

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,

Petitioner,

v.

INTERDIGITAL PATENT HOLDINGS,
INC.,

Patent Owner.

) CASE NO.:

) IPR2024-00305,

) 2024-00306,

) 2024-00537, and

) 2024-00538

DEPOSITION OF GEORGE EDWARDS, PH.D.

VOLUME I

REMOTELY IN LOS ANGELES, CALIFORNIA

TUESDAY, DECEMBER 3, 2024

REPORTED BY: NATALIE PARVIZI-AZAD, CSR, RPR, RSR
CSR NO. 14125

JOB NO.: J12013758

MICROSOFT EXHIBIT 1088



Microsoft v. InterDigital
IPR2024-00305

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DEPOSITION OF GEORGE EDWARDS, PH.D., VOLUME I
TAKEN ON BEHALF OF THE PETITIONER
REMOTELY VIA ZOOM VIDEOCONFERENCING, IN
LOS ANGELES, CALIFORNIA, BEGINNING AT
9:03 A.M. AND ENDING AT 10:16 A.M., ON
TUESDAY, DECEMBER 3, 2024, BEFORE
NATALIE PARVIZI-AZAD, CERTIFIED SHORTHAND
REPORTER NUMBER 14125.

A P P E A R A N C E S

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E X H I B I T S

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1 REMOTELY IN LOS ANGELES, CALIFORNIA
2 TUESDAY, DECEMBER 3, 2024, 9:03 A.M.

3
4 THE CERTIFIED STENOGRAPHER: Please raise
5 your right hand to be sworn.

6
7 GEORGE EDWARDS, Ph.D.,
8 having declared under penalty of perjury to tell
9 the truth, was examined and testified as follows:

10
11 EXAMINATION

12 BY MR. THACKER:

13 Q. Thank you. Good morning, Dr. Edwards.
14 How are you today?

15 A. Good morning. I'm fine.

16 Q. Great. You've been deposed before;
17 correct?

18 A. Yes.

19 Q. About how many times would you say you've
20 been deposed before?

21 A. I think it's between 15 to 20 times.

22 Q. Okay. So do you feel you understand the
23 deposition process?

24 A. Yes.

25 Q. Okay. So you understand that you're

1 under oath today?

2 A. Yes, I understand that.

3 Q. Great. And you agree to tell the truth
4 today?

5 A. Yes.

6 Q. Do you also understand that the rules
7 forbid you from communicating with Interdigital's
8 counsel during the deposition?

9 A. Yes.

10 MR. HEJNY: Object to form.

11 Q. Do you agree to follow these rules during
12 the deposition?

13 A. Yes.

14 Q. Do you also understand that the rules
15 forbid you from communicating with Interdigital's
16 counsel about the substance of your testimony when
17 we're on break today?

18 A. That's my understanding, yes.

19 Q. Okay. And you agree to follow those
20 rules as well?

21 A. Yes, I do.

22 Q. Okay. I will do my best not to interrupt
23 while you're providing an answer, let you give
24 your full and complete answer. Do you also agree
25 not to talk or interrupt or talk over me when I'm

1 asking a question?

2 A. Yes. Happy to do that.

3 Q. Great. And because this is a remote
4 deposition and I can't see what materials you have
5 in front of you, I just want to ask a few
6 questions.

7 First, do you have any materials in front
8 of you?

9 A. I don't have any written materials.

10 Q. What materials do you have in front of
11 you on your computer?

12 A. On my computer, I have several folders
13 provided to me by counsel that include PDF files
14 corresponding to the exhibits in the IPRs that I
15 understand I'm being deposed for today.

16 Q. Great. And those exhibits that were
17 provided to you by counsel, do those have any
18 notes on them?

19 A. Not that I'm aware of. I've been told
20 that they do not.

21 Q. So you understand that those are clean
22 copies of the exhibits; correct?

23 A. As far as I know, yes.

24 Q. Great. Do you have any other
25 applications open on your computer besides those

1 files?

2 A. This Zoom meeting.

3 Q. Great. But do you -- do you have the
4 Zoom messaging application open?

5 A. You mean the chat function?

6 Q. Yeah, the chat --

7 A. For this? I don't have it open, but I
8 actually see that there are a couple of messages
9 in the chat that I've not read because it's
10 showing a little red "2" next to the chat icon.

11 Q. All right. Well, if anyone -- if
12 Interdigital's counsel attempts to contact you
13 during the deposition via the Zoom -- any kind of
14 message on Zoom, do you agree to inform me of
15 that?

16 A. If that's what I'm expected and required
17 to do, then, of course, I would do that.

18 Q. Okay.

19 MR. HEJNY: And I will not do that, Sam.

20 MR. THACKER: Okay. Great.

21 Q. Okay. So other than Zoom and these PDF
22 files, do you have anything else open on your
23 computer?

24 A. No.

25 Q. Great. Have you ever been engaged as an

1 expert witness in any other cases involving Apple
2 products?

3 A. I think that I have, yes.

4 Q. Do you recall what Apple products were
5 involved in those cases?

6 A. I believe it was iOS devices, but the
7 case that I'm recalling was some years ago, so I
8 would need to -- I would need to refresh my memory
9 exactly on what -- which case that was, and what
10 the subject matter of it was.

11 Q. Got it. Do you recall if the version of
12 iOS that was involved was version 7 or later?

13 A. I do not recall --

14 Q. Okay.

15 A. -- the version.

16 Q. Have you ever been engaged as an expert
17 witness in any other cases involving AirDrop
18 specifically?

19 A. As I sit here today, I don't recall any
20 other cases that specifically involved AirDrop.

21 Q. Thanks. Okay. I'd like to turn to your
22 declaration for the IPR ending in '305 which is
23 Exhibit 2001 in that IPR.

24 (Exhibit 2001 marked.)

25 ///

1 BY MR. THACKER:

2 Q. Can you turn to that exhibit?

3 A. Exhibit 2001 for which IPR?

4 Q. It's the one ending in '305.

5 A. Okay.

6 THE CERTIFIED STENOGRAPHER: Counsel, is
7 that being marked as an exhibit here?

8 MR. THACKER: Yes.

9 A. Okay. I have that open.

10 Q. Okay. Can you turn to paragraph 126 of
11 that exhibit?

12 A. Okay. I'm at paragraph 126.

13 Q. All right. And just to be clear, this is
14 Exhibit 2001 for IPR 2024-00305 involving the '933
15 patent; correct?

16 A. Yes.

17 Q. Okay. Do you agree that Google's Nearby
18 Share is an AirDrop clone?

19 A. There were several related products and
20 features developed by Google that had somewhat
21 confusing naming terminology at various points in
22 time because some of the products changed names,
23 but I would agree that there was a Google product
24 called "Nearby Share" that shared a number of
25 essential characteristics, key characteristics

1 with AirDrop, and came after AirDrop had been
2 released, so could be considered a clone in that
3 respect.

4 Q. Okay. But just looking at paragraph 126,
5 you're quoting an article there that say's
6 "Google's new AirDrop clone"; correct?

7 A. Correct.

8 Q. And in brackets, you added that that
9 clone is [Nearby Share]; correct?

10 A. Correct.

11 Q. Okay. Is it your opinion that Nearby
12 Share detects other nearby devices using
13 bluetooth?

14 A. Let me just refresh my memory on this.

15 Q. Sure. And if it would help --

16 A. Because I said -- --

17 Q. Sorry. Go ahead.

18 A. There were several products developed by
19 Google over the years which were -- had various
20 similarities and differences, so I'm just going to
21 refer to my declaration here and make sure I give
22 you the correct answer.

23 Q. Yeah, take your time.

24 A. Okay. And could you repeat your question
25 for me one more time?

1 Q. Of course. Is it your opinion that
2 Nearby Share detects other devices using
3 bluetooth?

4 A. So nearby -- there was at least one
5 incarnation of Nearby Share that did, in fact, use
6 bluetooth to detect other nearby devices.

7 Q. Great. And did that same incarnation of
8 Nearby Share also transfer files using WiFi?

9 A. Yes, there was also a version of it that
10 transferred files using WiFi.

11 Q. Okay. Can you turn to paragraph 126 of
12 your declaration?

13 A. Okay. I'm at paragraph 126.

14 Q. Great. So it's actually the end of the
15 paragraph 126 on page 56 of your declaration.

16 Do you see the very end of that paragraph
17 where you quoted an article that said that
18 "competitor's alternatives just can't compete with
19 AirDrop."

20 A. Yes, I see that.

21 Q. Okay. And the article that you're
22 quoting there is Exhibit 2034; correct?

23 A. That's what the footnote says, but I can
24 pull up Exhibit 2034 if you want me to confirm
25 that.

1 Q. Sure. Go ahead and pull up Exhibit 2034.

2 A. Okay. There.

3 (Exhibit 2034 marked.)

4 BY MR. THACKER:

5 Q. Are you familiar with the exhibit?

6 A. Yes.

7 Q. Great. Can you read the title of this
8 exhibit?

9 A. "Android's Nearby Share just can't
10 compete with AirDrop."

11 Q. Great. Staying on that first page of
12 Exhibit 2034, can you read the last full paragraph
13 that begins right after the bolded text "it's the
14 eco system, man"? That paragraph starts with "but
15 while."

16 A. You would like me to read the entire
17 paragraph that begins with "but while"?

18 Q. Yes.

19 A. Okay.

20 "But while both AirDrop and Nearby Share
21 are similarly easy to use and about as effective
22 as each other for a simple phone-to-phone
23 transfer, there's still one way in which AirDrop
24 is better -- and it makes it much better -- that's
25 the eco system."

1 Q. Okay. So is it your opinion that this
2 paragraph of Exhibit 2034 asserts that AirDrop is
3 much better than Nearby Share because of the Apple
4 eco system?

5 A. This does say that there is still one way
6 in which AirDrop is better, that's the eco system.

7 Q. Okay. Now moving on to page 2 of that
8 same exhibit, 2034. Can you read the second and
9 third full paragraphs starting with "that's just
10 not something"?

11 A. "That's just not something that Android's
12 Nearby Share can facilitate in the same way.
13 Sure, you can send files between your Android
14 phone and Android tablet, or to a chrome book, but
15 let's be honest, they are far more people with
16 Android phones using iPads and Windows or Mac
17 computers, and you simply can't use Nearby Share
18 on them. That really limits Nearby Share's
19 usability for many people.

20 Q. Great. And can you go ahead and read the
21 subsequent paragraph as well?

22 A. "AirDrop is at once limiting and freeing.
23 Not only can you quickly and share files with your
24 own Apple devices, but you can also do so to and
25 from all of your friends's Apple devices, phones,

1 tablets, laptops, and desktops. In my household,
2 this comes in handy a lot. I can share files
3 directly to my girlfriend's Mac, or iPad, or her
4 iPhone, and she can do the same to me. And it's
5 not just files, you can send boarding passes in
6 Apple wallet, contact details and more, and the
7 devices all know how to automatically handle the
8 content types."

9 Q. Thank you. So is it your opinion that
10 these paragraphs of -- that you just read of
11 Exhibit 2034 explain that a user can use AirDrop
12 to transfer files amongst their different types of
13 devices including their phone, tablet, laptop and
14 desktop?

15 A. I think what this is saying is that while
16 the file transfer capabilities are essentially the
17 same between AirDrop and Nearby Share, that
18 because there are many more Apple devices, that
19 there is the potential for transfer with more
20 devices with AirDrop than there is with Nearby
21 Share which is a function of Apple's importance in
22 the marketplace as opposed to a technical
23 difference between the features themselves.

24 Q. Okay. Great. Thank you. Can you --
25 sticking with Exhibit 2034, do you see the fifth

1 full paragraph on page 2 that starts with "of
2 course"?

3 A. Yes, I see that.

4 Q. Great. And do you see the sentence --
5 the second sentence of that paragraph that starts
6 with "unfortunately"?

7 A. Yes, I see that.

8 Q. Can you read that sentence?

9 A. "Unfortunately, Apple is really the only
10 company that offers a complete device eco system."

11 Q. And then can you move down to the last
12 full paragraph that starts with "it's hard to
13 imagine"?

14 A. I see that.

15 Q. Can you go ahead and read that paragraph?

16 A. Sure.

17 "It's hard to imagine how Google could
18 make a better experience with Android Nearby
19 Share. It's a solid feature, and actually, it's a
20 necessary one that should have been here a long
21 time ago. It handles the basics, but without the
22 weight of a full eco system of products behind it.
23 In no way can it compete with Apple's devices. No
24 Windows support, and a very small market share
25 with Android tablets, Nearby Share's prospects for

1 competing with AirDrop are slim."

2 Q. Thanks.

3 So do you agree that this paragraph you
4 just read of Exhibit 2034 asserts that Nearby
5 Share still couldn't compete with AirDrop, at
6 least in part, because Apple offers an entire eco
7 system of AirDrop-supported products?

8 MR. HEJNY: Object to form

9 A. I think that this is pointing out that
10 Apple has a far larger share of the tablet market
11 than Android in the United States, and that Apple
12 also makes laptop and desktop computers. That's
13 what's referred to here as the full eco system of
14 products, and I would agree with that
15 characterization of the scope and diversity of
16 Apple's products versus those of Android.

17 Whether or not that makes AirDrop's
18 prospects for competing or Nearby Share's
19 prospects for competing with AirDrop to be slim, I
20 think that's speculation on the part of this
21 particular author, and I haven't offered a
22 specific opinion on that."

23 Q. Okay. I'd like to at this point turn
24 back to your declaration, Exhibit 2001 in the IPR
25 ending '305. Can you open that exhibit?

1 A. Sure. I have it open.

2 Q. So you reviewed the petition and the
3 materials I cited therein; correct?

4 A. Correct.

5 Q. Do you have the exhibits cited in the
6 petition in front of you?

7 A. I believe I have them -- the PDF files of
8 those exhibits in a folder that was provided to me
9 by counsel. I believe they're all there.

10 Q. Okay. Can you pull up Exhibits 1005 --
11 start with that one.

12 (Exhibit 1005 marked.)

13 MR. THACKER: Yes. I am referring to
14 Exhibit 1005 in IPR2024-00305 which is an account
15 application publication to McKillop referred to by
16 the Petitioners. McKillop.

17 (Discussion held off the record.)

18 BY MR. THACKER:

19 Q. Okay, Dr. Edwards. So you have
20 Exhibit 1005 up?

21 A. Yes, I do.

22 Q. And that's -- are you okay if we refer to
23 that as McKillop?

24 A. Sure.

25 Q. Great. In your opinion, does McKillop

1 disclose using bluetooth for detection and Wi-Fi
2 for transfer?

3 MR. HEJNY: Object to form.

4 A. I didn't offer any opinions on what is
5 disclosed by McKillop.

6 Q. Okay. Can you go to the abstract in
7 McKillop?

8 A. Sure. I have the first page open still.

9 Q. Great. Does the abstract of McKillop
10 state -- and this is starting on the second line
11 of the abstract: "The portable device includes
12 circuitry for providing wireless communications,
13 utilizing a low-power, relatively slow
14 communications protocol, such as bluetooth, to
15 establish a communications path between two
16 wireless devices"?

17 A. I believe you read that correctly, yes.

18 Q. And does the next sentence recite, "When
19 high speed communications are preferred, the two
20 devices can agree to switch to a different
21 high-speed protocol such as Wi-Fi for
22 communications"?

23 A. You read that exactly.

24 Q. Great. So does McKillop disclose using
25 bluetooth for detection and Wi-Fi for transfer?

1 A. Again, I haven't offered any opinions on
2 what's disclosed by McKillop. That's not within
3 the scope of the opinions that I offered.

4 Q. Okay. But based on what I just read from
5 the abstract of McKillop, does the abstract of
6 McKillop disclose using bluetooth to establish
7 communications with another device?

8 MR. HEJNY: Object to form.

9 A. It says that it's disclosing a portable
10 device that includes circuitry for providing
11 wireless communications to establish a
12 communications path between two wireless devices.
13 And I paraphrased that sentence, but that's what
14 disclosed here regarding bluetooth.

15 Q. And the subsequent sentence of McKillop
16 discloses switching to Wi-Fi for subsequent
17 communications; correct?

18 MR. HEJNY: Object to form.

19 A. It discloses switching to a different
20 high-speed protocol such as Wi-Fi "when high speed
21 communications are preferred."

22 (Exhibit 1006 marked.)

23 BY MR. THACKER:

24 Q. Can you open what has been marked as
25 Exhibit 1006, referred to by the petitioner as

1 Hoddie?

2 A. Okay. I have that open.

3 Q. Can you turn to page 4 of Hoddie?

4 A. Okay.

5 Q. Sorry. Scratch that. Page 3.

6 A. Okay. The -- this looks like there's
7 printed numbering on the pages that are different
8 than the PDF page numbers. Do you want me to go
9 to the third page on this PDF document or the page
10 that has the printed number 3 at the bottom?

11 Q. Yeah. The page that has the printed
12 number 3 that outlined one says detailed
13 description.

14 A. Okay. It's the PDF document I have.
15 That's at page 5 of the document. I'm on that
16 page.

17 Q. Yeah, it's page 5 of the PDF, but has a
18 printed number 3 on it.

19 A. Okay. I'm there.

20 Q. Okay. Can you look down at line 30?

21 A. Okay. I see line 30.

22 Q. Do you agree that lines 30 to 31 of
23 Hoddie state, "the PDA searches for other devices
24 available for communication using bluetooth."

25 A. You read that portion of the sentence

1 correctly.

2 Q. So it's your opinion that Hoddie
3 discloses using bluetooth to detect other devices?

4 MR. HEJNY: Object to form.

5 A. I have not offered any opinions on
6 whether Hoddie discloses using bluetooth to detect
7 other devices.

8 Q. Okay. Can you move on to page 4, printed
9 page 4? So just the next page in the PDF of
10 Hoddie.

11 A. Okay. I'm there.

12 Q. And go to lines 20 to 21 roughly.

13 A. Okay. I see those lines.

14 Q. Do these lines of Hoddie state, "the PDA
15 sends the file to the laptop across the Wi-Fi
16 connection"?

17 A. You read that part of the sentence
18 correctly.

19 Q. So in your opinion, does Hoddie disclose
20 using Wi-Fi to transfer files to another device?

21 MR. HEJNY: Object to form.

22 A. Again, my answer would be the same, which
23 is that what is disclosed in Hoddie, referring
24 using a a Wi-Fi connection, is not within the
25 scope of the opinions that I've given in this

1 matter, so I haven't offered an opinion on that
2 question.

3 Q. Okay. So it's your testimony today that
4 you have no opinion on what McKillop discloses?

5 A. I do not believe I've offered any opinion
6 on what McKillop discloses.

7 Q. And it's also your testimony today that
8 you have no opinion on what Hoddie discloses?

9 A. Again, I don't believe I've offered any
10 opinions on that question. Hoddie is mentioned in
11 my declaration once in passing, but it's not with
12 respect to giving any opinion regarding to what
13 extent it is closes the specific things you're
14 asking about.

15 Q. Give me one second.

16 Do you recall which portion of your
17 declaration you're referring to when you said that
18 you referenced Hoddie in passing?

19 A. I would have to find that for you. It
20 may be a declaration for one of the other IPRs.

21 Q. That's correct. I believe that was in
22 your declaration for the IPRs ending in '537 and
23 '538. That sound right?

24 A. Yes. Sorry.

25 Q. Can you open up Exhibit 1001 for those

1 IPRs ending in '537 and '538? That's been marked
2 as Exhibit 2014 in IPR ending in '537 and '538.

3 (Exhibit 2014 marked.)

4 A. Exhibit 2014 all up, in the one IPR
5 ending '537, and I have that open.

6 Q. Great. Can you go to to paragraph 85?

7 A. Sure.

8 Okay I am at paragraph 85.

9 Q. Is it there you refer to Hoddie?

10 A. This paragraph does refer to Hoddie, yes.

11 Q. Did this paragraph note that the
12 petitioner cites to Hoddie as an example of using
13 bluetooth and Wi-Fi in conjunction with one
14 another?

15 A. Yes, it does say that.

16 Q. Okay. Were there any technological
17 hurdles in December of 2008 that would have made
18 it different for a skilled artisan to implement
19 Wi-Fi for transfer in a single device?

20 MR. HEJNY: Object to form.

21 A. Here I think there are always some degree
22 of technological hurdles to be overcome when --
23 when developing a relatively complex hardware and
24 software device, like a mobile device. I think
25 that many of those technological hurdles were

1 things that were -- strategies for overcoming
2 those hurdles were things that would have been
3 known to a person of ordinary skill in the art, so
4 there would be a set of standard design and
5 engineering tasks that would need to be performed
6 in order to make those two different wireless
7 protocols coexist within a single device, but I
8 think it was within the ability of a person of
9 ordinary skill to be able to perform those design
10 and engineering tasks.

11 Q. Is it your opinion that it would have
12 been relatively straightforward for a skilled
13 artisan to develop those design tasks that you
14 note?

15 MR. HEJNY: Object to form.

16 A. I don't know if I would characterize it
17 as "relatively straightforward," but I think that
18 designing a device that includes both bluetooth
19 and Wi-Fi would have been within the ability of a
20 person of ordinary skill if the -- if that person
21 was motivated to create a device with that
22 combination.

23 Q. Okay. I'd like to return to your
24 declaration in IPR2024-00305 as Exhibit 2001. Can
25 you open that exhibit?

1 A. Okay. I'll switch back to that document.

2 Q. In this declaration, you map claim 1 of
3 the '933 patent to the version of AirDrop released
4 on September 18, 2013, for iOS 7; correct?

5 A. That's correct.

6 Q. You also note that an earlier version of
7 AirDrop was available on Mac on OSX Lion; correct?

8 A. That's true. Yes.

9 Q. And that version of AirDrop was released
10 in 2011; correct?

11 A. I believe that's correct. Let me just
12 confirm that to be absolutely sure.

13 Q. Sure. Take your time?

14 A. Yes. Paragraph 63 says that AirDrop was
15 first introduced in Mac -- that's a typo. It
16 should say Mac OSX Lion in 2011.

17 Q. Do you know whether the earlier version
18 of AirDrop used bluetooth for detection?

19 A. I don't know that every version of it
20 used bluetooth for detection. There were at least
21 some of versions of AirDrop for Mac OS that later
22 became known as Mac OS that did use bluetooth for
23 detection.

24 Q. Okay. Can you go ahead and open
25 Exhibit 20- -- what has been marked as 2025.

1 (Exhibit 2025 marked.)

2 A. Sorry. Just opened the wrong one here.
3 2025. And that's for the IPR ending in '537?

4 Q. No. This is for the IPR ending '305, I
5 believe.

6 A. Okay. Sorry.

7 Okay. Exhibit 2025 for the '305 IPR.

8 Q. Yes.

9 A. Okay. I have that open.

10 Q. Okay. Great. Can you go to the second
11 to last paragraph of that exhibit where it starts
12 with "Apple has a great feature."

13 Do you see that? The second to last
14 paragraph of page 1 "Apple has a great feature."

15 A. Of page 1?

16 Q. Yes.

17 A. I see that.

18 Q. Do you see the paragraph that starts with
19 "Apple has a great feature"?

20 A. Yes, I do.

21 Q. Do you agree that that paragraph states,
22 "Apple has a great feature built into to OSX
23 called AirDrop. This feature allows files to be
24 sent between Macs that are connected to the same
25 Wi-Fi network"?

1 A. Yes, I see that.

2 Q. Based on then description, do you agree
3 that this version of AirDrop uses Wi-Fi to
4 communicate with other Macs?

5 MR. HEJNY: Object to form.

6 A. This version did use Wi-Fi, yes.

7 Q. Great. Did this version use bluetooth?

8 A. What do you mean by this version?

9 Q. The version of -- the version of AirDrop
10 for Mac OSX that predates the AirDrop version for
11 iOS 7. Does that version use bluetooth to detect
12 other Mac devices?

13 MR. HEJNY: Object to form.

14 A. There may have been some period of time
15 where there was a capability to do device
16 detection with bluetooth on OSX devices, but there
17 were -- the very earliest versions of AirDrop for
18 OSX did not use bluetooth.

19 Q. Continuing on that same Exhibit 2025,
20 does the article state that "AirDrop for OSX is a
21 great way to share files between systems, even big
22 ones like video files or Photoshop files"?

23 A. This is stating that it's a -- what this
24 author describes as a great way to share files
25 between Mac laptops and desktops, but is critical

1 of its limitation that it is not able to perform
2 similar transfers with iOS devices.

3 MR. THACKER: I think now would be a good
4 time for a break, Dr. Edwards, if you and Scott
5 are okay with that.

6 MR. HEJNY: That's fine with me.

7 THE WITNESS: Yeah.

8 (Recess.)

9 BY MR. THACKER:

10 Q. Dr. Edwards, are you familiar with the
11 bluetooth service discovery protocol?

12 A. Yes.

13 Q. Do you agree that the bluetooth service
14 discovery protocol involves admitting an inquiry
15 message to all nearby devices?

16 A. Part of that protocol does include a
17 mechanism for a device to interrogate what other
18 devices are within its proximity.

19 Q. What do you mean by interrogate?

20 A. To find out what the other devices are
21 available within the transmission range of that
22 protocol.

23 Q. So do you agree that to determine the
24 devices that are nearby, that the device emits a
25 signal to all nearby devices?

1 MR. HEJNY: Object to form.

2 A. I would need to refer to the standard to
3 recall the specifics, but it does involve a series
4 of transmissions, and to broadcast, essentially,
5 between the devices, that allows them to discover
6 that the other is within its -- within its
7 transmission range.

8 Q. What do you mean by broadcast?

9 A. Well, as I said, as far as the specifics
10 go, I would need to refresh my memory by looking
11 at the technical standards themselves, but it
12 involves a wireless transmission that other
13 devices within that transmission range can receive
14 and that transmission contains information about
15 about the device that is making the transmission.

16 Q. So is that broadcast by the device that's
17 making that initial transmission, is that a
18 solicitation?

19 MR. HEJNY: Object to form.

20 A. It's a solicitation in the sense that it
21 is a message that other devices will know is an
22 attempt to discovery what other devices are within
23 that transmission range.

24 Q. Thanks. I have nothing further at this
25 time.

1 MR. HEJNY: No further questions for the
2 deposition?

3 MR. THACKER: Yes, correct.

4 MR. HEJNY: I have no questions. I'd
5 like to reserve the ability for the witness to
6 review the transcript and sign.

7 THE CERTIFIED STENOGRAPHER: Okay, great.
8 Off the record.

9 (Discussion held off the record.)

10 MR. THACKER: This deposition is for four
11 IPRs 2024-00305, 2024-00306, 2024-00537, and
12 2024-00538.

13 MR. HEJNY: Agreed. Thank you.

14 (Deposition concluded at 10:16 A.M.)

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DEPONENT: GEORGE EDWARDS, PH.D.

PG.	LN.	NOW READS	SHOULD READ	REASONS
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[illegible]

SIGNATURE _____ DATE _____

1 STATE OF CALIFORNIA)
) SS.
2 COUNTY OF LOS ANGELES)
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4

5 I, GEORGE EDWARDS, PH.D., HEREBY CERTIFY
6 UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE
7 STATE OF CALIFORNIA THAT THE FOREGOING IS TRUE AND
8 CORRECT.

9 EXECUTED THIS _____ DAY OF _____,
10 2024, AT _____, CALIFORNIA.

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16 GEORGE EDWARDS, PH.D.
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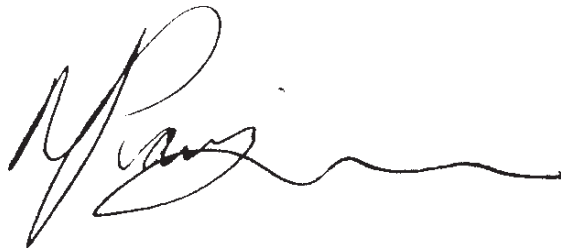
CERTIFICATE OF SHORTHAND REPORTER - NOTARY PUBLIC

I, NATALIE PARVIZI-AZAD, REPORTER AND
NOTARY PUBLIC WITHIN AND FOR THE STATE OF
CALIFORNIA DO HEREBY CERTIFY:

THAT GEORGE EDWARDS, PH.D., THE WITNESS
WHOSE DEPOSITION IS HEREINBEFORE SET FORTH, WAS
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.

I FURTHER CERTIFY THAT THE ADVERSE PARTY,
PETITIONER, WAS REPRESENTED BY COUNSEL AT THE
DEPOSITION.

I FURTHER CERTIFY THAT THE DEPOSITION OF
GEORGE EDWARDS, PH.D. OCCURRED REMOTELY THROUGH
ZOOM VIDEOCONFERENCE ON TUESDAY, DECEMBER 3, 2024,
COMMENCING AT 9:03 A.M. TO 10:16 A.M..



1 I FURTHER CERTIFY THAT I AM NOT RELATED
2 TO ANY OF THE PARTIES TO THIS ACTION BY BLOOD OR
3 MARRIAGE, I AM NOT EMPLOYED BY OR AN ATTORNEY TO
4 ANY OF THE PARTIES TO THIS ACTION, AND THAT I AM
5 IN NO WAY INTERESTED, FINANCIALLY OR OTHERWISE, IN
6 THE OUTCOME OF THIS MATTER.

7 IN WITNESS WHEREOF, I HAVE HEREUNTO SET
8 MY HAND THIS 17TH DAY OF DECEMBER, 2024.

9 MY COMMISSION EXPIRES:

10 NOVEMBER 30, 2024
11
12

13 NOTARY PUBLIC IN AND FOR THE
14 STATE OF CALIFORNIA
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