

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

AMAZON.COM, INC.,
AMAZON.COM SERVICES, LLC,
and AMAZON WEB SERVICES,
INC.,

Petitioners,

VS.

SOUNDCLEAR TECHNOLOGIES,
LLC,

Patent Owner.

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Case No. IPR2025-00565
U.S. Patent No.
11,069,337

REMOTE ORAL DEPOSITION OF
JOSEPH MCALEXANDER
FEBRUARY 5, 2026

DEPOSITION of JOSEPH MCALEXANDER,
produced as a witness at the instance of the
Petitioners, and duly sworn, was taken in the
above-styled and numbered cause on the 5th day of
February, 2026, from 10:58 a.m. to 2:22 p.m., before
Christy R. Sievert, CSR, RPR, in and for the State
of Texas, reported remotely by machine shorthand,
pursuant to the Federal Rules of Civil Procedure and
the provisions stated on the record or attached
hereto.

Amazon v. SoundClear
US Patent 11,069,337
Amazon EX-1201

1 A P P E A R A N C E S

2 (Appearing Remotely)

3

4 FOR THE PETITIONERS:

5 MR. COLIN B. HEIDEMAN
6 MR. NATHAN D. REEVES
7 Morgan, Lewis & Bockius, LLP
8 1301 Second Avenue, Suite 3000
9 Seattle, Washington 98101
10 colin.heideman@morganlewis.com
11 nathan.reeves@morganlewis.com

9

FOR THE PATENT OWNER:

10

11 MR. KEVIN H. SPRENGER
12 MR. STEVEN J. REYNOLDS
13 Daignault Iyer, LLP
14 8229 Boone Boulevard, Suite 450
15 Vienna, Virginia 22182
16 ksprenger@daignaultiyer.com
17 sreynolds@daignaultiyer.com

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4	Exhibit 1004	JP 2005-202076 A 2005.7.28	61
5	Exhibit 2013	Declaration of Joseph McAlexander	111
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1 P R O C E E D I N G S

2 (Oath administered.)

3 THE STENOGRAPHER: Counsel, would you
4 please introduce yourselves for the record, please.

5 MR. HEIDEMAN: Sure. This is Colin
6 Heideman from Morgan, Lewis & Bockius on behalf of
7 the petitioners. With me is my colleague, Nathan
8 Reeves.

9 MR. SPRENGER: And Kevin Sprenger of
10 the law firm Daignault Iyer, LLP, representing the
11 patent owner, SoundClear Technologies, LLC. And
12 with me today is my colleague, Steven Reynolds.

13 JOSEPH MCALEXANDER,
14 having been first duly sworn,
15 testified as follows:

16 EXAMINATION

17 BY MR. HEIDEMAN:

18 Q. Good morning, Mr. McAlexander.

19 A. Good morning, sir. How are you?

20 Q. I'm doing well. How are you?

21 A. I'm well.

22 Q. Okay. I know you've been deposed many
23 times before, but we'll just put some of the
24 instructions on the record. I know you're familiar
25 with most of these.

1 So approximately how many times have you
2 been deposed in the past?

3 A. More than 200.

4 Q. Okay. And you understand that you're
5 testifying today as if you were testifying in court?

6 A. Yes, I do.

7 Q. And is there any reason why you would not
8 be able to give truthful and accurate testimony
9 today?

10 A. No.

11 Q. Okay. You know from prior depositions that
12 we can take breaks when you need them. I just ask
13 that we don't take any breaks while a question is
14 pending. Is that okay?

15 A. Yes, that's fine.

16 Q. You understand that you're not permitted to
17 speak to your attorneys about the substance of the
18 case or your testimony during breaks in the
19 deposition today?

20 A. Yes, I have that understanding.

21 Q. And we're taking this deposition by video,
22 and during this deposition, you're not to consult
23 any other documents, including notes or messages or
24 outlines during the deposition. Agreed?

25 A. Agreed. Except as we had indicated, I do

1 have a hard copy of some of the documents that are
2 clean that I will refer to from time to time.

3 Q. Okay. Let's go through what those
4 documents are right now.

5 Can you hold up whatever documents you
6 have?

7 A. It's in a three-ring binder.

8 Q. Okay. Can you just list for the record
9 which documents you have there?

10 A. Yes. The declaration associated with this
11 matter dated December 9th, 2025; a copy of the U.S.
12 Patent No. 11,069,337; a copy of the Shin reference,
13 Patent U.S. 2017/0083281; a copy of the Japanese
14 patent application publication to Shimomura. I have
15 a copy of the Kristjansson patent, 10,147,439. I
16 also have a copy of the petition for the inter
17 partes review, IPR 2025565. I have a copy of the
18 patent owner's response to the petition. And I also
19 have a copy of Richard Stern's declaration. That's
20 it.

21 Q. Okay. Can we just walk through each of
22 those for a second?

23 Your declaration, the first document that
24 you referenced, does it have an exhibit number on
25 it?

1 A. No, it does not. This is a copy for my
2 files of the one that was served.

3 Q. Okay. How about the '337 patent, does it
4 have an exhibit number on it?

5 A. No, none of these have -- no, this does not
6 have an exhibit number. Again, this is from my
7 file.

8 Q. Okay. Just to walk through just to be
9 sure, so the Shin reference that you have also
10 doesn't have an exhibit number on it?

11 A. Yes, that's correct.

12 Q. Okay. And the Shimomura reference, does
13 that have an exhibit number on it?

14 A. It actually has an Amazon Exhibit 1004.

15 Q. Okay. And then I think the next one was
16 the Kristjansson reference. Does that have an
17 exhibit number on it?

18 A. No, it does not.

19 Q. Okay. And then the Stern declaration, does
20 it have an exhibit number on it?

21 A. Exhibit 1002.

22 Q. Okay. Thank you.

23 And those are clean documents without any
24 markings or notes on them; is that correct?

25 A. Yes, that is correct.

1 Q. Okay. Do you understand that during this
2 deposition, you're not to communicate with anyone
3 other than your attorneys who are in the room who
4 might communicate with you on the record by
5 objecting, for example?

6 A. Yes, I understand that.

7 Q. Okay. And you're on a computer, but you
8 understand that you're -- you're not allowed to
9 search the internet or check e-mail, use any chat
10 functionality during the deposition; is that right?

11 A. I have that understanding.

12 Q. Okay. And you agree not to check the
13 internet or e-mail or use any chat functionality
14 during the deposition?

15 A. Yes.

16 Q. Okay. Other than the two attorneys who are
17 in the room with you, is there anyone else in that
18 room with you?

19 A. No.

20 Q. Okay. Did you talk to anyone other than
21 SoundClear's attorneys in preparing for the
22 deposition today?

23 A. No, I did not.

24 Q. Did you review any documents other than the
25 documents that are in that binder in preparation for

1 the deposition today?

2 A. No, I believe that's -- that's the ones I
3 reviewed.

4 Q. Okay. And did you meet with SoundClear's
5 -- did you meet with SoundClear's attorneys in
6 preparing for the deposition today?

7 A. Yes.

8 Q. Okay. When did you meet with them and for
9 how long?

10 A. I met them -- I met with them by a Teams
11 meeting, virtual, on Friday for maybe an hour, hour
12 and a half, and then yesterday we met as well.

13 Q. Okay. And how long did you spend
14 yesterday?

15 A. No more than four hours.

16 Q. Sorry, could you repeat that?

17 A. No more than four hours.

18 Q. Okay. Thank you.

19 You signed a declaration that you
20 submitted in connection with this IPR proceeding; is
21 that correct?

22 A. Yes, that is correct.

23 Q. And that declaration contains your opinions
24 about the validity of the '337 patent; is that
25 correct?

1 A. They contain my opinions, that's correct.

2 Q. And those opinions relate to the validity
3 of the '337 patent, correct?

4 A. That is correct.

5 Q. In preparing that declaration, did you talk
6 to anyone other than SoundClear's attorneys?

7 A. No.

8 Q. Did you do any independent investigation
9 regarding the state of the art when you were
10 preparing that declaration?

11 MR. SPRENGER: Objection; vague.

12 A. I don't recall doing any separate
13 independent investigation in preparing the
14 declaration.

15 BY MR. HEIDEMAN:

16 Q. Okay. We're going to introduce the '337
17 patent. We'll drop it in the chat. Mr. McAlexander
18 if you want to bring it up on your computer and use
19 the electronic version, you're welcome to do so.
20 You're also welcome to refer to the -- the paper
21 copy that you have.

22 A. I appreciate that. When you do put
23 something in chat, I will download it so I can look
24 at it locally.

25 Q. Okay. So it just got dropped in. So let

1 me know when you can pull that up.

2 (Exhibit No. 1001 marked.)

3 A. All right. I have it pulled up.

4 BY MR. HEIDEMAN:

5 Q. I'm just pulling it up on my end as well.

6 Okay. You're familiar with this patent,
7 correct?

8 A. Yes.

9 Q. And this is the patent that was the subject
10 of your declaration that you submitted?

11 A. That is correct.

12 Q. The title of this patent refers to a
13 voice-content control device. Do you see that on
14 the first page?

15 A. Yes, I do.

16 Q. What is a voice-content control device?

17 A. This is a device that listens to, receives,
18 detects voice that's been generated and has some
19 control functionality that's built within the
20 structure of the device by handling that voice
21 that's been received.

22 Q. What is the control functionality that's
23 built in the device?

24 A. Well, there's a number of items that are
25 described in the specification and then the claims

1 define specifically the structure, such as claim 1,
2 that are pertinent to that particular invention.

3 Q. Were voice-content control devices known in
4 the art by 2017?

5 MR. SPRENGER: Objection; vague.

6 A. Are you asking generally?

7 BY MR. HEIDEMAN:

8 Q. Generally.

9 A. Generally, there were certainly devices
10 that could control voice that was received and
11 generate, for instance, stereo systems, that type of
12 thing, mics that pick up voice and promote that to
13 an either mono or stereo system. That would be a
14 type of a voice control device.

15 Q. Okay. Would you consider those devices
16 that existed in 2017 to be voice-content control
17 devices?

18 A. They are not. They do not meet the
19 requirements of the claimed invention of a voice
20 control -- voice-content control device, no.

21 Q. Would you consider them more generally to
22 be considered voice-content control devices?

23 MR. SPRENGER: Objection; vague.

24 A. Again, the voice -- the voice that's
25 uttered has some content associated with it. A

1 device that receives it will massage or manipulate
2 or transform that information, that content. So in
3 a general sense, there are such devices, but, again,
4 not measuring up to what's required by the claimed
5 invention.

6 BY MR. HEIDEMAN:

7 Q. Yeah, and we'll get to the claim in bit.
8 I'm just trying to figure out whether -- you used
9 the phrase "voice control device," and I'm trying to
10 figure out whether there's a difference between when
11 you're using "voice control device" and
12 "voice-content control device." Is there a
13 difference between those two terms, in your mind?

14 MR. SPRENGER: Objection; vague,
15 compound.

16 A. In the general sense, they could be -- they
17 could be considered talking about the same subject
18 matter. Again, the voice-content control device
19 that's claimed is different than what an other type
20 of device would be in the prior art as of that time.
21 But the claim is directed to a voice-content control
22 device that's very specific on what its structure is
23 or its methodology.

24 So that's what I'm using as far as any
25 differentiation from a voice control device that

1 does do content analysis but for a different reason.

2 BY MR. HEIDEMAN:

3 Q. Okay. So you're familiar with Apple's Siri
4 voice assistant, correct?

5 MR. SPRENGER: Objection; vague.

6 A. I have some familiarity with it.

7 BY MR. HEIDEMAN:

8 Q. Have you ever used it?

9 A. It's in my home.

10 Q. Have you ever used it?

11 A. Yeah, periodically I ask if it's listening.

12 Q. Did you use it before 2017?

13 A. Did I use --

14 MR. SPRENGER: Objection; vague,
15 scope.

16 A. Excuse me, say that again.

17 BY MR. HEIDEMAN:

18 Q. Did you use Apple's Siri voice assistant
19 before 2017?

20 A. I would say no.

21 Q. Okay. You're aware that it existed by
22 2017?

23 MR. SPRENGER: Objection; scope.

24 A. An earlier model of it did exist as of that
25 time, yes.

1 BY MR. HEIDEMAN:

2 Q. Do you consider an iPhone that has -- had
3 Siri in 2017 to be a voice-content control device?

4 MR. SPRENGER: Objection; scope.

5 A. Say that again, please.

6 BY MR. HEIDEMAN:

7 Q. Do you consider a device that has Siri on
8 it -- or had Siri on it in 2017 to be a
9 voice-content control device?

10 MR. SPRENGER: Objection; vague,
11 scope.

12 A. I would say that there were various
13 features of the -- Siri at that time that -- that
14 did some evaluation in terms of voice content. But,
15 again, I have not evaluated that to give more
16 specificity on it.

17 BY MR. HEIDEMAN:

18 Q. Do you agree there can be voice-content
19 control devices that don't meet all of the
20 limitations of, for example, claim 1 of the '337
21 patent?

22 MR. SPRENGER: Objection; vague.

23 A. I would say the probability is there, that
24 there will be such systems that do not meet all of
25 the limitations of the claimed invention of the '337

1 patent, yes.

2 BY MR. HEIDEMAN:

3 Q. Okay. So there are devices that don't meet
4 all of the limitations of the claimed invention of
5 the '337 patent, but are still voice-content control
6 devices, correct?

7 MR. SPRENGER: Objection;
8 mischaracterizes testimony.

9 A. In a general sense, you could look at a
10 device that controls the output that's associated
11 with a voice that's received as a control device,
12 and if there's manipulation on the content, I could
13 generally say, yeah, there would be such voice
14 control content -- voice-content control devices.
15 But, again, the claimed preamble is a voice-content
16 control device, but it has specific limitations that
17 have to be met to be the invented claim -- excuse
18 me, to measure up and be consistent with what the
19 claimed invention requires.

20 But there would be others that would --
21 maybe you could generally categorize them as a
22 voice-content control device, but they fall outside
23 the scope of the claim because one or more of the
24 limitations would be missing.

25 BY MR. HEIDEMAN:

1 Q. Are there any devices that you're aware of
2 that exist today that would be voice-content control
3 devices, but would fall outside the scope of the
4 claims of the '337 patent?

5 MR. SPRENGER: Objection; vague.

6 A. I have not undertaken nor have I been asked
7 to undertake that kind of an analysis as of this
8 point, so as I sit here, I can't with specificity
9 point to something like that. But in general, if
10 you have a particular device that is marketed or
11 sold or available for use, the practice is -- for
12 instance, the Shin reference, that would be a device
13 that would be maybe considered as a voice-content
14 control device, but it falls outside the scope of
15 what the claims of the '337 require.

16 BY MR. HEIDEMAN:

17 Q. And an Apple iPhone, as it existed in 2017
18 with Siri, would be considered a voice-content
19 control device regardless of whether it would meet
20 all of the limitations of the claims of the '337
21 patent, correct?

22 MR. SPRENGER: Objection; vague,
23 beyond the scope of Mr. McAlexander --
24 Mr. McAlexander's reply -- or declaration.

25 A. Again, I have not been asked to opine on

1 that or review that or analyze that from that
2 perspective. Again, from a general concept, is
3 there some aspect of voice that the content is
4 analyzed by Siri? Certainly. Could I ascribe a
5 general statement to it, it's a voice-content
6 control device? Most probably. But, again, the
7 question comes up as to, from an infringement
8 standpoint, whether or not it practices every
9 element of what's required by the invention.

10 So in other words, it could be generally
11 characterized as a type of voice-content control
12 device, but that general characterization does not
13 mean that it measures up to or doesn't measure up to
14 what's required by the claims of the '337.

15 BY MR. HEIDEMAN:

16 Q. Do you consider yourself to be an expert in
17 voice-content control devices?

18 A. I have certainly spent a number of years
19 working with that, so yes.

20 Q. And as of 2017, were you an expert or did
21 you consider yourself an expert in voice-content
22 control devices?

23 MR. SPRENGER: Objection; vague,
24 compound.

25 A. Yes. Yeah, formed my company in 1988

1 specifically around acoustic engineering, so yes.

2 BY MR. HEIDEMAN:

3 Q. Okay. What voice-content control devices
4 were you aware of in 2017?

5 A. Yamaha control boards that had sliders
6 using treble/bass and microphone selection and the
7 timbre and other things that would be associated
8 with voice from mic to presentation to a speaker.
9 So I've had many years of experience working with
10 systems such as the Yamaha system.

11 Q. What other voice-content control devices
12 were you aware of in 2017?

13 MR. SPRENGER: Objection; vague and
14 scope.

15 A. I thought I just answered that question by
16 mentioning Yamaha.

17 BY MR. HEIDEMAN:

18 Q. And I'm asking what other voice-content
19 control devices were you aware of in 2017?

20 A. Well, there's --

21 MR. SPRENGER: Same objections.

22 A. Again, we're looking at the general concept
23 of voice-content control. That can be -- there are
24 certain aspects of that that can be controlled
25 within the speakers. JBL was great at that. Again,

1 these are -- but it's not -- it's not voice-content
2 control that -- that classifies. It's just
3 controlling it based on different features. But the
4 -- but none of those that I'm aware of did any type
5 of classification.

6 BY MR. HEIDEMAN:

7 Q. Right. But you can have voice-content
8 control devices that don't perform classification,
9 right?

10 A. Yeah, like Shin, like anything that's done
11 according to the Shin reference.

12 THE STENOGRAPHER: I'm sorry, you
13 talked at the same time and I saw Mr. Sprenger's
14 mouth moving. I'm assuming there's an objection
15 there?

16 MR. SPRENGER: Yeah. Objection;
17 vague.

18 THE WITNESS: Thank you. I'll wait a
19 little bit longer.

20 BY MR. HEIDEMAN:

21 Q. The Shin reference describes a
22 voice-content control device, correct?

23 A. A type that does not do what is required by
24 the claims, but it is a type, yes.

25 Q. The Shimomura reference describes a

1 voice-content control device, correct?

2 A. Again, in a general sense, there are
3 features that it describes as -- (audio disruption).
4 So as a general feature, yes.

5 THE STENOGRAPHER: I'm sorry, there
6 was a noise that came through. Your answer was:
7 "Again, in a general sense, there are features that
8 it describes as," and then I got, "So as a general
9 feature, yes."

10 A. It -- let me just restate that, if I may.

11 That particular reference would describe
12 various features that it attempts to control, but,
13 once again, that does not -- does not fill the
14 obligation of the classification of the voice
15 itself.

16 BY MR. HEIDEMAN:

17 Q. I'm going to have you turn to the claim --
18 claims of the '337 patent, and specifically we're
19 going to look at claim 1.

20 A. All right. I have it in front of me.

21 Q. Okay. And I'm going to ask you about the
22 first limitation, which recites, "a proximity sensor
23 configured to calculate a distance between a user
24 and the voice-content control device."

25 Do you see that limitation?

1 A. I see that limitation.

2 Q. Do you consider yourself to be an expert in
3 proximity sensors?

4 MR. SPRENGER: Objection; vague.

5 A. Yes.

6 BY MR. HEIDEMAN:

7 Q. Okay. What's your experience with respect
8 to proximity sensors?

9 A. I have several patents on proximity sensors
10 that are used for airbag deployment in vehicles
11 during collision.

12 Q. Okay. Any other reason?

13 A. Well, I've worked in the area of wireless
14 communication. I have -- I think it's about 16
15 patents that are specifically addressed to location
16 of a particular object, whether it's an animal, a
17 person, or something of that nature, a truck, and
18 being able to specifically GPS identify where it is
19 located and indicate its proximity according to
20 certain set boundary conditions as to whether it's
21 following -- falling within the boundaries or
22 crossing the boundaries. So a lot of experience in
23 that in terms of trucking lines, verification of the
24 location, tracking, tracking of animals, tracking of
25 individuals.

1 Q. Proximity sensors were well-known by 2017,
2 correct?

3 MR. SPRENGER: Objection; vague.

4 A. There were different types of proximity
5 sensors that were available and known by themselves,
6 yes, certainly.

7 BY MR. HEIDEMAN:

8 Q. And using a proximity sensor to calculate a
9 distance between a person and a device was known by
10 2017, right?

11 MR. SPRENGER: Objection; vague.

12 A. Well, there were many proximity sensors
13 that did not have any calculation capability at all.
14 They merely sensed and then provided that
15 information to some other entity or some other unit
16 that did the calculations.

17 BY MR. HEIDEMAN:

18 Q. Okay. Your response was that there were
19 many proximity sensors that did not have any
20 calculation capabilities. But --

21 A. That is correct.

22 Q. But using a proximity sensor to calculate
23 the distance between a person and a device was known
24 by 2017, right?

25 MR. SPRENGER: Objection; vague.

1 A. In the general context of proximity to
2 detect distance between two particular entities,
3 yes, that was known.

4 BY MR. HEIDEMAN:

5 Q. A conventional use of proximity sensors by
6 2017 was to calculate the distance between an object
7 and the sensor, correct?

8 MR. SPRENGER: Objection; vague, calls
9 for a legal conclusion.

10 A. Not necessarily.

11 BY MR. HEIDEMAN:

12 Q. Why do you say that?

13 A. A proximity sensor can be used to trigger,
14 whether you're in a range close to or near or far
15 away, without actually calculating the distance.

16 Q. But it was conventional by 2017 to have a
17 proximity sensor that calculates the distance
18 between an object and the sensor, correct?

19 MR. SPRENGER: Same objections.

20 A. In the general context, yes, there were
21 proximity sensors that -- that, in combination with
22 the -- the control aspect that's associated with
23 that proximity sensor, whether it was within the
24 sensor or as a separate object, generally,
25 calculation of distance was a known fact, yes.

1 BY MR. HEIDEMAN:

2 Q. The '337 patent does not describe any new
3 proximity sensor, correct?

4 A. No, a person of skill in the art would know
5 what they were as of the time of this patent.

6 Q. The '337 patent relies on a conventional
7 proximity sensor, correct?

8 MR. SPRENGER: Objection; vague.

9 A. It is -- the '337 patent is not trying to
10 redesign or come up with a new design for a
11 proximity sensor. It relies on what is already
12 known.

13 BY MR. HEIDEMAN:

14 Q. The '337 patent relies on known proximity
15 sensors, correct?

16 A. I think that's what I just said.

17 Q. Claim 1 of the '337 patent doesn't require
18 any particular type of proximity sensor as long as
19 it can calculate the distance between the user and
20 the voice-content control device, correct?

21 MR. SPRENGER: Objection; vague.

22 A. I don't -- I don't see any limitation other
23 than what you just specified. As configured, it's
24 got that capability built in to calculate a
25 distance. That's all that's required.

1 BY MR. HEIDEMAN:

2 Q. So claim 1 encompasses all proximity
3 sensors that can calculate a distance between the
4 user and the device, correct?

5 MR. SPRENGER: Objection; vague,
6 misstates testimony.

7 A. I think it describes and would be a -- it
8 certainly touches on the different types of
9 proximity sensors that exist. But, again, this
10 proximity sensor has to be within the voice-content
11 control device because it's the voice-content
12 control device that comprises this. So it doesn't
13 generally contemplate any and all available
14 proximity sensors because some would be too large or
15 of a type of structure that would not fit within a
16 device that's required to meet the rest of the claim
17 elements.

18 So generally, proximity sensors could be
19 drawn from, but not all would apply.

20 BY MR. HEIDEMAN:

21 Q. So your understanding is that there are
22 some proximity sensors that calculate a distance
23 between a user -- or capable of calculating a
24 distance between a user and the device that would
25 fall outside the scope of this claim?

1 MR. SPRENGER: Objection to the extent
2 it misstates testimony.

3 A. Well, again, the scope of the claim has to
4 be each one of the limitations comprised within what
5 is called the voice-content control device. So if
6 it's a proximity sensor that cannot be within the
7 device or if it's separate from, then that's not
8 a voice -- that is not a proximity sensor, according
9 to the claim. So not all proximity sensors would
10 meet what is required by this claim.

11 BY MR. HEIDEMAN:

12 Q. A person of ordinary skill in the art who
13 is implementing the voice-content control device
14 described in the '337 patent could use an
15 off-the-shelf proximity sensor, correct?

16 MR. SPRENGER: Objection; vague,
17 scope.

18 A. I would say a person that's taking this
19 invention and building an application according to
20 this invention could draw from proximity sensors
21 that were available "off the shelf" to incorporate
22 within their design, yes. Depends upon the nature
23 of the particular design that's being created.

24 BY MR. HEIDEMAN:

25 Q. The next limitation, which in your

1 declaration you identify as Limitation 1[b],
2 recites, "a voice classifying unit configured to
3 analyze a voice spoken by a user and acquired by a
4 voice acquiring unit to classify the voice as either
5 one of a first voice or a second voice based on the
6 distance between the user and the voice-content
7 control device."

8 Do you see that?

9 A. I see that.

10 Q. So in this limitation, a voice is received,
11 right? I just want to walk through and get your
12 understanding of -- of how this works.

13 So the first part of this is that a voice
14 is received, right?

15 MR. SPRENGER: Objection; vague.

16 A. If by use of the word "received," you are
17 referring to the phrase "acquired by," then that
18 answer is yes.

19 BY MR. HEIDEMAN:

20 Q. Okay. So first, a voice is acquired by the
21 voice acquiring unit, correct?

22 A. That is correct.

23 Q. That voice is then classified into one of
24 at least two categories, right?

25 A. That generally is correct, yes.

1 Q. And the first category or class is called a
2 "first voice," right?

3 A. First class would be a first voice, yes.

4 Q. And the second category or class is
5 referred to as a "second voice," correct?

6 A. The second class would be a second voice.

7 Q. You agree that this claim only requires one
8 user speaking to the device, correct?

9 MR. SPRENGER: Objection; vague, and
10 to the extent it calls for a legal conclusion.

11 A. The claim requires -- you're referring to
12 the phrase "a user"? Is that what you --

13 BY MR. HEIDEMAN:

14 Q. Let's start with that.

15 A. All right. "A user" means one or more. So
16 it's not limited to one user. It could be more than
17 one.

18 Q. Okay. It could be just one person speaking
19 to the device, right?

20 A. It could be, sure.

21 Q. And that person's voice is classified into
22 one of two categories, right?

23 A. Correct.

24 Q. That person's voice could be classified
25 into three or four categories and still fall within

1 the scope of this claim, right?

2 A. As long as it --

3 MR. SPRENGER: Objection; vague.

4 A. As long as it meets a first and a second
5 voice category, the answer is yes.

6 BY MR. HEIDEMAN:

7 Q. And it's classified -- the acquired voice
8 is classified based on the distance between the user
9 and the voice-content control device, correct?

10 A. I believe you read that correctly.

11 Q. Is it your understanding that if a voice is
12 received from less than a threshold distance, it
13 could be classified as a first voice, and if it's
14 received from greater than that threshold distance,
15 it could be classified as a second voice?

16 MR. SPRENGER: Objection; vague,
17 scope, and incomplete hypothetical.

18 A. Your question used the word "could." And
19 so based upon the fact that it may or may not be, it
20 could be -- it could be classified, that could be
21 the feature that, in combination with other things
22 that it's evaluating, would be able to identify
23 whether it goes into classification of one voice or
24 classification as a -- as a second voice. It could
25 be.

1 BY MR. HEIDEMAN:

2 Q. The classification of the received voice as
3 a first or second voice could be based solely on the
4 distance calculation, correct?

5 MR. SPRENGER: Objection to the extent
6 it misstates prior testimony and scope.

7 A. Well, the phrase "based on the distance"
8 says that is a factor, a feature that is included in
9 the evaluation to reach a determination as to
10 whether it is classified as a first or a second
11 voice. But the classification has to be based on
12 upon the voice, not based as some parameter external
13 to the voice such as distance or range or something
14 like that. These are different factors that might
15 be used.

16 The claim requires -- a factor that --
17 that has to be considered as a part of that
18 evaluation is the distance, it's based on the
19 distance. But the classification is classification
20 of the voice, not classification that defines
21 whether it's before or less than a specific area in
22 terms of distance.

23 BY MR. HEIDEMAN:

24 Q. So your understanding of this claim is that
25 the classification has to be based on both the

1 distance and something else?

2 A. It has to be a classification of the voice.
3 The voice is what is received. And so it has to be
4 a classification of the voice, not based upon solely
5 what is external to the voice because the
6 classification is a voice classification, not a
7 distance classification.

8 Q. What are all of the voice classifications
9 that you're aware of?

10 MR. SPRENGER: Objection; vague,
11 scope, calls for speculation, incomplete
12 hypothetical.

13 A. Your question was, what are all the voice
14 classifications? How long do you want to spend here
15 today?

16 The patent claim -- the patent itself
17 defines and shows a voice classification as to
18 whether or not it is -- the voice that is projected
19 is one that is the normal voice or one that is a
20 whisper. So that is a classification distinction
21 between a whisper and one that's not a whisper. So
22 that's -- that is at least one that's been defined
23 and described in the patent itself.

24 BY MR. HEIDEMAN:

25 Q. Okay. What other voice classifications are

1 described in the '337 patent?

2 A. It describes -- it describes at least two
3 different categories of whisper, one of which does
4 not evoke the vibration of the vocal cords and one
5 that does. So there is -- there is at least two
6 embodiments that are recommended as consideration,
7 as illustrations of -- of voice differentiation for
8 classification.

9 Q. Are you suggesting that one of the
10 classifications would be -- would distinguish
11 between the two types of whisper voice that you've
12 identified?

13 MR. SPRENGER: Objection to the extent
14 it misstates prior testimony.

15 A. Well, the --

16 THE STENOGRAPHER: I'm sorry, I didn't
17 hear the objection. Speak up louder, please.

18 MR. SPRENGER: Objection to the extent
19 it misstates prior testimony.

20 THE STENOGRAPHER: Thank you.

21 A. As I recall, the specification, it
22 delineates the fact that the -- that the whisper
23 could be at least one of two different
24 classifications or types, whether it evokes any
25 vibration of the vocal cords or not. So those are

1 two different types, if you will. And it does a --
2 basically, again, a comparison of whether or not it
3 is a whisper or a nonwhisper, but giving some
4 latitude and breadth to what a whisper could be.

5 So as a person of skill in the art looking
6 at that, I can say, yeah, one could actually invoke
7 a differentiation based upon different types of
8 whisper. That's a possibility.

9 BY MR. HEIDEMAN:

10 Q. Okay. Does claim 1 require classifying the
11 voice as either a whisper or nonwhisper?

12 A. No, the claim is classifying the voice.
13 It's not limited to what is described or defined in
14 the illustration of -- of an embodiment.

15 Q. Okay. Are there any other voice
16 classifications that you believe are described in
17 the '337 patent?

18 A. The patent, as I understand, the patent --
19 he only has to describe at least one embodiment, and
20 he's done at least several. And he's described
21 embodiments that are based upon distance. He also
22 describes other ways that you can base it upon. And
23 so there are different ways in which this particular
24 -- the embodiments have been described.

25 But in terms of the voice itself, the

1 delineation between the whisper and the normal
2 voice, I think, is -- is the primary one that he has
3 embodied. But, again, the patentee, fortunately, is
4 not required to describe the entire universe of what
5 a person of skill in the art would know to be
6 possible combinations.

7 Q. Okay. We're not talking about the
8 requirements of a patent, though.

9 As a person of skill in the art, reading
10 this patent, what voice classifications besides
11 whisper and nonwhisper do you believe are disclosed
12 in the '337 patent?

13 A. Well, the specific embodiments are whisper
14 versus not whisper.

15 Q. Are there any other embodiments that
16 describe a classification other than distinguishing
17 between whisper and nonwhisper?

18 A. Well, again, it's not required for the
19 patentee to describe more than one. He has to
20 provide at least an illustration of how it can be
21 embodied, but he's not required to provide more than
22 one. But let me look back here in the patent
23 itself.

24 His classification at least suggests in
25 column 7 of the '337 patent, the paragraph that

1 begins on line 51 of column 7, he specifically
2 addresses -- and the line 52, 53, classifying the
3 voice to either be one of a first or a second voice.
4 And then he says, "In the present embodiment, the
5 voice classifying unit 38 classifies the voice V1 to
6 the second voice V1B when the voice V1 is determined
7 to be a whisper as a result of the analysis."

8 So V1 is determined -- the voice
9 classifying unit classifies the voice V1 to the
10 first voice when the voice is determined not to be a
11 whisper. So it describes whisper versus not
12 whisper, and there are different ways in which you
13 can then classify not whisper.

14 And so I would say that the indication
15 here -- the implication that the inventor is talking
16 about here says there is a class called whisper,
17 there's a class called nonwhisper, and that is when
18 the vocal cords are vibrating and giving you
19 resonance as a part of the content of that voice.
20 And so the classification of that vibrating area can
21 be one of a number of different types of
22 classifications, and I think it's -- it's implied
23 here.

24 Q. What classifications are disclosed in the
25 '337 patent other than the whisper and nonwhisper

1 classification?

2 MR. SPRENGER: Objection; asked and
3 answered.

4 A. And I do believe we've gone through this
5 three or four times now. The embodiment that's
6 shown is a whisper versus a nonwhisper. I've given
7 you two classifications of whisper, whether it is --
8 whether it uses or does not use the vocal cords.

9 And then as far as the nonwhisper aspect,
10 it's -- specifically at the bottom of column 7, then
11 heading over to column 8 talks about acquiring the
12 time waveform of intensity. And, therefore, you
13 have a spectrum of the -- of the values on intensity
14 versus frequency. And you go through a Fourier
15 transform of that and you transfer that time sample
16 into a frequency spectrum, and you can evaluate the
17 intensities of the frequencies and reach different
18 -- various classifications that are associated with
19 the nonwhisper aspect.

20 So there's a lot of different
21 classifications about the voice that is not whisper
22 that come under that particular umbrella of
23 classifying the unit based upon peak frequency for
24 peak intensity as a -- as a part of frequency.

25 BY MR. HEIDEMAN:

1 Q. Okay. So the top of column 8 -- column 8
2 where it's referring to classifying the voice using
3 a peak frequency, it does that classification based
4 on whether the peak frequency is equal to or higher
5 than a predetermined intensity; is that right?

6 A. In this particular example, yes.

7 Q. And so the classification there would be --
8 one class would be the peak frequency is equal to or
9 higher than that predetermined intensity, and the
10 other class would be that the peak frequency is
11 below that predetermined intensity, right?

12 A. That is correct.

13 Q. And those are voice classifications that
14 are not classifying the voice as a whisper versus
15 nonwhisper, correct?

16 A. This particular method -- and it says this
17 is one of a number of different methods. But in
18 this particular method that we're using as the
19 example, you have a -- you do a conversion in the
20 frequency spectrum, so you have an intensity versus
21 frequency. You can evaluate that against a
22 threshold, and where you set that threshold could
23 delineate between a whisper and a nonwhisper. But
24 you can set that threshold at other values for other
25 discriminations. A person of skill in the art knows

1 that.

2 But in this particular instance, they're
3 saying, let's do that -- that analysis and we set
4 the threshold so it can distinguish between the
5 whisper and the nonwhisper. And that's what's
6 covered in column 8.

7 Q. Okay. So your understanding of that
8 disclosure is that it's still only doing a voice
9 classification to whisper or nonwhisper?

10 A. Well, again, you keep coming back to the
11 word "only." And what I'm saying is the "only" has
12 to describe one embodiment. And he's done that. In
13 fact, he's described several. But that doesn't mean
14 that that -- that the claimed invention for voice
15 classification is limited to that embodiment when
16 it's clear from the specification that it can be
17 broader than that.

18 Q. And that's what I'm trying to figure out.
19 What other classifications are disclosed in the
20 spec, in your view?

21 So could one of the classifications just
22 be a high peak frequency and the other class could
23 be lower peak frequency?

24 MR. SPRENGER: Objection to the extent
25 it misstates prior testimony and compound.

1 A. No, the higher peak frequency and the lower
2 peak frequencies themselves are indicators of
3 something that you then will use that to resolve a
4 classification of the voice. But just the mere fact
5 of a peak frequency does not indicate a
6 classification. It has to be looked at and
7 evaluated to make a determination as to how that
8 fits into the scope of classification to reach that
9 determination.

10 So here, they described an evaluation
11 method where you can set a threshold below which
12 would be characteristic of the whisper and above
13 which would be characterized by a nonwhisper.

14 BY MR. HEIDEMAN:

15 Q. Other than characterizing the voice as a
16 whisper or nonwhisper, are there any other
17 classifications that could be based on the peak
18 frequency?

19 A. Yes, sure are.

20 Q. What are those classifications?

21 A. You can do threshold -- you can set
22 thresholds based upon peak -- peak intensity, or
23 whatever you want to call it, at a particular
24 frequency, that -- that spectrum. You can set that
25 to where you can separate or classify the voice as

1 to whether it is a soprano versus a bass. You can
2 actually further describe setting the thresholds to
3 discriminate between soprano or -- or mezzo-soprano
4 or alto. You can -- you can separate between
5 typically what would be ascribed to a man's voice
6 versus a woman's voice based upon setting those
7 frequencies. There are multiple different things
8 that you can come out of in terms of classification
9 based upon this analysis of the peak and frequency
10 basis.

11 Q. Okay. So lower in column 8, starts at
12 line 15.

13 A. Okay.

14 Q. It says, "Moreover, the voice classifying
15 unit 38 can perform the classification to the first
16 voice V1A and the second voice V1B by using either
17 one of a volume of the voice V1, a speaking speed of
18 the user in the voice V1, and a volume ratio between
19 a speech of the user and a wind noise as a feature
20 value."

21 Do you see that?

22 A. Yes, I do.

23 Q. What are the classifications that would be
24 based on the volume of the voice ?

25 A. You could still do the same types of

1 classifications, you're just using a different input
2 as one of the variables. The variable that we
3 talked about before is distance. This variable
4 would be looking at the peak -- he's still using the
5 peak frequency-type representation in the
6 transformed Fourier area. And you can look at, for
7 instance, volume, which goes to a peak intensity on
8 that particular spectrum.

9 Let's see. The second one is the speaking
10 speed. Speed would translate into a -- on a
11 frequency map in terms of a clustering around a
12 particular frequency versus a dispersion in another
13 area of the frequency. You can set thresholds based
14 upon that. And volume, of course, is what we talked
15 about before.

16 So each one of these are features that can
17 be utilized as inputs to assist in the
18 classification, but each one of those features
19 themselves are not a classification.

20 Q. So if a device exists that measures the
21 volume of the acquired voice and classifies that
22 voice as loud or quiet, depending on whether it's
23 above or below a threshold volume level, that is not
24 performing the voice classification as recited in
25 Limitation 1[b]; is that correct?

1 A. Well, it depends --

2 MR. SPRENGER: Objection -- objection;
3 vague.

4 A. It depends upon that device and what it is
5 doing. I would have to look at that and evaluate it
6 because it's a hypothetical. It's not -- not
7 covered here.

8 But if you look at -- at taking that
9 volume or some other input, you could consider that
10 as a feature by which you could come up with an
11 evaluation. But, again, to meet the claimed
12 invention, whether it does or does not do this based
13 upon speaking speed or volume, that -- that does not
14 fall within the scope of what's required by the
15 claim because the claim says the -- the one of the
16 inputs that you have to consider is distance between
17 the user and the voice-content control device.

18 BY MR. HEIDEMAN:

19 Q. Okay. So what if a device analyzes a
20 voice, determines whether the volume is above or
21 below a threshold value and also determines whether
22 the user is above or below a threshold distance, and
23 it classifies the voice as loud or quiet, depending
24 upon whether it's above or below the volume
25 threshold, and near or far, depending on whether

1 it's above or below the distance threshold, would
2 that be classifying a voice as recited in claim
3 Limitation 1[b]?

4 A. No.

5 MR. SPRENGER: Objection; vague,
6 incomplete hypothetical.

7 A. No. Near or far is a -- it has nothing to
8 do with the voice itself. It's not a classification
9 of the voice. That might be a classification of the
10 environment within which the voice is generated, but
11 that's not a classification of the voice.

12 BY MR. HEIDEMAN:

13 Q. So if that device classifies a received
14 voice as near and quiet, in your view, that does not
15 satisfy the classifying limitation in
16 Limitation 1[b]?

17 MR. SPRENGER: Objection; misstates
18 prior testimony and vague.

19 A. I would have to look at that in particular
20 to see exactly how it was framing that. In the
21 general sense, if -- you can have -- you can have a
22 voice that's quiet regardless of the distance. You
23 might have a voice that is determined to be quiet at
24 a particular distance and then it's a matter of --
25 no matter what the distance is, the voice is -- the

1 voice itself is going to be the same.

2 And so if it's using the distance
3 calculation to determine whether it's quiet or not,
4 we know the powers is going to follow by the square
5 root law. So you're going to have power degradation
6 depending upon distance. So something that's far
7 away could be considered quiet and -- at the exact
8 same volume of quietness, if you will, as something
9 that that's very, very close.

10 So if that measure is built upon a
11 determination of the quality based upon a particular
12 distance, then that may or may not. It depends upon
13 the specific instance as to whether that quietness
14 is something that's a part of the voice that stays
15 with the voice no matter how far away it is. It's
16 got to be a characteristic, a classification of the
17 voice, not based upon the voice being at a certain
18 place.

19 BY MR. HEIDEMAN:

20 Q. How is the -- how is the volume of an
21 acquired voice determined or measured? In what
22 unit?

23 MR. SPRENGER: Objection; vague,
24 compound, scope.

25 A. It could be -- it could be quantified based

1 upon decibel level. It's a power level.

2 BY MR. HEIDEMAN:

3 Q. Okay. And so when the -- when the patent
4 talks about using a volume of the voice in setting a
5 threshold, it's talking about using, for example, a
6 threshold decibel value, right?

7 MR. SPRENGER: Objection; vague.

8 A. It could, yes.

9 BY MR. HEIDEMAN:

10 Q. And so it looks --

11 A. Excuse me. In terms of an input into
12 the -- into the decision process to classify, it
13 could be, yes.

14 Q. Right. So it's going to classify an
15 acquired voice based on whether the volume was above
16 or below a threshold decibel level, correct?

17 A. That is certainly one way in which it could
18 resolve a classification of the voice, using that
19 volume as an input, but it does not necessarily have
20 to be based upon a threshold. Again, volume is an
21 input into the unit that will be performing the
22 classification. It's not -- it is not the decision
23 process -- it's not the deciding factor itself.

24 Q. So if a device acquires a voice, determines
25 whether the volume of that voice is above or below a

1 threshold decibel value, determines the distance
2 between the user and the device, and determines
3 whether that distance is above or below a threshold
4 value, and that's all it does, in your view, that is
5 not classifying a voice as recited in
6 Limitation 1[b]; is that correct?

7 A. Yes.

8 MR. SPRENGER: Objection; vague,
9 scope, incomplete hypothetical.

10 A. What you described is -- is the mechanism
11 by which a determination will -- could be derived as
12 far as the level of the voice. But that's different
13 from classifying. Determination of the level or the
14 volume is different than classifying. Classifying
15 is configured to analyze the voice it has -- that's
16 acquired to classify the voice. Distance or one of
17 these other factors, volume, could be a
18 consideration as a part of that, but that's
19 different from the actual classification.

20 BY MR. HEIDEMAN:

21 Q. A device that classifies a voice as loud or
22 quiet based on whether it exceeds or is less than a
23 threshold volume, you think it's outside the scope
24 of this limitation?

25 MR. SPRENGER: Objection; vague,

1 scope.

2 A. When I look at the limitation, which is a
3 part of the claim as a whole, this particular
4 limitation goes to the point of determining or
5 reaching a voice classification. But there are --
6 there are numbers of other remaining limitations
7 that have to be based upon that classification.

8 So, again, it depends on the particular
9 structure of -- of the particular device as to
10 whether or not it meets the requirement of
11 classifying and whether it uses that classification
12 to meter out the rest of the limitations.

13 BY MR. HEIDEMAN:

14 Q. Okay. But we're not referring to all of
15 the rest of the limitations. We're just looking at
16 Limitation 1[b].

17 So the question was: If a device measures
18 the volume of the acquired voice and classifies it
19 as loud or quiet, those are the two classifications,
20 it classifies it as loud or quiet based on whether
21 it is -- the received voice is greater than or less
22 than a threshold decibel value, would that
23 classification fall out of the scope of
24 Limitation 1[b]?

25 A. Well, first, I take issue with the fact

1 that you were focusing on a limitation and apart
2 from the rest of the claim. The claim -- the claim
3 as a whole is the invention, so it has to be
4 considered in light of the rest of the claim
5 limitations.

6 But setting that aside, the issue is, are
7 you classifying the volume or are you classifying
8 the voice? And so I would have to look at the
9 actual construct of this device that you're
10 hypothetically creating as to whether it falls
11 within the scope of this or not. There's a
12 difference between classifying volume and
13 classifying voice.

14 Q. Well, it's -- it's classifying the voice as
15 loud or quiet, correct? That's one way to classify
16 a voice?

17 MR. SPRENGER: Objection; vague,
18 scope, compound.

19 A. I can -- you know, I can -- on a
20 hypothetical basis, I can certainly see the
21 possibility that that could be a type of
22 classification. It may or may not be. It could be.

23 BY MR. HEIDEMAN:

24 Q. Well, I'm asking for your opinion. Is --

25 A. I just gave you my opinion. It could be.

1 I would have to look at it within the scope of the
2 particular device as a whole as to whether it
3 measures up to it. But it could be.

4 Q. You said "it could be." In what situations
5 do you consider classifying a voice as loud or quiet
6 to be classifying a voice as that phrase is used in
7 claim Limitation 1[b]?

8 A. Well, when you use that claim limitation as
9 -- as you've defined in claim Limitation 1[b], it
10 has to then use that classification to evoke the
11 rest of the claim elements such as generating the
12 difference in the output sentences based upon that
13 classification. So it depends on whether or not
14 that classification is then used as required by the
15 rest of the claim.

16 Q. That would be necessary if you were trying
17 to figure out whether that infringes the claim as a
18 whole. I'm just talking about the limitation that
19 recites, a voice classifying unit to -- I don't want
20 to read the whole thing into the record.

21 The voice classifying unit that's
22 configured to analyze a voice to classify the voice
23 as either the first voice or a second voice, that
24 classification could just be whether the voice is
25 loud or quiet, correct?

1 MR. SPRENGER: Objection; vague,
2 scope.

3 A. As I stated earlier, it could be.

4 BY MR. HEIDEMAN:

5 Q. In what situations would it be?

6 MR. SPRENGER: Objection; vague.

7 A. If that classification -- excuse me. If
8 that classification was then used in such a way that
9 it invoked the remainder of the claim as far as the
10 generation of the different outputs, according to
11 that classification.

12 BY MR. HEIDEMAN:

13 Q. Okay. So if a device classified a received
14 voice as loud or quiet based on a volume measurement
15 and then generated the output sentences as recited
16 in the rest of the claim, and altered the volume of
17 the output as recited in the rest of the claim, then
18 you agree that the classification of the voice as
19 loud or quiet based on the volume would satisfy the
20 voice classification in Limitation 1[b], right?

21 MR. SPRENGER: Objection; scope,
22 incomplete hypothetical.

23 A. No.

24 BY MR. HEIDEMAN:

25 Q. Why not?

1 A. Because claim element 1[b] requires
2 distance, not volume.

3 Q. Okay. So let's go back to my hypothetical
4 where a device analyzes the volume and the distance
5 and classifies the voice as either quiet or loud and
6 near or far, and then the device alters the output
7 sentences and the volume as recited in the rest of
8 the claim. In that situation, would you agree that
9 the device has satisfied Limitation 1[b]?

10 MR. SPRENGER: Same objections.

11 A. It could. It may not.

12 BY MR. HEIDEMAN:

13 Q. Under which situations would it?

14 MR. SPRENGER: Same objections.

15 A. If the decision process based on the
16 distance was at that particular distance, it's
17 quiet, that's looking at the power curve from that
18 particular location, but it may not be the
19 characterization of the particular person because
20 that distance may be far away, and they're actually
21 speaking loud, but because it's so far away, that --
22 that loudness is determined to be quiet.

23 So it's not a characterization of the
24 voice, it's a characterization of what's being
25 received at a distance. And so that would not meet

1 the claim limitation.

2 BY MR. HEIDEMAN:

3 Q. All of the characteristics that are
4 analyzed by the claim device are the characteristics
5 as they're received at the device, right?

6 MR. SPRENGER: Objection; vague,
7 scope.

8 A. The only thing the device has available to
9 it is what it has acquired, what it has received.
10 So it must make a determination in classification
11 based upon what it has received.

12 BY MR. HEIDEMAN:

13 Q. Exactly. And so it would determine whether
14 the received voice is loud or quiet based on a
15 volume threshold, right?

16 MR. SPRENGER: Same objections.

17 A. Well, again, this is your hypothetical. I
18 don't know that it's classifying the voice or it's
19 classifying what is being received. That's why --

20 BY MR. HEIDEMAN:

21 Q. You agree that there's voice
22 classifications that satisfy Limitation 1[b] other
23 than classifying the voice as a whisper or a
24 nonwhisper, right?

25 MR. SPRENGER: Objection; vague,

1 scope, incomplete hypothetical.

2 A. I believe the scope of the claim is not
3 limited to whether it's a whisper or a nonwhisper.

4 BY MR. HEIDEMAN:

5 Q. What other voice classifications are
6 included within the scope of this claim and are
7 disclosed in the specification of the '337 patent?

8 MR. SPRENGER: Objection; vague, asked
9 and answered, legal conclusion.

10 A. Would you repeat the question, please?

11 BY MR. HEIDEMAN:

12 Q. What other voice classifications are
13 included within the scope of this claim and are
14 disclosed in the specification of the '337 patent?

15 MR. SPRENGER: Same objections.

16 A. I'm trying to answer that question as best
17 as I can. I see you conflating two things. One is
18 the scope of the claim is determined by the claim;
19 and secondly, the limitation, at least as is
20 described in the embodiment. I do not believe the
21 scope of the claim is limited to whisper versus
22 nonwhisper because to do that would be reading an
23 embodiment into the claim, which I'm not permitted
24 to do. That's my understanding.

25 The whisper versus nonwhisper and the

1 several different ways of evaluating whisper are
2 covered in the embodiment as illustrations. The
3 takeaway is now when you come back to the claim,
4 it's classifying the voice that's spoken by the
5 user. Now, the voice that's spoken by the user is
6 acquired. But the classification is not based upon
7 what is acquired, it's based upon the voice that's
8 spoken by the user.

9 So there are different ways you can look
10 at that as -- a person of skill in the art
11 understands that you can do things such as the
12 range, as I've mentioned before, in terms of whether
13 that's a high range in soprano or whether it's a low
14 range bass. That's -- that to me is running the
15 frequency spectrum. That is something that is
16 plausible and possible to characterize the voice.

17 And that voice characterization, a soprano
18 versus bass -- those are the two extremes in that
19 frequency spectrum determination -- is a
20 characteristic of the voice that is unchangeable
21 regardless of the distance, regardless of the
22 volume, regardless of anything else. It is a
23 characterization of the voice that's spoken by the
24 user. So that's the distinction.

25 So just merely going through calculations

1 and looking at distance and volume and whether it's
2 quiet as received or that type of thing, that is not
3 the measure of what this claim requires. It's a
4 characterization, a classification of the voice
5 spoken by the user.

6 BY MR. HEIDEMAN:

7 Q. Classifying the voice as soprano or bass is
8 not described anywhere in the '337 patent, right?

9 A. The word "soprano" and "bass" are not
10 described and not required to be described, but a
11 person of skill in the art would understand that
12 those are classifications that are generally
13 understood in the music industry.

14 Q. And you said that the classification
15 between soprano and bass can be made regardless of
16 the distance between the person speaking and the
17 device, correct?

18 A. That is correct. The difference in
19 frequencies and the clustering of those frequencies
20 may have a change in intensity -- change in
21 intensity level depending upon the distance, but the
22 frequency is still there. And so you can make that
23 classification of the voice that's not
24 classification of the voice that's acquired, it's
25 classification of the voice that's spoken.

1 Q. What if the person who is talking is moving
2 toward or away from the device, then would that
3 classification change?

4 MR. SPRENGER: Objection; vague,
5 scope.

6 A. Well, unless they run faster than a jet
7 plane, you're not going to change the frequencies
8 that are received. You might change the intensity.
9 You might change the -- if you're doing a distance
10 discrimination, for instance, you'll do that
11 potentially using a multi-mic system, and so you
12 look at phase differences and that type of thing.
13 That's standard. That's understood.

14 But, again, when you do the Fourier
15 transform, it takes that time -- time slot snap --
16 snapshot in time and does multiple samples of that
17 and evaluates it according to its frequency spectrum
18 and intensity. So you might have some change in the
19 intensity level, the peaks at certain frequencies,
20 but -- and that -- and that peak is going to be
21 nonlinear in terms of the low -- the low frequencies
22 versus the high frequencies, but the frequency is
23 still going to be maintained. So you can make that
24 discrimination of the voice that's spoken regardless
25 of whether it's a movement or at different

1 distances.

2 BY MR. HEIDEMAN:

3 Q. Okay. So in this example where the
4 classification is bass or soprano, would that
5 classification be based on the distance between the
6 user and the voice-content control device?

7 MR. SPRENGER: Objection; vague,
8 incomplete hypothetical, scope.

9 A. The answer is, it could be based on the
10 distance between. Again, "based on" does not mean
11 it's -- that that is the one factor that determines
12 what the voice classification is. It is a factor,
13 it's a feature that's used in the voice
14 classification, but it is not the determinant
15 factor. The voice classification includes the
16 distance between the user and the voice-content
17 control device as an input for that classification,
18 but it's not -- the classification is not whether
19 it's far or near.

20 BY MR. HEIDEMAN:

21 Q. Would the distance between the user and the
22 voice-content control device help the device
23 determine whether the acquired voice is bass or
24 soprano?

25 MR. SPRENGER: Objection; scope,

1 incomplete hypothetical.

2 A. It is -- it does assist because it -- it
3 helps you to -- to evaluate the -- the slope of the
4 peaks. Because the -- your peak distribution is
5 going to change based upon distance -- I'm talking
6 about the peak of the volume of power at a given
7 frequency, and that frequency, as you move and -- as
8 you move linearly in distance, the peaks at the
9 different frequencies are not linear.

10 And so knowing what that distance is could
11 help you to establish an offset for the evaluation
12 in that frequency spectrum. So it assists, but it's
13 not the determining factor.

14 THE WITNESS: Colin, when you reach a
15 break point, my coffee has run out. I would like to
16 get another cup.

17 MR. HEIDEMAN: Yeah, no problem. We
18 can do that.

19 THE WITNESS: All right.

20 MR. HEIDEMAN: Let's go off the
21 record.

22 (Break taken, 12:20 p.m. to 12:34 p.m.)

23 MR. HEIDEMAN: Okay. I would like to
24 introduce -- or drop in the chat a copy of your
25 declaration, Mr. McAlexander, that was designated as

1 Exhibit 2013.

2 THE STENOGRAPHER: Is this going to be
3 Exhibit 2013, then?

4 MR. HEIDEMAN: Yeah, it's already been
5 marked. Yep.

6 THE STENOGRAPHER: Oh, okay. All
7 right.

8 (Exhibit No. 2013 marked.)

9 BY MR. HEIDEMAN:

10 Q. Mr. McAlexander, do you have a copy of
11 that?

12 A. I have a copy of it, but it says it cannot
13 be opened. We'll try to download it again because
14 it came in at zero.

15 Q. Okay.

16 A. There we go. Just took time to download.
17 Okay. I have it.

18 Q. Okay. Can you turn to page 12? And I'm
19 just going to ask about a sentence in Paragraph 43.
20 So if you could read that paragraph and let me know
21 when you're ready.

22 A. (Reads document.)

23 Okay. I've read it.

24 Q. Okay. The last sentence of Paragraph 43
25 says that, "A person of skill in the art would have

1 understood the claims of the '337 patent to require
2 classification, or distinction between, at least two
3 separately identifiable voices."

4 Do you see that?

5 A. Yes, I do.

6 Q. In this sentence, you're not saying that
7 the distinction or the device has to classify or
8 distinguish between two voices of two different
9 people, right?

10 MR. SPRENGER: Objection; vague,
11 misstates testimony.

12 A. No, what I'm referring to here is the claim
13 requires the classification between two distinct or
14 identifiable voices or a voice, like a Voice 1 or a
15 Voice 2, from that person.

16 Now, it -- if you have -- for instance,
17 the claim with a voice, it can be multiple voices.
18 The user can be -- let's say -- let's say -- go back
19 to the "a user" that we talked about earlier, it can
20 be one or more users, but each one of the users has
21 to meet all of what's required -- excuse me, the
22 attributes or classifications that are required by
23 the claim for a user has to be met by also the
24 second user or the third or the fourth. So you can
25 add more users, but each one has to -- the voice

1 that's generated has to meet each one of these
2 limitations.

3 So -- now, when we get down to a
4 particular user that's generating a voice, a voice
5 component that's being spoken, now you're
6 classifying that singular voice spoken from that one
7 person into one of two categories or
8 classifications.

9 BY MR. HEIDEMAN:

10 Q. And those classifications could be whisper
11 or nonwhisper, as we discussed earlier?

12 A. That is correct.

13 Q. And you mentioned bass versus soprano.
14 That would be another classification separately
15 identifiable?

16 A. That would be --

17 MR. SPRENGER: Objection; vague.

18 A. That would be separately identifiable as a
19 classification of the voice that's spoken, yes.

20 BY MR. HEIDEMAN:

21 Q. There are no other classes of separately
22 identifiable voices described in the '337 patent,
23 correct?

24 MR. SPRENGER: Objection; vague.

25 A. I don't know how many times this question

1 is going to be asked. We've talked about the fact
2 of the whisper versus nonwhisper and the different
3 -- different aspects of whisper as what is
4 specifically embodied and described in the patent.

5 BY MR. HEIDEMAN:

6 Q. And other than the whisper versus
7 nonwhisper, there are no other classes of separately
8 identifiable voices described in the '337 patent,
9 correct?

10 MR. SPRENGER: Objection; vague.

11 A. Once again, the inventor only has to
12 describe one, which he has done. In fact, he's
13 described several. In fact, he's described a number
14 of different ones based upon volume, which we have
15 talked about. Distance is another. And as I've
16 indicated, too, that when you're doing a frequency
17 and peak evaluation, that can be morphed into
18 multiple different types of classifications,
19 including soprano versus bass.

20 BY MR. HEIDEMAN:

21 Q. Okay. Can you turn back to the '337
22 patent, claim 1?

23 A. Sure. I have it in front of me.

24 Q. Okay. I want to ask a question about a
25 part of Limitation 1[b] that we were looking at

1 earlier. And the specific part is where it says
2 that, "The voice classifying unit is configured to
3 analyze a voice spoken by a user."

4 Do you see that part?

5 A. Yes.

6 Q. Is analyzing the volume of the voice one
7 way of analyzing the voice as recited here?

8 MR. SPRENGER: Objection; vague,
9 scope.

10 A. I'm trying to think is -- if I look at it
11 from the perspective of the whisper versus the
12 nonwhisper, you could have a -- you could have the
13 same volume for the whisper as you do for the
14 nonwhisper, and that would not be a distinct value
15 upon which you could make a decision as to whether
16 it is a whisper or a nonwhisper.

17 So depends on the way in which something
18 is used. But in -- but the general statement is
19 that you can't -- you can't make that decision based
20 strictly on something that can be received from a
21 power spectrum differentiated depending upon whether
22 you're near, far, whether you're walking away,
23 walking toward, where the volume itself may be
24 changing, but it's -- but that's not a
25 characteristic of the voice itself because you're

1 working at a changing variable.

2 Is there a volume that's associated with
3 what is generated by the user? Yes, but as it's
4 received, that content is going to be variable
5 depending upon the other external circumstances. So
6 it does not necessarily relate to or cause one to
7 come to a conclusion as to whether it is Voice 1
8 versus Voice 2.

9 So I guess another way to say it is, the
10 volume is an input, but the classification has to go
11 through the analysis process. You analyze the voice
12 spoken to reach the determination, and distance
13 plays a -- as a factor in that determination.

14 BY MR. HEIDEMAN:

15 Q. If a device is analyzing the volume of the
16 acquired voice, is it analyzing a voice spoken by a
17 user?

18 MR. SPRENGER: Objection; vague,
19 scope, incomplete hypothetical.

20 A. It -- when one is looking at the volume
21 components of the voice that's spoken, one could use
22 that as a -- as a -- as one of the prongs for, in
23 quotes, reaching a classification. So it could be.
24 But if you drop down to the Element 1[c], voice can
25 also be -- volume-wise be evaluated during that

1 processing for that other path, that other -- that
2 other aspect to analyze the voice acquired by a
3 processing as required by the user.

4 So there's different types of analytical
5 processes that are taking place. 1[b] requires the
6 analytical process resulting in a voice
7 classification. So yes, you could be analyzing
8 that, but if it -- if it's not for the purpose of
9 and resolving a classification, then it does not
10 meet 1[b].

11 BY MR. HEIDEMAN:

12 Q. Okay. But you agree that analyzing the
13 volume of a voice is one way to analyze a voice
14 spoken by a user, right?

15 MR. SPRENGER: Objection; vague,
16 misstates prior testimony.

17 A. That is one measurement that could be used
18 to resolve -- resolve a classification. It could
19 be. But, again, it's looking at how -- how that
20 measurement of that analysis is being performed and
21 what is the result of the analysis, how is it being
22 used? If it's not used to resolve in a unique
23 classification, then that is not being used
24 according to the claim.

25 BY MR. HEIDEMAN:

1 Q. Yeah, we'll get to the rest of the claim
2 limitation in a minute.

3 But just focusing on the part that says,
4 "analyze a voice spoken by a user," you agree that
5 measuring the volume of the acquired voice is one
6 way of analyzing a voice spoken by a user, right?

7 MR. SPRENGER: Same objections.

8 A. My understanding --

9 MR. SPRENGER: And incomplete
10 hypothetical.

11 A. My answer stays the same because this
12 Element 1[b] has a -- has a focal point. The focal
13 point is to classify the voice. So yes, you can
14 have analytical processing that takes place, volume
15 of which is one of the contributing -- contributing
16 variables, but that measurement itself is not the
17 classification. That is --

18 BY MR. HEIDEMAN:

19 Q. Right.

20 A. -- a means to derive a classification. But
21 if -- if that measuring resolves in a decision,
22 okay, here's the volume, that's not the voice
23 classification.

24 Q. Right. So measuring the volume is
25 analyzing a voice spoken by the user. Whether that

1 results in the classification required by the claim,
2 that may or may not be true, but the measurement of
3 the volume is one way of analyzing a voice, right?

4 MR. SPRENGER: Objection; misstates
5 prior testimony.

6 A. In the general sense, an analytical process
7 could involve volume.

8 BY MR. HEIDEMAN:

9 Q. Okay. And the specification talks about
10 calculating the speech rate. Do you recall that?

11 A. Yes, I do.

12 Q. Okay. And analyzing the speech rate is
13 another way of analyzing a voice, right?

14 A. It's another way that one can use to
15 analyze the content of the voice, yes, it is another
16 way. Again, the issue comes down to whether or not
17 the result of that analytical process is to classify
18 the voice.

19 Q. Right. Analyzing the peak frequency of a
20 received voice is one way of analyzing a voice,
21 right?

22 A. Under the same constraints that I phrased
23 on the previous two conditions, yes.

24 Q. And determining the speech-to-noise ratio
25 is one way of analyzing a voice, right?

1 A. That is another analytical tool, yes.

2 Q. And measuring the distance from the
3 origination point of the voice to the device is one
4 way of analyzing a voice, right?

5 MR. SPRENGER: Objection; misstates
6 prior testimony.

7 A. That is -- the answer is yes, but I want to
8 qualify each one of those answers. These are
9 different inputs into the analytical process. They
10 are not the analysis itself. The analysis itself is
11 separate from the input such as the distance.
12 Distance is an input. Peak frequencies is an input.
13 The distance is an input. The volume is an input.
14 These are all inputs, but you still have to not only
15 take those as inputs, but you have to do the
16 analytical process necessary to conclude the
17 classification.

18 BY MR. HEIDEMAN:

19 Q. Isn't the determination of the speech rate,
20 for example, an analysis of a voice?

21 MR. SPRENGER: Objection; vague,
22 incomplete hypothetical.

23 A. You use the word "determination." That is
24 the process that you use -- that's the analytical
25 part. The speech rate is what is being received.

1 You have to then -- but -- but to make a
2 determination, that's a process of analyzing. But
3 that's separate from what the actual speech rate is
4 that you're receiving as an input.

5 BY MR. HEIDEMAN:

6 Q. The received voice is analyzed to obtain a
7 speech rate, right?

8 MR. SPRENGER: Same objections.

9 A. No, because the speech rate would be
10 something that is generated by the person. You're
11 not determining -- you're not figuring -- you're
12 making -- you're reaching a determination as to what
13 that speech rate is, but you're not defining the
14 speech rate. The definition comes from the person.

15 BY MR. HEIDEMAN:

16 Q. Does the device perform any analysis that
17 allows it to determine the speech rate?

18 MR. SPRENGER: Objection; vague.

19 A. Does the -- which device? This
20 hypothetical?

21 BY MR. HEIDEMAN:

22 Q. The device that's described in the '337
23 patent.

24 MR. SPRENGER: Same objections.

25 A. Yeah, it looks like at the frequency

1 spectrum, it looks at the cluster analysis to
2 determine whether or not there is any specific
3 frequencies associated with it.

4 BY MR. HEIDEMAN:

5 Q. That's how it determines the speech rate?

6 A. That's how a person of skill in the art
7 would do it. You look at the fast Fourier transform
8 and -- as one way of doing it and looking at the --
9 at the peak versus frequency, and then you can see
10 in the frequency spectrum the clustering which would
11 indicate an increase in frequency rate. So yes,
12 there are ways to do that determination as covered
13 by the specification.

14 Q. Okay. And the specification talks about
15 analyzing the volume of the voice to determine
16 whether it's above or below a threshold volume,
17 right?

18 A. It does, yes, the volume, again, being what
19 is received as an input. Then you take those inputs
20 and put them into an analytical process.

21 Q. Isn't the input to the device the acquired
22 voice?

23 MR. SPRENGER: Objection; vague,
24 misstates prior testimony.

25 A. The input to the device is an acquired --

1 is the acquired voice, but there are attributes or
2 features that are associated with that acquired
3 voice that you use as inputs.

4 BY MR. HEIDEMAN:

5 Q. The device analyzes the acquired voice to
6 determine the volume of the voice, right?

7 MR. SPRENGER: Objection; vague.

8 A. Under this hypothetical, the -- the -- the
9 device would analyze to determine a rate -- that's
10 certainly something that could be done, is determine
11 the rate of that -- of that voice, rate associated
12 with the voice.

13 BY MR. HEIDEMAN:

14 Q. Well, as described in the specification,
15 the device analyzes the acquired voice to determine
16 the volume of that acquired voice, right?

17 MR. SPRENGER: Objection; vague.

18 A. If we're looking at -- at volume, yes, it
19 -- the spec does indicate that you can analyze the
20 acquired voice and -- and reach a determination of
21 the -- of the volume that's associated with that.
22 That's a possibility, yes.

23 BY MR. HEIDEMAN:

24 Q. And the specification explains that the
25 device analyzes the acquired voice to determine the

1 speech rate, right?

2 MR. SPRENGER: Objection; vague.

3 A. There's analytical processes that would
4 include in the specification based upon rate. You
5 could -- you could look at the analysis process of
6 the -- apply the analysis process to the acquired
7 voice and reach some understanding as to what that
8 speech rate was. Yes, you can do that.

9 BY MR. HEIDEMAN:

10 Q. That's what the '337 patent discloses,
11 right?

12 A. As an attribute of the voice, not a
13 classification of the voice, but an attribute of the
14 voice.

15 Q. I'm not talking about classification. I'm
16 just talking about analyzing the voice.

17 The '337 patent discloses analyzing the
18 acquired voice to determine the speech rate, right?

19 A. Speech rate is one of the variables that is
20 discussed in the patent, yes.

21 Q. Okay. That's not an answer to my question.

22 The '337 patent discloses analyzing the
23 acquired voice to determine a speech rate, right?

24 MR. SPRENGER: Objection; asked and
25 answered.

1 A. The specification -- the '337 specification
2 describes on column 8 that you can classify the
3 first voice and the second voice by using either one
4 of a volume of the voice V1, a speaking speed of the
5 user in the voice V1, and the volume ratio between
6 the speech of the user and wind noise. All three of
7 these are covered as ways in which you can use a
8 measurement analysis in order to assist in reaching
9 a classification. But none of those are themselves
10 a classification.

11 BY MR. HEIDEMAN:

12 Q. Okay. And Limitation 1[b] covers all ways
13 of analyzing a voice and classifying the voice as
14 long as that classification is somehow based on the
15 distance, right?

16 MR. SPRENGER: Objection; vague,
17 misstates prior testimony.

18 A. Generally, the statement is -- is correct.
19 The voice classifying unit analyzes the acquired
20 voice, and one of the contributing factors in that
21 process is a distance calculation. So you have to
22 do the analytical work, you have to include distance
23 as one of the main -- as one of the factors, and
24 then you have to, based upon that analytical work
25 plus the distance, reach a classification

1 determination.

2 BY MR. HEIDEMAN:

3 Q. That claim limitation does not require any
4 particular way of classifying the voice other than
5 based on distance, right?

6 MR. SPRENGER: Objection; vague.

7 A. You have to determine a classification
8 based upon an analytical process that includes
9 distance. But distance is one of the -- one of the
10 variables that is included as a claim limitation,
11 but in addition to that, you have to do the analysis
12 work.

13 BY MR. HEIDEMAN:

14 Q. The classification can be based on any
15 analytical process as long as it includes the
16 distance?

17 MR. SPRENGER: Objection; vague.

18 A. I can't agree that it requires any. That's
19 very open ended. It has to utilize the analytical
20 process coupled with the distance in order to derive
21 a voice classification. Not all conditions will
22 resolve a voice classification. And if you -- if
23 you even invoke multiple things like sound,
24 distance, frequency, speed, and distance all
25 together, and you use those to then project some

1 other thing, but you haven't classified, then you
2 still haven't met that obligation because you have
3 to utilize the analytical process coupled with the
4 distance in order to reach a determination which is
5 classified. Because the whole thrust of the
6 structure of the voice classifying unit
7 configuration is to classify the voice.

8 BY MR. HEIDEMAN:

9 Q. Claim 1 does not require using the distance
10 in any specific way, right?

11 MR. SPRENGER: Objection; vague.

12 A. I don't see any limitation on how the
13 distance is used other than during the
14 classification process.

15 BY MR. HEIDEMAN:

16 Q. And the claim does not require any
17 particular distance threshold to be used, right?

18 MR. SPRENGER: Objection; vague.

19 A. That is correct.

20 BY MR. HEIDEMAN:

21 Q. The specification doesn't describe any
22 distance threshold that should be used, right?

23 MR. SPRENGER: Objection; vague.

24 A. Well, I think the claimed invention leaves
25 it up to the user in his or her application as to

1 where that distance threshold would be relegated,
2 and that depends upon the application.

3 BY MR. HEIDEMAN:

4 Q. The specification doesn't describe any
5 distance threshold that could be used, right?

6 MR. SPRENGER: Objection; vague, asked
7 and answered.

8 A. It doesn't give a quantified number to the
9 distance, if that's what you're asking, but in each
10 one of these instances, it's an -- evaluating the
11 spectrum. The spectrum that -- that you're
12 evaluating, you can set the threshold up and down
13 that spectrum according to your particular
14 application. But it does describe a spectrum and it
15 does describe setting threshold. Where on that
16 spectrum you set the threshold would be application
17 dependent and not required to be stated specifically
18 in the -- in the patent itself.

19 BY MR. HEIDEMAN:

20 Q. What is the spectrum that you're referring
21 to?

22 A. In column 8 -- let me read just a second
23 here.

24 At the bottom of column 7, beginning
25 line 64, for example, "The voice classifying unit 38

1 acquires a time waveform of intensity of the voice
2 V1. . ." that's like a snapshot, a sample ". . . and
3 performs Fourier-transformation on the time
4 waveform, thereby acquiring a spectrum that
5 indicates intensity of the voice V1 per frequency."
6 This is the spectrum that I'm talking about.

7 And so now you can utilize that -- that
8 spectrum analysis, that Fourier transform analysis
9 looking at frequency and peak based upon different
10 input values. And that could be something that's
11 measured based upon distance. You could use volume,
12 you can use speaking speed. There are different
13 variables that will help you to -- to apply to that
14 spectrum analysis to reach a determination as to
15 where that falls within the spectrum of what you
16 would classify a particular voice to be. So the
17 makeup of that is as it applies to the spectrum
18 analysis, that's the embodiment that's shown.

19 Q. Okay. The question was that the
20 specification doesn't describe any distance
21 threshold that could be used. And I think you said
22 it doesn't -- it doesn't give -- I don't have the
23 actual --

24 A. I'll just restate it. It doesn't give the
25 actual value associated with a threshold, but it

1 indicates that when you do the Fourier transform
2 analysis, you get a peak versus frequency
3 dispersion. And you can set a threshold along
4 that -- that transformed curve to define where you
5 want to have the -- the determining factor as to how
6 to classify one versus another.

7 So it's -- it's well stated in the
8 specification because one knows that when you do a
9 time-to-frequency domain shift using the fast
10 Fourier -- or the Fourier and/or fast Fourier
11 transform, you can then garner a lot of information
12 from that to assist you in making the actual
13 classification.

14 And then I think I also said that the
15 precise definition of a particular value is really
16 something that would be application dependent
17 because a person of skill in the art looking at this
18 would understand that that actual value will be set
19 dependent upon the application. But the patent
20 specification itself is fully sufficient to inform
21 the reader on how to do that.

22 Q. Limitation 1[b] also refers to "a voice
23 acquiring unit."

24 Do you see that?

25 A. Yes, sir.

1 Q. The '337 patent does not describe any new
2 voice acquiring unit; is that right?

3 MR. SPRENGER: Objection; vague.

4 A. No, that's basically -- that's -- that's
5 known to be basically the receiver that receives the
6 particular voice that's being transmitted.

7 BY MR. HEIDEMAN:

8 Q. And receivers were conventional by 2017,
9 right?

10 MR. SPRENGER: Objection; scope.

11 A. It's kind of hard to work with something
12 that you don't have a transmit on one end and a
13 receiver on the other, yes, those are known.

14 BY MR. HEIDEMAN:

15 Q. Okay. Limitation 1[c] refers to "a process
16 executing unit."

17 Do you see that?

18 A. Yes, sir, I do.

19 Q. The processing -- the process executing
20 unit referred to in Limitation 1[c] was conventional
21 by 2017, right?

22 MR. SPRENGER: Objection; vague,
23 scope.

24 A. The general understanding of an execution
25 unit, which would be part of the core of a CPU,

1 central processing unit, would be kind of the
2 structure that would do something like this. It
3 could be a controller, it could be an FBGA, it could
4 be microcontroller, a processor -- microprocessor.
5 There's a number of different ways you can
6 substantiate something like this, and that's known.
7 But this processing unit has to analyze the voice
8 acquired by the voice acquiring unit, the one that
9 receives the voice, and execute a process required
10 by the user. So it has to be specifically set up in
11 order to process it according to what the claim
12 requires.

13 So processing units, yes, generally,
14 they're known, but this particular one is a
15 processing unit specifically for this type of claim.

16 BY MR. HEIDEMAN:

17 Q. But process executing units that were
18 configured to analyze a voice acquired by the voice
19 acquiring unit to execute processing required by the
20 user was conventional in 2017, right?

21 MR. SPRENGER: Objection; vague,
22 scope.

23 A. Again, when we look at general, were there
24 such things as processor executing units; in other
25 words, a unit that executes according to a given

1 process, the answer is yes. This particular one,
2 though, has to be one that's configured very
3 specifically to analyze the input voice, the voice
4 that's acquired, which then comes into the
5 processing unit and execute processing that's
6 required by the user.

7 So there's a specific restriction here.
8 So not any and all process units do this if they're
9 not so configured.

10 BY MR. HEIDEMAN:

11 Q. But processing units that perform that
12 function were conventional in 2017, right?

13 MR. SPRENGER: Same objections.

14 A. You had conventional processing units that
15 you could instantiate within your system and
16 configure them to perform what is required here.

17 BY MR. HEIDEMAN:

18 Q. iPhones with Siri had these process
19 executing units that performed this function by
20 2017, right?

21 MR. SPRENGER: Same objections.

22 A. Again, I haven't analyzed that product in
23 this case to answer that question one way or the
24 other.

25 BY MR. HEIDEMAN:

1 Q. Okay. Are you aware of Google products
2 that had these process executing units that
3 performed these functions by 2017?

4 A. Again, that's beyond --

5 MR. SPRENGER: Same objections.

6 A. That's beyond the scope of what I was asked
7 to do for this particular declaration, and I have
8 not undertaken any studies specifically directed to
9 that question.

10 BY MR. HEIDEMAN:

11 Q. Okay. I think in your declaration, you
12 referred to Google devices and Amazon devices. I
13 don't know if you referred to Apple devices.

14 But you're aware that there were
15 processors that were configured to analyze a voice
16 acquired by the voice acquiring unit to execute
17 processing required by the user by 2017, right?

18 MR. SPRENGER: Objection; vague,
19 scope.

20 A. Yeah, I think 2017 was the year that you
21 were using. There were systems that analyzed voice
22 as of 2017, again, not -- not, as I'm aware, to meet
23 all of the requirements here as that is used in the
24 claim. But the bottom line is, there were
25 processors that were used and configured to analyze

1 voice in some way.

2 BY MR. HEIDEMAN:

3 Q. Okay. That's -- I want to go through them
4 limitation by limitation to know what you -- what
5 your opinion is as to whether a limitation is new or
6 it was known at the time.

7 So for this particular limitation, you
8 agree that there were processing -- process
9 executing units in 2017 that were configured to
10 analyze a voice acquired by a voice acquiring unit
11 and execute processing required by the user, right?

12 MR. SPRENGER: Objection; vague,
13 scope.

14 A. There were processors that analyzed voice.

15 BY MR. HEIDEMAN:

16 Q. Well, of course, there were. There were
17 also processors in 2017 that analyzed an acquired
18 voice and executed processing required by the user,
19 right?

20 MR. SPRENGER: Objection; vague,
21 scope, misstates testimony.

22 A. Well, again, I don't believe that
23 particular issue is something that I was addressing
24 in my declaration. If you want me to point it,
25 because I don't recall it being there. So I can

1 only -- I can only describe that generally. I
2 haven't done any directed studies on it as far as
3 looking at any particular thing at that particular
4 time. I can just generally state that there were
5 processing units that analyzed voice data. But
6 specifically analyzing it for the purpose of
7 contributing to what is required for the rest of the
8 claim in conjunction with the classification unit --
9 BY MR. HEIDEMAN:

10 Q. That wasn't the question. It's not -- we
11 weren't talking about the other limitations in the
12 claim.

13 The rest of that limitation just says that
14 it analyzes the voice acquired by the voice
15 acquiring unit to execute processing required by the
16 user. I didn't think this was controversial, but
17 maybe it is.

18 You don't know whether there were process
19 executing units configured to analyze a voice
20 acquired by a voice acquiring unit to execute
21 processing required by the user in 2017?

22 MR. SPRENGER: Objection;
23 argumentative. Colin, just let the witness answer
24 your questions.

25 A. What I stated was, and I'll repeat, that I

1 have not undertaken any studies as part of this
2 case, I haven't been asked to analyze that
3 particular parameter. But in general, I've already
4 commented that in that time frame, yes, there
5 were -- there were units that -- that analyzed
6 voice. And those -- that analytical process was to
7 some extent based upon user input to -- for
8 instance, just processors that you select a mode,
9 and so to the analysis is going to be based upon a
10 particular mode that's selected. Those -- those
11 types of things do exist.

12 And the only caveat I said is when I play
13 this with this rest of the claim, the answer is no.
14 But in terms of just that particular frame of 1[c],
15 yes, there were units that analyzed voice.

16 BY MR. HEIDEMAN:

17 Q. And there were processing units that
18 analyzed the voice and executed processing required
19 by the user, right?

20 MR. SPRENGER: Objection; vague,
21 scope, asked and answered.

22 A. Again, in the general sense, there were
23 units that analyzed voice for other attributes, but
24 analyzed voice, and what they executed was, in part,
25 directed by a user.

1 As an example, I said you can select a
2 mode switch, and therefore, there would be a unit
3 that analyzes the voice and executes it as required
4 by the user because the user selected the mode. In
5 general, yes.

6 BY MR. HEIDEMAN:

7 Q. Okay. So yes, process executing units as
8 recited in claim 1[c] were known by 2017, right?

9 MR. SPRENGER: Objection; vague,
10 misstates prior testimony, scope.

11 A. Once again, the general processing device
12 that would do the analysis of a voice and does that
13 in a way that's selectable or directed by the user
14 in some way or form, that was generally known.

15 THE STENOGRAPHER: I'm sorry, you cut
16 out for me in the last part. I got, once again, the
17 general processing device that would do the analysis
18 of -- and it cut out. I didn't get it all.

19 A. Analysis of the voice was generally known.

20 BY MR. HEIDEMAN:

21 Q. Do you know whether Alexa-enabled devices
22 were being sold by 2017?

23 MR. SPRENGER: Objection; vague,
24 scope.

25 A. I haven't been asked for this particular

1 declaration or anything associated with it to delve
2 into that particular aspect or not. So as I sit
3 here, I can't really qualify one way or the other.

4 BY MR. HEIDEMAN:

5 Q. Okay. Can you look at your declaration?

6 A. Sure.

7 Q. Paragraph 33 on page 8.

8 A. 33?

9 All right. I have looked at it.

10 Q. Okay. What did -- what did you mean when
11 you said "the 2010-era"?

12 A. Well, this is in response to statements
13 made by Dr. Stern.

14 Q. Yeah, I understand that.

15 A. And so -- but the answer to your question
16 is, you said "the 2010 era." That's because that's
17 the era that he defined. That's what he was
18 describing.

19 Q. Okay. What years are covered by the 2010
20 era?

21 A. What years are covered?

22 MR. SPRENGER: Objection; vague.

23 A. It just says on or about in that particular
24 time frame of 2010. It's not definitive, as I
25 recall, as to whether that goes back to 2009, 2008,

1 or whether it's looking forward. Again, I'm just
2 responding to Dr. Stern's statement.

3 BY MR. HEIDEMAN:

4 Q. Okay. And your declaration acknowledges
5 that Alexa-enabled devices and Google's voice
6 assistant existed at that time, right?

7 A. That's correct.

8 Q. Okay. Do you know where -- whether either
9 of those devices, as they existed at that time, had
10 a process executing unit configured to analyze the
11 voice acquired by a voice acquiring unit to execute
12 processing required by the user?

13 MR. SPRENGER: Objection; vague,
14 scope.

15 A. My recollection is that there were CPUs
16 associated with those devices in that 2010 era and
17 that there was some level of processing that was
18 done based upon the voice received at that time. So
19 the general concept, as I had stated earlier,
20 processing units are units that process speech based
21 on various factors, that does preexist. That
22 existed.

23 BY MR. HEIDEMAN:

24 Q. Okay. So the processing -- process
25 executing unit recited in Limitation 1[c] was known

1 by 2017, right?

2 MR. SPRENGER: Objection; vague,
3 scope, misstates prior testimony.

4 A. The general concept of a process -- a
5 device that executes instructions to analyze an
6 input voice, there were such processors that did
7 exist, generally speaking, to analyze voice under
8 certain -- certain ways. Once again, when you look
9 at the claim, it has to take -- that process
10 executing unit's configured to do that has to
11 provide an output because the voice-content
12 generating unit of the next claim element is
13 configured to generate the output sentence based
14 upon the content of that processing unit.

15 So, once again, generally speaking, do
16 process units exist? Yes, they do. Are they
17 configured in such a way and combined within the
18 claimed invention? No, they were not.

19 BY MR. HEIDEMAN:

20 Q. The process executing units that existed in
21 2017 were configured to analyze a voice and execute
22 processing required by the user, right?

23 MR. SPRENGER: Objection; vague,
24 scope.

25 A. It's amazing how we can come back to this

1 now for the sixth time with the same answer. I
2 stated processing units, the units that executed
3 instructions, analyzing a voice input to various
4 parameters as configured or as required by the user
5 such as a mode switch, those existed.

6 BY MR. HEIDEMAN:

7 Q. You keep changing the language of the end
8 of the limitation, though. So the end of that
9 limitation says, it's configured to analyze the
10 voice to execute processing required by the user.
11 There's no doubt that that was known in 2017, right?

12 MR. SPRENGER: Objection; vague,
13 scope, misstates prior testimony.

14 A. Based on the qualifications that I've
15 previously stated now six times, the answer is yes.

16 BY MR. HEIDEMAN:

17 Q. Okay. The next limitation that you -- you
18 just referred to as Limitation 1[d]. And it recites
19 "a voice-content generating unit configured to
20 generate, based on content of the processing
21 executed by the process executing unit, output
22 sentence that is text data for a voice to be output
23 to the user."

24 Do you see that?

25 A. I do.

1 Q. And the voice-content generating unit here
2 is the part of the processor that performs the rest
3 of function in that claim limitation, right?

4 MR. SPRENGER: Objection; vague.

5 A. When you said the rest of the processing
6 for the claim, there are other elements that are --
7 follow this claim limitation. So I'm not sure that
8 it executes all of what's -- the rest, as you said.

9 BY MR. HEIDEMAN:

10 Q. Yeah, sorry, Mr. McAlexander, let me just
11 rephrase that because I had limitation at the end of
12 my question, but you might not have heard it.

13 So the question was: The voice-content
14 generating unit in this limitation is the part of
15 the processor that performs the function of the rest
16 of that claim limitation, right?

17 MR. SPRENGER: Objection; vague.

18 A. When you say "that claim limitation,"
19 you're saying within this claim limitation, the
20 voice-content generating unit?

21 BY MR. HEIDEMAN:

22 Q. Correct, the -- the function that is
23 recited in Claim Limitation 1[d].

24 A. Okay. Let me read it again.

25 (Reviews document.)

1 All right. As I read this claim
2 limitation, this unit that's called a voice-content
3 generating unit, it says based on the content of the
4 process executed by the process unit. So that is
5 one if its -- that is a primary input to the
6 voice-content generating unit, and it generates a
7 text output. That -- clearly, that text output is
8 going to be later converted to a voice or actually
9 outputting to the -- to the speaker. So that
10 voice-content generating unit, according to this
11 claim, generates the text.

12 Q. And the voice-content generating unit is
13 the part of the processor that generates that output
14 sentence based on the given input, right?

15 A. Yes, that's -- that is a result of the
16 voice-content generating unit. It generates an
17 output sentence, which is text.

18 Q. Okay. And voice generating units that
19 were -- that -- strike that.

20 Voice-content generating units configured
21 to generate, based on content of the processing
22 executed by the process executing unit, output
23 sentences, text data, for a voice to be output to
24 the user was known by 2017, right?

25 MR. SPRENGER: Objection --

1 THE STENOGRAPHER: Can you say that
2 again? I'm sorry, you're saying it so fast that I'm
3 not catching the process, processing, processor. So
4 could you say it again, but slower?

5 MR. HEIDEMAN: Yeah, I'll read it
6 again and I'll try and do it more slowly.

7 THE STENOGRAPHER: Thank you.

8 BY MR. HEIDEMAN:

9 Q. A voice-content generating unit configured
10 to generate, based on content of the processing
11 executed by the process executing unit, output
12 sentence that is text data for a voice to be output
13 to the user was known in 2017, right?

14 MR. SPRENGER: Objection; vague,
15 scope.

16 A. The general context of a unit that receives
17 the results of an analytical process and converts
18 that to text was known.

19 BY MR. HEIDEMAN:

20 Q. Based on your understanding of
21 Alexa-enabled devices and the Google voice assistant
22 that you referred to in your declaration, is it your
23 understanding that those devices by 2017 had a
24 voice-content generating unit as recited in Claim
25 Limitation 1[D]?

1 MR. SPRENGER: Objection; vague,
2 scope.

3 A. I can only give you an answer as best as I
4 recall because I haven't undertaken that evaluation
5 for the purposes of this particular declaration.
6 But if I take an example of a woke word, the
7 processors were able to receive, make a
8 determination as to whether it is a woke word or
9 not, and -- and then respond with a voice output
10 based upon that woke or turnoff or something of that
11 nature. Whether it converted it to text or not, I
12 don't recall that. It could, but I don't recall
13 that.

14 BY MR. HEIDEMAN:

15 Q. Do you know whether by 2017, you could ask
16 a Google voice assistant to give you the weather?

17 MR. SPRENGER: Objection; vague,
18 scope.

19 A. Again, I don't have the time frame in mind
20 because I was not asked to do that as a part of this
21 declaration, but I do know that -- that they are
22 capable of doing that, responding to a weather
23 request. In terms of the time frame, I'm -- I don't
24 recall exactly when that might have existed. But
25 yes, I know they can do it.

1 BY MR. HEIDEMAN:

2 Q. Okay. So if -- if -- if a Google voice
3 assistant can receive your voice request for the
4 weather and provide that weather back to you, do you
5 agree that that voice assistant would satisfy
6 Limitations 1[c] and 1[d] of this claim?

7 MR. SPRENGER: Objection; vague,
8 scope, lacks foundation.

9 A. I would -- again, I haven't undertaken that
10 study for this particular declaration, so my answer
11 is going to be qualified by the fact that I just
12 haven't done the due diligence on it to be able to
13 answer specifically. So I can just give you a
14 general understanding as I recall, if that's okay.

15 BY MR. HEIDEMAN:

16 Q. Sure.

17 A. Again, you're looking at just these
18 particular limitations of receiving a voice,
19 analyzing a given response, I would say generally,
20 yes, that particular aspect existed. But in context
21 of whether or not there was a text conversion for
22 that particular example, I just don't recall. The
23 fact that -- something like weather would be
24 something that would have to probably invoke, as I
25 recall, some cloud involvement in terms of answering

1 that. And what that -- what that transmission was
2 like, I just -- I just sit here, I don't recall.

3 But -- but the general context of was a
4 unit out there able to respond to a request for
5 weather and give a voice answer to that weather,
6 generally speaking, that did -- yes, that does
7 exist, but whether it meets all the claim
8 limitations here, I can't -- I can't recall.

9 Q. Claim Limitation 1[c] does not specify how
10 the process executing unit analyzes the voice,
11 right?

12 MR. SPRENGER: Objection; vague.

13 A. 1[c] specifies configured to analyze. If
14 your question is, does it go into detail in the
15 claim limitation about how the analysis is to be
16 performed, the answer is no. It leaves that to the
17 specific application as to the way in which the
18 analysis would be performed, but it's making sure
19 that the execution unit is configured to analyze.
20 That's the claim limitation.

21 BY MR. HEIDEMAN:

22 Q. Limitation 1[c] doesn't say how it's
23 configured to do that, right?

24 MR. SPRENGER: Objection; vague --

25 A. It doesn't say how -- excuse me. The word

1 "how" is now in the claim.

2 THE STENOGRAPHER: The remaining -- I
3 got objection; vague.

4 MR. SPRENGER: Vague and misstates
5 testimony.

6 BY MR. HEIDEMAN:

7 Q. Limitation 1[c] does not recite any
8 particular way of configuring the process executing
9 unit, correct?

10 MR. SPRENGER: Same objections.

11 A. No, it is a structure claim limitation
12 configured to analyze. It doesn't give you the
13 way -- doesn't specify a particular way in which it
14 has to be done, no.

15 BY MR. HEIDEMAN:

16 Q. And Limitation 1[c] doesn't recite any
17 particular way of analyzing the acquired voice,
18 right?

19 A. No, the way is not part of the claim
20 limitation. It's configured to analyze. It doesn't
21 go one and then -- and have additional limitations
22 as to the way it's to be done.

23 Q. Limitation 1[d] does not specify any
24 particular way that the voice-content generating
25 unit actually generates the output sentences, right?

1 MR. SPRENGER: Objection; vague.

2 A. It, again, is a structure claim limitation
3 of the voice-content generating unit. It's
4 configured to generate -- configured to generate an
5 output sentence that is text data for a voice to be
6 output. That's -- it's basically defining what that
7 unit is. It's what is configured to do and what it
8 outputs. The way in which it done -- is done, a
9 person of skill in the art would know -- would
10 understand multiple different ways in which that
11 could be instantiated, but the claim itself does not
12 limit the way.

13 BY MR. HEIDEMAN:

14 Q. Limitation 1[e] recites, "an output
15 controller configured to adjust a sound volume of
16 voice data obtained by converting the output
17 sentence thereinto. . ."

18 Do you see that?

19 A. Yes, I do.

20 Q. Controllers that adjusted the sound volume
21 of output were known by 2017, right?

22 MR. SPRENGER: Objection; vague,
23 scope.

24 A. In the general sense, controllers
25 configured to adjust a sound volume were known.

1 It's called loudness control.

2 BY MR. HEIDEMAN:

3 Q. Sorry, what was the end of that,
4 Mr. McAlexander?

5 A. It's called loudness control.

6 Q. Loudness control. Okay.

7 Was it -- what's the difference between
8 loudness control and volume control?

9 A. Well, again, I'm just saying that's a name
10 that's given to a slider that's used for volume
11 control. And you can -- you can adjust controllers
12 that not only adjust the volume levelling it up or
13 levelling it down, or putting a filter that -- that
14 puts it within a band that it will not be higher
15 than or lower than, so basically gives you a
16 continuous loudness level regardless of what the
17 input is, those types of things were known.

18 But, again, this voice-content generating
19 -- excuse me, the output controller adjusting the
20 volume, again, is associated with the output
21 sentence. And so that's something that -- that's --
22 that unique to this particular claimed invention.

23 Q. The Alexa-enabled devices and the Google
24 voice assistant that you refer to in your
25 declaration, those devices had output controllers

1 configured to adjust the sound volume of output
2 sentences, right?

3 MR. SPRENGER: Objection; vague,
4 scope.

5 A. In the general sense of adjusting volume,
6 the answer is, yes, in the general sense.

7 BY MR. HEIDEMAN:

8 Q. And they had such an output controller in
9 the 2010 era time frame that you refer to in your
10 declaration, right?

11 MR. SPRENGER: Same objections.

12 A. Again, it's beyond the scope of what I
13 provide in this declaration, so I don't have
14 immediate recall of those particular units at that
15 time, but to the best of my recollection, there was
16 output control in terms of volume. But, again, this
17 is obtained by converting the output sentence. I
18 don't have any recall of anything like that
19 happening one way or the other.

20 BY MR. HEIDEMAN:

21 Q. If those devices used text to speech to
22 output the voice to the user, then you would agree
23 that they had output controllers configured to
24 adjust sound volume of voice data obtained by
25 converting the output sentence therein, right?

1 MR. SPRENGER: Objection; vague,
2 scope, lacks foundation.

3 A. All right. I'm going to ask you to repeat
4 the question again, please.

5 BY MR. HEIDEMAN:

6 Q. Yeah. You're familiar with text to speech,
7 right?

8 A. I am.

9 Q. And if those devices that we were referring
10 to, the Alexa-enabled devices and the Google voice
11 assistant, if they used text to speech to output --
12 output a sentence in voice to the user, then you
13 would agree that those devices had output
14 controllers configured to adjust a sound volume of
15 voice data obtained by converting the output
16 sentence thereinto, right?

17 MR. SPRENGER: Objection; vague,
18 scope, lacks foundation.

19 A. The -- based on your hypothetical -- or,
20 excuse me, not your hypothetical, based on your
21 representation that the particular units you're
22 talking about had text-to-speech capability, and
23 that -- that controller receives a text input and
24 converts that to an output of -- that's some volume,
25 those existed.

1 Now, again, I have to look at this claimed
2 invention in the context of the entire claim because
3 there are other restrictions placed upon this output
4 controller, just like there are other restrictions
5 placed on the voice generating unit. So you have to
6 look at it in the context of the whole.

7 And so, yes, there were output controllers
8 configured to do a text-to-voice conversion. But,
9 again, that does not in and of itself meet what is
10 required by the entire claim.

11 BY MR. HEIDEMAN:

12 Q. Right. But there are output controllers
13 that satisfied -- just Limitation 1[e], if we just
14 take that limitation in isolation, those were known
15 in 2017, right?

16 MR. SPRENGER: Objection; vague,
17 scope, misstates testimony.

18 A. Again, I -- I want to be very careful
19 because your question was specifically to this claim
20 element in -- in a box all of itself without any --
21 looking at the rest of the limitations. And here,
22 the output controller has to adjust the sound volume
23 or the voice data by converting the output sentence,
24 but the remainder of the claim specifies that the
25 output sentence can be a first sentence and a second

1 sentence, and the output controllers has to adjust
2 the volume based upon which sentence it is. I don't
3 think that existed.

4 So if you're asking without the rest of
5 the limitations are there output controllers that
6 adjust volume to convert text to voice, yes,
7 generally speaking, but not in accordance with what
8 is required of the output controller for the rest of
9 the limitations.

10 BY MR. HEIDEMAN:

11 Q. Limitation 1[e] does not specify how the
12 controller adjusts the sound volume, correct?

13 MR. SPRENGER: Objection; vague,
14 scope.

15 A. The how is left to the skilled artisan who
16 knows various ways in which that can be done. It's
17 not required, but it's not even a requirement in
18 the -- in the claim itself. It's adjusting the
19 sound volume.

20 BY MR. HEIDEMAN:

21 Q. Limitation 1[e] is not limited to any
22 particular way of adjusting the volume, correct?

23 A. No, it's an --

24 MR. SPRENGER: Same objections.

25 A. It's an apparatus claim, and the way is not

1 described in this claim limitation.

2 BY MR. HEIDEMAN:

3 Q. Okay. Limitation 1[f] recites, "The
4 voice-content generating unit is further configured
5 to generate a first output sentence as the output
6 sentence when the acquired voice has been classified
7 as the first voice. . ."

8 Do you see that?

9 A. Yes, I do.

10 Q. Limitation 1[f] does not recite how the
11 voice-content generating unit is configured to
12 generate that first output sentence, correct?

13 MR. SPRENGER: Objection; vague.

14 A. Well, in the context of the preceding
15 claim, Limitation 1[d], we know that this output
16 sentence is in the form of text data. So that is --
17 that's at least one of the limitations that's
18 required. And so this first output sentence also
19 has to be text data, again, acquired -- when the
20 acquired voice has been classified as the first
21 voice. So the output sentence that's generated here
22 has to be one that's -- that's slaved to the fact
23 that there has been a classification.

24 So generating the first output sentence as
25 the output sentence when the acquired voice has been

1 classified as the first voice. So you generate that
2 output sentence according to this classification.
3 So if -- if you have a first output sentence, which
4 is text, but you have not been -- but the
5 classification is the second voice, then that will
6 not be generated. So you're going to be basically
7 generating the output sentence based upon the
8 classification. So the --

9 BY MR. HEIDEMAN:

10 Q. Claim Limitation 1[f] does not --

11 A. Excuse me, I'm sorry.

12 Q. Sorry.

13 A. It was kind of a way that's put in within
14 this element because there's some decision processes
15 that are being made as to which classification it
16 is, and the generation is dependent on that. So
17 there is some portions of a way that's placed within
18 this limitation.

19 Q. Okay. So -- so the voice has been
20 classified as a first voice and now the device is
21 going to generate a first output sentence, but the
22 limitation does not recite any particular way of
23 generating that first output sentence, right?

24 A. No, in terms --

25 MR. SPRENGER: Objection; vague.

1 A. In terms of behind the scenes, in terms of
2 a particular way in which a particular user would
3 apply this and their application, no, that is left
4 to the user. There's no reason to define that. But
5 it's -- but that part of the way is not within the
6 claim limitation.

7 BY MR. HEIDEMAN:

8 Q. Okay. And the same is true for
9 Limitation 1[g], which recites generating the second
10 output sentence, right?

11 A. Yeah, all of this which we have --

12 MR. SPRENGER: Objection; vague.

13 A. All of which we have discussed above would
14 apply to this particular claim limitation as well
15 just for the second output.

16 BY MR. HEIDEMAN:

17 Q. And Claim Limitation 1[g] recites that
18 information is omitted as compared to the first
19 output sentence in the second output sentence.

20 Do you see that?

21 A. I think that's [h], isn't it?

22 Q. If it's easier, Mr. McAlexander, you can
23 look at your declaration on page 14. You have the
24 claim limitation there -- or the claim language
25 there.

1 A. Yeah, I just want to make sure that I'm
2 connecting correctly with you. And this would be
3 [g] in this one, right?

4 Q. Yeah. You also have the claim on page 24
5 in a format that's easy to read.

6 A. Thank you. I just want to make sure I'm
7 reading it correctly. So thanks for the
8 information.

9 Q. Sure.

10 So I'm looking at Limitation 1[g]. And it
11 says that the -- in the second output sentence,
12 information is omitted as compared to the first
13 output sentence.

14 Do you see that?

15 A. Yeah, "generate a second output sentence in
16 which information is omitted," correct.

17 Q. Limitation 1[g] does not recite how the
18 voice-content generating unit determines which
19 information is omitted, correct?

20 MR. SPRENGER: Objection; vague.

21 A. Yeah, that would be
22 application-to-application dependent when you apply
23 this particular invention. But the actual way that
24 you'd parse which words to omit or which parts of
25 the structure of the sentence to omit, no, that's --

1 that's not required as a claim limitation.

2 BY MR. HEIDEMAN:

3 Q. And then Limitation 1[h] refers to
4 adjusting the volume of the outputs.

5 Do you see that?

6 A. Yes.

7 Q. Limitation 1[h] does not recite how the
8 volume is adjusted, right?

9 MR. SPRENGER: Objection; vague.

10 A. No, in terms of how one would within a
11 given application adjust the volume is not -- is not
12 limited. It's just the fact that adjustment is part
13 of the configuration of the output controller.

14 BY MR. HEIDEMAN:

15 Q. And Limitation 1[h] is not limited to any
16 particular way of adjusting the volume, right?

17 MR. SPRENGER: Objection; vague.

18 A. Not in a particular way, but certainly
19 within the restrictions of what's required by the
20 claim.

21 BY MR. HEIDEMAN:

22 Q. Okay. Mr. McAlexander, I can take a break
23 now or I can keep going. Do you have a preference?

24 A. I'll leave that to the wonderful lady who's
25 recording all this. I can keep going.

1 THE STENOGRAPHER: I would like a
2 break. Thank you.

3 MR. HEIDEMAN: Okay. Let's go off the
4 record.

5 (Break taken, 1:34 p.m. to 2:05 p.m.)

6 (Exhibit No. 1004 marked.)

7 BY MR. HEIDEMAN:

8 Q. Okay. Mr. McAlexander, we've dropped
9 Exhibit 1004 in the chat. If you could open that
10 up, please.

11 A. All right. I have -- you said 1004 is the
12 Shimomura reference open.

13 Q. Okay. You're familiar with this reference,
14 correct?

15 A. Yeah.

16 Q. I want to ask you a question about
17 Figure 7, which is at the -- near the end of the
18 reference. If you can turn to that figure, please.

19 A. Okay. I have Figure 7 in front of me.

20 Q. What does Figure 7 of Shimomura disclose?

21 MR. SPRENGER: Objection; vague.

22 A. I will -- I'll just state and then I'll go
23 back and check. But my -- my belief is it's whether
24 or not they implement an assertion into the
25 character string when it -- based upon whether it's

1 less than 350 or more than 350 centimeters.

2 BY MR. HEIDEMAN:

3 Q. Did you want to go back and check right now
4 or did you want me to ask a question?

5 A. Yes, I am right now.

6 Q. Okay. I couldn't tell if you were doing
7 that. So let me know when you've done that check.

8 A. Yeah, I'm looking at Paragraph 58, making a
9 decision whether to transform the character string
10 to insert the "ne," which would be a space to
11 basically space out the words. So I believe that's
12 consistent with what I said about Figure 7.

13 Q. And so the top row of Figure 7 is showing
14 what?

15 A. The top row is -- is basically looking at a
16 distance. Basically, you're making a decision as to
17 what to do or not to do based upon distance.

18 Q. And the top row has two categories of
19 distances, right?

20 A. Yeah, and I referred to that in my first --
21 my first response. It's less than 350 centimeters
22 or more than 350 -- 350 centimeters or more.

23 Q. And what does the second row of that figure
24 disclose?

25 MR. SPRENGER: Objection; vague.

1 A. That discloses whether you make a change in
2 the character string.

3 BY MR. HEIDEMAN:

4 Q. And so the device in Shimomura is using
5 this table to decide whether or not to make a change
6 in the character string based on which of these two
7 categories of distances the measured distance falls
8 into?

9 A. Well, again, it's --

10 MR. SPRENGER: Objection; vague.

11 A. I don't want to -- you sometimes have used
12 the word "category" in concert with "classify."
13 These are two different areas. This is
14 categorizing, if you will, based upon distance into
15 one of two of those particular aspects based upon a
16 distance judgment, which is not a voice judgment,
17 it's a distance judgment.

18 BY MR. HEIDEMAN:

19 Q. Okay. So the device is making a decision,
20 based on the measured distance, whether to make a
21 change in the character string, correct?

22 MR. SPRENGER: Objection; vague,
23 misstates testimony.

24 A. It seems to be a one-to-one correspondence
25 to -- Paragraph 62 says that the "character string

1 transformation unit 49 judges that the character
2 string should not be transformed if the distance to
3 the" -- excuse me, "if the distance to the
4 conversation partner recognized by the image
5 recognition unit 41 is less than 350 centimeters
6 according to the character string transformation
7 determination table 50, and judges that the
8 character string should be transformed if the
9 distance to the conversation partner is 350
10 centimeters or more."

11 So the first thing is, it's based on a
12 distance, not -- not a classification of the voice.
13 And secondly, the distance judgment is based upon a
14 visual image recognition. So it's using the two CCD
15 cameras that are talked about within the
16 specification to make some judgment as to what the
17 distance is. So that's an optical determination of
18 distance, and -- and it's based on what to do with
19 the string -- character string based upon that
20 judged distance regardless of the voice.

21 BY MR. HEIDEMAN:

22 Q. A person of ordinary skill in the art in
23 2017 knew that distance could be determined based on
24 a voice analysis, right?

25 MR. SPRENGER: Objection; vague.

1 A. Certainly not part of this particular
2 patent. Distances were something that could be
3 calculated based upon a number of different factors.

4 BY MR. HEIDEMAN:

5 Q. The distance could be calculated by
6 analyzing the voice?

7 MR. SPRENGER: Objection; vague.

8 A. It could be analyzed based upon measuring
9 different characteristics such as the time of
10 arrival. You can look at disparate multiple
11 microphones that are displaced by a certain
12 predetermined known distance, and you can look at
13 the time of arrival of that particular voice and
14 look at a determination on the time of arrival.

15 But, anyway, it has nothing to do with the
16 actual voice itself. It's just looking at the time
17 of arrival differences between the voice. That's
18 what -- that's the way it's being projected, not the
19 voice itself. But those -- those techniques were
20 known, yes.

21 BY MR. HEIDEMAN:

22 Q. Mr. McAlexander, during your last break,
23 did you discuss the substance of your testimony at
24 all with Counsel?

25 A. No, not at all.

1 Q. Okay. On the prior break, did you discuss
2 the substance of your testimony with Counsel at all?

3 A. No, not at all. I haven't discussed it at
4 all this morning.

5 MR. HEIDEMAN: Okay. I have no
6 further questions.

7 THE WITNESS: Can I ask some of you?

8 MR. HEIDEMAN: No.

9 THE WITNESS: No.

10 MR. SPRENGER: Why don't we go off
11 record?

12 MR. HEIDEMAN: Kevin, do you have
13 questions?

14 MR. SPRENGER: Can we go off record?

15 MR. HEIDEMAN: I can't hear you.

16 Sorry.

17 MR. SPRENGER: Oh, sorry. Can we go
18 off record?

19 MR. HEIDEMAN: Sure.

20 (Off the record.)

21 MR. SPRENGER: No further questions.

22 (Deposition concluded at 2:22 p.m.)

23

24

25

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

3 AMAZON.COM, INC.,
4 AMAZON.COM SERVICES, LLC,
5 and AMAZON WEB SERVICES,
6 INC.,

Petitioners,

7 VS.

8 SOUNDCLEAR TECHNOLOGIES,
9 LLC,

Patent Owner.

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Case No. IPR2025-00565
U.S. Patent No.
11,069,337

10 REPORTER'S CERTIFICATION
11 DEPOSITION OF JOSEPH MCALEXANDER
12 FEBRUARY 6, 2026

13 I, CHRISTY R. SIEVERT, CSR, RPR, in
14 and for the State of Texas, hereby certify to the
15 following:

16 That the witness, JOSEPH MCALEXANDER, was
17 duly sworn by the officer and that the transcript of
18 the oral deposition is a true record of the
19 testimony given by the witness;

20 I further certify that the signature of
21 the deponent was requested by the deponent or a
22 party and is to be returned within 30 days from date
23 of receipt of the transcript. If returned, the
24 attached Changes and Signature Page contains any
25 changes and the reasons therefor;

I further certify that I am neither
counsel for, related to, nor employed by any of the

1 parties or attorneys in the action in which this
2 proceeding was taken, and further that I am not
3 financially or otherwise interested in the outcome
4 of the action.

5 Subscribed and sworn to on this the 15th
6 day of February, 2026.

7

8

9



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CHRISTY R. SIEVERT, CSR, RPR
Texas CSR 8172
Expiration Date: 4-30-2027

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1 Case: Amazon.com, Inc. vs SoundClear Technologies, LLC

2 Witness Name: Joseph McAlexander

3 Deposition Date: 02/05/2026

4

5

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1 Errata Sheet

2 NAME OF CASE: Amazon.com, Inc. vs SoundClear Technologies, LLC

3 DATE OF DEPOSITION: 02/05/2026

4 NAME OF WITNESS: Joseph McAlexander

5 Reason Codes: 1. To clarify the record.

6 2. To conform to the facts.

7 3. To correct transcription errors.

8 Page _____ Line _____ Reason _____

9 From _____ to _____

10 Page _____ Line _____ Reason _____

11 From _____ to _____

12 Page _____ Line _____ Reason _____

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14 Page _____ Line _____ Reason _____

15 From _____ to _____

16 Page _____ Line _____ Reason _____

17 From _____ to _____

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19 From _____ to _____

20 Page _____ Line _____ Reason _____

21 From _____ to _____

22 Page _____ Line _____ Reason _____

23 From _____ to _____

24 _____

25 JOSEPH MCALEXANDER

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