

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

META PLATFORMS, INC.,

Petitioner,

v.

JAWBONE INNOVATIONS, LLC,

Patent Owner.

Patent No. 7,246,058

Filing Date: May 30, 2002

Issue Date: July 17, 2007

Inventor: Gregory C. Burnett

Title: DETECTING VOICED AND UNVOICED SPEECH
USING BOTH ACOUSTIC AND NONACOUSTIC SENSORS

Case No. IPR2023-01352

REMOTE DEPOSITION

OF

DAVID V. ANDERSON, Ph.D.

Reported by:

Robin LaFemina, RPR, CLR

Job No.: SY 9344

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June 11, 2024

10:09 a.m.

REMOTE DEPOSITION of DAVID V.
ANDERSON, Ph.D., held via Zoom, with all
parties appearing from their respective
locations, before Robin LaFemina, a
Registered Professional Reporter, Certified
LiveNote Reporter and Notary Public within
and for the State of New York.

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APPEARANCES:
(ALL PARTIES APPEARING REMOTELY)

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BY: JACOB OSTLING, ESQ.
Jostling@fabricant.com

1
2 THE COURT REPORTER: Good
3 morning. Today's date is June 11,
4 2024 and the time is approximately
5 10:09 a.m.

6 My name is Robin LaFemina
7 and I am the court reporter
8 representing TransPerfect Legal
9 Solutions.

10 This deposition is being
11 taken remotely and the court
12 reporter will not be physically
13 present with the witness whose
14 deposition is being taken.

15 The parties agree not to
16 challenge the validity of any
17 oath administered by the court
18 reporter, even if the court
19 reporter is a notary of a state
20 other than where the deponent is
21 currently physically located.

22 Would each attendee,
23 starting with the examining
24 attorney, please indicate your
25 agreement by stating your name,

1
2 your firm affiliation, who you
3 represent, and your agreement on
4 the
5 record, after which I will swear
6 in the witness.

7 MR. OSTLING: Jacob Ostling
8 from the law firm of Fabricant
9 LLP on behalf of Patent Owner,
10 Jawbone Innovations.

11 MS. WANG: Grace Wang from
12 the law firm Paul Hastings on
13 behalf of Petitioner, Meta.

14 THE COURT REPORTER: Dr.
15 Anderson, would you raise your
16 right hand, please.

17 Do you swear the testimony
18 you are about to give will be the
19 truth, the whole truth, and
20 nothing but the truth, and do you
21 acknowledge that although I am
22 not physically present in the
23 room with you, that this oath is
24 administered with the same force
25 and effect as though I were?

1 Anderson

2 THE WITNESS: Yes.

3 THE COURT REPORTER: You

4 can put your hand down.

5 Counsel, you may begin.

6 MR. OSTLING: Thank you.

7 EXAMINATION BY

8 MR. OSTLING:

9 Q. Sir, can you please state
10 your full name for the record?

11 A. It's David Verl Anderson.
12 The Verl is V-E-R-L.

13 Q. Thank you.

14 And, sir, have you been
15 deposed before?

16 A. Yes.

17 Q. Do you know roughly how many
18 times you've been deposed?

19 A. Roughly more than a dozen and
20 less than 20, I think.

21 Q. Okay.

22 So in that case, I will
23 assume that you're familiar with the
24 ground rules already. Just to recap, if
25 you need to take a break at any time,

1 Anderson
2 just let me know and we can take a break.
3 I just ask that if there's a question
4 pending, you answer that question before
5 we take the break.

6 Is that okay?

7 A. Yes.

8 Q. And I'll ask you to listen
9 carefully to my questions. If you have
10 any difficulty understanding the
11 question, please let me know and I'll try
12 to rephrase it. Otherwise I'll assume
13 that you understood the question.

14 Is that okay?

15 A. Yes.

16 Q. Thank you.

17 And, sir, you understand that
18 we're here today with respect to the
19 declaration that you submitted for
20 IPR2023-01352?

21 A. Yes. I don't remember the
22 numbers, but it's the IPR for the '058
23 patent or Patent No. 7,246,058 filed by
24 Meta.

25 Q. And is it okay if I refer to

1 Anderson

2 U.S. Patent No. 7,246,058 as the '058
3 patent today?

4 A. Yes.

5 Q. Sir, if you just give me a
6 moment, I'm going to upload an exhibit
7 into the chat.

8 (Exhibit 1003 previously
9 marked.)

10 Q. All right, sir, I've shared a
11 document in the chat. Can you please
12 open that up and confirm that it's a copy
13 of the declaration that you submitted in
14 this proceeding?

15 A. I'm opening it now.

16 Just so you know, I have two
17 displays. If you see me looking over to
18 the right, that's where I'll be putting
19 the documents.

20 Q. That's absolutely fine. I
21 have the same setup.

22 A. Okay.

23 Q. So just to reask the question
24 for a clean record, can you please
25 confirm that the document shared in chat

1 Anderson

2 is a copy of the declaration that you
3 submitted in this proceeding?

4 A. Yes. It is.

5 Q. Thank you.

6 And, sir, the caption of that
7 declaration is for IPR2022-00623 filed by
8 Google against Jawbone, so is it fair to
9 say that the declaration that you
10 submitted in this proceeding is a copy of
11 the one that was originally filed in that
12 Google proceeding?

13 A. Yes.

14 Q. Okay.

15 And this declaration contains
16 your obviousness opinions based on the
17 Meisel, Kaneda, Freidin and Lyons
18 references; is that correct?

19 A. Yes.

20 Q. And your opinions on those
21 references -- strike that.

22 Your obviousness opinions on
23 those references have not changed since
24 the time you submitted your declaration
25 in the prior proceeding for Google;

1 Anderson

2 correct?

3 A. That is correct.

4 Q. And, sir, do you recall that
5 you were deposed regarding your opinions
6 in this declaration in the Google
7 proceeding in February of 2023?

8 A. Yes.

9 Q. And to the best of your
10 knowledge, were the statements that you
11 made during that deposition true?

12 A. Yes.

13 Q. Okay, sir, I'd like to shift
14 gears a little bit, and I have some more
15 general questions about your review of
16 the '058 patent.

17 Firstly, do you have an
18 understanding of the difference between
19 specifications and the claims in a
20 patent?

21 A. I'm not a lawyer, but I do
22 understand the specification is
23 essentially the descriptive part of the
24 patent and the claims are what delineate
25 exactly what is protected by that patent.

1 Anderson

2 Q. And do you have an
3 understanding of whether the figures are
4 part of the specification?

5 A. I believe they are.

6 Q. In your own words, can you
7 explain how you relied on the
8 specification of the '058 patent in
9 forming your obviousness opinions?

10 MS. WANG: Objection.
11 Vague.

12 A. I -- yeah, it seems pretty
13 general. I read the entire patent from
14 cover to cover very carefully.

15 Q. Can you be any more specific
16 than that?

17 MS. WANG: Same objection.

18 A. Sure. When looking,
19 evaluating obviousness of the patent,
20 really what I'm evaluating is the
21 obviousness of the claims of the patent
22 and the claims are to be understood in
23 light of the specification and also of
24 one of ordinary skill in the art in the
25 field at the time of the patent.

1 Anderson

2 Q. Sir, is it fair to say that
3 it's your opinion that certain parts of
4 the '058 patent specification reflect the
5 knowledge of one of ordinary skill in the
6 art at the time of the invention?

7 MS. WANG: Objection.

8 Vague.

9 A. Are you asking if the
10 specification is obvious?

11 Q. No, sir. I'm asking if in
12 your declaration you have stated the
13 opinion that the specification or certain
14 parts of the specification of the '058
15 patent are a statement of the knowledge
16 of one of ordinary skill in the art at
17 the time of the invention.

18 MS. WANG: Objection.

19 Vague.

20 A. Okay. I don't have my
21 declaration memorized, especially since I
22 wrote it 18 months ago. I wouldn't be
23 surprised. If there's a specific area
24 you'd like to point me to, I can talk
25 about that.

1 Anderson

2 Q. Okay.

3 Well, sir, you recall that
4 the '058 specification discusses the
5 XCORR -- spelled X-C-O-R R -- function?

6 A. Yes.

7 Q. And was it your opinion that
8 the portions of the '058 specification
9 discussing XCORR are essentially a
10 statement of the knowledge of one of
11 ordinary skill in the art?

12 MS. WANG: Objection.

13 Vague.

14 A. As I recall, in the '058
15 patent, in column 5, it discusses --
16 it says, and optionally the
17 cross-correlation (XCORR) between, and
18 then it gives some data, and then from
19 there on out it refers to XCORR. XCORR
20 is in all caps. So cross-correlation was
21 well understood in the art. XCORR in all
22 caps inasmuch as it's just referring to
23 the concept of cross-correlation, which
24 was well understood in the art, and in my
25 declaration I also discussed that that

1 Anderson

2 particular abbreviation is used in some
3 programming languages such as MATLAB for
4 cross-correlation function and that was
5 known in the art. I don't know if that's
6 what was being referred to. That was an
7 observation. XCORR was known, and
8 because they happen to use that
9 abbreviation, it called to mind the
10 commonly integrated correlation function
11 in MATLAB.

12 Q. Sir, and you also discuss --
13 strike that.

14 In forming your obviousness
15 opinions, you relied at least in part on
16 Freidin's correlator; correct?

17 A. Yes.

18 Q. And it was your opinion that
19 a POSITA would see Freidin's correlator
20 as a form of cross-correlation; right?

21 A. Yes.

22 Q. And is it fair to say that
23 you viewed the statement -- strike that.

24 Is it fair to say that you
25 viewed the disclosure regarding XCORR in

1 Anderson

2 the '058 patent specification as a fair
3 statement of a POSITA's knowledge based
4 on Freidin's correlator?

5 MS. WANG: Objection.

6 Vague.

7 A. I don't -- let me parse what
8 you're asking here. Are you asking --
9 you're tying the XCORR function to
10 Freidin to one of a POSITA's knowledge
11 and I'm not quite sure of the link that
12 you're asking about.

13 Q. Sir, I'm asking if that's
14 what you did.

15 MS. WANG: Same objection.

16 A. So I need to know exactly
17 what you're asking before I can tell you
18 if it's what I did.

19 Q. Well, sir, is it fair to say
20 that you assumed that a POSITA reading of
21 Freidin's correlator would know of the
22 statements related to XCORR in the '058
23 patent specification?

24 MS. WANG: Objection.

25 Vague.

1 Anderson

2 A. So I think you're asking if
3 somebody who's reading Freidin would know
4 that the '058 patent also talked about
5 cross-correlation?

6 Q. Not exactly, sir.

7 So you assumed that -- strike
8 that.

9 It was your conclusion that
10 the '058 specification statements related
11 to XCORR reflected a POSITA's knowledge
12 at the time of the invention; right?

13 MS. WANG: Objection.

14 Mischaracterizes testimony and
15 vague.

16 A. Okay. So -- I apologize, I'm
17 still trying to unpack this. The '058
18 patent discusses using cross-correlation.
19 It does not define it. It just says what
20 the signals it's cross-correlating and
21 that cross-correlation can be used. That
22 is calculated to 15 delays which
23 corresponds to just 2 milliseconds --
24 just under 2 milliseconds at 16 -- or
25 8 kilohertz. It also discusses that

1 Anderson

2 cross-correlation can be useful when the
3 sensor signal is distorted or modulated
4 and that it's more susceptible to errors
5 from acoustic noise in high environment
6 and could be almost useless at less than
7 zero to be a signal to noise ratio.

8 So what would be known from
9 that? Well, there's nothing here
10 disclosed about cross-correlation, the
11 actual function, so it's assumed that one
12 of ordinary skill in the art would
13 know -- would associate meaning with
14 cross-correlation. It talked about
15 15 delays being under 2 milliseconds at
16 8 kilohertz, that's simple math that
17 anyone in signal processing can do. It
18 talked about how under high noise, the
19 cross-correlation values can be incorrect
20 or distorted. It also talks about how it
21 can be useful if signals are distorted or
22 modulated in some fashion. All of those
23 things are known, or I should say were
24 known.

25 Reading further down, it also

1 Anderson
2 states that you can compare
3 cross-correlation to thresholds for
4 detection. That also was known. And,
5 in general, cross-correlation is a
6 well-known method for determining when
7 two signals tend to move in the same way.

8 Q. Okay, sir. And you also
9 attributed all that knowledge to a POSITA
10 based on Freidin's reference to a
11 correlator; correct?

12 MS. WANG: Objection.
13 Mischaracterizes the document and
14 vague.

15 A. All of that knowledge is
16 something that's taught in basic signal
17 processing classes. Freidin mentions
18 some of those things, and so we put them
19 in there, so you don't have to just take
20 my word for it, but I'm basing that on
21 years of signal processing research,
22 teaching undergraduate students and
23 graduate students single processing
24 concepts. These are all basic concepts.

25 Q. So based on your conclusions

1 Anderson
2 of the knowledge of a POSITA, you thought
3 it was fair to take what you characterize
4 as basic concepts listed in the
5 specification of the '058 patent and
6 combine them with the disclosure of
7 Freidin? Is that what you're saying?

8 MS. WANG: Mischaracterizes
9 the witness's testimony.

10 A. The patent discusses using
11 cross-correlation with a threshold to
12 detect the coincidence or similarity or
13 relationship of signals. That is
14 well-understood in the prior art.
15 Freidin also teaches a way of doing such,
16 implementing such a thing in a low power
17 digital circuit and has the advantage in
18 case it's not entirely clear to the Court
19 or the Board, that it mentions then using
20 threshold detectors -- thresholds to
21 detect the presence or absence of certain
22 signal characteristics.

23 Q. All right. Thank you, sir.
24 With that, I'm going to pass the witness.

25 MS. WANG: I have no questions.

Anderson

MR. FABRICANT: Okay. I
think that we're done here.

THE COURT REPORTER: We are
off the record at 10:30 a.m.

A C K N O W L E D G E M E N T

I, DAVID V. ANDERSON, Ph.D.,
hereby certify that I have read
the transcript of my testimony
taken under oath in my deposition
of June 11, 2024; that the
transcript is a true, complete
and correct record of what was
asked, answered and said during
this deposition, and that the
answers on the record as given by
me are true and correct.

DAVID V. ANDERSON, Ph.D.

Subscribed and sworn to
before me this ____ day
of _____, 20__.

NOTARY PUBLIC

I N D E X

WITNESS	EXAMINATION BY	PAGE
David V. Anderson, Ph.D.	Mr. Ostling	6

** NO EXHIBITS MARKED **

PREVIOUSLY MARKED EXHIBITS:

Exhibit 1003

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C E R T I F I C A T E

STATE OF NEW YORK)
) ss.:
COUNTY OF NASSAU)

I, ROBIN LaFEMINA, a Registered
Professional Reporter, Certified LiveNote
Reporter and Notary Public, do hereby
certify:

That DAVID V. ANDERSON, Ph.D.,
the witness whose deposition is hereinbefore
set forth, was duly sworn by me and that such
deposition is a true record of the testimony
given by such witness.

I further certify that I am not
related to any of the parties to this action
by blood or marriage; and that I am in no
way interested in the outcome of this matter.

IN WITNESS WHEREOF, I have
hereunto set my hand this day of ,
2024.

ROBIN LaFEMINA

ERRATA SHEET

CASE NAME: META V. JAWBONE

DATE OF DEPOSITION: 6/11/24

WITNESS' NAME: DAVID V. ANDERSON, Ph.D.

PAGE/LINE(S)/ CHANGE REASON

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DAVID V. ANDERSON, Ph.D.

SUBSCRIBED AND SWORN TO
BEFORE ME THIS _____ DAY
OF _____, 20__.

NOTARY PUBLIC

MY COMMISSION EXPIRES _____

A abbreviation 14:2 14:9 absence 19:21 absolutely 8:20 acknowledge 5:21 acoustic 1:15 17:5 action 23:16 actual 17:11 administered 4:17 5:24 advantage 19:17 affiliation 5:2 ago 12:22 agree 4:15 agreement 4:25 5:3 Anderson 1:20 2:10 5:15 6:1,11 7:1 8:1 9:1 10:1 11:1 12:1 13:1 14:1 15:1 16:1 17:1 18:1 19:1 20:1 21:4,17 22:5 23:10 24:4,20 answer 7:4 answered 21:11 answers 21:13 apologize 16:16 APPEAL 1:3 APPEARANCES 3:2 appearing 2:11 3:3 approximately 4:4 area 12:23 art 11:24 12:6,16 13:11,21,24 14:5 17:12 19:14 asked 21:11 asking 12:9,11 15:8 15:8,12,13,17 16:2 associate 17:13 assume 6:23 7:12 assumed 15:20 16:7 17:11 attendee 4:22 attorney 4:24	Attorneys 3:6,14 attributed 18:9 Avenue 3:8,16 a.m 2:7 4:5 20:5 B based 9:16 15:3 18:10,25 basic 18:16,24 19:4 basing 18:20 behalf 5:9,13 believe 11:5 best 10:9 bit 10:14 blood 23:17 Board 1:3 19:19 break 6:25 7:2,5 Burnett 1:13 C C 1:13 21:2 23:2,2 calculated 16:22 called 14:9 caps 13:20,22 caption 9:6 carefully 7:9 11:14 case 1:16 6:22 19:18 24:3 certain 12:3,13 19:21 Certified 2:13 23:7 certify 21:5 23:9,15 challenge 4:16 CHANGE 24:5 changed 9:23 characteristics 19:22 characterize 19:3 chat 8:7,11,25 circuit 19:17 claims 10:19,24 11:21,22 classes 18:17 clean 8:24 clear 19:18 CLR 1:24 coincidence 19:12 column 13:15	combine 19:6 COMMISSION 24:25 commonly 14:10 compare 18:2 complete 21:9 concept 13:23 concepts 18:24,24 19:4 conclusion 16:9 conclusions 18:25 confirm 8:12,25 contains 9:15 copy 8:12 9:2,10 correct 9:18 10:2,3 14:16 18:11 21:10 21:14 correlation 14:10 correlator 14:16,19 15:4,21 18:11 corresponds 16:23 Counsel 6:5 COUNTY 23:5 court 4:2,7,11,17 4:18 5:14 6:3 19:18 20:4 cover 11:14,14 cross-correlating 16:20 cross-correlation 13:17,20,23 14:4 14:20 16:5,18,21 17:2,10,14,19 18:3,5 19:11 currently 4:21 D D 21:2 22:2 data 13:18 date 1:11,12 4:3 24:3 David 1:20 2:9 6:11 21:4,17 22:5 23:10 24:4,20 day 21:20 23:20 24:22 declaration 7:19	8:13 9:2,7,9,15,24 10:6 12:12,21 13:25 define 16:19 delays 16:22 17:15 delineate 10:24 deponent 4:20 deposed 6:15,18 10:5 deposition 1:18 2:9 4:10,14 10:11 21:7,12 23:11,13 24:3 descriptive 10:23 detect 19:12,21 DETECTING 1:14 detection 18:4 detectors 19:20 determining 18:6 difference 10:18 difficulty 7:10 digital 19:17 disclosed 17:10 disclosure 14:25 19:6 discuss 14:12 discussed 13:25 discusses 13:4,15 16:18,25 19:10 discussing 13:9 displays 8:17 distorted 17:3,20 17:21 document 8:11,25 18:13 documents 8:19 doing 19:15 dozen 6:19 Dr 5:14 duly 23:12 E E 21:2,2,2 22:2 23:2,2 effect 5:25 entire 11:13 entirely 19:18	environment 17:5 ERRATA 24:2 errors 17:4 especially 12:21 ESQ 3:10,20 essentially 10:23 13:9 evaluating 11:19 11:20 exactly 10:25 15:16 16:6 EXAMINATION 6:7 22:4 examining 4:23 exhibit 8:6,8 22:11 EXHIBITS 22:7,9 EXPIRES 24:25 explain 11:7 F F 23:2 Fabricant 3:13 5:8 20:2 fair 9:8 12:2 14:22 14:24 15:2,19 19:3 familiar 6:23 fashion 17:22 February 10:7 field 11:25 figures 11:3 filed 7:23 9:7,11 Filing 1:11 fine 8:20 firm 5:2,8,12 Firstly 10:17 force 5:24 form 14:20 forming 11:9 14:14 forth 23:12 Freidin 9:17 15:10 16:3 18:17 19:7 19:15 Freidin's 14:16,19 15:4,21 18:10 Fremd 3:16 full 6:10
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