

In the Matter Of:

APPLE INC. vs

SMITH INTERFACE TECHNOLOGIES

ANDREW COCKBURN, PH.D.

April 08, 2026



VOLUME 1
PAGES: 1-134
EXHIBITS: See Index

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

SMITH INTERFACE TECHNOLOGIES, LLC,
Patent Owner.

Case IPR 2024-01091
U.S. Patent No. 10,936,114

DEPOSITION OF ANDREW COCKBURN, PH.D.

- CONDUCTED BY VIDEOCONFERENCE -

Tuesday, April 8, 2026

12:00 p.m. (CDT)

Joan Ferrara, RMR, FCRR
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April 8, 2025

12:00 p.m. (CDT)

Deposition of ANDREW COCKBURN, PH.D.,
held remotely via Zoom, before Joan
Ferrara, a Registered Merit Reporter,
Federal Certified Realtime Reporter and
Notary Public.

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RYAN SHORT, ESQ.

1 ----- I N D E X -----

2 WITNESS EXAMINATION BY PAGE
3 ANDREW COCKBURN MR. LICYGIEWICZ 6

4

5

6 ----- EXHIBITS -----

7 EXHIBIT FOR ID.
8 (PROVIDED ELECTRONICALLY TO REPORTER)

9

10 Exhibit 1001 U.S. Patent No.
11 10,936,114 13

12 Exhibit 1002 Prosecution History of
13 '114 Patent 13

14 Exhibit 1003 Declaration of Dr. Andrew
15 Cockburn 14

16 Exhibit 1004 U.S. Patent Publication
17 No. 2010/0302281 to Kim 14

18 Exhibit 1005 U.S. Patent Publication
19 No. 2009/073571 to Bowens 14

20

21

22 (Continued)

1 ----- EXHIBITS -----

2 EXHIBIT FOR ID.

3 (PROVIDED ELECTRONICALLY TO REPORTER)

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5 Exhibit 1006 U.S. Patent Publication

6 No. 2006/0139320 to Lang 15

7 Exhibit 1007 U.S. Patent Publication

8 No. 2010/0156818 to

9 Burrough 15

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18 (REPORTER'S NOTE: All quotations

19 from exhibits are reflected in the manner in

20 which they were read into the record and do

21 not necessarily denote an exact quote from

22 the document.)

1 ANDREW COCKBURN,

2 called as a witness, having been duly

3 sworn by a Notary Public, was examined

4 and testified as follows:

5 EXAMINATION BY

6 MR. LICYGIEWICZ:

7 Q. Good morning, sir. I just want
8 to make sure I pronounce your name
9 correctly. I understand it's
10 Dr. "Coe-burn," is that how you pronounce
11 it?

12 A. That's correct.

13 Q. As you can tell by my last name,
14 it's a little bit of a tongue twister, so
15 I want to be very cognizant of that. If I
16 slip up, my apologies in advance, but I
17 should be pretty good about referring to
18 you as Dr. "Coe-burn."

19 A. That's great. Thanks.

20 Q. Okay. I understand that you have
21 been deposed a number of times, correct?

22 A. Correct.

1 Q. And you were just sworn in by the
2 court reporter. So you do understand that
3 you're testifying under oath here today,
4 correct?

5 A. I do.

6 Q. Do you have any familiarity with
7 the deposition process? I'm going to
8 dispense with most of the preliminaries,
9 if that's all right with you. That way we
10 can just basically cut to the chase.

11 A. Sure.

12 Q. I just wanted to make sure two
13 things are clear, though. First, let's
14 try not to talk over each other or
15 interrupt each other. I'll do my best to
16 make sure that I don't, when I'm asking
17 you questions and would appreciate it if
18 you do that, do not talk over me when vice
19 versa, when -- in the answer part of the
20 questions.

21 So is that acceptable to you?

22 A. It is.

1 Q. And then I'll try to take a break
2 about every hour or so. If we need to
3 take a break sooner, as you know, just let
4 us know and we'll do the best to
5 accommodate you.

6 If a question is pending though,
7 all I ask is that you answer my question
8 first before we take a break. Is that all
9 right?

10 A. That's good.

11 Q. Okay. And you understand that
12 we're here today to talk about your
13 opinions in connection with IPR 2024-01091
14 that challenges the validity of U.S.
15 Patent No. 10,936,114, is that right?

16 A. I haven't memorized the numbers
17 of the IPR. I haven't memorized the full
18 number of the '114 Patent, but I
19 understand what you mean when you refer to
20 the '114 Patent.

21 Q. All right. So if I refer to the
22 '114 Patent, you understand that we're

1 talking about the patent that's been
2 challenged in this IPR proceeding,
3 correct?

4 A. Yes.

5 Q. Okay. I'd like to -- I'm not
6 very good at memorizing these numbers and
7 I try not to if I don't have to, so I just
8 like using a shortcut, and that's what
9 we'll do here today as much as we can.

10 Where are you located here today,
11 located today rather?

12 A. I'm in Lyttelton, New Zealand.

13 Q. Is anyone else with you?

14 A. There are three others in the
15 house. Nobody else is in this room.

16 Q. If someone does enter the room,
17 could you please just let us know if that
18 happens?

19 A. I will.

20 Q. And Dr. Cockburn, aside from
21 participating in the Zoom deposition on
22 camera here, can you confirm for me that

1 you are not in communication with anyone
2 either, electronically or otherwise?

3 A. I am not.

4 Q. Okay. And can you confirm for me
5 that you will not look at or send any
6 emails, electronic messages, chats or
7 other communications during the
8 deposition?

9 A. I agree to that.

10 Q. Do you have anything open on your
11 computer other than the Zoom meeting?

12 A. Finder is running with no windows
13 showing. Chrome is running with no
14 windows showing. And this Zoom link is
15 showing with only this window showing.

16 Q. Fair enough.

17 Do you have any hard copies of
18 your report from this IPR or any other
19 documents with you?

20 A. No. I have a Post-it note in
21 front of me that contains some typos that
22 I would appreciate having the opportunity

1 to identify.

2 Q. We'll give that you opportunity
3 in just a second here. I have a, just got
4 a couple of more preliminary questions.

5 What did you do to prepare for
6 your depo here today?

7 A. I reread the materials that I
8 cited in my declaration. I reread the
9 declaration, the patents, and I talked
10 with Apple counsel.

11 Q. Anything else?

12 A. No, not that I can -- not that
13 occurs to me right now.

14 Q. Did you review any documents that
15 refreshed your recollection about what was
16 contained in your report?

17 A. I think my previous answer
18 included reviewing materials that are
19 referred to in my declaration.

20 So I reread those and I examined
21 one reference that is not cited in my
22 declaration, but that's -- that's an

1 omission from the materials considered --
2 it's cited, but not included in the list
3 of materials.

4 Q. And what reference was that, sir?

5 A. It's the Saponas reference. It's
6 U.S. Patent 2012/0319959. My report
7 includes a quote from that patent. It is
8 incorrectly cited in the report -- in the
9 declaration.

10 Q. Now, the question I asked is
11 whether anything you reviewed refreshed
12 your recollection as to what was contained
13 in your report.

14 Did anything you reviewed refresh
15 your recollection?

16 A. I think pretty much everything I
17 reviewed refreshed my recollection. I
18 wrote this report in June, I think, last
19 year. My recollection of it prior to
20 rereading it was pretty poor. When I
21 reread it, it all came flooding back.

22 Q. Did you review any other

1 materials that would -- that had refreshed
2 your recollection about what was contained
3 in your report?

4 A. Not that I recall.

5 MR. LICYGIEWICZ: Okay. We are
6 going to place a number of documents
7 in the Zoom chat. These will be ones
8 we'll be discussing today with you.

9 They are Exhibit 1001, which is
10 U.S. Patent No. 10,936,114.

11 (Exhibit 1001, U.S. Patent No.
12 10,936,114, remotely introduced and
13 provided electronically to the
14 reporter.)

15 MR. LICYGIEWICZ: Exhibit 1002,
16 which is the prosecution history of
17 what became the '114 Patent.

18 (Exhibit 1002, Prosecution
19 History of '114 Patent, remotely
20 introduced and provided electronically
21 to the reporter.)

22 MR. LICYGIEWICZ: Exhibit 1003,

1 which is the Declaration of Dr. Andrew
2 Cockburn in this IPR.

3 (Exhibit 1003, Declaration of Dr.
4 Andrew Cockburn, remotely introduced
5 and provided electronically to the
6 reporter.)

7 MR. LICYGIEWICZ: Exhibit 1004,
8 which is U.S. Patent Publication No.
9 2010/0302281 to Kim. And I believe
10 the parties have been referring to
11 that as the Kim reference.

12 (Exhibit 1004, U.S. Patent
13 Publication No. 2010/0302281 to Kim,
14 remotely introduced and provided
15 electronically to the reporter.)

16 MR. LICYGIEWICZ: In addition, we
17 will be placing Exhibit 1005, which is
18 U.S. Patent Publication No.
19 2009/073571 to Bowens, which I
20 understand we'll be referring to as
21 the Bowens reference.

22 (Exhibit 1005, U.S. Patent

1 Publication No. 2009/073571 to Bowens,
2 remotely introduced and provided
3 electronically to the reporter.)

4 MR. LICYGIEWICZ: Exhibit 1006,
5 which is U.S. Patent Publication No.
6 2006/0139320 to Lang, which the
7 parties have been referring to as the
8 Lang reference.

9 (Exhibit 1006, U.S. Patent
10 Publication No. 2006/0139320 to Lang,
11 remotely introduced and provided
12 electronically to the reporter.)

13 MR. LICYGIEWICZ: And Exhibit
14 1007, which is U.S. Patent Publication
15 No. 2010/0156818 to Burrough, which I
16 understand the parties have been
17 referring to as the Burrough
18 reference.

19 (Exhibit 1007, U.S. Patent
20 Publication No. 2010/0156818 to
21 Burrough, remotely introduced and
22 provided electronically to the

1 reporter.)

2 MR. LICYGIEWICZ: If there are
3 additional documents we need to
4 discuss during this deposition,
5 Dr. Cockburn, we will upload those to
6 you as we go along and we will
7 identify them.

8 BY MR. LICYGIEWICZ:

9 Q. Can you please let us know when
10 you have all these documents?

11 A. I have them all. Thanks.

12 Q. Okay. My apologies. I'm a
13 little offhanded here. I've got one good
14 arm right now, so it takes me a little bit
15 longer to get through some typing or some
16 writing as I go through the process, but
17 I'm going to do the best as I can as we go
18 forward and Ryan's here to help me out.
19 So Mr. Short will be of great assistance,
20 I hope.

21 First, let's go to your
22 declaration in this proceeding, Exhibit

1 1003, and tell me when you have that.

2 A. I have it, thanks.

3 Q. This document was submitted in
4 support of the IPR of the '114 Patent,
5 correct?

6 A. Yes.

7 Q. Do you have any corrections to
8 make in regards to your declaration,
9 Exhibit 1003?

10 A. I do.

11 Q. Can you please tell us what those
12 corrections are?

13 A. Sure. At paragraph 30, the first
14 four words read "in particular, the
15 755" -- that should be, in particular, the
16 "114."

17 Q. Okay.

18 A. At paragraph 52, seven lines from
19 the end of page 34.

20 Q. Okay.

21 A. It reads "in addition to
22 detecting gesture." That should be "in

1 addition to detecting the gesture."

2 Q. Anything else?

3 A. Yes. At paragraph 135.

4 Q. Go ahead.

5 A. On the fourth line, it reads "Kim
6 does not whether tactile feedback." That
7 should be" Kim does not state whether
8 tactile feedback."

9 At paragraph 60, the final line
10 on page 41 cites to 0106. That should be
11 0107.

12 Q. Anything else?

13 A. Two more.

14 Q. Okay.

15 A. The table of contents for the
16 document cites to incorrect page numbers.
17 The table of contents needed a final
18 re-build.

19 And at paragraph 64, seven lines
20 from the end of the paragraph, there is a
21 citation to Apple 1016, paragraph 33.
22 That should be a citation to the Saponas

1 reference that I mentioned earlier that is
2 missing from the list of exhibits
3 considered. So the exhibits considered
4 should include a reference to Saponas U.S.
5 2012/0319959.

6 Q. Okay. With all of those
7 corrections, does declaration Exhibit 1003
8 now accurately reflect all of your
9 opinions relating to the IPR of the '114
10 Patent?

11 A. All of the opinions that I hold
12 at this moment. Should more information
13 become available to me, I reserve the
14 right to add further opinions.

15 Q. And obviously we'll reserve the
16 right to examine you on those further
17 opinions, if you have further opinions.

18 A. Sure.

19 Q. Dr. Cockburn, who drafted the
20 declaration?

21 A. It was a collaborative effort
22 between me and Apple's attorneys.

1 Q. Are there certain portions of the
2 declaration that were drafted by your
3 counsel?

4 A. Yes. My legal understanding
5 was -- the section on legal understanding
6 was primarily drafted by the -- by
7 counsel.

8 Q. Okay. Any others?

9 A. As I said, it was a collaborative
10 effort. There were lots of discussions
11 that went into the creation of the various
12 segments of the report.

13 Q. Dr. Cockburn, let's turn to
14 paragraph 28 of your declaration, which is
15 on page 15. Let me know when you have
16 that.

17 A. I'm there, thanks.

18 Q. In paragraph 28, you state that
19 you understand that the words of the claim
20 should be given the plain meaning unless
21 that meaning is inconsistent with patent
22 specification or the patent's history

1 before the Patent Office, correct?

2 A. That's an abbreviation of the
3 sentence. But broadly yes, that's
4 correct.

5 Q. Did you give the words of the
6 claims that you opined upon a meaning
7 other than the plain and ordinary meaning?

8 A. I applied the plain and ordinary
9 meaning. When there was any scope for
10 alternative interpretations, I covered
11 that in my declaration.

12 Q. Dr. Cockburn, your declaration
13 does not state what the plain and ordinary
14 meaning is of any of the claim terms you
15 considered, correct?

16 A. I provide no definitions of terms
17 in my declaration.

18 Q. Okay. And you never expressly
19 state that the plain and ordinary meaning
20 of a certain term is X, for example? Is
21 that a fair statement?

22 A. As I said, I provide no

1 definitions of terms in my declaration.

2 Q. In paragraph 28, you also state
3 that you were informed by counsel that you
4 should use August 5, 2011 as a point in
5 time for claim interpretation purposes, is
6 that right?

7 A. That's broadly what the final
8 sentence of that paragraph states, yes.

9 Q. Did you, in fact, use August 5,
10 2011 as a point in time for your claim
11 interpretation purposes?

12 A. That's what I did. That's what I
13 was instructed to do.

14 Q. Do you have an understanding,
15 sir, of why you were instructed to use
16 August 5, 2011 as a point in time for
17 claim interpretation purposes?

18 A. I understand that date is the
19 earliest possible priority date for the
20 '114 Patent.

21 Q. Let me direct your attention now
22 to Exhibit 1001, the '114 Patent.

1 If you could turn to page 2 of
2 that document?

3 A. I'm there, thanks.

4 Q. In the left-hand column, do you
5 see the reference to (60)?

6 A. Yes.

7 Q. And you see (60) references four
8 different provisional applications from
9 which the application that became the '114
10 Patent claims priority, correct?

11 A. I see that.

12 Q. Did you review any of these four
13 provisional applications in coming to your
14 conclusions that are set forth in your
15 declaration?

16 A. I didn't independently review any
17 of those provisional applications.

18 However, I understand that
19 sometimes file histories can include
20 extracts from provisional application. I
21 don't recall whether extracts from those
22 provisionals are within the file history

1 or not.

2 Q. Okay. So it's fair to say that
3 you didn't look at the individual
4 provisional applications separately when
5 you were preparing your declaration,
6 correct?

7 A. If extracts from those
8 provisionals are independently contained
9 within the file history, then I may have
10 reviewed them. I don't recall whether
11 they are or not.

12 Q. Okay. And in paragraph 15 of
13 your declaration -- you can go back to
14 that -- none of the four provisional
15 application are listed as documents you
16 considered in formulating your opinions,
17 correct?

18 A. That's correct.

19 Q. Let's now go to Exhibit 1002, if
20 we could.

21 A. I have it up, thanks.

22 Q. Do you see anywhere in which the

1 provisional applications referred to in
2 paragraph or in -- strike that.

3 Do you see anywhere in Exhibit
4 1002 excerpts from any of the four
5 provisional applications?

6 A. This document is 952 pages long.
7 It's not searchable. I can't properly
8 answer that question in the time
9 available.

10 Q. Okay. To your recollection, do
11 you recall seeing any snippets from the
12 four provisional applications in the
13 prosecution history?

14 A. I don't recall that.

15 Q. Just to complete out the thought
16 process, aside from what you've already
17 disclosed to us for Saponas, did you
18 consider any other documents not listed in
19 paragraph 15 of your declaration?

20 A. When you say did I consider, are
21 you talking about in preparation for this
22 deposition or are you talking about in --

1 during the preparation of the declaration?

2 Q. Preparation for your declaration.

3 A. There were many documents that I
4 considered back in the period when I was
5 preparing the declaration. The documents
6 that I rely on in my declaration are those
7 listed in the exhibits considered and --
8 plus Saponas.

9 Q. Okay. Dr. Cockburn, let me ask
10 you this. It's a hypothetical.

11 Do you have any pets?

12 A. Yes.

13 Q. What kind of pets do you have?

14 A. I have a golden retriever.

15 Q. Just one?

16 A. Just one.

17 Q. Well, I'm a crazy person that has
18 six dogs, so...

19 Let's say I haven't met a rescue
20 that I didn't like. So we've rescued quite
21 a few over the years.

22 But let's, for purposes of the

1 hypothetical, let's use my six dogs as the
2 basis.

3 If I said to you that I had a dog
4 that can sit and roll over, you would agree
5 with me that one of my six dogs can sit and
6 roll over then, correct?

7 A. That sounds perfectly reasonable
8 to me.

9 Q. Okay. You would also agree that
10 if I had one dog that can sit and roll
11 over -- I'm sorry, let me restate that.

12 You would also agree that if I
13 had one dog that could sit and another dog
14 that could roll over, that is not the same
15 as "a dog that can sit and roll over,"
16 correct?

17 A. The fact you have a dog that can
18 sit and a dog that can roll over does not
19 preclude the possibility that you have a
20 dog that can sit and roll over.

21 Q. So if I understand your response,
22 the answer is yes, that you would

1 understand that one dog that could sit and
2 another dog that could roll over is not
3 the same as a dog that can sit and roll
4 over?

5 MS. HUANG: Objection. Asked and
6 answered.

7 Q. You can answer.

8 A. Same answer. The information
9 presented states that there is a dog that
10 can sit, there is a dog that can roll
11 over. I have no information regarding
12 whether or not there is a dog that can sit
13 and roll over.

14 Q. Okay. If I said that I had one
15 dog that could sit and another dog that
16 could roll over, that would not be the
17 same as a dog that can sit and roll over,
18 correct?

19 A. The fact that a dog can sit does
20 not preclude the possibility that the same
21 dog can sit and roll over.

22 Q. If I told you that the dog can

1 sit and roll over, you would agree with me
2 that I'm referring to a specific one of my
3 six dogs that can sit and roll over,
4 correct?

5 MS. HUANG: Objection. Form.

6 Q. You can answer.

7 A. I think the use of "the" is the
8 definite article, it's referring to one
9 specific dog. It carries no information
10 about whether other dogs could also sit
11 and roll over.

12 Q. And similarly the use of "a,"
13 that's an indefinite article, correct?

14 A. Yes.

15 Q. Okay. Let's take a look at the
16 Kim reference, Exhibit 1004.

17 A. I'm there. Thanks.

18 Q. Bear with me as I get my old
19 school hard copies here.

20 And I want to take a look at
21 Figures 2a and 2b.

22 A. Okay.

1 Q. They're on pages 3 and 4 of
2 Exhibit 1004.

3 Do you have those?

4 A. I'm just rotating them so I can
5 read them more easily.

6 Q. Sure.

7 A. Yes, I have them. Thanks.

8 Q. Okay. If we take a look at
9 Figure 2a, Step 201 indicates perform
10 selected mode.

11 Do you see that?

12 A. I do.

13 Q. And when it says performance of
14 selected mode, that's something like
15 running an app.

16 Is that a fair example?

17 A. Paragraph 47 of Kim characterizes
18 Figures 2a and 2b as illustrating a flow
19 diagram of a method for a touch base
20 zooming control in the zoom mode of the
21 mobile device in accordance with an
22 exemplary embodiment.

1 So I wouldn't necessarily
2 characterize it as being an app.

3 Paragraph 46, that precedes the
4 introduction of Figures 2a and 2b,
5 additionally states now a detailed process
6 of executing a zooming function in the
7 zoom mode or in the toggle mode according
8 to an exemplary embodiment of the present
9 invention will be described.

10 So the modes, though explicitly
11 recited, are zoom mode and toggle mode
12 here.

13 Q. That's fair.

14 But what I want to do is talk a
15 little bit about Step 201, performing a
16 selected mode.

17 Is it your testimony that the
18 mode that is being referred to in 201 is a
19 zoom or toggle mode?

20 A. Step 201 is part of the process
21 that's associated with the zoom mode or
22 the toggle mode.

1 In Step 201, there is a
2 description that says a selected mode
3 refers to a particular mode that allows
4 displaying some kind of display target
5 data outputted while a specific
6 application selected at the user's request
7 runs in the mobile device.

8 Q. And then that came out of
9 paragraph 48 of the Kim reference,
10 correct?

11 A. Correct.

12 Q. Then paragraph 48 continues to
13 describe a selected mode that can include
14 a web page display, a photo data display,
15 or a text display as examples of -- for
16 Step 201. Is that fair?

17 A. Roughly, you just read the
18 sentence that begins: Also a selected
19 mode can include a web page display mode
20 based on, but not limited to any of the
21 web browser function, et cetera.

22 Q. Yeah, and that's the real

1 sentence -- the next sentence in paragraph
2 48 that talks about those three different
3 modes, correct, roughly?

4 A. Roughly, that's how it's
5 describing it, yes.

6 Q. Okay.

7 A. Not exactly.

8 Q. Right. Then in paragraph 49, it
9 refers to after detecting an interrupt,
10 the mobile device determines whether an
11 interrupt is a request for activating the
12 zoom mode, Step 205.

13 Do you see that?

14 A. I do.

15 Q. You agree with me that a gesture
16 can be an interrupt, correct?

17 A. The paragraph goes on to say:
18 For instance, the mobile device can
19 determine whether an interrupt is a long
20 press input, which occurs at a specific
21 point on the display target data.

22 Q. And a long press input, that is

1 one form of a gesture?

2 A. A person of skill in the art
3 would understand that a long press input
4 can be a form of gesture.

5 Q. Okay. And just so we're clear,
6 gestures have two attributes, in general,
7 don't they? One would be an action and
8 the other would be a temporal aspect.
9 Would that be fair?

10 MS. HUANG: Objection. Form.

11 A. I think that mischaracterizes a
12 person of skill in the art's understanding
13 of gesture.

14 Q. Well, would you agree that a
15 gesture -- that part of a gesture refers
16 to an action between the individual and
17 the, in this case, touchscreen?

18 MS. HUANG: Object to the form.

19 A. I think you're referring to a
20 person of skill in the art's understanding
21 that a gesture has at least the meaning
22 that a user, a human user, can conduct a

1 gesture at a touchscreen, and this a
2 device can interpret the signals to detect
3 a particular gesture from the signals
4 received on a touchscreen.

5 Q. And one of those signals that
6 would be received on the touchscreen would
7 be the, for lack of another word, touch of
8 the person's finger to the touchscreen, is
9 that right?

10 MS. HUANG: Objection. Form.

11 A. A person of skill in the art
12 would understand that touchscreen sensor
13 panels of particular forms can detect the
14 approach of a contact with a screen, the
15 contact of the finger on the touch sense
16 panel, and report signals associated with
17 each of those steps, at least.

18 Q. Another aspect of a gesture would
19 be a temporal limitation, for lack of a
20 better phrase. Would that be fair,
21 there's a temporal aspect to a gesture?

22 MS. HUANG: Object to form.

1 A. A person of skill in the art
2 would understand that there could be
3 temporal aspects of the gesture that serve
4 the purpose of allowing the user to
5 specify a particular gesture and allowing
6 the device to detect a particular type of
7 gesture.

8 Q. And that temporal aspect can
9 be -- would start upon basically when the
10 person touches the screen, the
11 touchscreen, right?

12 A. To be accurate, a person of skill
13 in the art would understand that the
14 initiation of contact could be one point
15 at which time measurements begin.

16 Q. Uh-huh.

17 A. Time measurements could also
18 begin at other points in a gesture.

19 Q. When you say other points in a
20 gesture, you mean after the initial
21 contact is made?

22 A. I'm not providing a necessary

1 example. I'm providing an example that
2 people of skill in the art would
3 understand that the timing could be
4 associated with points after the
5 initiation of contact or proximity with
6 the touch sense panel.

7 Q. So is it fair to say that a
8 gesture has a duration associated with it?

9 A. Gestures can have durations, a
10 duration or a set of durations associated
11 with them.

12 Q. And one way to calculate the end
13 of the duration of a gesture is to stop
14 the time by, for example, removing the
15 touch from the mobile device's screen, is
16 that right?

17 A. A component of time within a
18 gesture could be determined, for example,
19 between the time of the initiation of
20 contact and the time of the cessation of
21 contact.

22 Q. Said more eloquently than I

1 could, but I understand what you're
2 saying.

3 So it's basically the touch and
4 untouch kind of thing for us people who
5 aren't as knowledgeable with respect to
6 some of the terminology?

7 A. Was that a question?

8 Q. I'm just trying to summarize it
9 in my basically simplified terms, just to
10 make sure that I understood what you were
11 saying. And I think that's what you were
12 saying, it's when the touch starts and
13 when the touch ends is one way to
14 calculate the duration of a gesture.

15 A. One way to calculate the duration
16 of a gesture is to measure the time
17 between initiation of contact or proximity
18 of contact and termination of contact or
19 the breaking of contact. That's just one
20 way. There are many other ways.

21 Q. And another way to calculate the
22 duration of a gesture would be to touch

1 the screen and then compare the amount of
2 time that elapses while the person is
3 touching the screen against predetermined
4 time limits, correct?

5 MS. HUANG: Objection. Form.

6 A. A person of skill in the art
7 understands that time thresholds can serve
8 an important purpose in determining and
9 detecting certain forms of gestures.

10 So the time between the
11 initiation of contact and the duration of
12 that contact in relationship to certain
13 thresholds are certainly well known,
14 widely used in the field.

15 Q. So to make sure I understand
16 this, when you have a time threshold, the
17 time threshold can help a person
18 distinguish between a short press, a long
19 press or some other type of hold event?
20 Would that be fair?

21 A. As I referred to earlier,
22 gestures can be viewed from the user's

1 perspective. They can also be used from
2 the system's perspective within its
3 gesture detection algorithm.

4 Broadly, with experience, users
5 learn the expected behavior and required
6 behavior to trigger certain functionality.

7 Your question referred to the
8 user, I think, or the person. A person
9 learns to understand the use of certain
10 thresholds in operating a touchscreen
11 device, such as the distinction between
12 the short contact, a long contact, a very
13 long contact, and an extremely long
14 contact, for example.

15 The device, however, implements
16 an algorithm that allows it to detect the
17 distinction between certain gestures.

18 Q. Based at least in part on the
19 time threshold, correct?

20 A. Gestures can be distinguished
21 based on many different characteristics of
22 the gesture. Time thresholds are one

1 common form of characteristic of a gesture
2 that is used as part of a gesture
3 recognition algorithm.

4 Q. And so going back to the Kim
5 reference in Figure 2a, we already agreed
6 that a gesture can serve as an interrupt,
7 correct?

8 A. I think that's broadly fair.

9 Q. Okay. And one such gesture could
10 be a tap, is that right?

11 A. In certain contexts, a tap
12 gesture could serve as an interrupt.

13 Q. The gesture could be a double tap
14 event, correct?

15 A. Your question referred to a
16 double tap event. To a person of skill in
17 the art, event would normally refer to the
18 gesture detection process and the
19 triggering of functionality associated
20 with it.

21 Q. Okay. So let me restate that
22 then just so we're using the same

1 terminology.

2 So the gesture can then be a
3 double tap as well, correct?

4 A. In certain contexts, a double tap
5 could serve as an interrupt.

6 Q. Okay. And an interrupt can also
7 be caused by a move gesture, correct?

8 A. In certain contexts, a move event
9 could serve as an interrupt.

10 Q. And in certain contexts, a hold
11 event could also serve as an interrupt,
12 correct?

13 A. I think that's fair.

14 Q. Okay. In Step 205, a
15 determination is made in Kim whether an
16 interrupt was activating a zoom mode, is
17 that right?

18 A. Paragraph 49 states: After
19 detecting an interrupt, the mobile device
20 determines whether an interrupt is a
21 request for activating the zoom mode.
22 That's Step 205.

1 Q. Okay. And if the interrupt is a
2 request for a zoom mode, then on Figure
3 2a, then you proceed to block 209,
4 correct?

5 A. Broadly that's what's described
6 at paragraph 51, yes, the first sentence.

7 Q. Okay. And under 209, that's
8 where the zoom mode is activated. Is that
9 fair?

10 A. Again, that's also contained
11 within the first sentence of paragraph 51.
12 So fair.

13 Q. And then the next step would be
14 to wait for a user input.

15 Do you see that? That's step
16 211?

17 A. I do, yes.

18 Q. So broadly speaking, the mobile
19 device waits for a user input to evaluate
20 then what type of event will be taking
21 place or is taking place, is that correct?

22 A. As we've already discussed, this

1 is not the only place where user input is
2 attended to or detected by the -- by Kim's
3 device. That was also part of what we
4 discussed at step 203.

5 But yes, at step 211, the device
6 is waiting for subsequent user input in
7 the activation mode -- in the zoom mode.

8 Q. And then broadly speaking, I just
9 want to look at Figure 2b for a second.
10 2b is a flow chart that characterizes --
11 strike that.

12 Figure 2b, would it be fair to
13 say that that is a flow chart that
14 determines the steps to be taken in the
15 instance of different events occurring?

16 MS. HUANG: Objection. Form.

17 A. Figures 2a and 2b are really a
18 continuation of the same flow chart.

19 Q. Right.

20 A. Figure 2b shows the series of
21 steps that are taken following on from
22 waiting for user input at box 211.

1 Q. Okay.

2 A. And it shows the responses to the
3 detection of certain forms of events,
4 including move event, hold event, and
5 double tap event.

6 Q. Let's go back to the '114 Patent,
7 if we could, and Claim 1. I think in your
8 declaration it starts on page 27.

9 Do you have that?

10 A. I have it now. Thanks.

11 Q. Okay. I want to go to step 1.e,
12 if we could, and that's on page 33,
13 paragraph 33 of your declaration.

14 Do you have that?

15 A. Yes. 1.e here, the analysis of
16 1.e is part of ground 1.a. There are many
17 other places where limitation 1.e is
18 visited through the declaration.

19 Q. And in your declaration, in
20 subsequent references, you refer back to
21 your original analysis in under ground --
22 under the first ground, correct, so you

1 don't have to rewrite everything?

2 A. I believe that's correct. I
3 can't remember the extent to which I add
4 additional information under 1.e for each
5 of the grounds.

6 Q. But if you added additional
7 information in subsequent paragraphs, that
8 information that you added would appear in
9 that subsequent paragraph. Would that be
10 fair?

11 A. I think that's fair.

12 Q. Now in 1.e, the limitation is
13 detect a gesture on the touchscreen on the
14 object. Okay.

15 And the gesture that you are
16 analyzing in terms of 1.e, that's a hold
17 event, correct?

18 A. I think that mischaracterizes the
19 analysis in 1.e. It refers to hold event.
20 It refers to double tap event, at least.
21 It refers to detection of an interrupt,
22 detection of a gesture, detection of a

1 move event. There are many disclosures in
2 that paragraph and that section.

3 Q. Yeah, and in paragraph 52, the
4 sentence prior to what you were referring
5 to in your answer says that Kim describes
6 various scenarios where a gesture is
7 received on its touchscreen.

8 Did I read that correctly?

9 A. Yes.

10 Q. Okay. And then subsequent to the
11 examples of gestures, beginning -- it's on
12 page 34, same paragraph, with the sentence
13 beginning in the highlighted example of
14 Figure 7 below, Kim describes continuous
15 zoom-in action depending on a hold event.

16 Did I read that right?

17 A. Yes.

18 Q. Okay. And the remainder of
19 paragraph 52 from the "as shown" language
20 through the end of paragraph 52, that
21 talks about the hold event, correct?

22 A. The paragraph introduces Kim's

1 many disclosures of gestures. It then
2 analyzes one form of gesture in more
3 detail using Figure 7 to exemplify that,
4 and then concludes by saying a POSITA
5 would have found it obvious that the
6 gesture was detected on the object.

7 Q. And the gesture that you are
8 referring to in your answer as being
9 analyzed in more detail is the hold event
10 that is highlighted in Figure 7 on page 35
11 of your declaration, correct?

12 A. Can you repeat the question,
13 please?

14 Q. Sure.

15 The gesture that you are
16 referring to in your answer as being
17 analyzed in more detail, that is the hold
18 event that is highlighted in Figure 7 on
19 page 35 of your declaration, correct?

20 A. The gesture that I analyze in
21 more detail and exemplify in Figure 7 is
22 the hold event and the continuing hold

1 that's highlighted in orange.

2 The subsequent paragraph goes on
3 to discuss other forms of gesture. And
4 that paragraph 52 begins with a broad
5 review of Kim's disclosure of gesture
6 events and recognition.

7 MR. LICYGIEWICZ: Move to strike
8 the response relative to paragraph 53
9 as nonresponsive to the question.

10 Why don't we take a short
11 five-minute break here so I can get my
12 thoughts a little more organized and
13 then we can come back and continue --
14 or if you want to take 10 minutes,
15 that's fine, too. Up to you.

16 THE WITNESS: Sure. Should we
17 meet back at 10 past the hour?

18 MR. LICYGIEWICZ: That would be
19 perfect.

20 (Recess taken from 2:05 p.m. to
21 2:11 p.m.)

22 BY MR. LICYGIEWICZ:

1 Q. Dr. Cockburn, did you speak to
2 anyone during your break? Did you
3 communicate with anybody?

4 A. My 13-year old boy who just got
5 out of bed. I said good morning to him.

6 Q. Aside from the 13-year old,
7 anyone else?

8 A. No.

9 Q. I've got an 18-year old. My
10 youngest is 18. So I certainly understand
11 that. They're in their own worlds.

12 But let me get back to the task
13 at hand and direct your attention to 1.f,
14 which begins -- it begins on page 36 of
15 your declaration and your respective
16 paragraph there is paragraph 54.

17 Do you have that?

18 A. I do.

19 Q. The gesture being analyzed in
20 connection with 1.f is a double tap event,
21 is that correct?

22 A. The dominant analysis relates to

1 the double tap. There is mention of the
2 hold event as well substantially as part
3 of the detection, gesture detection that
4 is discriminating between a double tap and
5 a hold.

6 Q. And where are -- what are you
7 referring to in your paragraph 54 for that
8 distinction?

9 A. There is a sentence roughly a
10 third of the way through the paragraph, I
11 guess: In describing the touch as a tap,
12 Kim discloses the duration of each of the
13 taps of the double tap gesture must be
14 less than a threshold value associated
15 with a longer-lasting (i.e., hold) event,
16 the first magnitude threshold.

17 Q. So in that sentence, we are not
18 analyzing -- strike that.

19 So in that sentence, we are still
20 focused on the double tap gesture and how
21 that is different in this case than a hold
22 event, is that right?

1 A. The dominance analysis of
2 paragraph 54 relates to the double tap
3 event. The paragraph includes reference
4 to the hold gesture or hold event as
5 something that the double tap is being
6 discriminated from.

7 Q. And when you say "discriminated
8 from," is that another way to say
9 differentiated from that?

10 A. That seems reasonable, a person
11 of skill in the art understands that
12 gesture detection algorithms looks for
13 inputs, flags and signals, analyze those
14 characteristics of input and use those
15 characteristics to determine whether the
16 user's gesture satisfies the requirements
17 for particular system gesture detections.

18 Q. In paragraph 54, the second line
19 of your paragraph, starting: Kim
20 describes a double tap event for returning
21 an initial state with a basic display size
22 after a zoom-in or zoom-out action.

1 Do you see that?

2 A. That's on the first and third
3 lines.

4 Q. Yes.

5 A. And I think you might have
6 skipped the word "to" in your reading, but
7 broadly that's correct.

8 Q. My apologies.

9 And the citation there provides
10 citations to the paragraphs in the Kim
11 reference that discuss the double tap
12 event, correct? That's that next sentence.

13 A. There's a series of citations
14 within that sentence, including paragraphs
15 31, 64, 99, 103 and 106.

16 Q. Yes.

17 A. And those are citations to the
18 Kim reference, yes.

19 Q. And the citations that you've
20 chosen to highlight in this sentence refer
21 to the double tap event, correct?

22 A. They include reference to the

1 double tap event.

2 Q. In fact, both the citations to
3 paragraph 64 and 99, they both expressly
4 refer to a double tap event, correct?

5 A. They do. Both also refer to the
6 response that occurs having detected the
7 double tap event.

8 Q. And in the next sentence, as you
9 read earlier, there is a double tap
10 gesture that is referred to here and that
11 is differentiated from a hold event. Is
12 that fair?

13 A. Broadly, I think that's fair.

14 Q. Okay. And in the last sentence
15 on that page beginning "in particular,"
16 again your analysis focuses on a double
17 tap event, correct?

18 A. It describes characteristics of a
19 double tap gesture and how that is shorter
20 than a threshold duration associated with
21 more persistent gesture, such as hold.

22 Q. And in the subsequent citations

1 in the line beginning Apple-1005, both of
2 those quotations that you reference again
3 focus on a double tap, correct?

4 A. The subject of those quotes is a
5 double tap and it includes reference to
6 the timing with which that double tap
7 gesture must be executed.

8 Q. And then continuing on in your
9 paragraph, the next sentence: The
10 duration of each of the taps of the double
11 tap gesture is a duration of the gesture.

12 Do you see that?

13 A. Yes.

14 Q. Okay. Again, the focus of your
15 analysis here is the double tap gesture,
16 correct?

17 A. The focus is the double tap
18 gesture and its duration.

19 Q. Okay. So in paragraph 54, it
20 would be fair to say that your analysis
21 does not focus on how a hold event would
22 meet the limitation 1.f, correct?

1 A. The analysis does not focus on
2 how a gesture would meet the hold event,
3 but it certainly includes reference to the
4 hold event being a -- or hold gesture and
5 the event that's triggered from the hold
6 gesture being a longer-lasting gesture.

7 Q. As compared to the double tap
8 gesture that is the focus of your analysis
9 in paragraph 54, correct?

10 A. The focus of paragraph 54 is the
11 double tap gesture and its shorter
12 duration in comparison to that hold event.

13 Q. Dr. Cockburn, I think just to
14 wrap this portion up here, you are not
15 analyzing how a hold event would meet the
16 limitation 1.f in paragraph 54, is that
17 right?

18 A. Limitation 1.f includes reference
19 to a first magnitude threshold. The
20 analysis of the double tap gesture shows
21 that the double tap is required to be a
22 short gesture, one that is less than a

1 certain threshold time. The threshold
2 time that I'm referring to here throughout
3 this analysis is the threshold time
4 associated with determining a hold gesture
5 and triggering the hold event in response.

6 Q. And as we've been discussing, the
7 inclusion of the reference to the hold
8 event is a means to differentiate the
9 double tap gesture that you analyze in
10 paragraph 54 from the hold event, correct?

11 A. The differentiation of the hold
12 event from the double tap event, as I
13 discuss in paragraph 54 and this section,
14 discloses, renders obvious to a person
15 skilled in the art that a first magnitude
16 threshold would be used to determine
17 whether the gesture is sufficiently long
18 in duration to satisfy a hold event, that
19 is included within this analysis.

20 Q. And the gesture that you're
21 referring to in your answer here that's
22 being analyzed in paragraph 54, that's the

1 double tap, correct?

2 A. The dominance analysis relates to
3 the double tap gesture that needs to be
4 shorter than a first magnitude threshold.
5 Because if the gesture is longer than
6 first magnitude threshold it would be
7 instead interpreted as a hold event, for a
8 hold gesture.

9 Q. So your analysis in 54 is not
10 focusing on the hold gesture. The main
11 focus of the analysis is the double tap
12 event, correct?

13 A. The main focus of the analysis is
14 the duration of the double tap event being
15 short and shorter than a hold event.

16 Q. Okay. And then let's go to
17 paragraph 55, and the last sentence you
18 have in paragraph 55, which appears on
19 page 38, which states: In Kim's device,
20 when a double tap event is generated, the
21 "device displays a target data with a
22 given basic magnification value," thus

1 performing another operation.

2 A. I see that.

3 Q. You see that?

4 A. I do see that.

5 Q. And that is the conclusion that
6 you reach relative to the double tap event
7 that is the subject of your analysis of
8 1.f, correct?

9 A. I didn't identify this as a typo
10 in my earlier disclosure of typos, but
11 this would be clearer if it said an
12 operation, thus performing an operation,
13 the determination of that sentence.

14 I didn't spot the lack of -- the
15 imperfection there, but certainly the
16 analysis relates to "an operation" being
17 performed in response to the double tap
18 gesture.

19 Q. Okay. I appreciate that. So
20 we'll add that to the list of typos and
21 corrections for your report.

22 A. Thank you. It is less clear than

1 it should be.

2 Q. Okay. Let's move on to 1.g,
3 which is also on page 38 and your
4 discussion there begins with paragraph 56.

5 Do you have that?

6 A. I have it.

7 Q. Now, the focus of your analysis
8 under Section 1.g is a hold event,
9 correct?

10 A. I don't think that's quite right.
11 The analysis concerns the detection of a
12 gesture that is greater than a first
13 magnitude threshold and the performance of
14 scaling in connection with at least the
15 object.

16 Q. Let's go back to, in paragraph
17 56, to your third sentence where it says:
18 For such a hold event.

19 Do you have that?

20 A. I do.

21 Q. Okay. And that refers back to
22 the second sentence, which also

1 discusses -- and I'm going to read this in
2 part -- to show a continuous zoom-in
3 action depending on a hold event. That's
4 shown in the bottom path of Figure 7. Is
5 that correct?

6 A. Yes.

7 Q. And it would be fair to say that
8 the citations in paragraph 56 of your
9 declaration, beginning with Apple-1013
10 referencing [0050], it's about halfway
11 down the paragraph 56 on page 38, those
12 citations refer to a hold event, correct?

13 A. I'm not sure whether your
14 question is limited to the disclosure in
15 Apple-1013. There are a series of
16 references and quotes from that series of
17 references through the paragraph and it
18 includes, for instance, when the first
19 touch down event is received from the
20 hardware, a timer may be started.

21 Q. Uh-huh.

22 A. Disclosures are broader than just

1 a hold event.

2 Q. The disclosure that you're
3 referencing in your answer of when a first
4 touch down event is received from the
5 hardware timer may be started, that is
6 used to establish the duration of the
7 gesture, correct?

8 MS. HUANG: Objection. Form.

9 A. That disclosure is consistent
10 with a person of skill in the art's
11 understanding that timers are used to
12 determine the duration of gestures. That
13 includes a hold gesture and other forms of
14 gestures.

15 Q. The next citation to Apple-1014
16 [0049] talks about a press and hold,
17 correct?

18 A. That is included within the
19 sentence.

20 Q. And the citation after that to
21 Apple-1015, column 6, lines 25 to 28, that
22 refers to a pressing for a long period of

1 time, correct?

2 A. It includes those words, yes.

3 Q. Okay. And that long period of
4 time, one would understand that to be a
5 hold event in this case, correct?

6 A. That particular disclosure
7 relates to the user's execution of a
8 gesture.

9 Q. Uh-huh.

10 A. As I clarified earlier, a person
11 of skill in the art understands that
12 gestures can be viewed from the user's
13 perspective, the thing the user conducts
14 on a touchscreen, for example, in order to
15 carry out some functionality.

16 Hold event, a person of skill in
17 the art normally understands to be the
18 detection process and the triggering of
19 functionality within an apparatus
20 computing device in order to execute that
21 functionality when the requirements for a
22 particular gesture are satisfied.

1 Q. And in the case of this citation,
2 the gesture being referenced is a long
3 press, correct?

4 A. Broadly, I think that's fair.

5 Q. Okay. And the same of the next
6 citation from column 8, line 66 to 94, the
7 reference -- I'm sorry -- the gesture that
8 is being referenced is a long press,
9 correct?

10 A. The quote discloses that a long
11 press is determined when sufficient time
12 has expired.

13 Q. Dr. Cockburn, can a long press
14 also be referred to as a hold event?

15 A. Depending on context, a person of
16 skill in the art would understand that a
17 long press gesture when executed by a user
18 can be detected by software and trigger an
19 event. The term event is usually used to
20 describe identifying particular
21 characteristics of a gesture, including an
22 association with triggering the

1 functionality connected with that gesture
2 recognition.

3 Q. Okay. Let me ask it this way,
4 because I think I conflated some terms
5 there that you corrected me on.

6 Would it be fair to say that a
7 long press would be a synonym for a hold
8 event -- I'm sorry, strike that.

9 Would it be fair to say that a
10 long press would be a synonym for a hold?

11 A. It really depends on context.
12 There are contexts where a long press and
13 hold would be synonymous.

14 There are also contexts where a
15 long press and a hold would be identified
16 as different gestures and have different
17 events and functionality associated with
18 them.

19 Q. But one can reasonably state that
20 a long press is distinct from a double
21 tap, correct?

22 A. I think a person of skill in the

1 art would understand that a long press and
2 a double tap are different gestures and
3 have different recognition processes
4 associated with them.

5 Q. Let's go to paragraph 57. And in
6 paragraph 57, again the focus of your
7 analysis here is the hold event, correct?

8 A. I'm not sure that's quite right.
9 The first sentence begins by describing a
10 zoom-in process. It continues to connect
11 the outcome, the zoom-in process, with the
12 recognition of a hold event.

13 Q. And in the context of paragraph
14 57, the gesture that you're discussing,
15 that gesture is the hold gesture, correct?

16 A. Broadly, I think that's fair.
17 The gesture under analysis in this
18 particular paragraph is the long or hold
19 gesture.

20 Q. Okay. And similarly, in
21 paragraph 58, the gesture under analysis
22 is the hold gesture, correct?

1 A. I think that's fair.

2 Q. And then again in paragraph 59,
3 the gesture being analyzed by you is a
4 hold or long press, correct?

5 A. Not quite. The final sentence of
6 that paragraph reads a POSITA would have
7 understood that Kim's long press would be
8 discriminated from a normal press based on
9 the contact being maintained without
10 moving for longer than a threshold
11 duration.

12 So that paragraph considers the
13 discrimination between a normal press and
14 a long press or hold based on a threshold
15 duration.

16 Q. But the analysis of this
17 paragraph, it's focused on a long press
18 even though it does mention a
19 discrimination between a normal press,
20 correct?

21 A. That is included within the
22 paragraph. I think, though, the thrust of

1 the paragraph is contained within the
2 final sentence that I just read.

3 Q. Where it talks about
4 discriminating Kim's long press from a
5 normal press based on the contact being
6 maintained for longer than threshold
7 duration?

8 A. That's almost what the sentence
9 reads. It additionally contains without
10 moving and a POSITA's understanding of
11 that disclosure.

12 Q. Okay. But make no mistake about
13 it, you're not analyzing a double tap in
14 paragraph 59, correct?

15 A. There is no explicit analysis of
16 a double tap in that paragraph. It
17 certainly would be included in a POSITA's
18 understanding, especially with respect to
19 the paragraphs that have preceded that
20 point.

21 Q. In connection with 1.g here, your
22 analysis focuses on the long contact or

1 the hold, correct?

2 A. I think that mischaracterizes the
3 analysis. The analysis includes reference
4 to the use of a threshold in order to
5 discriminate a -- one gesture from
6 another, specifically the double tap from
7 the long press or hold.

8 Q. And then in connection with 1.g,
9 your analysis focuses not on a double tap,
10 but on a long press or hold gesture,
11 correct?

12 A. The analysis focuses on the
13 duration of the long tap exceeding the
14 threshold to be determined as a long press
15 or hold gesture.

16 Q. Let's go next to 1.h.

17 A. Sorry, can I just add to that
18 previous response? I neglected to mention
19 that it also discloses the scaling.

20 Q. Okay. I appreciate that.

21 All right. Now let's move on to
22 1.h, if we could. It's on the next page,

1 beginning with paragraph 60 of your
2 declaration on page 41.

3 Do you have that?

4 A. I'm there. Thanks.

5 Q. Okay. Dr. Cockburn, you are not
6 analyzing any specific gesture in
7 paragraph 60, are you?

8 A. Is the question limit to
9 paragraph 60 or to the disclosures of my
10 analysis of limitation 1.h.

11 Q. Let me rephrase it and I think
12 this would make it clearer, hopefully.

13 In paragraph 60, and I want to
14 focus only on paragraph 60, the gesture
15 that is being the focus -- strike that.

16 In paragraph 60, the gesture that
17 is the focus of your analysis is a hold
18 gesture, correct?

19 A. I think that mischaracterizes
20 paragraph 60, which includes analysis of a
21 persistent gesture, one with a constantly
22 changing duration. It includes a gesture

1 that has input motion, which travels in a
2 given pattern. And it includes a long
3 press gesture.

4 Q. Paragraph 60 does not include a
5 double tap gesture, does it?

6 A. Paragraph 60 makes no explicit
7 mention of a double tap gesture.

8 Q. In fact, in paragraph 60, when
9 you talk about a POSITA's understanding,
10 you are talking about a POSITA's
11 understanding in connection with a hold
12 event, correct?

13 A. Broadly, I think that's fair.

14 Q. Now, let's turn to page 44 of
15 your declaration where you analyze
16 limitation 1.i.

17 Do you have that?

18 A. Yes, I do.

19 Q. In paragraph 62 of your
20 declaration, you focus on a gesture that
21 is greater than a second magnitude
22 threshold, correct?

1 A. The performance of another
2 operation in response to a gesture that is
3 greater than a second magnitude threshold,
4 yes.

5 Q. And the gesture you're broadly
6 referring to in your analysis under 1.i is
7 a gesture that has a minimum threshold to
8 be deemed an intentional touch, correct?

9 A. Paragraph 62 terminates with
10 specifically a minimum threshold to be
11 deemed an intentional touch. So yes.

12 Q. Your analysis under limitation
13 1.i does not focus on a double tap, does
14 it?

15 A. In this ground at paragraph 62
16 and so on, it does not.

17 Q. And in paragraph 64, what I'm
18 looking at the sentence on page 46
19 beginning: A POSITA would have understood
20 that such an interrupt would be caused by
21 a gesture that is longer in duration than
22 the second threshold (as necessary to

1 avoid the gesture from being disregarded)
2 shorter than the duration necessary for a
3 long press threshold and a different
4 gesture than a double tap gesture.

5 Did I read that right?

6 A. Yes.

7 Q. Okay. I want to go to Claim 32,
8 your analysis of Claim 32, which begins on
9 page 59 of your declaration.

10 Let me know when you're there.

11 A. I'm there. Thanks.

12 Q. Earlier we referenced future or
13 further paragraphs in your declaration
14 that would refer back to a prior
15 paragraph.

16 Is what we see in 97 one of those
17 instances?

18 A. It is.

19 Q. And just so I understand what
20 you're trying to accomplish there is
21 you're directing the reader to look at the
22 discussion of the prior instance, in this

1 case in paragraph 97, 27.pre -- which I
2 assume is preamble?

3 A. That's correct.

4 Q. (Ground 1A). Is that what you're
5 doing?

6 A. Yes.

7 Q. Okay. So to understand your
8 analysis under paragraph 97, one would
9 have to go back and look at 27.pre for
10 Ground 1A to understand what you mean --
11 strike that. Bad question.

12 Let's go to actually look at
13 paragraph 98. So to understand your
14 analysis of limitation 32.a, one would have
15 to go back to the discussion of 27.a under
16 Ground 1A, correct?

17 A. Paragraph 98 refers back to the
18 analysis at 27.a under Ground 1A, and that
19 analysis should be incorporated at this
20 point.

21 Q. Okay. I thought that is what was
22 going on. I just wanted to make sure.

1 Let's look at -- on page 60,
2 limitation 32.e: Detect at least one
3 component of a gesture on the touchscreen
4 on the first object.

5 Do you see that?

6 A. Yes.

7 Q. And in your analysis under
8 paragraph 102, the gesture that you're
9 analyzing is a hold event or long press,
10 correct?

11 A. I don't think that's quite right.
12 The second sentence reads a POSITA would
13 have understood or found obvious that the
14 gesture detected on Kim's device, device's
15 touchscreen includes a plurality of
16 time-related components including, for
17 example, how long the gesture has been
18 maintained at any point in time or its
19 cessation of the gesture.

20 So the component here is any
21 component of a gesture.

22 Q. And as we discussed previously,

1 one of the components of a gesture is the
2 duration of a gesture, correct?

3 A. The duration of a gesture can be
4 one of the components of a gesture.

5 Q. And in fact, in paragraph 102, in
6 the last line in your citations, the
7 citations that you referred to here all
8 focus on either a long press or the
9 duration of a hold event, correct?

10 A. The examples provided from
11 Apple-1004 all relate to a long press or
12 hold.

13 Q. And under paragraph 102, there is
14 no analysis provided relative to a double
15 tap gesture, is there?

16 A. There is no explicit mention of a
17 double tap gesture in that paragraph.
18 However, the paragraph incorporates a
19 POSITA's understanding that gestures
20 include a plurality of time related
21 components including, for example, how
22 long the gesture has been maintained at

1 any point in time during, at, or cessation
2 of a gesture.

3 A person of skill in the art
4 certainly understands that double taps
5 importantly have time components
6 associated with them.

7 Q. And as we just discussed, the
8 examples that you provide in paragraph 102
9 focus on a long press or duration of the
10 hold event, correct?

11 A. There are a series of examples at
12 the end of the paragraph and those
13 examples at the end of the paragraph are
14 directed at the long press or hold event.

15 Q. Okay. We'll move on to 32.f,
16 which I believe your analysis is contained
17 within paragraph 104, is that right?

18 A. Paragraph 104 includes the
19 discussion at limitation 1.f. The first
20 sentence cites to that component.

21 Q. Yep.

22 A. But that incorporation is within

1 paragraph 104. So yes, broadly, 104 is
2 the analysis.

3 Q. And then here is an instance
4 where you expound on your prior analysis
5 in 1.f for purposes of limitation 32.f
6 where you start with "in particular," is
7 that right?

8 A. It's in addition to and
9 supplementing the analysis of 1.f. 1.f is
10 incorporated at two places throughout that
11 paragraph.

12 Q. Okay. And the gesture that we
13 are -- strike that.

14 And the gesture that you are
15 analyzing in connection with paragraph 104,
16 that's the double tap event, correct?

17 A. It includes reference to the
18 double tap. That's present in the quotes
19 at the end of the paragraph.

20 Q. And it's also present in the
21 first line after the reference to the
22 first 1.f where it says: In particular,

1 when a first component of the gesture
2 (time-related component when a double tap
3 event is generated).

4 Do you see that?

5 A. Yes.

6 Q. Okay. And moving on now to
7 limitation 32.g, your analysis for 32.g is
8 set forth in paragraph 105, correct?

9 A. The analysis is in paragraph 105,
10 which incorporates the analysis at 1.g.

11 Q. Sure.

12 And the gesture being analyzed in
13 connection with paragraph 105 is a hold
14 event, correct?

15 A. The gesture that's under analysis
16 is substantially the hold event and its
17 relationship with the threshold and the
18 response associated with it.

19 Q. And in paragraph 105, you do not
20 analyze a double tap event. Is that fair
21 to say?

22 A. To be certain, in my response to

1 that, I would need to scroll back to
2 limitation 1.g and see to what extent it
3 possibly describes a double tap. I can do
4 that now, if you wish.

5 Q. Yeah, why don't we go back to 1.g
6 then just so that you're comfortable with
7 the...

8 And just for clarity of the
9 record here, the question pending is, in
10 paragraph 105, you do not analyze a double
11 tap event, is that fair to say?

12 A. In paragraph 105, there is no
13 explicit mention of a double tap event.

14 Q. There's no mention at all of a
15 double tap event in 105, correct?

16 A. Well, paragraph 105 incorporates
17 the analysis at 1.g. And the conclusion
18 of the analysis at 1.g states a POSITA
19 would have understood that Kim's long
20 press would be discriminated from a normal
21 press based on the contact being
22 maintained without moving for longer than

1 a threshold duration.

2 The POSITA's understanding would
3 have also been that the long press would
4 be discriminated from a double press based
5 on the contact being maintained without
6 moving.

7 Q. And we discussed this in detail
8 when we were talking about your analysis
9 under limitation 1.g, correct?

10 A. We discussed this limitation
11 earlier, yes.

12 Q. Okay. And now let's move to your
13 analysis under 32.i. It's in paragraph
14 107, correct?

15 A. And it incorporates the analysis
16 of 1.i, yes.

17 Q. Okay. Dr. Cockburn, if I was to
18 ask you the same questions I asked you
19 with respect to limitation 1.i, but
20 instead asked them with respect to
21 limitation 32.i, you would give me the
22 same answers, correct?

1 MS. HUANG: Objection. Form.

2 A. I don't recall which questions
3 you asked regarding 1.i.

4 Q. Let me ask it this way. Maybe
5 we'll short circuit having you go back
6 through the questions for 1.i.

7 Your analysis under 32.i includes
8 the analysis you had for limitation 1.i,
9 correct?

10 A. That's fair.

11 Q. Okay. And then in the remainder
12 of 32.i beginning in the particular
13 sentence, the sentence beginning "in
14 particular when a third component" -- that
15 is your further discussion of 32.i in
16 connection with the requirement to perform
17 another function, correct?

18 A. That sentence addresses the
19 presence of a third component of the
20 gesture and its detection and its
21 comparison to a threshold and the
22 performance of another action.

1 Q. And when it says another action,
2 one would understand that to be a
3 different action than was previously
4 discussed in this claim, correct?

5 MS. HUANG: Objection. Form.

6 Q. Let me restate it.
7 And when it says "another
8 function," one would understand that to be
9 different -- a different function than was
10 previously discussed in this claim,
11 correct?

12 A. Claim 32 recites performing a
13 function, performing a scale operation,
14 and performing another function. This is
15 equivalent to the architecture of Claim 1
16 and it is reasonable to import the
17 analysis of Claim 1 into my analysis of
18 32.

19 But I'm not sure I answered your
20 question. Can you reask your question,
21 please?

22 Q. Let me ask it again because I

1 don't think you answered it either.

2 When it says "another function,"
3 one would understand that to be a different
4 function that was -- than that was
5 previously discussed in this claim, Claim
6 32, correct?

7 MS. HUANG: Objection. Form.

8 A. Claim 32 recites performing a
9 function and performing another function.

10 Q. And in Claim 32, the function and
11 another function, those are different,
12 correct?

13 A. In the analysis I provide under
14 Claim 1 that I import into my analysis in
15 Claim 32, I show how Kim in this ground
16 performs different functions and that
17 satisfies the limitations for the claim.

18 Whether it could be the same
19 function or not, or a different instance
20 of the same function, I don't think I've
21 considered that.

22 Q. Okay.

1 MR. LICYGIEWICZ: Why don't we
2 take a short break and we can move on
3 to the next portion afterwards.

4 Say about another 10 minutes?

5 THE WITNESS: Sure. 25 past?

6 MR. LICYGIEWICZ: Sounds good.

7 THE WITNESS: Thanks.

8 MR. LICYGIEWICZ: Thank you.

9 (Recess taken from 3:15 p.m. to
10 3:26 p.m.)

11 BY MR. LICYGIEWICZ:

12 Q. Dr. Cockburn, next I'd like to go
13 to the Bowens reference, which is Exhibit
14 1005 and look at that in connection with
15 your declaration, and specifically
16 beginning on page 83 of your declaration
17 under Ground 2A.

18 A. I have Bowens and I'm at page 83.

19 Q. Okay. Would it be fair to
20 describe Bowens as being directed to a
21 gesture recognition algorithm?

22 A. At the first sentence, I say:

1 Bowens is directed to a "state machine
2 gesture recognition algorithm for
3 interpreting streams of coordinates
4 received from a touch sensor."

5 That incorporates what you asked,
6 and therefore the answer is broadly yes.

7 Q. And in Bowens, we're looking at
8 two things, a touch and a duration. Would
9 that be fair?

10 A. I don't think that's a fair
11 characterization of Bowens. Bowens
12 includes consideration of data from a
13 touch sensor that represents a touch. It
14 includes analysis of duration and it
15 includes analysis of other things.

16 Q. For purposes of these next
17 questions, I want to focus on paragraph
18 165 of your declaration.

19 In it, you state that: Bowens
20 describes various types of user actions and
21 how each are identified.

22 Did I read that right?

1 A. Yes.

2 Q. And then the first example you
3 give is a tap event.

4 Do you see that?

5 A. Yes.

6 Q. So that is a tap event generated
7 when the user makes a tap gesture (i.e.,
8 "when the user quickly touches and
9 releases the touch surface").

10 That's your understanding of how
11 Bowens describes a tap event, correct?

12 MS. HUANG: Objection. Form.

13 A. I don't think that's correct. I
14 have more substantial analysis of Bowens
15 identification of a tap event through the
16 analysis in Ground 2A.

17 The paragraph you're referring to
18 is just providing an introduction to -- or
19 it's just part of my introduction to the
20 disclosures of Bowens.

21 Q. And Bowens -- a tap event is
22 distinguished from a double tap, correct?

1 In other words, they're different.

2 A. Bowens' algorithm includes a
3 process for identifying tap events and
4 double tap events.

5 Q. And a tap event is different than
6 a double tap event, correct?

7 A. The process that Bowens discloses
8 distinguishes between a tap event and a
9 double tap event.

10 Q. So the answer to the question
11 would be yes?

12 A. Can you remind me what the
13 question was?

14 Q. And the tap event is different
15 than a double tap event, correct?

16 A. In Bowens, the algorithm
17 distinguishes between a tap event and a
18 double tap event. So Bowens distinguishes
19 between a tap event and a double tap
20 event.

21 Q. So when you say Bowens
22 distinguishes between a tap event and a

1 double tap event, in short, Bowens

2 considers these events to be different,

3 correct?

4 A. Bowens does.

5 Q. Okay. And going on to paragraph

6 166, in general you're discussing press

7 events, correct?

8 A. I'm discussing Bowens disclosure

9 relate to a press event, yes.

10 Q. And there is a difference between

11 a short press event and a long press

12 event, correct?

13 A. Bowens disclosures include a

14 discrimination between what it generates

15 as a short event and -- sorry, a short

16 pressed event and a long pressed event.

17 Q. So Bowens explains that a short

18 press event is different than a long press

19 event, correct?

20 A. To be clear, Bowens' description

21 of a short press event is within the

22 context of a broader pressed event and the

1 state recognition engine associated with
2 that.

3 Bowens is also clear that the
4 transitions illustrated in Figure 3, which
5 shows and discloses the short pressed
6 event will not -- may not be
7 simultaneously active. Each of those
8 states can be disabled, if required.

9 Q. So, in short, Dr. Cockburn, a
10 short press event is different than a long
11 press event, correct?

12 A. Bowens' disclosures related to
13 the short press event are or can be
14 different to the long press event.

15 Q. Let me ask it another way.

16 A short press event is not the
17 same thing as a long press event in Bowen,
18 correct?

19 A. Bowens' disclosures related to
20 the short press event, which is part of
21 the pressed event, a clear that the short
22 pressed event may or may not be present.

1 So Bowens' disclosures include
2 the possibility that a short press event
3 does not exist and therefore only a long
4 press event may be considered in Bowens'
5 disclosures.

6 So it doesn't necessarily
7 distinguish between a short pressed event
8 and a long pressed event.

9 Q. In Bowens, a short press event is
10 not the same thing as a long press event,
11 is it?

12 A. I think to be accurate, I need to
13 repeat my previous response. I think that
14 question was the same.

15 Q. Well, I think your question is
16 much simpler than you're making it out to
17 be.

18 In Bowens, is a long press event
19 the same thing as a short press event, yes
20 or no?

21 A. I don't think this is a yes or no
22 question. Bowens' disclosures of a short

1 press event are specific. They are -- the
2 short press event in Bowens is part of the
3 state transition diagram associated with
4 the pressed event. The pressed event is
5 the parent event, if you like.

6 Bowens is clear that a short
7 pressed event can precede a long press
8 event. Bowens' disclosures are also clear
9 that the short press event may not be
10 present in which case there is no
11 discrimination between a short press event
12 and a long press event because the short
13 press event may not exist.

14 Q. So is your testimony,
15 Dr. Cockburn, that a short press event is
16 the same thing as a long press event?

17 A. That question is much broader
18 than the previous questions. The previous
19 questions were directed to Bowens'
20 disclosures relating to the short press
21 event.

22 Now, I think you're just

1 abstracting that question to a person of
2 skill in the art's general understanding
3 of short press event and long press event.

4 A person of skill in the art
5 would understand, in general, that there
6 can be contexts in which a short press
7 event is distinguished from a long press
8 event.

9 Q. Let me ask you to follow up on
10 that. I'll ask it two ways here.

11 In Bowens, is it your testimony
12 that a short pressed event is the same
13 thing as a long pressed event?

14 A. I think you've already answered
15 that question twice to the best of my
16 ability.

17 Bowens' disclosures relate to a
18 short press event, include a short press
19 event is distinct from a long press event.
20 Bowens' disclosures related to subsets of
21 the pressed state also include
22 possibilities that the short press event

1 is not recognized at all, in which case
2 it's reasonable -- there is no distinction
3 between short press event and a long press
4 event.

5 Q. So, Dr. Cockburn, assuming that
6 there is both in the instance of a short
7 press event and a long press event, is it
8 fair to say that the short press event and
9 the long press event, as described in
10 Cockburn, are different.

11 A. I think you misspoke in the
12 question. You stated as described in
13 Cockburn. I think you mean as described
14 in Bowens.

15 Q. Oh, as described in Bowens. My
16 apologies, sir.

17 A. Can you repeat the question,
18 please?

19 Q. Sure.

20 Assuming that there is both an
21 instance of a short press event and a long
22 press event, is it fair to say that the

1 short press event and the long press event,
2 as described in Bowens, are different.

3 A. On the assumption that the full
4 transitions in the pressed event, shown in
5 Figure 3 of Bowens, are present, i.e.,
6 specifically there is a short pending
7 state and a long pending state, assuming
8 both of those states are present in a
9 particular embodiment of Bowens, then the
10 two pressed events are different.

11 Q. And a press event, as disclosed
12 in Bowens, that is different than a tap
13 event that is disclosed in Bowens,
14 correct?

15 A. Bowens' disclosures of a pressed
16 event are distinct from Bowens'
17 disclosures of a tap event.

18 Q. Tap is not the same thing as a
19 short press, correct?

20 A. In Bowens, a tap is distinct from
21 a short press.

22 Q. In Bowens, a double tap is

1 distinct from a short press, correct?

2 A. In Bowens, a tap is a distinct
3 event from a short press event, in Bowens.

4 Q. So I think we can say it a little
5 more broadly, that in Bowens a tap event
6 is different than a press event, correct?

7 A. Bowens' disclosures of a tap
8 event and a pressed event are different.

9 Q. Let's move on to -- let's flip
10 over to paragraph, I think 190 of your
11 declaration. It takes me a bit to get
12 there.

13 Do you have that in front of you?

14 A. I do.

15 Q. For limitation 1.f, as analyzed
16 in your paragraph 190, the event being
17 analyzed is a double tap event, correct,
18 or a double tap gesture?

19 A. The analysis includes the overall
20 discussion of Bowens in Section VII.E.2
21 that's cited at the end of the first
22 sentence.

1 Q. Uh-huh.

2 A. And it includes the distinct taps
3 that go into Bowens' recognition algorithm
4 for a double tap gesture.

5 Q. And so, in short, what you're
6 analyzing in paragraph 190 is a double tap
7 gesture?

8 A. The identification of a double
9 tap gesture through the identification of
10 distinct taps as part of that double tap
11 gesture.

12 Q. So with that clarification, it
13 would be fair to say that what you're
14 analyzing in paragraph 190 is a double tap
15 gesture?

16 A. The algorithm that forms the
17 process for recognizing a double tap
18 gesture and the performance of an
19 operation therein.

20 Q. Dr. Cockburn, in paragraph 190 of
21 your declaration, you are not analyzing
22 a -- strike that.

1 Dr. Cockburn, in paragraph 190 of
2 your declaration, you are not evaluating
3 how a press event would purportedly meet
4 the limitation 1.f, correct?

5 A. To be clear, Bowens' disclosure
6 of press is a distinct state from other
7 states contained in Bowens.

8 So when you refer to press, are
9 you referring to the pressed state and the
10 associated events or are you referring to
11 press in a more general way?

12 Q. What I'm referring to is the
13 press event that we are discussing in
14 connection with paragraph 166 of your
15 declaration.

16 Can you answer the question with
17 that understanding?

18 A. Can you repeat the question,
19 please?

20 Q. Sure.

21 Dr. Cockburn, in paragraph 190 of
22 your declaration, you are not evaluating

1 how a press event would purportedly meet
2 the limitation 1.f, correct?

3 A. In paragraph 190, I am not
4 analyzing how Bowens' disclosure of a
5 press event satisfies the limitation.

6 Q. Let's move on to paragraph 191 of
7 your declaration.

8 A. I'm there.

9 Q. You have it?

10 A. Yeah.

11 Q. I'm sorry, I didn't mean to talk
12 over you.

13 So, Dr. Cockburn, in paragraph
14 191 of your declaration, you are not
15 evaluating how a tap event will purportedly
16 meet the limitation 1.g, correct?

17 A. Under the analysis of limitation
18 1.g, I am not analyzing how Bowens'
19 disclosures of a tap event would satisfy
20 the limitation.

21 Instead, I'm analyzing how
22 Bowens' disclosures of a tap and hold or

1 long press would satisfy the limitation.

2 Q. Let's now move to paragraph 195
3 of your declaration, please. It's on page
4 105, in relation to limitation 1.i.

5 Do you have that?

6 A. I do.

7 Q. Dr. Cockburn, in paragraph 195 of
8 your declaration, you are not analyzing
9 how a press event would purportedly
10 satisfy the limitation of 1.i, correct?

11 A. To be clear, in paragraph 195, I
12 am not analyzing how Bowens' disclosures
13 of a press event or the pressed state
14 would satisfy this limitation.

15 Instead, I'm analyzing how
16 Bowens' disclosures of a tap event would
17 satisfy the limitation.

18 Q. And when you say "tap event,"
19 that would include a tap gesture, correct?
20 I want to make sure we're not talking past
21 each other here.

22 A. As we discussed earlier during

1 the deposition, a personal of skill in the
2 art understands that users execute
3 gestures and systems and the algorithms
4 therein detect the signals,
5 characteristics and inputs associated with
6 user's gestures in order to fire
7 particular events in response to the
8 recognition of the gestures.

9 In paragraph 195, I'm relying on
10 Bowens' disclosures of its algorithm to
11 recognize a tap gesture and fire a tap
12 event in response to the recognition of
13 that gesture.

14 Q. I just want to go back to 191.

15 A. I'm there. Thanks.

16 Q. Okay. Just so we're clear, the
17 same type of logic would apply with
18 respect to 191 as you just stated for 195
19 where the gesture being evaluated under
20 Boeing -- under Bowen is a long press
21 event or a tap and hold -- strike that --
22 a long press gesture or a tap and hold

1 gesture, is that right?

2 A. The question imports some
3 component of a previous question and I'm
4 not sure which parts of the previous
5 question are being imported.

6 So if I could have a simpler
7 question, I'd be grateful.

8 Q. Yeah. Let me ask it this way:
9 For purposes of your analysis in paragraph
10 191, the gesture that is the focus of your
11 analysis is a long press gesture or a tap
12 and hold gesture, correct?

13 MS. HUANG: Objection. Form.

14 A. The analysis includes
15 consideration of Kim's tap and hold or
16 long press gesture and how Bowens' gest
17 surveillance recognition algorithm would
18 achieve those gesture recognition
19 processes.

20 Q. So in paragraph 191 you are
21 discussing the tap and hold gesture from
22 Kim and how Bowens would interpret that

1 tap and hold gesture, correct?

2 A. I think that's a little bit the
3 inverse, a person of skill in the art
4 seeing disclosure of Kim's tap and hold
5 gesture and long pressed gesture would
6 look to a disclosure such as Bowens for
7 details on how to implement an algorithm
8 to accomplish the various gesture
9 recognition processes that would be
10 required by Kim.

11 Q. And those various gesture
12 recognition processes would result in a
13 long press event, correct?

14 A. Bowens, for example, includes an
15 algorithm where the algorithm will
16 generate a long press event in response to
17 gestures that have certain inputs,
18 characteristics and signals.

19 Q. And those gestures that have
20 these certain inputs, characteristics and
21 signals, as you say, those are the long
22 press gestures, for example?

1 A. Bowens describes an algorithm
2 that includes a set of state transitions
3 in order to reach a long pending state and
4 subsequent to certain timeouts from the
5 long pending state generating a long
6 event.

7 Q. Okay. So now let's move to
8 paragraph 216 of your declaration, if you
9 would. That's on page 114.

10 A. I'm there. Thanks.

11 Q. Okay. In your analysis in
12 paragraph 216 of your declaration, the
13 focus of the analysis are press gestures,
14 correct?

15 MS. HUANG: Objection. Form.

16 A. The focus of the analysis at
17 paragraph 216 is best summarized, I think,
18 in the second sentence, a POSITA would
19 have understood or found obvious that the
20 gesture detected on the KBD's touchscreen
21 includes a plurality of time related
22 components, including, for example, how

1 long the gesture has been maintained at
2 any point in time during or its cessation
3 of the gesture.

4 Q. And in paragraph 216, about a
5 third of the way from the bottom, you cite
6 to Apple-1004, paragraph 34, that talks
7 about a long press.

8 Do you see that?

9 A. I do.

10 Q. And then the next reference talks
11 about a hold event, correct?

12 A. Yes.

13 Q. And a couple beyond that talks
14 about the duration longer than a threshold
15 duration ("a very long press").

16 A. Yes, these are quotes from
17 Bowens. These last ones are quotes from
18 Bowens.

19 Q. Okay. You are not analyzing tap
20 events in connection with your evaluation
21 under paragraph 216, are you?

22 MS. HUANG: Objection to form.

1 A. There is no explicit mention of
2 tap events in that paragraph, but Bowens'
3 processes for recognizing different forms
4 of gestures and generating events includes
5 starting a variety of timers, including
6 timers that are used for the recognition
7 of tap events.

8 Q. Dr. Cockburn, your analysis in
9 paragraph 216 does not explicitly mention
10 tap events, correct?

11 A. I think I just answered that
12 there is no explicit mention of a tap
13 event in that paragraph. However --

14 Q. That was the question.

15 A. Sorry, can I finish my question?

16 Q. To the extent you want to add the
17 explanation, that's fine. We'll move to
18 strike the explanation as beyond the scope
19 of the question.

20 A. However, the meaning of the
21 paragraph relates to a person of skill in
22 the art's understanding. And the

1 significance of these time-related
2 components is clear in both Kim and
3 Bowens' teachings. That's explicit in the
4 paragraph.

5 MR. LICYGIEWICZ: Move to strike
6 as nonresponsive to the second part of
7 the answer.

8 THE WITNESS: If it's -- I think
9 there's no question pending. If it's
10 possible to take a short break, I'd
11 appreciate it, because I have a dog
12 who is barking like crazy upstairs.

13 MR. LICYGIEWICZ: I fully
14 understand, sir. That's absolutely
15 possible. And I'm sure after we come
16 back, we can wrap the rest of this up.

17 THE WITNESS: Thank you. Should
18 we take 10 minutes?

19 MR. LICYGIEWICZ: That's fine.
20 Tell me what you need for your dog. I
21 understand.

22 THE WITNESS: Five minutes would

1 be fine. Ten past the hour if that's
2 what you want.

3 MR. LICYGIEWICZ: We can do 10
4 minutes, how about that, quarter past
5 the hour.

6 THE WITNESS: Thank you.

7 (Recess taken from 4:05 p.m. to
8 4:15 p.m.)

9 BY MR. LICYGIEWICZ:

10 Q. Dr. Cockburn, I think we left
11 last at paragraph 217. That would be the
12 next paragraph we would be talking about.

13 So if you could turn to 217 and
14 limitation 32.f.

15 A. I'm there. Thanks.

16 Q. The gesture that you are
17 analyzing in connection with paragraph 217
18 is a double tap gesture, correct?

19 MS. HUANG: Objection. Form.

20 A. Well, first, paragraph 217
21 imports all of the discussion in
22 limitation 1.f.

1 And second, the analysis concerns
2 a first component of the gesture, which is
3 a time-related component such as when a
4 double tap is generated.

5 Q. And that time component of the
6 gesture you analyze in connection with a
7 double tap gesture in paragraph 217,
8 correct?

9 A. That time-related component in
10 paragraph 217 is analyzed with respect to
11 a double tap gesture.

12 Q. And going back to 216, the
13 time-related component that is being
14 analyzed in 216 is related to a long press
15 gesture, correct?

16 A. As I stated earlier, the second
17 sentence of the analysis at paragraph 216
18 contains the primary thrust of that
19 paragraph, which is a POSITA's
20 understanding that the gesture detected on
21 the KBD's touchscreen includes a plurality
22 of time-related components, including, for

1 example, how long the gesture has been
2 maintained at any point in time during or
3 the cessation of the gesture.

4 A person of skill in the art also
5 understands that in order to measure the
6 duration of a component of a gesture, you
7 need at least two points, including the
8 point at which that component of the
9 gesture begins and at a point in time.

10 Q. And so, Dr. Cockburn, the gesture
11 that's at the basis of your analysis of
12 whether 32.e is purportedly met is a press
13 gesture, correct?

14 MS. HUANG: Objection. Form.

15 A. I provide examples of press
16 gestures in that paragraph. The analysis,
17 the primary thrust is directed to time
18 related components of gestures and a
19 person of skill in the art's understanding
20 of that.

21 Q. And the gesture that you are
22 discussing in reference to your analysis

1 in paragraph 216, that gesture is a press
2 gesture, correct?

3 MS. HUANG: Objection. Form.

4 A. It includes analysis of various
5 forms of press gestures. It also includes
6 analysis of short touch durations, short
7 duration gestures such as flex and taps,
8 and long duration gestures such as a
9 press.

10 So it's not limited to one
11 particular gesture, nor is it limited to
12 Bowens' specific naming of states
13 associated with particular types of
14 gesture and their recognition.

15 Q. So if I understood what you said
16 then with respect to paragraph 216 of your
17 declaration, the gesture -- I'm sorry,
18 strike that.

19 So if I understood what you said
20 then with respect to paragraph 216 of your
21 declaration, when you speak of a gesture,
22 you are not speaking of any particular

1 gesture?

2 MS. HUANG: Objection. Form.

3 A. In my analysis in paragraph 216,
4 I'm concerned with detecting at least one
5 component of a gesture. At least one
6 component of a gesture includes a
7 plurality of time related components, such
8 as how long the gesture has been
9 maintained at any point in time, during or
10 at cessation of the gesture.

11 Specifically, Bowens discloses a
12 multitude of timer that is are used,
13 including one that is initiated at the
14 point that the finger is touched down.

15 Q. Let me try it a simpler way.

16 Dr. Cockburn, what is the gesture
17 that you're concerned about in paragraph
18 216?

19 MS. HUANG: Objection. Form.

20 A. In paragraph 216, I'm concerned
21 with a component of a gesture that will
22 lead to the gesture being detected.

1 Q. So is it your position,
2 Dr. Cockburn, that it doesn't matter which
3 gesture is being detected for purposes of
4 your analysis in paragraph 216?

5 MS. HUANG: Objection. Form.

6 A. In paragraph 216, I disclose how
7 at least one component of a gesture on a
8 touchscreen on the first object is
9 satisfied by the combination of Kim and
10 Bowen, and I provide a multitude of
11 examples.

12 Q. Dr. Cockburn, in your prior
13 answer you made reference to a gesture.
14 What gesture are you referring to?

15 A. Specifically, I'm referring to at
16 least one component of a gesture as
17 required by the limitation.

18 Q. I'll ask is it this way,
19 Dr. Cockburn: What gesture are you
20 referring to the at least one component of
21 a gesture?

22 MS. HUANG: Objection. Form.

1 A. A person of skill in the art
2 would understand that Kim and Bowens are
3 disclosing the detection of gestures, and
4 that includes a plurality of time related
5 components, including, for example, how
6 long the gesture has been maintained at
7 any point in time.

8 So that would include the point
9 in time at which the contact or proximity
10 with the touch sensor is established. It
11 would also include the continuity of that
12 contact with the touch sensor.

13 Q. So is it fair to say that in your
14 analysis under 216, the "at least one
15 component" would be a time-related
16 component?

17 A. A time-related component would be
18 at least one component of a gesture.

19 Q. So for purposes of 216, which
20 gesture are you referring to -- strike
21 that.

22 In 216, the limitation under 32.e

1 states of a gesture. In your analysis in
2 216, what is the gesture that you opine
3 meets the limitation of a gesture?

4 A. I provide several examples of
5 gestures that include detection of at
6 least one component of the gesture. That
7 includes a long press, the duration of the
8 hold event, duration -- touch of a
9 duration longer than a threshold duration,
10 a very long press, duration longer than a
11 threshold duration is sensed, and
12 distinguishing between different durations
13 of a press, and others, including flex and
14 taps.

15 All of these gestures include
16 detection of at least one component of a
17 gesture on the touchscreen on the first
18 object.

19 Q. So is it your opinion,
20 Dr. Cockburn, that the reference to of a
21 gesture in this limitation is met by any
22 gesture?

1 MS. HUANG: Objection. Form.

2 Sorry.

3 A. This limitation requires
4 detecting at least one component of a
5 gesture. And any example of detecting at
6 least one component of a gesture, provided
7 it's on the touchscreen, on the first
8 object, would meet the limitation.

9 Q. And in your opinion, sir, that
10 could be any gesture, correct?

11 A. Providing there is an
12 identifiable component of a gesture on the
13 touchscreen, on the first object, it could
14 be any gesture had.

15 Q. Let's go to paragraph 218 of your
16 declaration. It's on page 116.

17 A. I'm there. Thanks.

18 Q. Okay. And for purposes of
19 paragraph 218, the gesture that is being
20 considered is a press gesture, correct?

21 MS. HUANG: Objection. Form.

22 MR. LICYGIEWICZ: What's the

1 basis of the form objection?

2 MS. HUANG: Lack of clarity.

3 MR. LICYGIEWICZ: We've already
4 defined press gesture.

5 MS. HUANG: You said broadly that
6 the gesture that's being considered,
7 and it's not really clear what you
8 mean by that.

9 But the witness can answer, if he
10 can understand the question.

11 A. The limitation requires a second
12 component of the gesture is detected where
13 the magnitude of the duration of the
14 gesture being detected -- so the
15 limitation is clear that there is a
16 gesture that is being detected. It is
17 underway of being detected.

18 And my analysis provides examples
19 of this, specifically the zoom-in scale
20 operation being performed in response to a
21 time-related component where a long press
22 event is generated.

1 Q. So, Dr. Cockburn, for the gesture
2 of which you are detecting the duration on
3 the touchscreen, that duration must be
4 greater than a first magnitude, correct?

5 A. The magnitude of the duration of
6 the gesture being detected must be greater
7 than a first magnitude threshold.

8 Q. And that first magnitude
9 threshold, that's the time out for the
10 transition from a touch to a press
11 gesture, correct?

12 A. That's an example of it, yes, the
13 one I disclose in paragraph 218.

14 Q. Well, the limitation requires
15 that the duration of the gesture being
16 detected on the touch screen on the first
17 object is greater than the first magnitude
18 threshold, correct?

19 A. Can you repeat the question,
20 please?

21 Q. I'm saying looking at the
22 limitation under 32.g, it requires that

1 the duration of the gesture being detected
2 on the touchscreen on the first object is
3 greater than the first magnitude
4 threshold, correct?

5 A. No. The limitation reads when a
6 second component of the gesture. You
7 omitted that segment of the limitation
8 from your question.

9 Q. Dr. Cockburn, in paragraph 218,
10 you refer to the second component of the
11 gesture in the parenthetical as a
12 time-related component when a long press
13 event is generated, correct?

14 A. That's part of the second
15 sentence of paragraph 218, yes.

16 Q. Okay. And in 217, when you're
17 referring to a first component of the
18 gesture, you refer to that in parens as a
19 time-related component when a double tap
20 event is generated. Correct?

21 A. That's part of the second
22 sentence of paragraph 217, yes.

1 Q. So as I understand paragraphs 217
2 and 218, the first component of the
3 gesture is not the same as a second
4 component of the gesture, correct?

5 MS. HUANG: Objection. Form.

6 A. It depends what you mean by is
7 the component the same. The component
8 being a time-related component. That's
9 true for 217.

10 Q. Uh-huh.

11 A. It's also true for 218.

12 Q. The difference being that in 217,
13 the gesture you're referring to is a
14 double tap, where the gesture in 218
15 you're referring to is a long press,
16 correct?

17 A. 217 relates to the gesture that
18 is being detected on the touchscreen where
19 it satisfies certain timing conditions.

20 218 concerns the gesture that is
21 being detected on the touchscreen where
22 different timing considerations must be

1 met in order to satisfy the limitation.

2 Q. And 217, Dr. Cockburn, those
3 timing considerations are met by a double
4 tap event, correct?

5 A. The example I provide are the
6 time-related components related to a
7 double tap event, yes.

8 Q. And in 218, the time-related
9 components relate to a long press event,
10 correct?

11 A. That's the example I use in 218,
12 yes.

13 Q. Let's go over to paragraph 220 of
14 your declaration. It's on the bottom of
15 page 117 relative to limitation 32.i.

16 A. I'm there. Thanks.

17 Q. Okay. This limitation requires,
18 in part, a third component of the gesture.

19 Do you see that?

20 A. Yes.

21 Q. And the example you give for that
22 third component is a time-related

1 component, correct?

2 A. A time-related component when a
3 tap event is generated, yes.

4 Q. Okay. And so the gesture is a
5 tap gesture, correct?

6 A. In this particular example, the
7 gesture that is being detected is detected
8 as a tap gesture.

9 Q. Let's jump to paragraph 254 of
10 your declaration, if you would.

11 A. I'm there. Thanks.

12 Q. Okay. You state that Kim does
13 not teach that any tactile feedback is
14 provided to a user, correct?

15 A. It does not directly disclose
16 that, no.

17 Q. Is it your position, sir, that
18 Kim indirectly discloses that tactile
19 feedback is provided to a user?

20 A. I think it does. At paragraph
21 218, Kim discloses that it's device could
22 be deployed on a smartphone and a person

1 of skill in the art certainly understood
2 that smart phones well before 5th of
3 August 2011 included haptic feedback
4 mechanisms.

5 Q. Paragraph 218? I don't have a
6 paragraph 218 in the Kim reference.

7 A. Sorry. My apologies. 118.

8 Q. 118.

9 So if I understand your position,
10 then you are of the opinion that the
11 reference to a smart phone in paragraph 118
12 of the Kim reference implicitly discloses
13 haptic feedback, is that right?

14 A. I think the phrase of the
15 previous question was indirectly
16 discloses. And as I say, a person of
17 skill in the art understands that a smart
18 phone at the time was well known to
19 include haptic feedback.

20 Q. Is there anything else in Kim
21 that you would point to that would support
22 the position that Kim teaches tactile

1 feedback?

2 A. I didn't say teaches it. I said
3 it indirectly discloses it. And another
4 example would be personal digital
5 assistants, which precedes smartphones in
6 the same paragraph. They were also very
7 well known to include haptic feedback well
8 before 2011.

9 Q. Dr. Cockburn, does the Kim
10 reference make any reference to tactile
11 feedback in its specification?

12 A. No direct reference to it.

13 Q. Does the Kim reference even
14 mention the word tactile?

15 A. The version that I have, that you
16 provided to me, is not searchable.

17 Q. Okay.

18 A. I don't have a glossary of terms
19 used in the document, but I believe Kim
20 does not use the word tactile.

21 Q. Okay. Does Kim discuss a
22 vibration feedback at all?

1 A. Not that I'm aware of.

2 Q. Sir, would you agree with me that
3 the invention of Kim provides a mobile
4 device and related method which allows a
5 simpler and more convenient zooming
6 function?

7 A. That sounds like a perfectly
8 reasonable description of Kim.

9 Q. Does Kim disclose a multi-touch
10 input?

11 A. It could do. The version of Kim
12 that I have at the moment is not
13 searchable. I don't recall Kim disclosing
14 multi-touch input, but it's entirely
15 possible that it does.

16 I don't believe multi-touch input
17 is something I've relied on in Kim in my
18 declaration.

19 Oh, let me revise that. I now
20 see the term multi-touch input being
21 disclosed at paragraph 8 of Kim.

22 Q. Yes. And you see the last

1 sentence of Kim in paragraph 8 that says:

2 Therefore, this technique, which is

3 referring to the multi-touch input, by

4 means of two-finger interactions may not

5 be applicable to a mobile device having a

6 normal touchscreen incapable of handling a

7 multi-touch input.

8 Do you see that?

9 A. I see that.

10 Q. Dr. Cockburn, Kim does not

11 disclose a touchscreen that is capable of

12 handling a multi-touch input, does it?

13 A. Kim discloses the use of a

14 touchscreen. And touch screens, by 2011,

15 were extremely well known to be capable of

16 handling multi-touch input.

17 Kim directly discloses in its

18 background at paragraph 8 at least the

19 existence of multi-touch sensing

20 capabilities.

21 The specific disclosures of its

22 embodiments do not rely on multi-touch

1 sensing capabilities.

2 Q. Dr. Cockburn, the disclosure of
3 Kim does not state that it is to be used
4 on a touchscreen that's capable of
5 handling a multi-touch input, correct?

6 A. Kim's paragraph 118 makes clear
7 that the mobile device, according to this
8 invention includes a plurality of
9 electronic devices having a touch
10 sensitive surface such as one of a
11 touchscreen and a touch pad.

12 Q. Uh-huh.

13 A. It does not explicitly recite
14 multi-touch sensing capabilities.

15 However, Kim makes clear that the
16 existence of multi-touch sensing
17 capabilities was well-known.

18 And a person of skill in the art,
19 reading Kim's disclosures, including
20 paragraph 118, would have understood that
21 this method could be deployed on a
22 touchscreen with multi-touch sensing

1 capabilities.

2 Q. But the method disclosed by Kim
3 is not directed to the deployed on a
4 touchscreen capable of handling
5 multi-touch inputs, correct?

6 A. I'm not sure I understand how
7 that question is different to the previous
8 question.

9 Kim's disclosures make clear that
10 it could be deployed on a plurality of
11 electronic devices, having a touch
12 sensitive surface, such as one of a
13 touchscreen and a touch pad.

14 These were well known to be
15 capable of sensing multi-touches at the
16 time. And therefore, Kim's method could
17 be deployed on a touchscreen that supports
18 or enables multi-touch sensing.

19 Q. A pinch zoom technique,
20 Dr. Cockburn, would be a multi-touch
21 input, correct?

22 A. Clearly, I think that's correct.

1 MR. LICYGIEWICZ: Why don't we
2 take a few minutes here and let me go
3 through and see if I've got anything
4 further.

5 (Recess taken from 4:57 p.m. to
6 5:11 p.m.)

7 BY MR. LICYGIEWICZ:

8 Q. Dr. Cockburn, I'm generally
9 complete with my examination, but I do
10 have one question.

11 Does your golden retriever sit
12 and roll over?

13 A. He's three and a half and
14 particularly stupid. So no.

15 Q. Sounds about as obstinate as my
16 dachshunds are, so....

17 MR. LICYGIEWICZ: I have no
18 further questions.

19 MS. HUANG: No redirect.

20 THE WITNESS: Thanks all.

21 MR. LICYGIEWICZ: Thank you for
22 your time.

1 THE COURT REPORTER: Counsel, is
2 regular okay? Any particular rush on
3 this?

4 MR. LICYGIEWICZ: The rough,
5 please. And then whatever they've
6 been ordering is fine with me.

7 THE COURT REPORTER: Jenny, would
8 you like the rough also?

9 MS. HUANG: Yeah, rough would be
10 great. Thank you, Joan.

11 (Time noted: 5:12 p.m.)

12

13

14

ANDREW COCKBURN

15

16 Subscribed and sworn to before me

17 this ____ day of _____, 2025.

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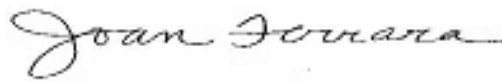
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IN WITNESS WHEREOF, I have
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April, 2025.

A handwritten signature in cursive script, reading "Joan Ferrara", is written over a horizontal line.

JOAN FERRARA, RMR, FCRR

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Case Caption: Apple v. Smith Interface

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