

In the Matter Of:

APPLE INC. vs

SMITH INTERFACE TECHNOLOGIES

LOREN TERVEEN

April 25, 2025



VOLUME 1
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

SMITH INTERFACE TECHNOLOGIES, LLC,
Patent Owner.

Case IPR2024-01084
Patent 10,649,578

DEPOSITION of LOREN G. TERVEEN, PH.D.

- CONDUCTED BY VIDEOCONFERENCE -

Friday, April 25, 2025

9:59 a.m. Eastern Daylight Time

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E X H I B I T S

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PREVIOUSLY MARKED EXHIBITS

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** Documents quoted on the record are
transcribed as read **

P R O C E E D I N G S

LOREN G. TERVEEN, PH.D.,

having been satisfactorily identified and duly
sworn by the Notary Public, was examined and
testified as follows:

EXAMINATION BY COUNSEL FOR PATENT OWNER

BY MR. ROBINSON:

Q. Good morning, Dr. Terveen. Thank you for
being here today.

A. Good morning.

Q. Could you please state your full name for
the record, sir.

A. Loren Terveen.

Q. Thank you. And I know you've been deposed
a number of times before, so I won't spend too
much time on ground rules. Two quick reminders.
Can we agree to try not to talk over each other?

A. Yes.

Q. All right. And I'll try to take a break
about every hour. If you get to a point you want
to break, feel free to ask. My only request would
be that we finish whatever question is open at the

1 time. Is that fair?

2 A. Sure.

3 Q. This deposition involves IPR2024-01084
4 related to U.S. Patent 10,649,578. Is that your
5 understanding?

6 A. I don't remember all of the numbers, but
7 the '578 patent is what I have in my mind.

8 Q. Okay. Great. So if I refer to the patent
9 as "the '578 patent," you'll know what I'm
10 referring to?

11 A. Yes.

12 Q. Okay. Is there anything -- is there
13 anyone with you in the room today, sir?

14 A. No.

15 Q. And do you have any applications open
16 other than the Zoom one that we're using?

17 A. No.

18 Q. Okay. Do you have any copies of documents
19 or notes with you, sir?

20 A. No.

21 Q. Okay. All right. After you completed
22 your declaration in this case, what did you do to

1 prepare for today's deposition?

2 A. Well, I reviewed documents and I met with
3 Apple's attorneys.

4 Q. And which documents did you review?

5 A. Well, I reviewed my declaration, the '578
6 patent, the prior art that I cited, the -- in the
7 IPR proceedings, the patent owner's preliminary
8 response, and the PTAB's institution decision.

9 And I can't think of anything else. Those
10 are the things that I certainly spent time with
11 and do remember at this point.

12 Q. Okay. Other than the preliminary response
13 and the institution decision, did you review any
14 documents that are not referenced in your
15 declaration?

16 A. I can't recall any.

17 Q. Okay. I'm going to use the chat function
18 to share exhibits with you. The first one I'll
19 put in is your -- it's what's been marked as
20 Exhibit 1003.

21 (Previously marked Exhibit 1003)

22 Q. If you would, please let me know when

1 that's available and you can open it up.

2 A. Okay. I've got it downloaded and opened.

3 Q. And is that your declaration that you
4 submitted in this proceeding related to the '578
5 patent?

6 A. Yes.

7 Q. As we sit here today, are there any
8 changes or corrections that you would make to that
9 declaration, sir?

10 A. As I was reviewing it, I noticed a few I
11 think typos and grammatical errors, but nothing
12 that changes my opinions.

13 Q. Okay. Do you recall what those typos or
14 grammatical corrections were?

15 A. Yeah. I think there was one place -- I
16 can probably find it -- where I was quoting from
17 one of the pieces of prior art and I didn't get
18 the quotes right. So it should have been, like,
19 quote, end quote, and picking up the quote again,
20 and I forgot the intermediate quotes or something
21 like that. But that's one that I remembered right
22 offhand.

1 Q. Okay. But nothing substantive in terms of
2 revisions or corrections?

3 A. I didn't find anything that substantively
4 changes any of my opinions.

5 Q. Okay. Would you please turn to
6 Paragraph 18 of your declaration. I believe it's
7 pages 28 and 29, if that helps.

8 A. Oh, Paragraph 18. Yes. I'm there.

9 Q. Does this paragraph -- let me ask it a
10 little different way.

11 Are there any documents that you
12 considered in connection with the '578 patent and
13 your opinions in this proceeding that are not
14 listed in Paragraph 18?

15 A. Not that I can recall. No.

16 Q. If you would, please turn to Paragraph 21
17 of your declaration, sir.

18 A. Okay.

19 Q. I guess the heading above Paragraph 21 is
20 "Pertinent Disclosure" under the primary heading
21 of "The '578 Patent."

22 You then go on to reference the abstract

1 of the '578 patent and then Column 1, lines 37 to
2 56.

3 A. Yes.

4 Q. Did you consider the rest of the '578
5 patent?

6 A. Yes.

7 Q. Did you review it in its entirety?

8 A. Yes.

9 Q. I'm going to put another exhibit into the
10 chat here for you. It's been marked Exhibit 1001.

11 (Previously marked Exhibit 1001)

12 Q. If you would please let me know when
13 that's available.

14 A. Okay. I've got it.

15 Q. Would you please turn to Column 1. I
16 believe it's page 40 of the document.

17 A. Okay. I'm at Column 1.

18 Q. So under the heading "Cross-Reference to
19 Related Applications," there are a number of
20 applications and provisional applications listed
21 and then incorporated by reference.

22 Did you review those other applications?

1 A. I can't recall that I did.

2 Q. Okay. And those other applications are
3 not listed in the materials considered at
4 Paragraph 18 of your declaration, are they?

5 A. I don't believe so. I'll check. No,
6 they're not listed there.

7 Q. Okay. And just to confirm, is it
8 reasonable to infer that if you downloaded and
9 reviewed those applications, they would have also
10 been listed in the materials considered, sir?

11 A. If I would have in any way based my
12 opinions on them, absolutely I would have listed
13 them.

14 Q. Okay. I'm now going to put Exhibit 1004
15 into the chat.

16 (Previously marked Exhibit 1004)

17 Q. Same thing. If you would, please let me
18 know when you've got it.

19 A. Okay. I have it and I've opened it.

20 Q. Thank you. Do you recognize that as the
21 Shiplacoff reference that is discussed in your
22 declaration?

1 A. Yes.

2 Q. So broadly speaking, would you agree that
3 Shiplacoff teaches that user inputs can cause the
4 device to switch from one display mode to another?
5 If it's helpful, I'll refer you to Paragraph 73 of
6 Shiplacoff.

7 A. Sure. Yes, Shiplacoff, one thing
8 Shiplacoff does disclose is using user inputs to
9 switch from one display mode to another.

10 Q. And at Paragraph 74, Shiplacoff describes
11 those modes as "'full screen,' 'card,' 'shuffle,'
12 and 'grid.'" Correct?

13 A. Here, in Paragraph 74, it does use the
14 names "'full screen,' 'card,' 'shuffle,' and
15 'grid'" to refer to some of the modes that it's
16 talking about.

17 Q. Are there other modes that it talks about?

18 A. Well, there's -- there is the -- I guess
19 what Shiplacoff refers to -- so each of these
20 modes represents a user interface.

21 And there's one other main user interface
22 which is -- I think Shiplacoff calls it "the

1 launcher." It's a home screen, basically. So
2 that is another user interface -- I think of it as
3 a mode -- that one can switch between. So
4 switching between, for example, any of the modes
5 and the launcher as well.

6 Q. But Shiplacoff, for whatever reason, does
7 not describe the launcher as one of its modes.
8 Correct?

9 A. Right offhand, I'm not sure whether
10 Shiplacoff uses the word "mode" to describe the
11 launcher. Yeah. I know it says -- it talks about
12 display modes can include any of these, but I
13 don't think it rules out that a mode could be
14 understood to include the launcher as well.

15 Q. Would you please refer to Shiplacoff's
16 Figure 1.

17 A. Yes. I see Figure 1.

18 Q. Okay. And this depicts an example of a
19 touchscreen device. Correct?

20 A. Yes.

21 Q. Okay. And in this device shown in
22 Figure 1, it also includes gesture area 102 that's

1 also touch-sensitive. Correct? If it's helpful,
2 I can refer you to Paragraphs 63 to 64.

3 A. Sure. I'll take a look there. Yeah.

4 Yes, it -- I think I've got your question.
5 So Shiplacoff does refer to area 102 as a
6 touch-sensitive gesture area.

7 Q. And at Paragraph 64, Shiplacoff describes
8 user input received via screen 101 as "touching a
9 displayed icon" to "activate an application or
10 function." Correct?

11 A. Well, in Paragraph 64, Shiplacoff is
12 talking about, I think, the touch-sensitive
13 capacities or capabilities of the device.

14 And so it mentions in the first sentence
15 that "screen 101 is touch-sensitive, so that a
16 user can activate an application or function by
17 touching a displayed icon."

18 And then it goes on to talk about other
19 touch-sensitive capabilities, including that, I
20 guess, both 101, screen 101 and the gesture area
21 102 are sensitive to user motion. So you can
22 detect gestures.

1 So this paragraph is talking about the --
2 yeah, it's explaining the touch-sensitive
3 capabilities of the device.

4 Q. And since you referred to the last
5 sentence in that Paragraph 64, it's actually
6 talking about motion near the surface that doesn't
7 necessarily contact the surface. Correct?

8 A. In this case, it is. In that sentence,
9 it's talking about motion near the surface that is
10 not in -- necessarily in contact with the surface.

11 Q. And in the sentence before that, it
12 references the inputs at the touch-sensitive
13 gesture area to be gesture-based commands. Right?

14 A. Well, in that sentence it does. And in
15 other places in Shiplacoff, it talks about
16 gestures that start in the touch-sensitive gesture
17 area and then move on into the rest of the screen
18 area 101.

19 Q. And also gestures that start on a screen
20 and move on to the gesture area 102. Right?

21 A. Yes. That's my recollection.

22 Q. In Paragraph 66, the -- it looks like

1 maybe two-thirds of the way down, there is a
2 sentence that says, "In one embodiment, gesture
3 area 102 provides a touch-sensitive control area
4 expanding beyond the edges of touch-sensitive
5 screen 101."

6 Do you see that, sir?

7 A. Yes, I see that.

8 Q. Okay. So I'm going to ask you to refer
9 back to Figure 1 of Shiplacoff.

10 A. Okay.

11 Q. It seems like that description of a
12 touch-sensitive gesture area 102 around the edges
13 of screen 101 is consistent with what's shown in
14 Figure 1, with 102 extending around the actual
15 display.

16 Is that consistent with your
17 understanding?

18 A. Could you -- I want to make sure I
19 understand what you're asking. Maybe you could
20 try that again.

21 Q. Sure. I'll read you the sentence from
22 Paragraph 66 again. "In one embodiment, gesture

1 area 102 provides a touch-sensitive control area
2 extending beyond the edges of touch-sensitive
3 screen 101."

4 The sentence continues. I don't want
5 anything to be misleading, but that phrase seems
6 to be consistent with what's shown in Figure 1.
7 Right?

8 A. Well, I think that sentence is consistent
9 with Figure 1, but I think other sentences are as
10 well.

11 For example, the first sentence in
12 Paragraph 66 that says, "In various embodiments,
13 touch-sensitive screen 101 and gesture area 102
14 can be implemented using any technology that is
15 capable of detecting a location of contact and/or
16 user motion proximate to the surface."

17 Q. And it seems like the sentence you just
18 read is also consistent with the sentence that I
19 read. Correct?

20 A. I think what is consistent, or I think
21 what Figure 1 is showing, is that there are two
22 areas being referred to on the screen, area 102

1 and 101, and those are different defined areas.

2 And then the specification is talking
3 about how they work, including with these
4 sentences that we've been reading from
5 Paragraph 66.

6 Q. I think we're on the same page, but let me
7 ask that a little bit differently just to make
8 sure.

9 The first sentence you read was, "In
10 various embodiments, touch-sensitive screen 101
11 and gesture area 102 can be implemented using any
12 technology that is capable of detecting a location
13 of contact and/or user motion proximate to the
14 surface."

15 Would you agree that there's -- that's not
16 inconsistent with "gesture area 102 provides a
17 touch-sensitive control area extending beyond the
18 edges of touch-sensitive screen 101"?

19 A. I don't think those sentences are
20 inconsistent.

21 Q. Okay. Would you please take a look at
22 Figure 2 of Shiplacoff.

1 A. Okay. I see it.

2 Q. Is it your understanding that this depicts
3 an example of a full-screen mode of Shiplacoff?
4 I'll refer you to Paragraph 75, if that's helpful.

5 A. Yes. Figure 2 depicts the full-screen
6 interface of Shiplacoff.

7 Q. Okay. And this is a calendar example, but
8 the full-screen mode is when the application
9 occupies substantially all of the screen 101.
10 Right?

11 A. That is the way Shiplacoff describes it.
12 Yeah.

13 Q. Would you please refer to Figure 5 of
14 Shiplacoff.

15 A. Yes.

16 Q. This is another example of a full-screen
17 mode. Correct?

18 A. Yes.

19 Q. Just with an email application. Right? I
20 can refer you to Paragraph 91, if you want to
21 confirm that.

22 A. Yeah. It's some sort of messaging thing.

1 Email. Yes, Paragraph 91 says it is
2 email.

3 Q. And then I'll ask you to refer to
4 Paragraph 74 of Shiplacoff in the second full
5 sentence.

6 A. I'm looking at Paragraph 74. Let's see.
7 And I'll read the second sentence. Okay.

8 Q. In general, Shiplacoff teaches that the
9 "full-screen mode is optimized for maximum use of
10 screen space for interacting with a single
11 activity." Do you see that?

12 A. That's correct. "In general, and without
13 limiting the scope of the claimed invention:
14 full-screen mode is optimized for maximum use of
15 screen space for interacting with a single
16 activity."

17 Q. Okay. So in Figure 2, the calendar is
18 that single activity?

19 A. In Figure 2, the calendar application is
20 the single entity.

21 Q. Okay. And in Figure 5, the email
22 application is another one, where in that one

1 that's the single activity. Right?

2 A. It's the single activity that Shiplacoff
3 describes full-screen mode optimizes use of.

4 Q. I'll ask you to refer to Figure 3 now,
5 please.

6 A. Okay.

7 Q. This displays an example of the card mode.
8 Correct?

9 A. Yes.

10 Q. Feel free to -- okay.

11 A. Yes.

12 Q. And that's different from the full-screen
13 mode in that the -- at least two -- there's three
14 cards shown in this one, and they're shown smaller
15 than in the full-screen mode. Correct?

16 A. Yes. One card, we see the whole interface
17 and two other cards, we see part of their
18 interface. The cards are smaller than in
19 full-screen mode, and one of these cards is
20 displayed larger than the other two.

21 Q. And the two that are displayed smaller are
22 only partially visible. Right?

1 A. That's correct. 301A and 301C are only
2 partially visible and they are displayed smaller
3 than 301B.

4 Q. And just to be clear, "partially visible"
5 means they're partly cut off, not that they're
6 blurred. Right?

7 A. All I'm seeing -- what I'm seeing here is
8 partial visibility of 301A and 301C. That's what
9 I meant by -- well, what I meant by "partial
10 visibility" is that they're cut off.

11 Q. Okay. Not blurred?

12 A. I'm not seeing explicit blurring.

13 Q. Okay. And so in Figure 3, it's card 301B
14 that's in focus. Right?

15 A. Yeah. I was -- yeah. And I think you
16 were going to refer me to Paragraph 78.

17 Q. 74, actually.

18 A. Oh, 74. Okay. Well, in Paragraph 78, it
19 talks about card 301B having focus and being fully
20 visible and then cards 301A and 301C partially
21 visible and do not have focus.

22 Q. Okay. And then I'll refer you back to 74

1 for a more general discussion of that too.

2 A. Sure.

3 Q. But it says, "card mode is optimized for
4 easily switching focus from one activity to
5 another and for easily initiating and terminating
6 activities."

7 A. That's what it says. Yes.

8 Q. All right. So if I'm understanding that
9 correctly, when it says "switching focus" it means
10 scrolling left and right.

11 And so for example, if in Figure 3 you
12 scrolled to the right, then 301A would become
13 centered and in focus?

14 A. That is my understanding. I mean, you
15 talked about scrolling. And so you have some way
16 of navigating through the cards and changing focus
17 from one to another. That's correct.

18 Q. And sticking with Paragraph 74 for a
19 moment, we looked at it earlier for the
20 description of full-screen mode.

21 For card mode, it says that "card mode is
22 optimized for easily switching focus from one

1 activity to another and for easily initiating and
2 terminating activities."

3 So the -- let's start with a really broad
4 question. And that's just that from this
5 description, card mode is optimized for something
6 different than what full-screen mode is optimized
7 for. Correct?

8 A. Yes. That's what this paragraph says.

9 Q. Okay. And the sort of, I guess, natural
10 extension of that is, it describes doing different
11 things in card mode than it does in full-screen
12 mode?

13 MR. HOLT: Objection, form.

14 A. Well, the things it lists are different
15 here. And of course, it says that it's optimized
16 for those things, but this isn't a complete list
17 of the things that you could do in these two
18 different modes.

19 Q. Sure. Let me see if I can ask a little
20 bit better question.

21 In full-screen mode, you're focused on the
22 single activity, whichever card is sort of taking

1 up the whole screen. Right?

2 A. Full-screen mode is optimized for
3 interacting with a single activity.

4 Q. Okay. And card mode is more about
5 navigating between activities. Right?

6 A. I mean, just as it said, card mode is
7 optimized for switching focus from one activity to
8 another and initiating and terminating activities.

9 Q. And so in card mode, some functions that
10 are available in full-screen mode may not be
11 available; and in full-screen mode, some functions
12 that are available in card mode might not be
13 available?

14 MR. HOLT: Objection, form.

15 A. What do you mean by "function"?

16 Q. Just as an example, you know, in card mode
17 you may not be permitted to interact with a
18 specific application without first going into
19 full-screen mode?

20 A. There certainly are examples like that.
21 So in card mode, if you want to -- in card mode
22 you cannot have a focus on a single activity to

1 interact with, so you would have to change modes
2 if you want to do that.

3 Q. So for example, in Figure 3 in card mode
4 if you want to interact with a calendar you'd
5 select the calendar and go into full-screen mode
6 for the calendar. Right?

7 MR. HOLT: Objection to form.

8 A. Well, I think as you were mentioning
9 before, in Paragraph 74 it says "Card mode is
10 optimized for switching focus from one activity to
11 another and easily initiating and terminating
12 activities."

13 So in a given example like in Figure 3, if
14 you wanted to switch focus from one activity to
15 another, for example to get to the card mode or
16 another activity, you could do that.

17 And then the whole disclosure of
18 Shiplacoff talks about how you could then switch
19 between modes. So to go from card mode, it gives
20 various ways you could go from card mode to
21 full-screen mode if you wanted to interact with --
22 focus on a particular activity.

1 Q. And when you're in full-screen mode, for
2 example, it's -- you're not going to be scrolling
3 through different activities? You're going to be
4 interacting with the single activity that you're
5 focused on. Right?

6 A. Full-screen mode is for focusing on and
7 interacting with a single activity.

8 Q. Sorry if this seems pedantic. I just want
9 to make sure we're on the same page here.

10 I think the corollary of what you just
11 said is that when you're in full-screen mode
12 you're not going to be scrolling through different
13 cards like you are in card mode.

14 A. Full-screen mode and card mode are
15 different modes, different user interfaces. And
16 in full-screen mode, you are not navigating
17 through a set of different cards.

18 Q. All right. Would you please refer to
19 Figure 4.

20 A. Yes.

21 Q. This displays another example of card
22 mode. Correct? I can point you to Paragraph 90,

1 if that's helpful.

2 A. Yeah. Let me take a look at that.

3 This is another example of card mode.

4 Q. And in this example, the email application
5 in card 301C is now the one in focus. Correct?

6 A. That's correct.

7 Q. And like we talked about for Figure 3,
8 card 301B is not blurred but is only partially
9 visible because it's cut off by the edge of the
10 screen. Correct?

11 A. 301B is not in focus. It's only partially
12 visible because it's cut off by the side of the
13 screen and it's smaller than card 301C.

14 Q. But it's not blurred. Right?

15 A. I don't see explicit blurring.

16 Q. Would you now turn to Figure 7, please.

17 A. Yes. I'm in Figure 7.

18 Q. So it may be helpful to refer to
19 Paragraph 92 as well. But this is sort of a
20 conceptual depiction of what's happening in card
21 mode. Right?

22 A. Let's see. I'm looking at Paragraph 92.

1 Yes, Paragraph 92 says, "Referring now to
2 FIG. 7, there is shown a conceptual depiction of a
3 sequence for switching from one activity to
4 another according to one embodiment of the present
5 invention." And multiple cards are being shown
6 open.

7 Q. And that's consistent with how card mode
8 navigates between cards. Correct?

9 A. Yes.

10 Q. And if you would go to Figure 8A and 8B.

11 A. Okay.

12 Q. This is -- and Paragraph 100 might be
13 helpful to refer to. Figures 8A and 8B are
14 showing conceptually how card is dismissed when
15 you're in card mode. Correct?

16 A. Let me read Paragraph 100.

17 Paragraph 100 is showing an example within
18 an embodiment of how you can close a card or
19 dismiss a card.

20 Q. And it's consistent with closing or
21 dismissing a card in card mode. Right?

22 A. This is an embodiment for dismissing or

1 closing a card in card mode.

2 Q. I'm going to ask you to refer, then, to
3 Figure 17A through 17D. And it may be helpful to
4 also refer to Paragraph 167.

5 I'll give you a second to . . .

6 A. Okay. I'll take a look at the figure and
7 then read the paragraph as well.

8 Q. Sure. Take your time.

9 A. Okay. I've read that.

10 Q. This is another example of functionality
11 in card mode. Correct? Well, let me ask that
12 more clearly first.

13 About halfway down Paragraph 167 it says,
14 "The example depicts the operation in card mode."
15 I think that's referring to Figure 17A through
16 17D.

17 A. Yes. That sentence, "The example depicts
18 the operation in card mode," the example is
19 referring to Figure 17 -- well -- A through D.

20 Q. And it can also be performed in a similar
21 manner in shuffle mode? Not trying to be tricky.

22 A. That's right.

1 Q. You mentioned a launcher earlier for
2 Shiplacoff. Is that what's shown in Figure 1?

3 A. I'll just -- yes, that is what's shown in
4 Figure 1.

5 Q. Okay. We haven't gone quite an hour yet,
6 but we're probably at a decent pause point.

7 Would you be all right taking a ten-minute
8 break?

9 A. Sure.

10 (Recess, 10:49 a.m. to 11:00 a.m.)

11 BY MR. ROBINSON:

12 Q. Dr. Terveen, I'd like to go back to
13 Paragraph 64 of Shiplacoff for just a moment.
14 Sorry. 74 of Shiplacoff.

15 A. Okay. Yes, I'm there.

16 Q. Do you see where it says "shuffle mode is
17 optimized for reordering and manipulating cards
18 representing activities"?

19 A. Yes.

20 Q. And "grid mode is optimized to provide an
21 overview of open activities"?

22 A. Yes.

1 Q. So just to confirm, grid mode and shuffle
2 mode are similar to card mode in that multiple
3 cards are shown on the screen at once. Right?

4 A. That is something that card mode, shuffle
5 mode, and grid mode all have in common, that
6 multiple cards are shown at once.

7 Q. All right. I'm going to ask you to refer
8 to Paragraphs 124 to 132 of Shiplacoff.

9 A. 124 to 132? Is that what you said?

10 Q. Yes.

11 I'll give you a minute to review those, if
12 you would.

13 A. Sure.

14 Okay. I read through those paragraphs.

15 Q. Generally speaking and consistent with the
16 heading above Paragraph 124, Paragraphs 124
17 through 132 discuss ways to switch among modes.
18 Correct?

19 A. That's correct.

20 Q. So starting with Paragraph 124, there are
21 three ways discussed in that paragraph to switch
22 among modes: pressing a physical button, pressing

1 or double-tapping a card, or by remaining inactive
2 for a period of time. Correct?

3 A. Let's see. Yes. This paragraph discussed
4 or mentioned three specific examples of ways to
5 switch between modes, and then it went on to say,
6 "Other mechanisms can also be provided for
7 switching among the modes" as well.

8 Q. And Paragraph 125 -- sorry. Let me stick
9 with Paragraph 124.

10 Just to make sure we're clear, the three
11 specific examples it provides in Paragraph 124 are
12 that a user can press a "physical button or some
13 other button on device 100" . . . "can touch or
14 double-tap a card 301 in shuffle mode" . . . or
15 "switches from shuffle mode to full-screen mode
16 (or to card mode) after some period of
17 inactivity." Correct?

18 A. Those are the three specific examples that
19 this paragraph mentioned.

20 Q. Okay. And Paragraph 125 teaches that a
21 "user can switch among card mode, shuffle mode,
22 and grid mode by tapping in a designated area" of

1 the screen. Correct?

2 A. That's what this first sentence says.

3 Yes.

4 Q. And the second sentence -- and the second
5 and third sentence of Paragraph 125 don't change
6 that, do they?

7 A. Well, the first sentence is just saying in
8 one embodiment there's a way to switch among card
9 mode, shuffle mode, and grid mode by tapping in a
10 designated area on screen 101.

11 And the next two sentences just go on to
12 describe what the designated area might be.

13 Q. Shiplacoff's Paragraph 126 includes a few
14 more examples. The first one is that a user can
15 switch between card mode -- sorry -- a user can
16 switch from card mode to shuffle mode by tapping
17 on an area not occupied by a card. Correct?

18 A. That is the first example in
19 Paragraph 126.

20 Oh, an example of how to switch from card
21 mode to shuffle mode by tapping an area below the
22 row of cards. And then I guess in shuffle mode,

1 tapping an area not occupied by a card causes a
2 switch to card mode.

3 Q. And then it goes on to -- Paragraph 126
4 goes on to describe that "other user input actions
5 can cause a switch between the modes," and then it
6 lists several examples, like "entering a gesture,
7 typing a key on a keyboard, pressing a button,
8 selecting a menu command," or "activating an
9 on-screen button or other element." Correct?

10 A. These are more examples, again, listed in
11 other embodiments of ways to switch between modes.

12 Q. Is your understanding of the menu command
13 a command option that's listed in a menu?

14 A. Yes.

15 Q. And Paragraph 127 of Shiplacoff describes
16 a swipe up gesture that begins in gesture area 102
17 and extends onto screen area 101. Correct?

18 A. It does describe that. That's the second
19 sentence, and the first sentence was saying in
20 another embodiment, users "can switch among the
21 various modes by performing a gesture."

22 And so then it's giving an example of a

1 gesture that could be performed to switch among
2 modes. And that is, the swipe up gesture -- from
3 here, the example is it begins in gesture area 102
4 and extends onto screen 101.

5 Q. And then Paragraph 128 describes "Another
6 example of a mode change gesture" that swipes
7 down, "beginning on screen 101 and extending onto
8 gesture area 102." Correct?

9 A. Yes. That is another example of a mode
10 change gesture.

11 So this is yet another example of a mode
12 change gesture that -- the gesture is described
13 there as "a 'swipe down' gesture beginning on
14 screen 101 and extending onto screen area 102."

15 And then I guess both Paragraph 127 and
16 128 go on to give various examples of what the
17 result of that gesture can be.

18 Q. So Paragraph 27 -- sorry.

19 Paragraph 127 lists a number of examples
20 of mode switches that can happen in response to
21 the swipe up gesture. I think two of those --
22 sorry.

1 A. I was just saying yes, it does list
2 examples. Yeah.

3 Q. So two of those examples from
4 Paragraph 127 are from full-screen mode to card
5 mode. I guess it's listed three times. One of
6 the examples listed three times is from
7 full-screen mode to card mode. Do you see that?

8 A. Yes. That is one of the examples listed.

9 Q. Okay. And none of the examples in
10 Paragraph 127 go from any of the other modes to
11 full-screen mode, do they?

12 A. In Paragraph 127?

13 Q. Yes.

14 A. None of the examples listed in
15 Paragraph 127 go to -- are described as going to
16 full-screen mode.

17 Q. Okay. In 128, though, for the swipe down
18 gesture, there are some examples listed, one of
19 which is from card mode to full-screen mode.
20 Correct?

21 A. In 128, let's see. I think it may, again,
22 be maybe one example that's described several

1 times that I think what Shiplacoff is doing
2 throughout this section and in each paragraph is
3 sort of saying here are gestures, like a swipe up
4 or a swipe down or whatever it may be.

5 And then you could use -- giving examples
6 of how you could use those to switch from one mode
7 to another.

8 And in Paragraph 128, it's giving some
9 examples. The examples include switching into
10 full-screen mode, into card mode, from the card
11 mode, from the launcher screen. So it is giving
12 various examples, including switching to
13 full-screen mode.

14 Q. So unlike in Paragraph 127, Paragraph 128
15 describes examples of switching to full-screen
16 mode using the swipe down gesture?

17 A. Each of the paragraphs is describing
18 different examples of gestures and mode switches
19 you could make with them, with the gestures,
20 possible mode switches.

21 And here in Paragraph 128, the examples
22 are about things you could do with the swipe down

1 gesture, and several of them involve switching to
2 full-screen mode.

3 Q. Okay. And none of the examples listed in
4 Paragraph 28 involve switching from full-screen
5 mode to another mode, do they?

6 A. Well, each paragraph is giving a set of
7 examples. And the whole section is just giving
8 examples of what you can -- switches you can make
9 with various gestures. And in Paragraph 1 -- and
10 so none of them is complete or exclusive.

11 But in Paragraph 128, there's only --
12 there's no examples given of switching from
13 full-screen mode.

14 Q. Have you considered why the examples in
15 Paragraphs 127 and 128 might be different for
16 different gestures?

17 A. I can't get inside the mind of the
18 inventors. I don't know what the rationale was
19 for giving different examples.

20 But I think when a POSITA would read this,
21 what they'd understand is that a gesture can be
22 used to have a certain effect in a certain

1 context; for example, in a certain user interface
2 or mode.

3 And so what I think a POSITA would
4 understand from this is they have a rich set of
5 examples that they can then deploy as appropriate.

6 Q. So in the full-screen mode when you're
7 interacting with a single activity, though, a lot
8 of gestures are going to be directed towards
9 interacting with that activity. Right?

10 MR. HOLT: Objection, form.

11 A. Well, when you're in full-screen mode,
12 certainly that is optimized for interaction with a
13 particular activity, like your calendar
14 application or your email or whatever it may be.

15 And so certainly some of what you're doing
16 is going to be interacting with that application.
17 And when you're using gestures to interact in
18 general with your device, some of those gestures
19 will be focused on that activity.

20 I don't know if I can quantify how many or
21 what proportion, but certainly some will be.

22 Q. In full-screen mode if it's optimized for

1 interacting with that individual activity, it's
2 probably reasonable to infer that most gestures
3 are going to be directed towards interacting with
4 that individual activity. Right?

5 MR. HOLT: Object to form.

6 A. I mean, most gestures -- I mean, it could
7 be. I know when I'm -- I think it's very common
8 that when you're -- you know, you might have a
9 particular application up, but you might tap on a
10 notification, you might tap on the time to -- you
11 might tap on a weather icon or a battery icon.

12 So maybe most gestures in a given session
13 will be for the activity in full-screen mode,
14 maybe not. It could vary.

15 Q. Now let's take a look at Figure 5 of
16 Shiplacoff.

17 A. Okay. I see Figure 5.

18 Q. There aren't any notifications shown on
19 this screen, are there?

20 MR. HOLT: Objection, form.

21 A. I don't see any notifications.

22 Q. So just so we're clear, when you refer to

1 notifications, you mean like a notification that
2 pops up over whatever it is you're interacting
3 with?

4 A. I do not necessarily mean that.

5 So in Figure 5, you can see icons at the
6 top, I guess the battery icon. What is that? A
7 WiFi icon, and one that indicates, I guess,
8 cellular connectivity and time.

9 And all of those could be things that the
10 user would interact with. And you could have
11 notification indicators displayed in that area as
12 well.

13 So that's the kind of thing I was talking
14 about.

15 Q. Okay. So in this email application that's
16 shown in Figure 5, a user would expect to be able
17 to scroll up and down in those messages?

18 A. Yes.

19 Q. And a POSITA would expect this to be
20 implemented in such a way that a user can scroll
21 up and down in those messages?

22 A. Yes.

1 Q. Let's go back to Paragraphs 129 to 132.

2 A. Let me review those, since we hadn't
3 gotten to those yet.

4 Okay.

5 Q. Paragraph 129 describes multi-finger
6 gestures. Correct?

7 A. Yes.

8 Q. And Paragraph 130 describes touching a
9 button on the screen or pressing a physical button
10 103 or some other physical button on a device 100.
11 Correct?

12 A. Or by selecting a mode change command from
13 a menu, I think is the -- I don't think you read
14 the last example that was given in that paragraph.

15 But yeah, those are -- Paragraph 130
16 describes mode change commands that include
17 touching buttons or selecting a command from a
18 menu.

19 Q. You saved me from having to ask my next
20 question. That covers the universe of
21 Paragraph 130.

22 Paragraph 131 describes switching modes by

1 changing the orientation of the device. Correct?

2 A. Yes. In Paragraph 131, the example it
3 gives of a way to switch from one mode to another
4 is changing the orientation of the device.

5 Q. And then it goes on to describe that
6 sensors like an accelerometer can be used to
7 detect those changes in orientation. Correct?

8 A. Yes.

9 Q. So that description of changes of
10 orientation in Paragraph 131 is not itself
11 referring to a user's finger making some gesture
12 on the screen, is it?

13 A. Detecting a change in the orientation of a
14 device is -- does not involve detecting a user's
15 touch of the screen.

16 Q. Okay. There's a pretty large number of
17 possible gestures that Shiplacoff discusses in the
18 Paragraphs 124 to 132.

19 Is one reason that a POSITA might
20 implement a gesture in one mode but not in another
21 that the gesture already has an assigned function
22 in a given mode?

1 MR. HOLT: Objection, form.

2 A. Well, I think it sort of depends on what
3 you mean by a gesture.

4 In any given user interface or mode, a
5 gesture should have a single meaning. But
6 gestures can differ in many ways, including, I
7 guess, how much motion there is in the gesture,
8 how long the motion is, how long they're in
9 contact with the screen, the start point, the
10 endpoint.

11 So you could have gestures that share some
12 properties implemented in the same mode, as long
13 as each gesture was distinguishable by users and
14 by the system.

15 Q. So you would not implement the same
16 gesture with the same characteristics both to
17 interact with, say, the full-screen mode and to
18 switch between modes?

19 A. Well, that's not exactly -- it doesn't
20 exactly follow from what I said. So, you know,
21 in -- what we were just talking about was within
22 the same mode, a single gesture -- and I'll come

1 back to that in a minute -- has to have a single
2 effect, like has to map to a single command, if
3 you will.

4 And that means by a single gesture it has
5 to have something that's distinguishable to a user
6 and the system.

7 But if you're -- you know, in Mode 1, a
8 particular gesture could have a particular
9 meaning. And then if you wanted to switch from
10 Mode 2 to Mode 3, maybe it would make sense to use
11 that exact same gesture because, since you were in
12 Mode 2 when you started that gesture, it would not
13 necessarily have the same meaning as it did in
14 Mode 1.

15 So let's see. I think the answer to your
16 last question, if I remember it exactly, is "not
17 necessarily."

18 Q. Let me see if I can ask it a little more
19 cleanly because I think we're in the same place.

20 Using your example, in Mode 1 a particular
21 gesture could have a particular meaning, but you
22 might not want to use that same gesture to switch

1 from Mode 2 to Mode 3.

2 If that gesture had a particular meaning
3 in Mode 1, you're not going to then use that same
4 gesture to switch from Mode 1 to Mode 2. Right?

5 A. A particular gesture, which again we
6 talked about how gestures are defined in terms of
7 a number of parameters having to do with the
8 touch, where you touch, where you end the touch,
9 how long it takes, how fast you move.

10 But the identical gesture within a mode
11 has to have one meaning, one effect.

12 Q. So we're talking about the same identical
13 gesture in Mode 1. It is not going to both have
14 an assigned meaning for that mode and be used to
15 switch from Mode 1 to a different mode. Right?

16 A. If a gesture is truly the same gesture,
17 literally a user does one gesture and then three
18 minutes later does the -- precisely the same
19 gesture with all the same characteristics in the
20 same mode, it has to have a single meaning.

21 Q. So it would not be used to both perform an
22 action in the Mode 1 and to switch from Mode 1 to

1 a different mode. Right?

2 A. Well, in a hypothetical example where you
3 have an identical gesture, it has to have a single
4 effect. It can't have an effect of doing
5 something within the user interface mode and then
6 switching to another mode.

7 But if gestures vary, they could have
8 things in common, like they could start in the
9 same area and end in the same area but vary in
10 their speed, for example.

11 And then in that case, it could be that
12 you could have different meanings associated with
13 them.

14 Q. So is it fair, then, to say that gestures
15 are assigned a meaning depending on the context in
16 which they're used?

17 A. Yes. And in the sense that a gesture --
18 certainly the same gesture could have different
19 meanings in different contexts, like literally in
20 different user interfaces.

21 And we still need to consider whether
22 or -- when you say "context," we might want to

1 include in that the properties of the gesture
2 itself since, as we've said, two gestures can
3 share some things in common; for example, where
4 they start or where they end or their speed or
5 their distance. But then they can vary in others
6 of those parameters.

7 So with all that said and trying to unpack
8 what we mean by "context," I would say gestures
9 can have different meanings in different contexts.

10 Q. Is it fair then to say that the meaning
11 assigned to a gesture or whether a meaning is
12 assigned to a given gesture can vary depending on
13 the particular application or user interface in
14 which that gesture is used?

15 A. I think yes. A gesture -- the meaning or
16 the effect of a gesture can vary depending upon
17 the -- you said before the context in which it's
18 used. And the context certainly can include or
19 would include the application that a user is
20 interacting with.

21 Q. And let me -- this got a little bit
22 abstract and I didn't mean it to. Let me bring

1 you back to Shiplacoff's sort of mode and
2 activities.

3 Is it fair to say that a POSITA
4 implementing Shiplacoff would understand that not
5 all modes are going to use a given gesture in the
6 same way?

7 A. Well, that is correct. And I mean,
8 Shiplacoff gives many examples of how you could
9 use a gesture to do different things in different
10 modes or user interfaces.

11 Q. And a POSITA implementing Shiplacoff is
12 going to consider which gesture might be
13 appropriate for a given mode. Right?

14 A. A POSITA implementing, you know, the
15 teachings of Shiplacoff would have a -- has a very
16 large palette of options to choose from with all
17 the examples that Shiplacoff gives. So they would
18 have to use their knowledge as their -- as they're
19 implementing, as they're doing the design, to make
20 a set of choices. Yes.

21 Q. And let me give you a specific example.

22 In Shiplacoff's Paragraph 125, it talks

1 about tapping on screen 101 to switch modes.

2 A. That's correct.

3 Q. And it does not list full-screen mode as
4 one of the modes that you can switch between by
5 tapping on screen 101, does it?

6 A. Well, Paragraph 125 doesn't say anything
7 about full-screen mode.

8 Q. Okay. And one reason for that might be
9 that a tap in full-screen mode is typically going
10 to interact with the activity that's occupying the
11 whole screen. Right?

12 A. Let's see. A tap would -- yeah. I was
13 just looking at what it all says about tapping
14 here. It says a lot of things.

15 Okay. So what was your question again?

16 Q. One reason that full-screen mode isn't
17 listed in 125 could be that you would expect a tap
18 in full-screen mode to interact with the single
19 activity that's occupying the full screen. Right?

20 A. Well, that could be the case. And I
21 think, again, if we sort of look at what 125 is
22 saying, it's saying you could use tapping to

1 switch among card mode, shuffle mode, and grid
2 mode.

3 And they're sort of keying off the idea
4 that there could be unoccupied areas of the screen
5 or not occupied by any card, and so a tap there
6 could be treated as a mode switch request.

7 And I mean, if you were implementing
8 Shiplacoff, you might decide not to use tapping
9 for switching from the full-screen mode.

10 Or you could have a designated icon or
11 something that you put in the full-screen mode.
12 If you tap on it, it would go to a different mode.

13 So that's something a designer could
14 consider or decide they didn't want to do that,
15 that they wanted to do mode switch with one of the
16 other things that Shiplacoff talks about.

17 Q. And as we looked at earlier, Shiplacoff
18 specifically says that the full-screen mode is
19 optimized to a single activity, takes up
20 substantially all of the screen. Right?

21 A. That is what Shiplacoff said.

22 Q. Okay. And so given that and what we said

1 about tapping, I mean, it seems like in
2 Paragraph 125, the omission of full-screen mode is
3 consistent with some thought around which modes
4 tapping would be a good one to switch from.

5 MR. HOLT: Objection, form.

6 A. Could you ask that again? I wanted to
7 make sure I heard.

8 Q. Sure. It's just that Paragraph 125 of
9 Shiplacoff, the fact that it omits full-screen
10 mode is consistent with there having been some
11 thought given to which of these modes tapping
12 would be a good input to use to switch from.

13 MR. HOLT: Objection, form.

14 A. Well, I think the right way to put it is
15 all of these paragraphs, 125 to 132, are giving
16 examples, I guess I would say positive examples of
17 things you can do with a gesture.

18 And if you didn't give an example of a
19 particular gesture being used for a particular
20 function, that doesn't logically imply that it
21 would be impossible or bad to use that.

22 And again, I think, you know, you have

1 to -- a POSITA would have to read all of
2 Shiplacoff and in particular this whole section
3 about switching among modes, in light of their
4 knowledge, and then make decisions on how to do
5 things based on what Shiplacoff discloses and
6 their knowledge.

7 MR. ROBINSON: For the record, I've got to
8 object to that answer as nonresponsive and move to
9 strike.

10 Q. I'm going to ask you to sort of listen
11 carefully to my questions, sir.

12 A. Sure.

13 Q. Paragraph 125's omission of full-screen
14 mode is consistent with the inventor having listed
15 examples that were consistent with that tapping
16 gesture. Right?

17 MR. HOLT: Objection, form.

18 A. So I think it -- there's two sides to
19 this.

20 And I will be happy to respond positively
21 to the first side of it, which is that I do think
22 that the inventor when they list examples of how

1 you could use a gesture for a particular function,
2 that they think -- that the inventor thinks that
3 those would be ways that you could indeed use that
4 gesture, functions you could use it for.

5 But if the inventor -- for all of the
6 other functions that the inventor did not list,
7 you can't infer that the inventor would think that
8 using the gesture for those functions would be a
9 bad idea. You just can't make that logical
10 inference.

11 Q. But you can make the inference that for
12 Paragraphs 124 to 132 when the inventor lists a
13 particular example with a particular gesture, that
14 the idea is that the examples chosen are done so
15 with -- for that gesture. Right?

16 MR. HOLT: Objection to form.

17 A. I think I can answer that, but I'll have
18 to see if you -- if this answers what you have in
19 mind.

20 I think the inventor is giving examples of
21 things that -- of functions that you could use
22 gestures for.

1 And there's lots of functions that are
2 described here, and I guess perhaps in the rest of
3 Shiplacoff, and there's a set of gestures or even
4 commands, you know, like clicking on a button or
5 whatever, that you could use to invoke those
6 functions.

7 And by listing them, I think the inventor
8 is giving many examples of things you could
9 reasonably do with each of the gestures that the
10 inventor talks about.

11 Q. Paragraphs 124 through 132 don't just make
12 a big list of gestures and then make a big list of
13 mode transitions and say "mix and match them as
14 you will," does it?

15 A. Well, it doesn't give a big table and say
16 "mix and match as you will."

17 But what it does do is describe, you
18 know -- I don't know how many -- a dozen different
19 embodiments where it gives many different examples
20 of things you could use a particular gesture for
21 in a particular context.

22 And so I think it really is, as I said

1 before, giving a whole palette of options to
2 somebody who is implementing Shiplacoff so that
3 they can use their own knowledge as a POSITA to
4 decide how particularly to assign -- to use
5 particular gestures in particular contexts for
6 particular functions.

7 Q. And so I'm going to try to use the words
8 of the first part of your answer for this
9 question.

10 What Paragraphs 124 to 132 do is they each
11 provide certain examples of gestures paired with
12 certain examples of contexts where you could use
13 those particular examples of gestures. Right?

14 A. Yes. And I think I added one other thing
15 for gestures and examples of gestures you could
16 use in particular contexts for particular
17 functions.

18 Q. I'm going to ask you to turn to -- back to
19 your declaration, please. Starting at page 3,
20 there's a "Listing of Challenged Claims."

21 A. Yes.

22 Q. So in Element [1i] it says "detecting a

1 second input." Do you see that phrase, sir?

2 A. Yes.

3 Q. And then in Limitation [1j] it says "in
4 response to detecting the second input."

5 When it says "the second input," it's
6 referring back to a second input in Element [1i].
7 Correct?

8 A. That's correct.

9 Q. And in Limitation [1k] when it says,
10 again, "in response to detecting the second
11 input," it's referring back to the "a second
12 input" in Limitation [1i]. Correct?

13 A. Yes.

14 Q. So whatever second input is detected for
15 Limitation [1j] or Limitation [1k] also has to
16 meet the requirements of Limitation [1i].
17 Correct?

18 A. Well, yes. Each of [1j] and [1k] refer
19 back -- the mention of "the second input" in each
20 of them is referring back to a second input that
21 is mentioned in Limitation [1i].

22 Q. Okay. So the second input of

1 Limitations [1j] or [1k] have to be as required by
2 Limitation [1a] -- [1i], detected "while
3 displaying the user interface of the application."
4 Correct?

5 A. Yes. [1i] says "while displaying the user
6 interface of the application, detecting a second
7 input." That's correct.

8 [1i] does require that you're detecting a
9 second input while displaying the user interface
10 of the application.

11 Q. Okay. And in the same way, the second
12 input also has to be by a second contact that
13 includes movement across the display in a
14 direction. Correct?

15 A. Yes. That's also part of Limitation [1i].

16 Q. Okay. And I'll ask you to jump ahead to
17 page 10 and Limitation [15e].

18 A. Yes.

19 Q. Similar language. Do you see where it
20 says "detecting a second input"?

21 A. Yes.

22 Q. So "the second input" in each of [15f] and

1 [15g] refer back to the a second input of [15e].

2 Correct?

3 A. Yes.

4 Q. And similar question for "the second
5 input" of [15f] and [15g].

6 That second input must be detected while
7 the user interface of the application is displayed
8 and must include movement across the display in a
9 direction. Correct?

10 A. Yes. Limitation [15e] does require that
11 the user interface of the application is displayed
12 and that there's a second contact that includes
13 movement across the display in a direction.

14 Q. Okay. I'll ask you to refer back to
15 page 4 and Claim 2.

16 A. Okay.

17 Q. You understand that Claim 2 depends from
18 Claim 1?

19 A. Yes.

20 Q. Okay. And do you understand that that
21 means that Claim 2 by that dependency requires all
22 of the limitations of Claim 1 as well as the one

1 added by Claim 2?

2 A. Yes.

3 Q. Okay. So when Claim 2 refers to
4 "detecting the second input by the second
5 contact," that's the same second input that is
6 first introduced in Limitation [1i]. Correct?

7 A. Yes.

8 Q. And Claim 3 also refers to "detecting the
9 second input." That, too, is the same second
10 input that's introduced in Limitation [1i].
11 Correct?

12 A. Yes.

13 Q. All right. I'm going to ask you to move
14 ahead to Claims 16 and 17.

15 A. Okay.

16 Q. So both of Claims 16 and 17 refer to "the
17 second input." That is the same second input that
18 is detected in Limitation [15e]. Correct?

19 A. Yes.

20 Q. All right. I'm going to ask you to refer
21 now to page 15, Claims 28 and 29.

22 A. 28 and 29? Okay.

1 Q. And similar question. Claims 28 and 29,
2 about halfway down in each, recite "detecting the
3 second input."

4 A. Yes.

5 Q. Is that the same second input that is
6 detected in Limitation [27d]?

7 A. Yes.

8 MR. ROBINSON: Okay. We've been going
9 about another hour. I think I'm at a decent pause
10 point. Why don't we take another ten-minute
11 break, come back at ten after the hour, if that
12 works.

13 THE WITNESS: Sure thing.

14 MR. HOLT: Yup.

15 (Recess, 11:58 a.m. to 12:10 p.m.)

16 BY MR. ROBINSON:

17 Q. Dr. Terveen, I'll ask you to turn back to
18 your declaration, please, specifically at
19 Paragraph 53.

20 A. Sorry. I'm looking at the wrong thing.

21 Okay. I'm at Paragraph 53.

22 Q. So Paragraph 53 is on page 47. It may

1 also be helpful to refer back to page 46 for this
2 question.

3 For Limitation [1i], you're mapping the
4 calendar application as the user interface --
5 sorry -- the calendar application in full-screen
6 mode as a user interface of the application
7 recited in Element [1i]. Correct?

8 A. Since you mentioned Paragraph 46, I'll
9 take a quick look there as well.

10 Q. Sorry. That got confusing. I meant
11 page 46 and 47. So Paragraph --

12 A. I'm sorry. Okay. So you were just
13 saying -- I see -- Paragraph 52 goes on to page 46
14 and 47.

15 Well, in Paragraph -- excuse me. For
16 Element [1i] of the '578 claim in Paragraph 52
17 and, I guess, in the rest of this section, I'm --
18 the thing that I'm saying maps to the user
19 interface of the application, the application I'm
20 referring to is Shiplacoff discloses that by an
21 application displayed in full-screen mode.

22 And here, the particular example

1 application displayed in full-screen mode that I
2 pointed to I guess was the calendar application.

3 Q. And for -- continuing on to page 48 and
4 49, for Element [1j] you point to Shiplacoff's
5 card mode as the language in [1j] that recites
6 "displaying at least a portion of the user
7 interface of the application in a first virtual
8 display layer that appears at a lesser depth as
9 compared to the second virtual display layer."

10 A. The terminology is a little complicated.

11 So Element [1j] talks about in response to
12 the second input displaying at least a portion of
13 the user interface of the application in a first
14 virtual display layer, et cetera. And that
15 displaying at least a portion of the user
16 interface of the application in a first virtual
17 display layer, I was talking about what happens
18 when you now have gone from full-screen mode of an
19 application to card mode and you're displaying the
20 user interface of that application in the -- well,
21 in full, but in a -- yeah.

22 So that is what I was referring to.

1 Q. Okay. The card mode with the calendar
2 application at card 301B?

3 A. That is an example of displaying the user
4 interface of the application in card mode, which
5 you reached from full-screen mode.

6 And that is what I was showing mapping
7 onto the user interface of the application in a
8 first virtual display layer from Element [1j].

9 Q. Continuing on to Element [1k] at page --
10 starting on page 54 of your declaration --

11 A. Okay.

12 Q. -- and specifically as shown at the bottom
13 of page 55 of your declaration.

14 For Limitation [1k]'s home screen,
15 including the icon associated with the
16 application, you're mapping to Shiplacoff's
17 launcher. Correct?

18 A. Yes. Just to unpack that, I'm -- since
19 the [1k] ends with saying "replacing the user
20 interface of the application with the home screen
21 including the icon associated with the
22 application," I'm saying that in Shiplacoff when

1 you went from full-screen mode back to the
2 launcher, the launcher, that discloses the home
3 screen which includes the icon associated with the
4 application.

5 And that's what I'm specifying at the end
6 of Paragraph 61 at the bottom of page 55.

7 Q. So I'll ask you to move ahead to Ground 2,
8 your discussion of Ground 2 in your declaration.
9 It starts on page 74.

10 A. Okay.

11 Q. So Ground 2 adds a second reference called
12 "NAN." Correct?

13 A. That's correct.

14 Q. And the SNC system, if I understand
15 correctly, refers to the Shiplacoff-NAN
16 combination?

17 A. That's correct.

18 Q. So in Paragraph 87, it's on page 75, the
19 second sentence talks about what would be
20 different in the SNC system versus the Shiplacoff
21 reference.

22 And it specifically references features

1 [1j] and [1k] of Claim 1. It says that "the edge
2 gesture used in the SNC system (that would
3 substitute for the swipe up gesture in Shiplacoff
4 alone) renders these features obvious."

5 Do you see that?

6 A. I do.

7 Q. Okay. So I think what that's saying is
8 that the edge gesture used in NAN would replace or
9 substitute the swipe up gesture from Shiplacoff in
10 the combination. Is that correct?

11 A. I think that's a little -- that's in part
12 true.

13 So I guess it's the second sentence that
14 you read, "To the extent Patent Owner argues that
15 Shiplacoff does not disclose and render obvious a
16 'movement threshold' and related features such as
17 'when the second input is detected to include the
18 movement parameter that is above the movement
19 threshold.'"

20 And I refer to features in [1j] and [1k],
21 "the edge gesture used in the SNC system (that
22 would substitute the swipe up gesture in

1 Shiplacoff alone) renders these features obvious."

2 And when I was referring to "features," I
3 was referring to the features used, to the
4 features of gestures used to, I guess, distinguish
5 what's referred to in [1k] and [1j] when the
6 second input is detected to include the movement
7 parameter that is above the threshold or does or
8 does not meet that criteria being above the
9 movement threshold.

10 So I was talking about the edge gesture
11 being used to substitute for the relevant gestures
12 from Shiplacoff.

13 And I think I only gave the example here
14 of the swipe up gesture. But of course, the edge
15 gesture from NAN could be used to substitute for
16 other gestures as well.

17 Q. I'm going to ask you to go back to
18 Paragraph 36 of your declaration.

19 A. Okay.

20 Q. Here it says, "e.g., an edge gesture with
21 a certain length, speed, hold time, or a number of
22 inputs, to execute a change from the full-screen

1 mode to the card mode."

2 So that's the edge gesture that we're
3 talking about?

4 A. Well, yeah. I think I have to be careful
5 to read the whole thing.

6 So I'm talking about implementing NAN's
7 teachings into Shiplacoff's system.

8 And then I say, "For example, Shiplacoff's
9 system would have been modified to incorporate
10 software, code, and/or related programming to
11 recognize certain gestures, e.g., an edge gesture
12 with a certain length, speed, hold time, or a
13 number of inputs, to execute a change from the
14 full-screen mode to the card mode."

15 But in other paragraphs in this section, I
16 mention things like Shiplacoff teaches detecting
17 and processing gestures to navigate from one mode
18 and corresponding user interface to another.

19 And so then what I'm really getting at
20 here is that you can use NAN's teaching about
21 recognizing -- about edge gestures in all of what
22 Shiplacoff teaches about transitioning from one

1 mode or one user interface to another.

2 And so what I wrote in Paragraph 36 was,
3 as I said, for example -- or one example of how
4 you could use NAN's teaching in Shiplacoff.

5 Q. So Paragraph 34 describes why a POSITA
6 would have been motivated to combine Shiplacoff
7 and NAN. Correct?

8 A. Well, Paragraph 34 says that. And then
9 it's elaborated on in the rest of the section.

10 Q. Well, let's take it one paragraph at a
11 time.

12 So Paragraph 34 says, "A POSITA would have
13 been motivated."

14 Paragraph 35 explains why -- what NAN says
15 about why its edge gestures are beneficial.
16 Right?

17 A. Yes. And then I talk about why -- yes.
18 And then I go on to say how those benefits could
19 be realized in Shiplacoff's system.

20 Q. Okay. And then Paragraph 36 talks about
21 how a POSITA would have implemented NAN's teaching
22 into Shiplacoff's system. Right?

1 A. To be precise, the first sentence says, "A
2 POSITA would have implemented NAN's teaching into
3 Shiplacoff's system through programming efforts
4 well-within the knowledge and capabilities of a
5 POSITA."

6 So that's the main point of that
7 paragraph.

8 And then I give examples of how you would
9 do that, of what you might do. A POSITA --

10 Q. Okay. And then Paragraph 37 begins an
11 explanation of why the combination would have been
12 predictable and with a reasonable expectation of
13 success. Right?

14 A. That's correct.

15 Q. And so then Paragraph -- it says, "First,
16 Shiplacoff and Nan are directed to similar
17 systems" and explains.

18 A. Uh-hmm.

19 Q. And then Paragraphs 38 and 39 add second
20 and third reasons that the combination would have
21 been predictable with a reasonable expectation of
22 success. Right?

1 A. Yes.

2 Q. Okay. And I'm going to ask you to refer
3 back to Shiplacoff.

4 A. Okay.

5 Q. Specifically at Paragraph 66. The last
6 sentence of that paragraph says, "In one
7 embodiment, gesture area 102 provides a
8 touch-sensitive control area extending beyond the
9 edges of a touch-sensitive screen 101, as
10 described in a related application."

11 It gives the details, and then it says
12 "the disclosure of which is incorporated herein by
13 reference."

14 Do you see that, sir?

15 A. Yes.

16 Q. Did you review that application that's
17 incorporated by reference?

18 A. Not that I recall.

19 Q. And it's not referenced anywhere in your
20 declaration, is it?

21 A. No.

22 Q. All right. I'm going to share in the chat

1 what's been marked Exhibit 2003.

2 (Exhibit 2003 marked for identification)

3 MR. ROBINSON: This one has not yet been
4 filed in the record. So, David, I'm going to ask
5 you if you want to make it part of the transcript
6 or we would send you a copy and then file it?

7 MR. HOLT: Yeah. Since we're referencing
8 it here, let's make it part of the transcript.

9 MR. ROBINSON: Sounds good. When we file
10 that with the board, we may not include it for
11 size purposes, but it will be filed separately.

12 MR. HOLT: Understood.

13 Q. Dr. Terveen, would you glance through that
14 Exhibit 2003 and tell me if that looks familiar to
15 you as something you reviewed previously.

16 A. Sure. I'll look through that.

17 So after having taken a little time to
18 look at this, I see that this is the related
19 application that was referred to in Paragraph 66
20 of Shiplacoff.

21 In my declaration I referred to one of the
22 materials that I had looked at was the patent

1 application issued to Duarte. And it's at least
2 possible that this is the application that led to
3 that patent. I can't tell that without looking
4 back at the Duarte patent.

5 As I said, I reviewed the Duarte patent
6 when I was preparing my declaration, but I don't
7 know that I ever saw this application.

8 Q. So for the sake of time, I will tell you
9 that the application number of the Duarte patent
10 referenced in your declaration was
11 Application 12/341,514 and that the application
12 number of Exhibit 2003 is 12/115,992.

13 A. Okay.

14 Q. So while it may be the same Duarte, it's
15 not the same application.

16 A. Okay. So then as far as I know, I have
17 not seen this -- what's come in as Exhibit 2003
18 before.

19 Q. Okay. I'll ask you to refer to Figure 4B,
20 for example. The numbering in that figure of
21 device 100, screen 101, gesture area 102, and
22 button 103 is consistent with the numbering used

1 in Shiplacoff. Correct?

2 A. The numbering is consistent generally. I
3 don't know how this application actually refers to
4 Figure 4B, so all I can say is the figures look
5 similar.

6 Q. So I'll also refer you to Figure 2 of this
7 Exhibit 2003.

8 A. Okay. I see it.

9 Q. That uses similar numbering for
10 device 100, screen 101, gesture area 102, and
11 button 103. Correct?

12 A. Similar to which figure of the Shiplacoff
13 patent were you saying?

14 Q. Figure 1, for example, in Shiplacoff, I
15 believe.

16 A. I'm just looking at these figures. It
17 uses similar numbering. Again, I don't know how
18 the -- how this Duarte application actually refers
19 to its Figure 2.

20 Q. So I'll refer you to Paragraph 44 of the
21 Duarte application of Exhibit 2003.

22 A. Okay. I've read Paragraph 44 of the

1 Duarte application.

2 Q. So Duarte uses 102 for the gesture area.

3 Correct?

4 A. Yes.

5 Q. And it uses touch -- I'm sorry. It uses

6 reference numeral 101 for the touch-sensitive

7 screen?

8 A. Yes.

9 Q. And I guess it's just above Paragraph 44.

10 But on that same page, it also uses the number 103

11 to refer to the button. Correct?

12 A. Yes.

13 Q. Okay. Do you see in Paragraph 44, I think

14 in the fourth line, where it talks about "touch

15 commands that cross over from gesture area 102 to

16 touch-sensitive screen 101, and vice versa"?

17 A. Yes.

18 Q. And in -- and then it says, "Specific

19 examples of touch commands will be described in

20 more detail below." Right?

21 A. Yes.

22 Q. I'll ask you to refer to Paragraph 57 of

1 that same Exhibit 2003.

2 A. Okay.

3 Q. That describes an upward swipe gesture
4 with reference to Figure 4B. Correct?

5 A. Yes. It says "In the example of Fig. 4B,
6 the user performs an upward swipe gesture 402B
7 starting within gesture area 102 and ending within
8 screen 101."

9 Q. So the -- sorry. I lost my place.

10 The "upward swipe gesture 402B starting
11 within the gesture area 102 and ends within
12 screen 101."

13 And as shown in Figure 4B, that's an
14 upward motion. Correct?

15 A. Yes. And I'm going to take a quick look
16 back at Figure 4B since I only saw it the one
17 time. So I'll come right back.

18 Q. Sure.

19 A. Okay. Yes. I mean, in the example of
20 Figure 4B, it's showing the user performing an
21 upward swipe gesture starting in gesture area 102
22 and ending within screen 101.

1 Q. So looking at Paragraph 72, Exhibit 2003,
2 it says, "Referring now to Fig. 7, there is shown
3 an example of a flick gesture 402BB to cause
4 list 601 currently displayed on screen 101 to
5 scroll upwards."

6 A. I see that.

7 Q. Okay. So let's go to Figure 7. This
8 appears to be what Shiplacoff would describe as an
9 example of a full-screen mode. Correct?

10 MR. HOLT: Objection, form.

11 A. I can't tell that for sure because it's
12 labeled "Generic List View." I just don't know
13 how that would correspond to what Shiplacoff is
14 presenting.

15 I mean, I don't know if it's full screen
16 or if this is functionally the same as a card view
17 where each of these is cards that you can do
18 things with.

19 I just am not familiar with this patent
20 application, so I'm not sure how it describes
21 what's going on in Figure 7 and how that would
22 relate to the Shiplacoff patent.

1 Q. So Figure 12A appears to be a messaging
2 application. Right?

3 A. Figure 12A in the application?

4 Q. Yes. In Exhibit 2003.

5 A. This appears to be a messaging
6 application.

7 Q. And that includes a list of messages.
8 Correct? If it's helpful, I'll refer you to
9 Paragraph 33 of Exhibit 2003 that refers to it as
10 a list.

11 A. Sure. Let me take a quick look at that
12 just to be -- Paragraph 33.

13 Sorry. My machine is freezing up a little
14 bit. Okay. It's saying these are examples of
15 using a swipe gesture to delete an item from a
16 list, Figures 12A through 12D.

17 Q. So 12A shows a list within a messaging
18 application. Correct?

19 A. It shows a list of messages within a
20 messaging application.

21 Q. And you recall that reference numeral 101
22 is used for the touch-sensitive screen?

1 A. Yes.

2 Q. And in 12A, 101 is shown pointing to the
3 messaging application there. Right?

4 A. Yes.

5 Q. So 12A depicts something that would be
6 consistent with what Shiplacoff would call a
7 full-screen mode in which the messaging app
8 occupies substantially all of the screen 101.
9 Correct?

10 MR. HOLT: Objection, form.

11 A. I mean, all I have so far is looking at
12 the figures.

13 And again, I'm not sure how the Duarte
14 application actually describes what's going on in
15 Figures 12A through 12D, if its description is
16 consistent with the full-screen mode of the
17 Shiplacoff application or not. I'm not sure.

18 Q. Well, Figure 12A uses the referenced
19 numeral 101, which is for the touch-sensitive
20 screen. Correct?

21 A. That's correct.

22 Q. And Figure 12A doesn't show anything else

1 on a touch-sensitive screen. Correct?

2 A. Well, I mean, all I see in 12A is things
3 having to do with messaging. That's all I see in
4 12A.

5 Q. So 12A doesn't show anything besides a
6 messaging app on the screen that it labels 101 in
7 12A, does it?

8 MR. HOLT: Objection, form.

9 A. I'm sorry. Could you just ask that again?

10 Q. Sure. In Exhibit 2003, Figure 12A does
11 not show anything besides the messaging app on the
12 screen that it labels 101, does it?

13 MR. HOLT: Objection, form.

14 A. Well, 101 is just the touch-sensitive
15 screen. And the only information -- the
16 information I see displayed in here seems to have
17 to do with messaging.

18 Without reading more in this application,
19 the Duarte application, I can't be sure of what
20 all is going on here in this screen of how it's
21 being described or presented.

22 Q. Let's refer to Paragraph 84 of

1 Exhibit 2003.

2 A. Okay. I'm going to read Paragraph 84.

3 Okay. I've read Paragraph 84.

4 Q. So 12A shows an email application. Right?

5 A. Yes.

6 Q. And Paragraph 84 doesn't describe anything
7 except an email application in Figures 12A through
8 12D, does it?

9 A. Paragraph 84 is just illustrating some
10 functionality within an email application.

11 Q. And Figures 12A through 12D depict only an
12 email application. Correct?

13 A. Yeah. I mean, it says "Figs. 12A through
14 12D."

15 "Another example of a swipe gesture 402EE
16 is shown in Figs. 12A through 12D, in the context
17 of an email application."

18 Q. And the shape of that email application in
19 12A through 12D matches the shape of screen 101 in
20 Figure 2. Correct?

21 A. Yes. Generally, it's a rectangle
22 that's -- the height is longer than the width.

1 Q. And Figures 12A through 12D include the
2 reference numeral 101 for the screen. Correct?

3 A. Figures 12A through 12D include the
4 reference number 101.

5 Q. And 12A through 12D don't show any other
6 cards or any other applications as would be done
7 in Shiplacoff's card mode. Correct?

8 MR. HOLT: Objection to form.

9 A. In 12A through 12D, the only application
10 that I'm seeing information about is the messaging
11 application.

12 How any of -- the relationship of what's
13 in Duarte here to the particular modes of
14 Shiplacoff is something that I haven't, you know,
15 explored.

16 Q. But as we talked about earlier, Shiplacoff
17 specifically shows and describes an email
18 application in full-screen mode. Correct?
19 Specifically at Figure 5.

20 A. Yeah. Shiplacoff does show an email
21 application in full-screen mode.

22 Q. And I'll refer you to Paragraph 70 of

1 Exhibit 2003.

2 A. Okay. I see Paragraph 70. And I'll read
3 that through.

4 Okay. I read Paragraph 70.

5 Q. And Paragraph 70 describes a flick input
6 for scrolling. Correct?

7 A. Yes. It says -- Paragraph 70 starts, "The
8 user can also flick across screen 101 in a
9 direction that supports scrolling for the current
10 state of the display."

11 So in a particular context or state, a
12 flick could support scrolling.

13 MR. ROBINSON: I think we've been going
14 another hour. Why don't we take a quick break.
15 I'm probably pretty close to done.

16 (Recess, 12:59 p.m. to 1:10 p.m.)

17 BY MR. ROBINSON:

18 Q. Dr. Terveen, have you had any
19 communications with counsel or anybody else during
20 any of our breaks today?

21 A. No.

22 MR. ROBINSON: I'll pass the witness.

1 David, if you have any redirect.

2 MR. HOLT: No redirect.

3 (Off the record at 1:10 p.m.)

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1 CERTIFICATE OF SHORTHAND REPORTER - NOTARY PUBLIC

2 I, Michelle Keegan, Registered Merit
3 Reporter and Notary Public within and for the
Commonwealth of Massachusetts, do hereby certify:

4 That LOREN G. TERVEEN, PH.D., the witness
5 whose deposition is hereinbefore set forth, was
6 duly sworn by me before the commencement of such
deposition and that such deposition was taken
before me and is a true record of the testimony
given by such witness.

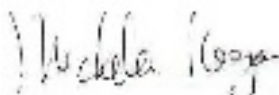
7
8 I further certify that the adverse party
was represented by counsel at the deposition.

9 I further certify that the deposition of
LOREN G. TERVEEN, PH.D. occurred virtually using
10 Zoom, commencing at 9:59 a.m. to 1:10 p.m.

11 I further certify the inspection, reading,
12 and signing of said deposition was waived on the
record by agreement of all parties.

13 I further certify that I am not related to
14 any of the parties to this action by blood or
marriage, I am not employed by or an attorney to
15 any of the parties in this action, and that I am
in no way interested, financially or otherwise, in
the outcome of this matter.

16
17 I declare under penalty of perjury that
the foregoing is true and correct. Executed on
25th day of April, 2025.
18 My commission expires May 15, 2026.

19
20 
21 NOTARY PUBLIC IN AND FOR THE
COMMONWEALTH OF MASSACHUSETTS

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E R R A T A S H E E T

I, LOREN G. TERVEEN, PH.D., do hereby certify
that I have read the foregoing transcript of my
testimony, and further certify that said
transcript is a true and accurate record of my
testimony (with the exception of the following
corrections listed below):

Page	Line	Correction
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Signed under the pains and penalties of perjury
this day of , 2025.

LOREN G. TERVEEN, PH.D.

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