of pride, digging
16 in their heels. Rather, it is usually best to discuss the
17 evidence, pro and con, on the various issues before proceeding
18 to take even a straw vote. In this way, all of the viewpoints
19 will be on the table before anyone expresses a vote. These are
20 merely recommendations, however, and it is entirely up to you
21 to decide how you wish to deliberate.

22 A United States Marshal will be outside the jury room
23 door during your deliberations. If it becomes necessary during
24 your deliberations to communicate with me, you may send a note
25 through the Marshal, signed by your foreperson or by one or

FINAL JURY INSTRUCTIONS

1 more members of the jury. No member of the jury should ever
2 attempt to communicate with me except by a signed writing, via
3 the marshal, and I will respond to the jury concerning the case
4 only in writing or here in open court.

5 If you send out a question, I will consult with the
6 lawyers before answering it, which may take some time. You may
7 continue your deliberations while waiting for any answer to a
8 question. Remember that you are not to tell anyone, including
9 me, how the jury stands, numerically or otherwise, until after
10 you have reached a unanimous verdict or have been discharged.
11 Do not disclose any vote count in any note to the Court.

12 As you know, you have been required to be here from
13 7:45 to 1:00. Now that you are going to begin your
14 deliberations, as before, you are free to modify this schedule
15 within reason. For example, if you wish to continue
16 deliberating in the afternoons after a reasonable lunch break,
17 that is fine. The Court, does, however, recommend that you
18 continue to start your deliberations by 8:00 a.m. If you do
19 not arrive at a verdict by the end of today, then you will
20 resume your deliberations tomorrow and thereafter.

21 It is very important that you let us know via note, a
22 note, what hours you will be deliberating so that we may
23 conform our schedule to yours.

24 You may deliberate only when all of you are together.
25 Now that is the 11 of you, not 12. The 11 of you. You may

FINAL JURY INSTRUCTIONS

1 only deliberate when all 11 of you are together. This means,
2 for instance, that in the morning before everyone has arrived
3 or when someone steps out of the room to go to the restroom,
4 you may not discuss the case. As well, the admonition that you
5 are not to speak to anyone outside the jury room about this
6 case still applies during your deliberations.

7 And, also, that you should not do any homework, go on
8 the internet and do research about this case, that still
9 applies.

10 After you have reached a unanimous agreement on a
11 verdict, your foreperson will fill it in, date it, sign it and
12 advise the Court through the Marshal that you have reached a
13 verdict. The foreperson should hold onto the filled-in verdict
14 form and bring it into the courtroom when the jury returns the
15 verdict.

16 Thank you for your careful attention. The case is
17 now in your hands. You may now retire to the jury room and
18 begin your deliberations.

19 **THE CLERK:** All rise.

20 (Jury exits the courtroom at 11:54 a.m.)

21 **THE COURT:** All right. Please be seated.

22 Any issues for the Court?

23 (No response.)

24 **THE COURT:** Hearing none, we will do our --

25 **MR. PURCELL:** Your Honor?

1 **THE COURT:** Yes, Mr. Purcell.

2 **MR. PURCELL:** Your Honor, I apologize. I raised this
3 morning before we got started with the closings the issue of
4 Phase 3, which may be starting as soon as tomorrow.

5 Oracle has asked for us to make our CEO and our
6 chairman available here to testify about these nine lines of
7 code and whatever revenue from Android might be attributable to
8 them.

9 We moved to exclude those witnesses from the trial
10 and, also, to clarify the evidentiary issues and, hopefully,
11 get a ruling that Oracle needs to actually put forward some
12 evidence of --

13 **THE COURT:** What is the point now, Mr. Purcell?

14 **MR. PURCELL:** Well, I guess the point in the first
15 instance is if the damages phase is going to start tomorrow, we
16 need to get our witnesses up here and prepare them.

17 **THE COURT:** First, we need to get the exhibits in the
18 jury room and send all the things in. It is now -- it's now
19 almost noon.

20 I'm trying to think of when I have the criminal
21 calendar this afternoon. We'll do this. Dawn, at 1:30 can we
22 reconvene to hear this motion?

23 **THE CLERK:** Sure.

24 **THE COURT:** 1:30 we will reconvene to hear your
25 motion.

1 Listen, but you need to -- it doesn't matter that
2 they want to get your top people back here unless you have a
3 legitimate legal reason for postponing it, which I will, of
4 course, hear. And so we're going to have a full and fair
5 discussion about these issues, but the fact that Mr. Big is
6 being subpoenaed, I'm sorry. This is a big case. That doesn't
7 cut much of a figure with me.

8 What might cut much of a figure with me is the fact
9 that I still have trouble understanding how nine lines of code
10 can lead to anything more than statutory damages. That's the
11 point you ought to be worrying about and not playing the violin
12 about Mr. Big, who is going to have to give up his vacation.

13 All right?

14 **MR. PURCELL:** We get that, your Honor, and the issues
15 are related. It's the fact that these witnesses don't have
16 anything to say about these nine lines of code, but I hear your
17 Honor's comments.

18 **THE COURT:** Thank you. We're going to break now.
19 We're going to get this stuff into the jury room that they
20 need. We will reconvene at 1:30.

21 (Whereupon there was a recess in the proceedings
22 from 11:57 until 1:30 p.m.)

23 **THE COURT:** Please be seated. Thank you.

24 Okay. Back to work.

25 Let's hear this -- hear the motion.

1 **MR. PURCELL:** Thanks for making time, Your Honor.

2 So cutting to the chase, the issue in a nutshell for
3 Phase Three is what Your Honor has said over and over again in
4 this case.

5 This is not Android versus Java. It's more
6 particular than that. Android wasn't found to have infringed
7 Java. What was found to have infringed were these two test
8 files that -- sorry, these two Timsort files that contain the
9 nine lines of rangeCheck code and then the eight test files
10 that didn't end up on any phone.

11 And it was Oracle in the jury instructions who asked
12 for the files to be defined in that narrow way, because they
13 didn't want the infringing material compared to the entire Java
14 platform. That would have run the risk of a de minimus
15 verdict. So they asked for and they got a verdict form and a
16 verdict that defined the infringement very narrowly.

17 Now, for purposes of the damages phase they want to
18 turn that around. They want to act as though Android
19 infringes.

20 There's no finding of that. And all they've said
21 about what the damages phase is going to consist of will be
22 them pointing to Android gross revenues. That's it. And they
23 say that carries their burden, and then the burden shifts to
24 us.

25 That's not enough legally. And the case that

1 establishes that most clearly is the *Mackie vs. Rieser* case in
2 the Ninth Circuit, 2002.

3 And what happened in *Mackie* was the infringing
4 material was one photo that was incorporated into a collage on
5 one page of a promotional brochure for a symphony. Now, the
6 symphony didn't sell the brochure. That was given away for
7 free, for the purpose of promoting subscriptions.

8 And, basically, we have the exact same thing here.
9 We have nine lines of code out of 15 million lines in the
10 Android software.

11 And the Android software isn't sold. It's given away
12 for free. But, obviously, Google uses that software to enable
13 downstream ad sales and application sales.

14 So we have a similar sort of indirect source of
15 revenue that the plaintiff wants to get at. We have a
16 similarly attenuated causal link. And we have, in this case, a
17 far tinier quantum of infringing material than was at issue in
18 *Mackie*. We've got nine lines out of 15 million.

19 It's not enough for them to say, here's the Android
20 gross revenue, that's it, and they don't have anything else.

21 They don't have any witness, an expert witness or a
22 fact witness, who can tie any amount of revenue of any kind to
23 the specific files that were found infringed.

24 Those are the infringing products, the infringing
25 works, for the purposes of this analysis.

1 And so Your Honor's right. I mean, this is a
2 statutory damages case, if it's anything.

3 And what the damages phase is going to consist of is
4 a lot of documents with very big numbers. Some of them actual,
5 some of them projections, some of them aspirational statements
6 from our CEO about how he hopes that Android will do great
7 things in the future. And it's not going to be tied to the
8 actual issue that the jury has to resolve. And that's our
9 concern. And that's what we want to head off.

10 **THE COURT:** All right. Mr. Boies.

11 **MR. BOIES:** Thank you, Your Honor. Let me begin with
12 one legal point and one factual point, and one point about what
13 we're claiming.

14 Let me begin with what we're claiming, because I -- I
15 constantly hear about how we're claiming, for nine lines of
16 code, billions or hundreds of millions of dollars.

17 We're not claiming billions or hundreds of millions
18 of dollars. We are claiming that it's not zero. And we are
19 claiming that we believe under the law they have a burden of
20 proof. But there is no claim here that this is something in
21 which we are entitled to all or most or even a large percentage
22 of either the revenues or profits of Google.

23 Second, let me deal with the legal point. There is
24 no case, none, in which there has been proven a product that
25 was containing copyright-infringed materials that was

1 distributed and revenue generated and recorded by the defendant
2 where it has been held that the burden is still on the
3 plaintiff to go forward.

4 That is contrary to the clear command of 504(b). The
5 cases like *Mackie* are not cases that involve products that
6 generated revenue.

7 *Polar Bear*, which is a subsequent Ninth Circuit case,
8 is a case in which the Court analyzes in an indirect case, an
9 advertising case, analyzes three different types of situations.
10 And in two of those types of situations, the Court holds that
11 the plaintiff has met its burden. The only time that the
12 plaintiff didn't meet its burden was with respect to a claim
13 for something that didn't even generate any revenue.

14 There was no revenue tied to the advertisement. But
15 it was an attempt to put forward a theory that a price increase
16 over a period of four years was somehow tied to the
17 advertisement. The Court said, if you're going to make that
18 kind of claim you've got to tie something to the advertisement.

19 Here, *Android* includes copyright-infringing material.
20 There has been no case in which something has been distributed
21 containing copyright -- copyrighted-infringing material, that's
22 generated revenue, in which the Court has said you are now
23 limited to statutory damages; you cannot go to a trier of fact
24 on an infringer's profit.

25 The *Bucklew* case, out of the Seventh Circuit, says

1 the purpose of the infringer profits provision of 504(b) is to
2 make infringement worthless.

3 You don't make infringement worthless if what you say
4 is, if something is small there are no damages.

5 And, again, this is not a case, not a question of how
6 large the damages are. It is a question of whether we ought to
7 be precluded as a matter of law from going to the trier of fact
8 and seeking infringer's profits simply because the amount of
9 the copyrighted material contained in the infringing product is
10 small.

11 Third, a factual point. It's not at all clear to me
12 that the right comparison is nine lines to 15 million.
13 10 million of those of the Linux Kernel. But whatever
14 comparison is made, nine lines of code is a small percentage.

15 The test files, so-called test files -- again,
16 there's a factual dispute as to exactly what these are, but
17 those files are much more substantial. But they are not
18 included. At least in the current version of Android.

19 But both of those benefited Google. And it benefited
20 Google in at least several ways. But take one way just as an
21 example. It benefited Google because it accelerated the time
22 that Android could be finished.

23 The timing of Android was critical. We've
24 demonstrated that to a limited extent already. That would be
25 something that we would be demonstrating in Phase Three.

1 But the timing is critical, was critical to Google.
2 They wanted it faster, faster, faster. And what this did, what
3 this copying did was, it allowed them to use fewer resources
4 and to accelerate that.

5 Now, suppose they only accelerated it two days.
6 They're making \$3 million a day, essentially, now. They are --
7 they are activating either 750,000 phones or 850,000 phones,
8 depending on which executive you listen to.

9 Mr. Schmidt said that he thought that each phone
10 ought to generate or could generate \$10. That's 8 and a half
11 million dollars a day.

12 If you just get one day acceleration or two days
13 acceleration, that's anywhere from, you know, six to
14 \$17 million. That is not an unreasonable amount of money. And
15 it is not something that is untethered from the value that is
16 created.

17 What they want to argue is that somehow this court,
18 as a matter of law, ought to say, if something is small you
19 don't get any infringer's profits.

20 We think that's contrary to the precedent. We think
21 it's contrary to the statute. It's contrary to the policy.
22 It's designed to make infringement worthless. And what it does
23 is, it gives them a free pass on these things that they
24 deliberately copied.

25 What they want to say is we deliberately copied them,

1 but it didn't help us.

2 Yes, somebody else could have written that. But it
3 would have taken time. And it would have taken some resources.

4 The question is whether we're entitled, under the
5 infringer's profits theory, to make a case to the trier of fact
6 that we are entitled to get that.

7 **THE COURT:** Let me ask a question.

8 **MR. BOIES:** Sure.

9 **THE COURT:** Under 504 you are required to make an
10 election. So I'd like to know, I would like to hear you say
11 it, because the other day I thought you had said the opposite.
12 So are you now saying that you waive -- not waive, but you
13 elect to try for 504 damages and profits, and not statutory
14 damages?

15 **MR. BOIES:** Yes, Your Honor.

16 **THE COURT:** All right. So you recognize --

17 **MR. BOIES:** I recognize if I lose this, zero.

18 **THE COURT:** Zero. And if you lose all the other
19 issues in the case, think about the -- just the costs alone.
20 You would then have lost everything.

21 **MR. BOIES:** We understand that, Your Honor.

22 **THE COURT:** And I expect that the amount of taxable
23 costs in this case are pretty high.

24 **MR. BOIES:** I do, Your Honor. And one of the things
25 that we could have done is, we could have taken statutory

1 damages on one of them and sought infringer's profits on the
2 other, as a tactical matter.

3 We think, as a matter of principle, that we're
4 entitled to infringer's profits. And the Court's -- I know
5 from previous things the Court has said, the Court's dubiety
6 about this. Okay.

7 And we've thought about the fact that if we lose this
8 and lose the other, that we are in a position of not having won
9 anything. And we thought about it, okay.

10 We've thought about whether what we ought to do is we
11 ought to take statutory damages on one of those things, and
12 seek infringer's profits on the other.

13 And we decided that's that was the wrong thing to do,
14 that as a matter of principle that we thought we were entitled
15 to infringer profits.

16 And as a matter of principle, in trying to enforce
17 these copyrights, we didn't want to send a message that says,
18 if you take something that's small, and you're a big company
19 and you can afford to litigate it thoroughly, what we're going
20 to do is we're going to say, okay, we're going to settle for
21 statutory damages.

22 **THE COURT:** All right. Let's go to that point.

23 Does your expert call out these two items and trace
24 through a nexus from those items to the large amount of profits
25 that you have in mind?

1 I don't think -- I think the answer to that is no.
2 But maybe I don't understand the expert report well enough.

3 **MR. BOIES:** I think the way the Court is asking the
4 question, the answer is no, Your Honor.

5 **THE COURT:** The law requires you to prove a nexus
6 between the infringement and the body of profits that you're
7 seeking. So how do you propose to prove that nexus?

8 **MR. BOIES:** With respect, Your Honor, I think the law
9 with respect to infringer profits, as opposed to damages, only
10 requires us to demonstrate that there was a product that
11 contained infringing material, and that product generated
12 revenue.

13 Once we have done that, I believe the burden shifts
14 to the other side.

15 Now, if I'm wrong about that -- and I don't think
16 there is a case that holds that I'm wrong on that -- but if I'm
17 wrong about that, I think it is still possible as a factual
18 matter to demonstrate a nexus by, for example, showing that,
19 one, speed was very important to Google in getting Android out
20 there; two, by copying, they accelerated that; three, even --

21 **THE COURT:** Can I stop you on that part for a second?
22 We heard the testimony of Mr. Bloch.

23 **MR. BOIES:** Yes.

24 **THE COURT:** All right. I have -- I was not good -- I
25 couldn't have told you the first thing about Java before this

1 trial. But, I have done and still do a lot of programming
2 myself in other languages. I have written blocks of code like
3 rangeCheck a hundred times or more. I could do it. You could
4 do it. It is so simple.

5 The idea that somebody copied that in order to get to
6 market faster, when it would be just as fast to write it out,
7 it was an accident that that thing got in there.

8 There was no way that you could say that that was
9 speeding them along to the marketplace. That is not a good
10 argument.

11 **MR. BOIES:** Your Honor --

12 **THE COURT:** You're one of the best lawyers in
13 America. How can you even make that argument?

14 You know, maybe the answer is because you are so good
15 it sounds legit. But it is not legit. That is not a good
16 argument.

17 **MR. BOIES:** Your Honor, let me approach it this way,
18 first, okay. I want to come back to rangeCheck. All right.

19 **THE COURT:** RangeCheck. All it does is it makes sure
20 that the numbers you're inputting are within a range. And if
21 they're not, they give it some kind of exceptional treatment.
22 It is so -- that witness, when he said a high school student
23 would do this, is absolutely right.

24 **MR. BOIES:** He didn't say a high school student would
25 do it in an hour, all right.

1 **THE COURT:** Less than -- in five minutes, Mr. Boies.

2 **MR. BOIES:** Well, Your Honor --

3 **THE COURT:** If you know the language. Once you know
4 the language, it is a five-minute proposition.

5 **MR. BOIES:** Your Honor, I'm not an expert on Java,
6 okay. This is my second case on Java, but I'm not an expert on
7 Java. And I couldn't program that, probably, in six months.
8 But I accept that there are people who could.

9 If the Court would just let me -- I know I should
10 always answer the Court's question, but let me come back to
11 rangeCheck after I've just reminded the Court that we've got
12 the issue of these test files.

13 **THE COURT:** All right.

14 **MR. BOIES:** These test files, what they had to do was
15 they had to take the Oracle code, Sun code, decompile it, and
16 then re-create from that.

17 That was not an accident. That was not something
18 that they did by mistake. They did it intentionally. And they
19 did it for the purpose of accelerating what they were doing.
20 Or saving money. Or both.

21 I don't -- just as the Court says to me, rangeCheck
22 is only nine lines of code, and how can any -- you know, how
23 can you draw any inference from that, I say to the Court, you
24 can't look at the decompiling copy and simply say this was
25 meaningless.

1 It's not in Android, but there's no doubt it
2 accelerated Android. It helped Android. That's why they did
3 it.

4 Now, let me come back to rangeCheck. Every time I
5 talk about this I get in a situation where I feel like I'm
6 either saying it's important or it's nothing. And that's a
7 false dichotomy.

8 Nobody can say that rangeCheck, you know, is an
9 essential element or a big thing. But it was something that
10 was copied. And it was something that was included. And it
11 was something that was important to Timsort and
12 ComparableTimSort, that did have a significant performance
13 advantage. Now, they could have done it a different way.

14 If you take a copyrighted poem, a nine-line
15 copyrighted poem, and you just pick that poem because you think
16 it is available to you, and it turns out you're wrong, and you
17 publish it, and nobody buys your anthology because of that nine
18 line poem, and you could have gotten another poem in five
19 minutes, but if you put it in, it's copyright infringement and
20 you're entitled to some infringer profits.

21 Now, I tell the Court, this is a much harder argument
22 for me on Timsort than it is on the other files because I
23 accept what the Court is saying about the limitations on
24 Timsort and the limitations on rangeCheck within Timsort.

25 My point is really a matter of principle, which is

1 that I think we are entitled to make a case for infringer
2 profits.

3 Now, if -- if I were just trying to do something
4 tactical, what I would say is give me statutory damages on
5 rangeCheck and let me go for infringer's profits on the other
6 files.

7 I, frankly, thought that the Court would think I was
8 playing games if I did that; you know, which is why we're where
9 we are.

10 I think that the -- the case for infringer profits on
11 the decompiled files, I don't see how you can not --

12 **THE COURT:** What is the nexus?

13 **MR. BOIES:** Well, the nexus is they were using these
14 to test and to produce Android.

15 **THE COURT:** How many times did they do that? What is
16 your testimony on that?

17 **MR. BOIES:** Well, that's one of the things I'm going
18 to be asking these people. Okay.

19 **THE COURT:** Who is even your witness?

20 **MR. BOIES:** I'm going to ask every single Google
21 witness that I call about that. And, Your Honor, I don't
22 even --

23 **THE COURT:** Is this a fishing expedition?

24 **MR. BOIES:** It's not a fishing expedition.

25 **THE COURT:** It sounds like it.

1 Look. Here's what really happened. Your side did no
2 discovery to this prior to trial. This was a non-issue. This
3 was all in there just for coloration.

4 And now you're in the fix that you haven't won on
5 anything with copyright except this, and you want to make this
6 into a federal case. It is a federal case.

7 **MR. BOIES:** It is a federal case.

8 **THE COURT:** You want to make it into a bigger federal
9 case over something that's this tiny. And the reason, the
10 proof is in the pudding. You didn't do any discovery. You
11 don't even know who wrote -- you do know --

12 **MR. BOIES:** Yeah, we do.

13 **THE COURT:** -- Bloch, but you don't know about the
14 decompiled files and what role they had and what the nexus
15 might have been.

16 **MR. BOIES:** Your Honor, we have testimony from both
17 experts about the test files, all right. In addition, we -- I
18 agree with you, nobody thought we would be going to the jury on
19 these particular issues alone. Nobody thought that the jury
20 was going to hang on fair use.

21 What we had suggested was that this all be put off.
22 In fact, we think as, you know, from -- I'm not going to
23 reargue this, but, as you know, we think it's wrong to send
24 this to the jury alone.

25 **THE COURT:** Well, if I rule against you on

1 copyrightability, then we -- even Question 1, 1A and 1B is
2 moot.

3 **MR. BOIES:** Yes, Your Honor.

4 **THE COURT:** Well, that's a possibility.

5 **MR. BOIES:** It is. And, for example, one of the
6 things that we suggested to the Court was that these two
7 issues, these tiny issues, if you will, ought not to be the
8 single subject of Phase Three. That, for example, if you
9 decide against us on copyrightability, that's going to resolve
10 the issue, you know, subject --

11 **THE COURT:** It won't resolve these two issues. It
12 won't resolve rangeCheck. It still is there.

13 **MR. BOIES:** Let --

14 **THE COURT:** And I don't want to be stamped into
15 making a decision.

16 **MR. BOIES:** No.

17 **THE COURT:** There are many, many pages I've got to
18 read. I have a lot to read before I can tell you what the
19 answer is on the big issue.

20 So, in the meantime, we have -- we've got to get
21 through the rest of Phase Three. And so there -- we're in this
22 position where I think you are taking a huge stretch.

23 I've got a criminal calendar to go to in a few
24 minutes. I'm not going to rule right now. Here's what we are
25 going to do.

1 **MR. BOIES:** Could I make one possible suggestion?

2 **THE COURT:** Of course. Go ahead.

3 **MR. BOIES:** I haven't talked to my client. Sometimes
4 my clients shoot me for these kind of things.

5 But let me make a proposal, that we put off sending
6 this to the jury. That if it is determined that there's no
7 copyrightability for the APIs, that we lose that, we'll take
8 statutory damages for these two things, not make an infringer's
9 profits claim.

10 If it turns out that we eventually go to a jury on
11 API damages, we'll seek this at that time. So that if the API
12 thing goes away, these things go away and never have to go to a
13 jury.

14 If the API --

15 **THE COURT:** Who would try that part of the case?

16 **MR. BOIES:** I'm sorry?

17 **THE COURT:** Let's say you lose on API, but you
18 still -- who would decide the amount of statutory damages?

19 **MR. BOIES:** Uhm, Your Honor, I'd stipulate to
20 whatever the Court does. You know --

21 **THE COURT:** So you'd waive a jury on that?

22 **MR. BOIES:** I'd waive a jury on that.

23 **THE COURT:** If both sides would waive a jury on that,
24 that might be a doable proposition.

25 **MR. BOIES:** I'm just trying to work something out.

1 I agree with the Court. It makes no sense for us to
2 try these two tiny issues in front of the jury.

3 On the other hand, as a matter of principle, I don't
4 think it is right to say that we're going -- we're going to
5 relieve them of their infringer's profits obligation 504(b)
6 puts on them.

7 **THE COURT:** All right. Can I make -- you haven't
8 agreed to anything yet. You made a proposal.

9 Mr. Purcell, I don't have time to negotiate for you
10 or with you. I need to get to the criminal calendar.

11 But, I have a two-part ruling. First -- it's not a
12 ruling on the ultimate question. It's a ruling on how to
13 proceed from here, called *modus vivendi*.

14 **MR. VAN NEST:** Called what?

15 **THE COURT:** *Modus vivendi*.

16 **MR. VAN NEST:** You've been reading too much Java.

17 (Laughter)

18 **THE COURT:** You can look that up in that file cabinet
19 of yours.

20 (Laughter)

21 **THE COURT:** Here is -- it means a way to muddle
22 through. At least for today.

23 First, Oracle should submit tonight a detailed offer
24 of proof as to nexus, with specifics to show the nexus between
25 these two files and infringer's profits.

1 To my mind, a nexus has to be shown. That's not --
2 in other words, if it's so de minimus, so speculative a
3 connection, then it ought not to be -- we don't even go there.

4 But, I'm not making that as a ruling of law now.
5 That's just the way I think the law should be. And I would
6 have to go look at the *Mackie* case and the *Polar Bear* case.

7 But I would like to see that detailed offer of proof.
8 And that should include what the experts have done on that
9 subject.

10 Now, if Google wants to weigh in on that, I welcome
11 it, as well. So that would be due by 9:00 p.m. tonight.

12 Now, second thing is, I think the idea that Mr. Boies
13 suggested is a good enough start that you, as good lawyers,
14 ought to be able to find a way to draft a simple 2-page
15 document that would put off to the future, or in some way like
16 Mr. Boies suggested, a better way to deal with this problem.

17 **MR. PURCELL:** And --

18 **THE COURT:** Wait. Mr. Purcell, sit down. I don't
19 know what has gotten into you today, but you are on a tear.
20 Let me finish.

21 (Laughter)

22 **THE COURT:** What you need to think about, though, is
23 Mr. Boies suggestion that if there was a further trial later,
24 does that mean that the expert reports get reopened, that they
25 get to fix the problems they have with these two files that

1 they -- I'm not saying yes or no on that. And the Court could
2 years from now or months from now could possibly allow both
3 sides to reopen and to address those issues.

4 But it would be better if you addressed them in your
5 agreements rather than for the Court to punt that issue.

6 All right. Now, what did you want to say
7 Mr. Purcell?

8 **MR. PURCELL:** I apologize for interrupting you, Your
9 Honor.

10 I just wanted to let you know that we've already
11 taken a position, and stand by it, that we would be comfortable
12 having the Court decide any entitlement to infringer's profits.

13 **THE COURT:** Okay. That's part of what was being
14 suggested.

15 **MR. PURCELL:** Right.

16 **THE COURT:** But the other parts are --

17 **MR. PURCELL:** There's other moving parts.

18 **THE COURT:** There are other moving parts that you
19 heard that would be -- you would have to address and come up
20 with a written agreement. A written agreement would be good.

21 So that's all I have to say on that, as Forrest Gump
22 would have said.

23 **MR. VAN NEST:** Your Honor, you said we could weigh in
24 at 9 o'clock, also. That's what I understood you to say.

25 **THE COURT:** Yeah. Both of you can file your briefs

1 at 9 o'clock.

2 **MR. VAN NEST:** Good.

3 **THE COURT:** We will take -- the jury -- I have to
4 back up. I think one member of the jury is still in the jury
5 room reading documents, which is fine. They are entitled to do
6 that. So not all the jurors have left the building. But you
7 are free to take off because the -- there's not going to be any
8 notes coming out of the jury room today.

9 Tomorrow your time is going to be --

10 **MR. VAN NEST:** 8:00 to 1:00, Your Honor.

11 **THE COURT:** 8:00 to 1:00. All right. Well, let's
12 reconvene tomorrow.

13 What time would you like to reconvene tomorrow,
14 8 o'clock?

15 **MR. JACOBS:** 8 o'clock is fine.

16 **THE COURT:** 8 o'clock. And we will see if you've
17 made any progress on this issue.

18 Thank you.

19 **MR. VAN NEST:** Thank you, Your Honor.

20 (Counsel thank the Court.)

21 (At 2:59 p.m. the proceedings were adjourned until
22 Wednesday, May 16, 2012, at 8:00 a.m.)

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I N D E X

	<u>PAGE</u>	<u>VOL.</u>
Jury Instructions	4095	23
Closing Argument by Mr. Jacobs	4099	23
Closing Argument by Mr. Van Nest	4152	23
Rebuttal Argument by Mr. Jacobs	4199	23
Final Instructions	4204	23

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/s/ Katherine Powell Sullivan

Katherine Powell Sullivan, CSR #5812, RPR, CRR
U.S. Court Reporter

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Tuesday, May 16, 2012