

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.,
Petitioner,

v.

SOUNDCLEAR TECHNOLOGIES LLC,
Patent Owner.

IPR2025-00565
Patent 11,069,337 B2

Record of Oral Hearing
Held: May 20, 2026

Before MICHAEL R. ZECHER, DAVID C. McKONE, and IFTIKHAR
AHMED, *Administrative Patent Judges*.

APPEARANCES:

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P R O C E E D I N G S

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JUDGE ZECHER: Please be seated. All right. Good morning. My name is Judge Zecher. I have with me to my left, Judge Ahmed, and joining us online is Judge McKone from Detroit. This is a hearing for IPR2025-00565. The claims at issue are Claims 1–5 of U.S. Patent No. 11,069,337. So, I'd like to start by taking a roll call for the parties here. So, let's start with Petitioner, Amazon.com, Inc., Amazon.com Services LLC, and Amazon Web Services, Inc. If you can tell us who's here.

MR. HEIDEMAN: Good morning, Your Honor. Colin Heideman from Morgan, Lewis. With me today is my colleague, Nathan Reeves, also from Morgan, Lewis.

JUDGE ZECHER: Thank you, Mr. Heideman. Are you going to be arguing today? All right. Thank you. Can we hear from Patent Owner, SoundClear Technologies LLC?

MR. REYNOLDS: Good morning, Your Honor. Steve Reynolds. I'll be arguing today, and with me is Stephen McBride and Erin Hadi. And I might just note, Your Honor, I think you said IPR2020. It's IPR2025.

JUDGE ZECHER: Oh, yes, that is --

MR. REYNOLDS: Not sure --

JUDGE ZECHER: I'm sorry, I wrote it down wrong. Thank you. Yeah, let's correct that. It is not IPR2020. It would be odd that we would still have it. It's IPR2025-00565. Sorry about that. All right, so we issued a Hearing Order in this case, I believe it's paper 35, and in that Order we outlined how this hearing is going to unfold. We gave each party 45 minutes

1 of total argument time. When you come to the lectern, Mr. Heideman, first,
2 please let me know how much time you would like to reserve for rebuttal,
3 and we'll set the clock accordingly. Mr. Reynolds, same with you. When
4 you come to the lectern, please let us know how much you're going to
5 reserve for surrebuttal, and we'll go from there. Any questions at this time?
6 All right. Mr. Heideman, the floor is yours.

7 MR. HEIDEMAN: Thank you, Your Honor, I'd like to reserve 12
8 minutes --

9 JUDGE ZECHER: Twelve minutes.

10 MR. HEIDEMAN: -- for rebuttal, please.

11 JUDGE ZECHER: All right.

12 MR. HEIDEMAN: Thank you. This case involves a very simple
13 idea that has been known for at least two decades, and that is when a device
14 receives a voice input from a user, it can vary the information it provides and
15 the volume at which it provides it, back to the user. The claims here recite
16 that simple idea. Receive a voice, determine the distance between the device
17 and the user, and then alter the output based on whether that distance is
18 above or below a threshold. That's exactly what the prior art references
19 relied on in the petition disclosed.

20 The dispute here is not so much about the technology as it is
21 whether the Patent Owner can rewrite its claims to add requirements that are
22 nowhere in the plain language of the claims, nor in the specification. And in
23 particular, they argue that the voice cannot be classified based on distance
24 alone, and I will walk through evidence and show the Board why that's
25 wrong.

1 So, I'll start with just a brief overview of the '337 patent. I know
2 the panel is familiar with it. On Slide 1, we have Figure 1 from the patent.
3 It shows a user H providing a voice input to a device, that's voice V1. You
4 have the device sitting on a shelf, and it responds with a voice output, V2.
5 On the right-hand side, we have Figure 2 from the '337 patent, showing the
6 device at a high level, it just requires a voice acquiring unit, which acquires
7 the voice from the user and it kind of splits into two paths.

8 On the left-hand side, there's a voice analyzing unit, which
9 determines the intent and retrieves the information that the user is asking for.
10 On the right-hand side, in box 38, you have a voice classifying unit, and
11 that's what we're going to be talking about mostly today. Those paths come
12 back together at box 36 where you have a voice content generating unit, so
13 that's a unit in the device that actually generates the output response, and it
14 can generate one of two output sentences, depending on the voice
15 classification, and then you have the output controller, which varies the
16 volume.

17 JUDGE ZECHER: Can I ask a question about the voice
18 classifying unit? I read through the spec. It seems pretty open-ended. It
19 says it could use any method, and it seems that the claim, at least, indicates
20 to us one method by which it does classify these voices is by using distance
21 in some shape or form; is that correct?

22 MR. HEIDEMAN: That's correct, Your Honor.

23 JUDGE ZECHER: Okay.

24 MR. HEIDEMAN: And I think that part of the specification that
25 you're referring to is critical, and I think resolves all of the disputes, really

1 that are left in this IPR. So, I'll get to that in just two slides. So, I just have
2 the claim language here. Not going to go through the whole thing, but it
3 recites the proximity sensor that gives you the distance calculation, the voice
4 classifying unit, which your Honor just referred to. Virtually, the entire
5 debate here is about that claim limitation. You have a process executing unit
6 that's going to do the processing and get the information. The voice content
7 generating unit will generate your two output sentences, and then a
8 controller that controls the volume.

9 And so, on Slide 3, we've shaded a couple out. There's no dispute
10 that the prior art discloses the proximity sensor, that it discloses the process
11 executing unit, and that these devices in the prior art generate the voice
12 responses. So, those are not really in dispute. If you take what's left, kind of
13 simplify it down to where it's a little more manageable, claim limitation B,
14 and this is the one we're going to talk about most. A voice classifying unit
15 configured to analyze a voice spoken by a user and acquired by a voice
16 acquiring unit to classify the voice as either one of a first voice or a second
17 voice based on the distance between the user and the voice content control
18 device. Okay. So, that's the key limitation for sure for today, but just to run
19 through the next couple.

20 You generate a first output sentence. If you've classified the voice
21 as a first voice, it generates a second different output sentence. If it's
22 classified the voice as the second voice, and the limitation in G just says if
23 that second output sentence has some information that's omitted that would
24 have been provided in the first output sentence, so you have these two
25 different sentences, and then you adjust the volume.

1 And so, on Slide 5, you reduce it really to what we're talking
2 about. You're classifying the voice based on distance, you're generating two
3 types of output based on the classification. Either full output, all of your
4 information, or if it's classified as a second voice, you omit some of that
5 information and provide a simpler output, and then a different volume for
6 each.

7 JUDGE AHMED: So, how do you respond to the argument
8 -- Patent Owner's argument that you basically -- if you just classify based on
9 distance, if that's the only requirement, then you read out the portion of the
10 claim that says analyze a voice, right? You'd never need that portion of the
11 limitation then.

12 MR. HEIDEMAN: There are certainly different ways you could
13 write the claim to achieve the same thing, but in all of the prior art
14 references -- let me back up. We're not reading voice out of the claim. All
15 of the prior art references analyze the incoming voice in various ways. One
16 of the ways they do it is to reach a classification based on the distance from
17 which the voice was received, and the specification, which is why it's on the
18 screen right now, makes it clear that that's exactly how the patent envisions
19 doing it. And so, I wouldn't normally do this in a hearing, but this paragraph
20 that's on the screen right now answers all of these questions. So, I do want
21 to take just a couple minutes to walk through this portion of the specification
22 --

23 JUDGE MCKONE: Sorry to interrupt you. Since I can't see what
24 you're projecting, let me know what I'm looking at, please.

25 MR. HEIDEMAN: Sure, I'm on Petitioner's Slide 6. We have a

1 call out from column eight of the '337 patent, and there's three portions
2 highlighted, but like I said, this, to me, is the most important -- maybe the
3 most important slide of the day. So, I do want to spend a little bit of time on
4 it.

5 So again, this is the only disclosure in the patent that tells us how
6 do you analyze a voice to classify it based on distance. So, starting with the
7 first highlighted sentence, it says, the voice classifying unit 38 can perform
8 the classification to the first voice and the second voice using any method.
9 It's going to describe several ways of doing that. So for example, you can
10 classify it by using a slope of the peak in the spectrum as a feature value.
11 Okay, that's one option.

12 Moreover, the voice classifying unit can perform the classification
13 to the first voice and the second voice by using either one of a volume of the
14 voice, a speaking speed of the user, and a volume ratio between a speech of
15 the user and a wind noise as a feature value. Okay, that's another way of
16 classifying voice.

17 This middle highlighted part. Furthermore, a proximity sensor can
18 be provided in the voice content control device one. A distance between the
19 user H and the voice content control device one is calculated from a
20 detection result of the proximity sensor, and the distance can be used as a
21 feature value to perform the classification to the first voice V1A and the
22 second voice V1B. It goes on to give one more way -- one more feature
23 value that you could use, which is the mel-frequency cepstral coefficient.
24 Then the paragraph concludes with the last highlighted part.

25 In these cases, the voice classifying unit 38 sets a threshold of the

1 feature value and classifies the voice as either one of the first voice, V1A, or
2 the second voice, V1B, based on whether the feature value exceeds the
3 threshold. This is the only disclosure that relates to these claims in the entire
4 specification. And what our expert explained, and we have in our briefs, and
5 it's shown on Slide 6, when you're using distance as your feature value, this
6 paragraph says you classify it as a first voice if your feature value here -- the
7 distance is less than or equal to a threshold distance X meters, and it's -- the
8 voice is classified as a second voice when your feature value, or your
9 distance, as determined by the proximity sensor, is greater than your
10 threshold distance, whatever that is X meters.

11 So, we know from this paragraph, the way you classify a voice
12 based on distance, is you take the result from the proximity sensor, the
13 calculation, you use it as a feature value, the analysis is comparing that
14 feature value to a threshold, and then you classify your voice. The voice is
15 the first voice or the second voice. Like I said, I think this resolves almost
16 every argument they make, because everything else they're trying to read
17 into the claims, all the requirements they're trying to add would exclude this
18 preferred embodiment. This says you can just use the distance from the
19 proximity sensor, analyze it by comparing it to a threshold, classify your
20 voice as first or second voice based on the calculated distance. It doesn't
21 require anything else from the voice.

22 The '337 patent gives an example. I have it on Slide 7. The user
23 says, what's the weather today, and there's two output sentences that are
24 described. The first talks about -- gives all the information -- the day, the
25 month, and the year in Tokyo, and it gives some parameters for the weather.

1 The second output sentence can omit some of that information, and I have
2 that crossed out in gray, and it provides the remainder of the information.
3 And then it has a disclosure that the volume can be different for the two
4 sentences. That's not really in dispute here.

5 Okay, so let me turn to the prior art with that background. There's
6 two primary references, Shin and Shimomura, and I'm going to spend most
7 of my time talking about Shin, because the arguments largely overlap
8 arguments that they're making. So, I'll start with Shin.

9 So, on Slide 10, we have on the left-hand side, Figure 1A of Shin,
10 which looks very similar to Figure 1A of the '337 patent. You have a user
11 who's providing a voice input to a device, and you have the device providing
12 corresponding content back to the user. In the middle of Slide 10, we're
13 showing Shin's figure 5A, which is one example of how its process works.
14 The first step in the process is obtaining speech from the user as a voice
15 input. That triggers the rest of the steps, then you determine the distance
16 between the user and the electronic device through analysis of the voice
17 input, so there's clearly voice analysis occurring. It also gets the distance
18 from a proximity sensor.

19 In the next block, the device determines the output scheme of the
20 content based on the determined distance between the user and the device,
21 and we know from paragraph 49 of Shin, which I have on the right-hand side
22 of Slide 10, the output scheme includes the output volume level and the
23 information, or the amount of information that's being provided. So, that
24 box 505 is saying that Shin determines the output scheme, which is the
25 amount of content and the volume based on the determined distance between

1 the user and the device, and the next box simply says that the device outputs
2 the content corresponding to the voice input. That is exactly the process,
3 just described that we just went through in the '337 patent.

4 Not only is Shin's description and figures the same, the example is
5 nearly identical. On Slide 11, we have the example from Shin, where the
6 user says to the device, let me know today's weather, and Shin explains that
7 it can provide various responses based on the distance between the user and
8 the device. For example, if it's classified as a first voice, you get that
9 statement from a user below the distance threshold. It will return that first
10 full output sentence. It has the date and all the details of the weather.

11 Shin labels M1, 2, 3, 4, and 5, the parts of the information, and
12 says as the user gets further away and passes different thresholds, you can
13 omit any one or combination of those pieces of information, all the way
14 down to the second output sentence that I have on the slide, where it omits a
15 lot of the information and just returns the response rainy after cloudy. So,
16 Shin is clearly disclosing the two different output sentences, and I'll show
17 you on the next slide which one it outputs is based on the distance between
18 the user and the device, and then Shin also discloses changing the volume so
19 that those two sentences are provided at different volumes.

20 On Slide 12, I have Shin's table three, and there's more disclosure
21 in Shin than in this, but this is, I think, the clearest disclosure of the
22 classifications in Shin. Shin's table three explains that you use the proximity
23 or the analysis of the voice or both, to determine the distance between the
24 user and the device. That's on the left-hand side of the table. You have
25 distance thresholds just like in the patent, and there's five classifications

1 there. You can be less than a meter, between one and two meters, between
2 two and three, between three and four meters, and greater than four meters.
3 So, there's five classifications in Shin's table three that your voice can fall
4 into based on the distance between the user and the device.

5 The right-hand side of table three shows what's the output,
6 depending on the classification. So, at the top, when the user is less than a
7 meter away, it outputs what Shin calls the original content, which is all of it.
8 And then as the user gets further away and passes these thresholds, it would
9 abbreviate or omit some of the information. And on Slide 13, we have our
10 expert's annotation of it, and he testified that that's exactly how a person of
11 ordinary skill in the art would have understood Shin.

12 A person of skill in the art reading Shin would have recognized
13 that Shin discloses first voice classifying voice input, which starts the whole
14 process in Shin. It's a first voice if it's below a threshold. For example, one
15 meter. And it discloses a second voice classification, for example, if the
16 distance is greater than four meters.

17 Now, the second voice could have been any of those categories.
18 There's five classifications there. Any of them could have been the second
19 voice, and we have our expert's testimony at the bottom of Slide 13. So,
20 Shin discloses classifying the voice based on the distance between the user
21 and the device, that's the left-hand side of table three.

22 So, then the question is, does it disclose generating the different
23 output sentences based on that classification, and on Slide 14, that's the
24 right-hand side of table three. So, if it's classified as a first voice, the
25 distance is less than a meter, you output all of the information. If it's

1 classified as a second voice, because they're greater than four meters away,
2 you output abbreviated content, in which case some of the information is
3 omitted. That's the second example I showed you previously, where it's just
4 rainy before cloudy, instead of all of the information.

5 So, Shin is clearly disclosing the voice classifications based on
6 distance. It's clearly disclosing the claimed output sentences and the
7 omission of information from the second output sentence. So, all that's left
8 is, does it also disclose providing those output sentences at different
9 volumes, and that's on Slide 15. This is where we get to table one of Shin,
10 which uses the distance between the user and the device, to vary the volume
11 of the output, and Shin explains this in paragraph 80, provides an example
12 where, as the user user's distance increases, each meter it increases the
13 volume would go up by five decibels. So, you have on the left-hand side, if
14 the distance is less than a meter, the output sentence is going to be output at
15 40 decibels. If you're between one and two meters, the output is going to be
16 at 45 decibels, and so on up to, if the user's voice is received from more than
17 five meters away, it will be output at 65 decibels.

18 And so, on Slide 16, you just need to take those two tables together
19 to see that Shin discloses exactly what's claimed in Claim 1. On the left-
20 hand side in table three, it classifies a voice as a first voice or a second voice
21 based on the distance between the user and the device using thresholds just
22 like the '337 patent specification says. And if it's a first voice, it's output at
23 40 decibels, and if it's classified as a second voice, you get the abbreviated
24 content with some information omitted, and its output at it would be either
25 60 decibels or 65 decibels, because what's not shown in table one is there's a

1 -- if your distance is between four and five meters, it would be at 60
2 decibels, because it's increasing five decibels for every meter.

3 And we have again our expert's testimony at the bottom of Slide 16
4 explaining that Shin discloses essentially everything that's disclosed in
5 Claim 1. The key limitations of Claim 1, you can -- it's obvious from this
6 slide alone, that Shin is disclosing exactly what the '337 patent claims, and
7 not only what it claims, but exactly what this specification describes and
8 how you get to that point.

9 JUDGE ZECHER: Mr. Heideman, how would you respond to
10 Patent Owner's argument that you shouldn't be reading tables one and three
11 together?

12 MR. HEIDEMAN: Well, Shin says you do this together. The
13 whole point of Shin is to decide the output scheme. So, if we go back to this
14 box 505, you determine the output scheme, and the output scheme is content,
15 the amount of information, and the volume, and it's also the speed at which
16 you provide it. So, Shin is explicit that these are used together. They're both
17 part of the output scheme that has to be determined, and so they're clearly
18 used together. I don't think there's any legitimate argument that they're not
19 part of the same disclosure or embodiment in Shin, that's really the core of
20 Shin, and all you really need to understand about Shin to know that it
21 invalidates these claims is what we just walked through, and so I want to
22 turn just for a minute to some of their arguments.

23 Their first argument is about claim construction. The Board's
24 preliminary claim construction was that a user means one or more users,
25 that's the only construction in the institution decision. They have slides and

1 slides and arguments and arguments about other claim terms, none of them
2 were construed. This is the only construction, and it's absolutely correct,
3 and their expert admits that it's correct, and that's on the bottom of Slide 17.

4 This is their expert's testimony. He said a user means one or more
5 agreeing with the construction, and I wanted to clarify that the claims cover
6 just one person talking to the device, which was the idea behind this claim
7 construction, and he agreed. I asked, it could just be one person speaking
8 the device, right, and he said, it could be, sure. And that person's voice is
9 classified into one of two categories, right? Answer, correct. So, the
10 Board's construction is correct. What he's describing here, as covered by the
11 claim, is exactly what Shin discloses.

12 JUDGE ZECHER: And did you understand that we provided this
13 construction based on the arguments that were presented at the preliminary
14 stage, in order to understand at least how many users were required for the
15 scope of the claim?

16 MR. HEIDEMAN: Yes, Your Honor. That's exactly right. Their
17 argument in their preliminary response is that the claim required
18 distinguishing between two different people's voices, which is not in the
19 claim, not in the specification. That construction was required and necessary
20 because they were arguing that distinction, and they're still arguing it.
21 They've now agreed with this construction, but there are still arguments
22 running through their Patent Owner response and the surreply that seems to
23 suggest -- they still think you have to distinguish between two different
24 people's voices, and you don't.

25 That's nowhere in the claim. That construction is important. It's

1 correct. Their expert agreed, and our expert agrees with it, and it definitely
2 -- they said it shouldn't be in the final written decision, essentially, but it
3 needs to be -- it is a disputed issue, still, for sure.

4 JUDGE ZECHER: Then how would you respond to Patent
5 Owner's argument that somehow, we have conflated different features of the
6 claim, such as voice, distance, volume, so on and so forth?

7 MR. HEIDEMAN: I think that argument is wrong. There's no
8 conflation of those terms in the institution decision. Everybody agrees that
9 voice is voice and it has a bunch of different characteristics. Distance is one
10 of them. The specification tells us that, and I'll get to some citations where
11 their expert says that. Of course, a voice also has other characteristics
12 -- volume, speech, speed. There are several different characteristics of a
13 voice. Nobody is conflating the two.

14 So, voice -- the distance is separate. It's the distance between the
15 user and the device, as determined by a proximity sensor. That's what the
16 claim requires. That's what the spec says. That's what the prior art
17 disclosed. I think it's a stretch to say that the Board did anything to conflate
18 those terms. The Board construed user to mean one or more users. All the
19 rest of the terms have their plain and ordinary meaning. They haven't
20 proposed a construction for any of those terms, and there's a reason why they
21 haven't proposed a construction for voice, they haven't proposed a
22 construction for classify, they haven't proposed a construction for analysis.

23 There's no construction of those that supports their argument that
24 it's also consistent with the specification that we went through. That's why I
25 spend the time going through that paragraph of the specification. Their

1 arguments can't be right, otherwise the claim would exclude the only
2 embodiment that's described in the specification.

3 JUDGE AHMED: And is it also your position that we don't need
4 to construe the terms voice or classify, in order to reach a decision?

5 MR. HEIDEMAN: You don't need to construe those. There's
6 been no proposed constructions from either side. I don't know how the
7 Board would go about construing those. The Board doesn't need to construe,
8 for example, classify, to know that the prior art discloses classifying a voice
9 based on distance, because the prior art does it exactly the way the
10 specification describes in column eight that I showed.

11 So, the Board doesn't have to define the contours of what classify
12 includes or doesn't include, what might be classification and what might not
13 be. We know that the prior art discloses classifying a voice based on
14 distance because it does it in exactly the way the patent describes. Any other
15 construction of that would read out the only embodiment in a spec. The
16 same is true for the other terms.

17 So, just quickly, with the time I have left, I'll go through a couple
18 of their arguments. I don't think they're making this one anymore. These are
19 mostly taken from their Patent Owner response. So, on Slide 18, they're
20 saying -- they argued that Shin mentions voice, only in the connection with
21 output. Clearly, that's wrong. Repeatedly, over and over throughout Shin, it
22 talks about the voice input, as you can see on Slide 18.

23 Their second argument was that table three discloses a calculation
24 of distance and nothing else. I have table three on Slide 19. There's nothing
25 about a calculation anywhere in that table. That table is classifying voices

1 based on distance, using distance as the feature value, and comparing it to a
2 threshold, exactly like the '337 patent says to do, and then it's also telling
3 you how much information is provided based on the classification. So, it's
4 not a disclosure of calculation at all. It's a disclosure of really, the rest of the
5 claim, which is the classification of voice based on distance and information
6 that's being output.

7 On Slide 20, we discuss this briefly. One of their arguments is that
8 Shin's device wouldn't distinguish between the voices of two different users
9 standing the same distance from the device. That's right, that's the whole
10 purpose of the embodiment they claimed is that if two people are standing
11 the same distance from the device, they should get the same amount of
12 information at the same volume, that's the whole point of the embodiment
13 that they're claiming here.

14 So, this two-user distinction, or you have to distinguish between
15 two people at the same distance, it makes no sense in the context of this
16 claim. The purpose of this claim is to provide a certain amount of
17 information, at a certain volume, when the voice is received from a certain
18 distance.

19 We've gone through this on Slide 21, Shin does not disclose
20 classifying a voice based on distance. That's their argument, and this is
21 essentially the comparison we just walked through. If you look at column
22 eight of the patent, it says you classify a voice based on distance by taking
23 the distances calculated by the proximity sensor and comparing it to a
24 threshold. That's how you classify based on distance. Shin discloses the
25 exact same thing, albeit in a table format, instead of in prose, like the '337

1 patent discloses.

2 On Slide 22, they argue that Shin does not disclose analyzing a
3 voice. If you look at Shin, Shin says over and over and over again that you
4 analyze a voice. It has analyzing a voice throughout it. A couple of
5 examples are provided here at the bottom of Slide 22, where Shin says the
6 processor 120 may analyze a voice input. It's shown in box 503 analyzing
7 the voice input. Shin's entire process starts with the voice input.

8 The analysis in the patent, from that one paragraph that we looked
9 at, which is the only relevant disclosure in the patent, we know that the
10 analysis that's being done is the comparison of the distance to a threshold.
11 That's the analysis. When it says, analyze the voice to classify it, the
12 analysis is the comparison of the calculated distance to a threshold, that's
13 what Shin discloses, that's what we walked through in table three.

14 Patent Owner's argument is that it has to analyze some other
15 characteristic of the voice, aside from distance. We think that's wrong. The
16 specification does not say that. The claim language does not require
17 anything else to be considered. The paragraph of a specification that we
18 reviewed says it can be based on the distance calculation alone, but even if
19 their interpretation were adopted by the Board, Shin also discloses analyzing
20 the voice, the voice characteristic, the volume, and determining the distance
21 based on that voice analysis of the volume of the voice, and the distances
22 calculated by the proximity sensor, putting them together to get the distance,
23 and then classifying the voice based on that distance. So, even if you accept
24 their argument --

25 JUDGE AHMED: How do you respond to their argument that this

1 was never presented in the petition, so it's an untimely argument?

2 MR. HEIDEMAN: Yeah. So, that argument's wrong. That
3 paragraph of Shin was cited in the petition, and the cases that they cite for
4 that proposition do not support what they're arguing here. So, let me just get
5 the case site. I believe it's *Rembrandt*. So, the cases that they cite make
6 clear that you can raise in your reply, arguments that are responsive to the
7 arguments they made in their Patent Owner response, and this one certainly
8 is.

9 We explained how Shin discloses analyzing a voice to classify it in
10 the same way that the patent describes it. They came back and said, oh, but
11 it needs to also disclose this other thing that's not in the claims. We are free
12 to say Shin also discloses that, and it does so in a paragraph that we cited in
13 our petition. And the *Rembrandt* Diagnostics case that they cite, actually
14 supports our position. It says, that type of argument is permissible, where
15 it's the same prior art and the same legal argument, which is -- we're still
16 relying on Shin, we're still saying it expressly discloses. The cases they're
17 citing are talking about when you change from anticipation to obviousness.

18 In the one case that they cite, *Yita*, there was an obviousness
19 argument presented in a footnote in the reply, and it wasn't even responsive,
20 so they changed from anticipation to obviousness, and it wasn't even
21 responding to an argument, and the Board said that's a new legal theory and
22 it could have been presented in your petition. This situation is different.
23 We're raising that directly in response to their argument that Shin doesn't
24 disclose analyzing the voice, and that makes perfect sense. They can't say
25 the claim also requires this other thing that we know is disclosed in Shin, but

1 you didn't raise that in your petition. If they say that, of course we're
2 allowed to come back and say that argument fails because Shin also
3 discloses that.

4 Their last argument is that the classification can't be based on
5 distance alone, and they stated this most clearly in their surreply, which I
6 have on the screen in Slide 23. In the highlighted section of the end, Patent
7 Owner says that the plain language of the claims requires distance to be used
8 in conjunction with other feature values to classify voices. That's really the
9 crux of their argument. This is the core dispute. Can the classification be
10 based on distance alone or does it have to be based on something else?

11 That construction or that argument clearly contradicts the claim
12 language. The claim language that I have on Slide 24 says that you classify
13 the voice as either a first voice or a second voice, based on the distance
14 between the user and the device. Not based on distance plus something else
15 that's not identified. Based on the distance between the user and the device.

16 Could it also be based on other things? Sure. Does it have to be?
17 No. There's no requirement in this claim that you classify based on distance
18 plus something else, that argument also contradicts this part of the
19 specification that we already walked through. That part says you can use
20 any method. It says distance can be used as a feature value to perform the
21 classification to the first voice and the second voice. The last highlighted
22 part from that prior slide said that the voice classifying unit sets a threshold
23 of the feature value and classifies the voice V1 based on whether the feature
24 value exceeds the threshold.

25 Well, the feature value can be the distance, as in the second bullet

1 on that slide, so their argument that you have to have distance plus
2 something else contradicts that embodiment that we walked through. It also
3 contradicts their expert testimony. So, on Slide 26, we have our expert
4 testimony. He testified that it can be based on distance alone, but their
5 expert also made this very clear. He said -- this is the bottom of Slide 26
6 -- some embodiments use the distance between the speaker and the device to
7 classify the voice.

8 He said that the specification compares the user device distance
9 and a threshold for the purpose of distinguishing one class of voice from
10 another. He said that each characteristic described in the specification,
11 including distance can be used alternatively or in combination to classify
12 voices, and we agree. That is what the specification says. Their expert has
13 admitted through these statements in its declaration that the classification
14 can be based on voice alone or distance alone.

15 On Slide 27 before we got to this proceeding, they also made
16 representations in the district court that the classification was based on
17 distance, and I think the most telling is probably the third point on Slide 27
18 where they said that classifying the incoming voice as a first recorded voice
19 or a second recorded voice, that's a binary decision, and we did it with the
20 distance calculation. And then, of course, in the litigation, in their
21 complaint, they're arguing that you can do it based on distance alone, and the
22 allegedly infringing product classifies the voice based on near or far, and
23 that's it. So it's clearly based on distance alone. That was a position they
24 took in the district court, and they're trying to change their position now that
25 they're faced with prior art.

1 So, I'm in my rebuttal period already. So, I'll stop there, unless the
2 Board has questions. Arguments for Shimomura largely track the disputes
3 for Shin, so I'll leave it with that, unless there are questions.

4 JUDGE ZECHER: No, thank you.

5 MR. HEIDEMAN: Thank you.

6 JUDGE ZECHER: So, I have you at -- it looks like you ate into
7 two minutes of your rebuttal, so you'll be at ten minutes of rebuttal when
8 you return.

9 MR. HEIDEMAN: Perfect. Thank you, Your Honor.

10 JUDGE ZECHER: Mr. Reynolds, while you're setting up there,
11 how much time would you like to reserve for surrebuttal?

12 MR. REYNOLDS: Ten minutes, Your Honor.

13 JUDGE ZECHER: And before you get started, I want to comment
14 you on your tie. It's a great choice. You can begin when you're ready.

15 MR. REYNOLDS: Your Honor, I always hate to start with their
16 argument, but I do have to start right from where they ended. Our expert
17 absolutely did not admit that only distance is needed. They quoted a
18 question that was asked many, many times in the transcript, and if you go
19 through the transcript, our expert is very clear on other pages that distance
20 can be used as part of the classification process.

21 And we can get there in a second, but the quote they clip, he
22 clearly starts answering about what it's based on, because he talks about the
23 cepstrum coefficient can be used. I think he uses the word to morph into
24 voice, but then later in the transcript, he says, just to be clear -- he says it on
25 page 30 of the transcript, and then he says it on page 70 -- he's very clear

1 that distance can be used as a variable, but the classification cannot be
2 distance alone. So, it's just never been admitted, that there is a dispute there
3 between the experts, but that is wrong.

4 Okay. The district court. We had a motion to dismiss. We
5 responded to a motion to dismiss on *Alice* grounds and on infringement
6 grounds. So, they quote my arguments on *Alice* grounds, but one of the
7 quotes is from step two of *Alice* and I'm explaining what the improvement
8 was over what's conventional. So, we're saying we use distance, but at no
9 point in this argument were we saying, oh, the claim only requires distance,
10 and the part they cite at page 68, they cite my statement, we use distance,
11 and they stop it at the first sentence.

12 The very next sentence, I say, we use distance, and then I answer a
13 question from the Judge about why we couldn't have just tested the device
14 and used that to decide whether it infringes, and I said you cannot determine
15 if the device meets the claims just because a user is moving closer or farther
16 from the device and the volume changes.

17 That transcript is before the IPRs, before we ever heard any of this
18 argument. This is us responding to a motion to dismiss. I explained the
19 claims. Basically, I said, what we don't do is what Shin does, not even
20 knowing about Shin, so you can look at that. It's the very next sentence in
21 there. And even on the *Alice* step two part, if you look at the page before, I
22 say distance is used to help the classification.

23 And so, what I would submit is when you look at their reply,
24 there's some desperation there, because I think they looked at the institution
25 decision, and then they started moving things around, some new arguments

1 came up, and then they start misquoting things and taking them out of
2 context. And lawyers get -- make their arguments based on the record, but I
3 think you'll start to sense that Figure 5A, that's now like the foundation of
4 their reply, they just went through it here, they didn't rely on that in their
5 petition.

6 It's cited twice. Once in the background, and then it's string cited
7 under the proximity sensor part of their petition, but the quote they put
8 before -- they quote a part of Shin, and they ellipses out the part where Shin
9 analyzes volume to determine distance. They expressly decided not to rely
10 on that. They just found Figure 5A that was -- happened to be cited in this
11 proximity sensor, and now they're building their whole case on it, but it
12 doesn't matter, because all Figure 5A says is that Shin absolutely analyzes a
13 voice input. You know that argument one we put up there? Never made.
14 Absolutely not. Complete opposite.

15 What we said is Shin only analyzes the voice to determine user
16 intent. Once that intent is determined, the voice is done. It's done analyzing
17 the voice, and so our point was in their petition, they rely on all this input
18 analysis, but when they get to the classification part of the claim, every
19 mention of voice either come from their expert or the spec. There's just
20 nothing in Shin about analyzing the voice in connection with the
21 classification. That's completely different argument we made.

22 JUDGE ZECHER: Mr. Reynolds, let me ask you a question.
23 When we get to this disputed limitation about analyzing the voice based on
24 classification, do we need to go outside the intrinsic record? I mean, when I
25 say intrinsic record, plain language of the claim, spec, prosecution history

1 -- we don't really need more than that to understand what it means, correct?

2 MR. REYNOLDS: No, you don't even have to go outside the
3 claim because it's in the claim. I mean, it's recited in the claim, analyze a
4 voice, and that's why on reply, they went and added this Figure A because
5 there's nothing in the petition about analyzing the voice for the classification.
6 There's analyzing a voice to determine user intent, but then you do natural
7 language processing, and what you get is data about what the system thinks
8 the user intends, but the voice is done at that point.

9 And we're going to get here, and I'm going to show you that there
10 are three words you need to look for in the petition "to do so", because their
11 expert acknowledges that voice is gone by the time you get to table three.
12 He fills in classification, it's on page 13 of the petition, and I think it's 39 and
13 40, and at the very last sentence he says to do so. That's the only support in
14 the record, because everything in the petition before there was just talking
15 about that front end of Shin, determining the user's intent, the content.

16 So, I'm getting a little ahead of myself. We will certainly have that
17 to show on the slides, but I'd just like to start from the 30,000 foot view here.
18 Maybe more than anything in life, when somebody writes a patent or claims,
19 they make sure to mean what they say. And Shin says distance. That's what
20 we care about, that's what we're operating on. And Amazon says, no, no, no,
21 you mean voice.

22 Shimomura -- the first four words of the patent -- depending on the
23 distance. Amazon says no, no, no, they're all -- they're concerned with
24 voice. '337 patent says voice all over it, classification all over it. The claims
25 have concepts of distance and volume elsewhere in the claims and user

1 intent, but when the Patentee sat down to say what they did, he wrote
2 classify a voice. That's what the plain language of the claims means.

3 Now, Mr. Heideman says everything relies on that part from the
4 spec. First of all, the spec is not exclusionary. There's an article "a" in that
5 section. It says, distance can be used as a feature value. Never says "the".
6 It says a feature value. And certainly, you can apply a decision tree with
7 more than one thresholds. We do it all the time. I mean, my threshold of
8 getting here today was the date. All right. Once it's past the date, now I get
9 here, then I get to the elevators, another threshold. I've got to go -- so go up
10 to floor nine.

11 So, the specification never ever says, oh, it can include just
12 distance. No, it says distance can be a feature value. Now, there are some
13 feature values that may be more conducive to thresholds or not, but it's just
14 not clear, but also, they're going to the spec for a broadening construction,
15 and that's what they're doing, is that he doesn't -- he spends most of his time
16 in the spec and not on the claim itself. And so that -- and they admit this
17 because the Board on institution recognized that there must be a broadening
18 construction. So, when Mr. Heideman says that the Board only construed
19 user, well, it is very clear the institution decision -- and I'm just putting it up
20 here. I hope this is okay. It's not a demonstrative, but I literally just clipped
21 part of the --

22 JUDGE ZECHER: I'm sorry, you're putting what up? Just so I
23 can --

24 MR. REYNOLDS: Sorry, yes.

25 JUDGE ZECHER: -- follow along.

1 MR. REYNOLDS: This is a clip from page 16 of the decision on
2 institution, and so this was working on user construction, and it says,
3 accordingly, for the purpose of our decision on institution, our preliminary
4 claim construction only requires Petitioner to show a single user who may
5 perform both, a first and second voice, depending on the single user's
6 changing distance and associated changing volume from the voice content
7 control device. So, the Board has said -- the previously constituted Board
8 said this is what Petitioner must show, this is what our preliminary
9 construction says. The word "only" means they must show less, so that
10 means that the scope of the claim is broader. And I want to be clear.

11 JUDGE ZECHER: Are you advocating that's actually the
12 construction? I understood that as clarifying what the construction was on
13 page 15, which is the page before this, when they said, we've preliminarily
14 construed the scope -- or excuse me. Where is it? At this stage, we've
15 preliminarily construed the scope of the term a user is covering one or more
16 users. Period. That's what I understood to be the preliminary construction.
17 Is that not correct?

18 MR. REYNOLDS: Well, so that is the preliminary construction,
19 but the Federal Circuit has said that when the Board applies a claim term to
20 adjust the scope of a claim, that is a construction, whether it said so or not,
21 and I can probably try to grab some of the case cites to that.

22 JUDGE ZECHER: Well, first, a couple things. One, even putting
23 aside what this sentence means, this is still preliminary. I think that's pretty
24 clear, right?

25 MR. REYNOLDS: Um-hum.

1 JUDGE ZECHER: It's said more than once. It's a DI, and we
2 invited the parties to clarify what this was, what it means in the context of
3 the claim. So, there's been no affirmative, definitive construction of any sort
4 of analyzing or classifying at this point. All we've said is that the user is one
5 or more users, that is it.

6 MR. REYNOLDS: Okay.

7 JUDGE ZECHER: Is that correct?

8 MR. REYNOLDS: That's correct. And Mr. Heideman claims that
9 we're walking back. No, absolutely not. We agree user means one or more.
10 We're not saying it has to be two users. The reason we made that argument
11 in the Patent Owner preliminary response is because we picked up Shin and
12 we looked at this table three and we're like, there's only user in distance, and
13 so we said their argument can only be that somehow Shin relies on more
14 users.

15 So, in our Patent Owner preliminary response, we're like, oh no,
16 this was only one user. We just -- we never even contemplated this
17 argument, and neither did the examiner. The examiner had Shin in front of
18 it, him or her. They never contemplated this argument, so we made that
19 argument, and then the decision institution came out, and we recognized that
20 our argument had an implication that there had to be two or more users. We
21 were really trying to address Shin, but we do not dispute that user is one or
22 more users, but you have to have two voice -- you have to have a distinction
23 in voices. You can't just be distance voices in this claim.

24 So, the point most -- the primary point on that -- the application of
25 that construction is that Amazon says it doesn't go far enough. So, this is

1 their reply on page five, and they say to the extent the Board found the
2 claims to require a change in distance and volume, Petitioner agrees with
3 Patent Owner that this would be incorrect. So, you've got a statement that
4 appears to be a broadening construction or broadening scope of the claims,
5 and Amazon says that's not far enough.

6 So, we've got the scope on the decision and institution that neither
7 party thinks is correct. I understand it's preliminary, but both parties think is
8 not correct, and Amazon says it doesn't go far enough. So, to assert that
9 we're trying to change the claim or read something out of the claim, or going
10 to the specification, none of this makes any sense, because they're admitting
11 that there is a claim scope issue here, and unless the Board goes further than
12 what it said had to be shown, they admit that the petition can't succeed.

13 JUDGE ZECHER: Let's just cut to the chase here. How would
14 you construe analyzing a voice to classify it as a first or second voice based
15 on distance between the user and the voice content control device? Can that
16 be done based on distance alone, distance against some threshold or distance
17 plus something else?

18 MR. REYNOLDS: It can't be done on distance alone.

19 JUDGE ZECHER: Okay.

20 MR. REYNOLDS: You've got a proximity -- and there's no
21 construction. I mean, again, I think the Patentee wrote this about as clear as
22 the Patentee can write a claim. So this is demonstrative -- SoundClear
23 demonstrative --

24 JUDGE ZECHER: I'm going to take each word. Distance alone.
25 Distance plus a threshold, is that enough?

1 MR. REYNOLDS: So, let's walk through the claim. So, we
2 analyze a voice to classify the distance based on a threshold. So, if you're
3 not analyzing the voice for some reason -- if I just have a laser pointer and
4 that's the distance and I use a threshold, no, that doesn't -- the claim requires
5 more.

6 JUDGE ZECHER: So, what more does it require?

7 MR. REYNOLDS: You have to analyze the voice.

8 JUDGE ZECHER: In what way?

9 MR. REYNOLDS: I mean, the specification gives examples, but it
10 says volume is one, it says the cepstrum coefficient, because one of the
11 embodies in the specification is to determine whether somebody's speaking
12 in a whisper or not. So, the specification says -- I mean, the primary goal is
13 to determine some concept of voice that's not just these singular
14 measurements. All the claim does is it says, well, here's one of the
15 measurements you have to use, that's in the claim, but it doesn't get rid of
16 this concept of analyzing a voice to do this.

17 JUDGE AHMED: So then, how do you address that last sentence,
18 and from the specification that Petitioner highlighted for us, where it says, in
19 these cases the voice classifying unit sets a threshold of the feature value,
20 and then classifies the voice based on whether the feature value exceeds the
21 threshold?

22 MR. REYNOLDS: Sure. So, I would point you to lines -- it's
23 right at line 24, and distance can be used as a feature value to perform the
24 classification.

25 JUDGE ZECHER: This is column eight, right? Line twenty-four?

1 MR. REYNOLDS: Yes.

2 JUDGE ZECHER: Yeah.

3 MR. REYNOLDS: Sorry. A feature value. Then it goes into this
4 mel cepstrum coefficient analysis, where you're breaking apart frequencies,
5 and you're analyzing peak frequencies. And then it says you can set a
6 threshold, so one that (INDISCERNIBLE) threshold for that. Well, yeah,
7 you can set thresholds for different values. No, I mean -- and it's very clear
8 right up front that there are different ways that this can be done. Some of
9 them are based on the voice alone, some of them are based on distance. And
10 then the claim -- when the Patentee wrote the claim, it says, well, you're
11 doing both. You've got a proximity sensor taking distance, and then you've
12 got a voice analysis that's using distance to classify the voice.

13 So, the claim that they're attacking is a claim that says measure
14 distance and adjust output. And I can -- it's very clear, because Mr.
15 Heideman's opening statement said the exact same thing that they say in the
16 petition right away in the background section. They're not just moving the
17 goal posts, they're changing the playing field right from the get-go. Using a
18 proximity sensor to determine a user's distance from a device, and then
19 tailoring the information provided in the volume based on that distance, has
20 been known for decades.

21 That's petition page two. That's the first sentence. Nothing about
22 classifying voice, measuring in distance and adjusting output. They're
23 saying right there that their entire petition is based on a claim that says
24 measuring distance and adjusting output.

25 JUDGE AHMED: So, what language in the claim suggests this

1 combination of a distance with another feature value?

2 MR. REYNOLDS: If we take a look at SoundClear
3 demonstratives 8 and 9 -- okay, so I just -- start from the fact that we just flip
4 between these two, it's just a visual indication of when the Patentee is talking
5 about volume or data or distance, and when they're talking about voice. So,
6 there is a voice analysis. You're analyzing a voice spoken by the user and
7 acquired by the voice acquired unit. The Board on page 16 of institution
8 decision, recognizes that voice is something a user has to perform. So, when
9 you are analyzing something that the user performed, and then you're
10 classifying that using distance, and that distance came from the proximity
11 sensor in A.

12 So, we're not reading anything into the claims. We're reading the
13 claims. None of this language is ambiguous. It's very straightforward
14 language. The Patentee wrote classifying a voice, and even if you could -- it
15 was possible to classify a voice with just distance, you still have to show that
16 the prior art does it, and their expert is clear in his testimony that we've
17 cited, that you cannot just look at inputs and outputs and determine what's
18 going on inside that box. He's very clear about that. He calls it a black box
19 at one point. He's answering a slightly different question, but the theory
20 remains the same.

21 You don't know what's going in there, except for what Shin and
22 Shimomura told you. Well, they said no, we're analyzing and categorizing
23 distance, but they didn't tell you they're classifying voice, so even if you
24 could classify voice without distance only, even if you tried to do that, prior
25 art has to disclose that that's what you're doing, but it's not there. No

1 POSITA would have picked up Shin and Shimomura and ever thought we're
2 classifying voices in these things. And what -- I'll show you on --

3 JUDGE ZECHER: Mr. Reynolds, can I ask you a question?

4 Because I looked at the prosecution history here that you guys put in the
5 record. It's Exhibit 2009. And at one point you do make an amendment to
6 the claim that's at issue now, which then issued with this amendment. And
7 the original claim just had the voice classifying unit configured to analyze
8 the voice spoken by a user, acquired by a voice acquiring unit to classify the
9 voice as either one of a first voice or second voice. And then you amended
10 in, based on distance between the user and the voice content control device,
11 and you made some arguments against the prior art the Examiner asserted in
12 the rejection, saying that it didn't do this distance calculation. If this claim
13 requires more than analyzing the voice to classify it based on distance, why
14 don't you add some other feature in there? Why is it just distance in that
15 amendment?

16 MR. REYNOLDS: Well, I have to admit, Your Honor, we never
17 addressed a construction based on the prosecution history, and so I don't
18 have the prosecution --

19 JUDGE ZECHER: I'm just telling you how we arrived at the
20 claim language. This is --

21 MR. REYNOLDS: Right.

22 JUDGE ZECHER: -- what we can see through the prosecution
23 history, which kind of gives us some insight into what was happening and
24 what you thought the claim meant.

25 MR. REYNOLDS: So, the way I read that is that this is an

1 improvement patent, and so, as Mr. Heideman said, and in their petition they
2 talked about Siri and all these devices that pre-existed -- well yeah, there
3 were devices, but what the Patentee added is we'll use this distance in
4 connection with what I've already claimed. So, I mean, I just -- it's very
5 difficult for me to get by when we say classify a voice when it's in the claim.
6 Like that's -- or I'm sorry, analyze a voice to classify it, like the language is
7 in the claim, that's what -- it's a verb and an object.

8 And then they add, oh, well, okay, we're going to mandate that you
9 -- this is a consideration you must have in that classification process, but at
10 no point did they broaden the claim and say, well, because we wrote based
11 on distance, now the claim just means only distance. I mean, you wouldn't
12 amend a claim to broaden it to overcome a rejection. So, I mean, I think that
13 the prosecution history supports our point. We're just in this odd position
14 where Amazon's using the spec to try to broaden the claim, and we've been
15 saying no, no, no, the claim has never been --

16 JUDGE ZECHER: I guess I'm confused by that argument, because
17 when you amended in, based on distance between the user and the voice
18 content control device, you clearly narrowed the claim, and then you use that
19 as an argument to overcome the prior art the Examiner applied.

20 MR. REYNOLDS: That's --

21 JUDGE ZECHER: I don't view that as broadening the claim in
22 any sense whatsoever. I view that as clarifying what you mean about
23 analyzing to classify based on distance.

24 MR. REYNOLDS: I'm sorry if I misspoke. I completely agree.
25 That's what I'm saying. It narrowed the claim by requiring use of distance,

1 but Amazon's argument is because it says, based on distance, now you can
2 only use distance -- that you can meet the claim by only using distance. So
3 they are asserting that by adding that the claim got broader. We're saying by
4 adding that, the claim got narrower. That's the same thing I told Judge
5 Trenga, that this is just something that's used to classify the voice. That's
6 what improved over the prior art.

7 So, if we look at demonstrative 33, this is the Shin robot, and for
8 all purposes, it's the same thing as -- I'm sorry, the Shimomura robot, and for
9 all purposes it's the same thing as the device in Shin. Voice goes in and it
10 interprets what the user intends, but then it's done. Distance goes in through
11 these proximity sensors, and then distance goes straight through, and these
12 are the tables on the right --

13 JUDGE ZECHER: Which slide are you?

14 MR. REYNOLDS: I'm sorry, Your Honor. This is SoundClear
15 demonstrative 33.

16 JUDGE ZECHER: Thank you.

17 MR. REYNOLDS: And so, what's being operated on is distance,
18 so they're measuring distance, and then there's an output, and so I told you I
19 would get to this point, because I think it's important. Here on SoundClear
20 demonstrative 39, I want to go through what we have on top is Shin in the
21 upper left from the petition, Shimomura in the upper right from the petition.
22 And then below, are the expert declarations, that just completely mirror each
23 other. The top and the bottom mirror each other.

24 So, let's just walk through the Shin one. So, it starts with second.
25 The part of the petition that starts with first is just saying the device analyzes

1 voice to determine user intent. So, we've covered that. Second, Shin
2 discloses that the voice classifying unit processor analyzes the voice to
3 classify as either a first or a second voice based on the user to device
4 distance. Okay. That's just a conclusory topic sentence. Yes, we get it's
5 saying what they're going to try to prove, but it just cites right back to the
6 paragraph 63 where the expert says the same thing. So, this is an
7 introductory sentence. There's no analysis, it's just making a conclusory
8 statement.

9 All right. So, then the next sentence, Shin's processor executes a
10 voice recognition application to process the voice input and generate
11 corresponding content for output. That's data. You're interpreting a user,
12 you're generating output content. The processor determines the output
13 scheme, which includes content and its volume level based on the distance
14 between the user and the electronic device.

15 Voice is gone. We've got an output scheme. We have user intent,
16 created the data, then we created output content. They adjust that based on
17 the distance between the user and the device. To do so, Shin's processor
18 classifies the voice based on the distance, citing to the expert who just says
19 the exact same thing. That is the conclusory -- the type of conclusory
20 analysis that cannot support a missing limitation.

21 Then the next page goes into table three. We cited that testimony
22 from their expert. Table three only discloses distance and output content,
23 and nothing more. That's what he says. Nothing more. And the Board
24 agreed with that at institution. Here we go. This is SoundClear
25 demonstrative 40. When the Board -- the previous panel, previously

1 constructive panel, said, reproduce above Shin's table three, which depicts
2 providing a different amount of information based on the user device
3 distance.

4 So, we've got table three, which is just distance, distance, distance,
5 and everything before that, all we have is their expert saying to do so. To do
6 so, you classified a voice. To do so, you classified a voice. So, I have up
7 here now -- this is Patent Owner's demonstrative. I'm sorry, Petitioner's
8 demonstrative 5.

9 What's missing here? Key claim limitations, analyze voice. I
10 mean, this is the claim they're attacking, so that's one of the things that's
11 missing from the petition and the reply -- I just want to be clear, every part
12 of the analyze the voice part was basically abandoned because on reply, they
13 instituted that Figure 5A, which was never used for classification. It was
14 cited in the proximity sensor section, but where they ellipsed out any
15 analysis of voice, but they clearly realized something was afoot on the
16 analyze voice part, and I mean, because you usually don't dump in whole
17 new arguments.

18 And the case law says new arguments on reply are -- and new
19 theories on reply. That's a whole new theory. That's not responding to our
20 argument any more than, well, I introduced a new theory because I read the
21 POR and realized I was missing something, as a response, but that's a new
22 theory. And it's clear that from the way they recite their view of the claim,
23 that it's just gone.

24 JUDGE ZECHER: Well, putting aside this whole notion about
25 reliance on Figure 5, I was under the impression they had cited to some

1 paragraphs that talk about the processing or analyzing a voice input received
2 through the audio input module. I think I see that replete throughout Shin in
3 both paragraph 48 and also in paragraph 37. What part of that tells us the
4 voice is not being analyzed?

5 MR. REYNOLDS: Okay. So, I'll pull this -- the answer to this is
6 visually represented on SoundClear's demonstrative 45.

7 JUDGE ZECHER: Forty-five.

8 MR. REYNOLDS: So, you can't really see it, but that paragraph
9 45, that is where Shin is saying, we are determining what the user is saying.
10 They're pulling the content out, interpreting the voice, and then they skip all
11 the way over to table three, where you're adjusting output based on distance.
12 So, yes, these devices interpret voice. They analyze the voice to interpret it,
13 but once they use natural language processing to interpret the voice, now
14 you just have content. The voice is gone.

15 So, they do analyze the voice, but not in any connection with their
16 purported classification here. Oh, and I just -- it occurred to me, as I'm
17 flipping through here, I mean, I think at some point, credibility has to come
18 into play. Mr. Heideman mentioned the complaint. That is not in the
19 record, it's not in the petition, it's not in the reply. Do you know where this
20 came from?

21 After their expert's reply, we took his deposition. At the very end
22 of the deposition, Mr. Reeves started going way outside the scope with
23 leading questions and threw the complaint in front of their own expert and
24 says, doesn't this label say this? I objected, outside the scope, leading
25 -- that's not in the record. And even if it were, it's a label in the complaint,

1 and what I stated at the hearing up here on SoundClear 37, this is what I
2 referenced before. It's the same thing they're citing. They just only cite the
3 sentence that's not highlighted.

4 And I'm talking about the patent. It doesn't use distance directly to
5 modulate volume, so you can't determine whether it, and I'm speaking about
6 the (INDISCERNIBLE) product, meets the claims just by knowing if one
7 speaker gets closer to the device or not and has the volume change because it
8 uses distance, to figure out who's speaking. Again, I've never heard their
9 arguments here before, never seen the petitions. We're telling the Judge
10 what our claims are, and we're saying no, they're not that broad. They
11 require more.

12 JUDGE ZECHER: Well, Mr. --

13 MR. REYNOLDS: So, at the very --

14 JUDGE ZECHER: Mr. Reynolds, this goes back to my first
15 question that I asked. We could decide all this, the scope of the claim on the
16 intrinsic record. I don't need this complaint to determine the scope of the
17 claim. I don't need to look at what you said in a district court proceeding to
18 a judge on a 101 issue.

19 MR. REYNOLDS: I completely agree.

20 JUDGE ZECHER: Okay.

21 MR. REYNOLDS: I never brought any of this stuff up. I've got to
22 respond to it one after another, but I completely agree, Your Honor. Yeah,
23 there's nothing. Yeah, I completely agree.

24 JUDGE ZECHER: All right.

25 MR. REYNOLDS: Yeah, and I always argue a non-infringement

1 argument. That's somebody else's docket.

2 JUDGE ZECHER: Okay.

3 MR. REYNOLDS: So, if we look at SoundClear demonstrative 6,
4 these are excerpts from Dr. Stem, their expert. So, starting in the middle,
5 he's talking about table three of Shin, which is similar to table four -- or the
6 tables in Shimomura, and it says, it tells you about distance between the user
7 and the electronic device and nothing else, so if I put that up to their slide,
8 Patent Owner's argument, table three discloses only calculation of distance
9 and nothing else. Well, yeah, that's our argument, that's what their expert
10 said.

11 And back to SoundClear 6, if you look on the left side, he says
12 distance tells you nothing about voice. Both experts say -- and I think Mr.
13 Heideman said this in his argument too -- voice is something more. It
14 involves a lot of different characteristics. It is not just one characteristic or
15 another. So, if table three tells you nothing about voice and -- or table three
16 only tells you about distance and nothing more, and distance can tell you
17 nothing about voice, how do we get to the claims where you're classifying a
18 voice? So, that's a factual argument. And then that's just a technical
19 argument --

20 JUDGE MCKONE: Are you making this argument for claim
21 construction? A moment ago, you told us we didn't need to really be
22 looking at the extrinsic record to construe the claims.

23 MR. REYNOLDS: No, Your Honor, because what I'm showing
24 here is where their expert is addressing the prior art. So, what he's saying is,
25 when I look at this table, I see nothing more than distance, and then he's

1 saying that, well, a POSITA would never look at distance and know
2 anything about voice. And then on the right, we asked, would a POSITA
3 have been able to determine how a device classifies inputs simply by
4 looking at how the device adjusts outputs. I think in general answer is no.

5 I mean, just think about what this would mean in terms of the
6 notice function of claims, if someone could say, well, the claims say analyze
7 this and adjust that, but we're just going to look at two different things and
8 assume it's doing the same thing. This is kind of a visual depiction on
9 SoundClear 36. Lots of signals go into this device, and it processes stuff,
10 and it outputs, and you can't know what's going on in that device. You can't
11 understand the algorithm, unless you look inside the device, you look at the
12 source code, which Dr. Stern recognized, unless someone like Shin or
13 Shimomura tells you, here's what we're doing, we take this input, here's how
14 we're processing it.

15 And so, we put this in our surreply, just measuring distance and
16 adjusting output, I could argue, now we're classifying whether a user is
17 doing a somersault or not, because when a user does a somersault, the
18 distance is going to change, and then in Shin and Shimomura, the output is
19 going to change. So, now you have a device that's classifying a user doing a
20 somersault? I mean, it seems nonsensical, but that's the logical conclusion
21 of these types of analyses.

22 So, I would submit to the panel -- please, the Patentee shows the
23 best language in the claims when they said classify a voice, and their expert
24 has admitted basically that the only basis for the petition, is this "to do so"
25 sentence. And if there's nothing more, I'll reserve the rest for rebuttal.

1 JUDGE ZECHER: Okay. Thank you, Mr. Reynolds. I have you
2 at about nine and a half minutes left for surrebuttal. Mr. Heideman, I had
3 you at 10 minutes left for your rebuttal. You can begin when you're ready.

4 MR. HEIDEMAN: Thank you, Your Honor. I'll just start back at
5 the beginning, where you started, which was with claim construction and
6 their argument that the Board read in this additional requirement into its
7 preliminary construction, the institution decision repeatedly states on other
8 pages that no change in volume was required. That's on pages 15, 16, 24, 29
9 and 30. And as Your Honor mentioned, that was a preliminary construction,
10 and the Board invited the parties to brief claim construction to the extent it
11 mattered. They didn't offer any construction for analyze or classify or voice,
12 and they still can't tell you what it means.

13 They still can't stand here and respond to a question -- what does it
14 mean to analyze a voice and classify it based on distance. And that's
15 because any definition that they give you that excludes Shin and avoids that
16 prior art would read out the embodiment from the spec. We know what it
17 means, and you can see how they break down that limitation, and they want
18 to treat analyze as separate from the rest of that limitation. No, the
19 limitation says analyze the voice to classify it based on distance. The spec
20 tells us how to do that. You use the distance as a feature value, you set a
21 threshold, and then you look at the calculated distance and determine
22 whether it's above or below the threshold, that's the analysis that's required.
23 There's a reason they can't respond to that very basic question, even though
24 their entire argument depends on how they're construing the claim.

25 JUDGE AHMED: Could you address the prosecution history? So,

1 their argument is they added the distance to narrow the claim, so wouldn't
2 that mean there was already something in the claim that was analyzing the
3 voice, in addition to the distance?

4 MR. HEIDEMAN: Well, of course. So, they added those
5 limitations, and you notice they added the proximity sensor limitation, and
6 they said classified based on the distance in the same amendment to
7 overcome the prior art, and of course that narrowed the claim, because it
8 now requires analyzing the voice to classify it based on distance. So, yes, it
9 narrowed the scope of the claim, but all the claim requires is analyzing the
10 voice to classify it based on distance. Any prior art that discloses that
11 discloses this claim and renders it unpatentable.

12 The claim does not require anything further. It doesn't require
13 analyzing some other aspect of the voice. I think he's mistaken or
14 misunderstanding. Yes, they narrowed the claim, but that doesn't mean
15 there's other requirements in the claim. The only requirement in the claim is
16 analyzing the voice to classify it based on the distance, and we know from
17 the spec exactly how you do that. Compare it to a threshold.

18 They referred in support of this argument to the part of the
19 specification that I had up at the very beginning, and they're referring to
20 column eight at line 24. They're referencing the use of A, and they say, the
21 distance can be used as a feature value to perform the classification. That's
22 exactly right. It can. And in the claim, it is. It doesn't say it has to be used
23 in conjunction with something else. It can be used as a feature value to
24 classify the voice.

25 How do you do that? You set the threshold, you compare the

1 calculated distance to the threshold. It's exactly what both Shin and
2 Shimomura disclosed, and that's all the claim requires. Next, he argued that
3 these prior art references are black boxes, and that we don't know how they
4 operate. That couldn't be further from the truth. We know exactly what the
5 inputs are to Shin and Shimomura. We know exactly the thresholds that
6 they're using and the comparison they're doing, and we know exactly how
7 they're generating the output and adjusting the volume. Both of those
8 references provide more disclosure than what's in column eight of the patent.

9 There's no way that those references can be considered black
10 boxes, as if they're just describing the output, and we don't know how they
11 get there. No, we know exactly the analysis that those prior art references
12 are using, and it's the same analysis that's described in column eight of the
13 patent.

14 Your Honor, I think mentioned repeatedly throughout the petition,
15 we emphasized and stated and cited the parts of Shin that disclose analyzing
16 the voice. It's on the petition at pages 12 to 13 and other places as well.
17 This idea that this is a new argument that we came up with after their Patent
18 Owner response -- not true.

19 The argument that we're adding -- or adding in the reply, is if the
20 Board finds that this claim requires the classification to be based on distance
21 and something else, which we don't think it does, but if that were -- the
22 Board were to construe it that way, then Shin clearly discloses it, because it
23 also uses the distance and the voice volume, which is clearly a characteristic
24 of the voice. It's another one of the feature values that you can use, and so
25 even if it requires some combination of distance and something else, Shin

1 discloses that.

2 There was an argument near the end relating to whether the
3 references directly modulate the volume, and so he was talking about his
4 argument in the district court, and he told the district court, you can't tell if
5 it's just modulating volume based on distance. That's not enough. That's not
6 what these references are doing. The references are not just increasing
7 volume as you increase distance. They use specific thresholds and classify
8 the incoming voice as either coming from a distance above or below the
9 threshold. Again, that's exactly what the patent describes as the analysis for
10 classifying a voice based on distance.

11 And the reason I put this up, and we read through it slowly and
12 carefully. This answers all of the questions. Everything they're arguing
13 about their claim, if it were true, would exclude this embodiment that's in the
14 patent. With respect to Stern -- Dr. Stern's testimony, they put a couple
15 quotes up, Dr. Stern saying that table three tells you about distance. If you
16 read through that part of the transcript, and we address this in our reply at
17 pages 12 and 13, he repeatedly said that Shin's table three classifies the
18 voices. It classifies the voices based on distance in exactly the same way
19 that the '337 patent describes.

20 Their counsel instructed him to stop answering in the context of
21 classification, and then they got the one quote they want to put up that says it
22 talks about distance. Well, of course it does. It has the distance thresholds.
23 It has the distance thresholds, it has five classifications, and it's classifying
24 the voice based on the distance thresholds again, exactly as the '337 patent
25 explains.

1 I'll finish with just one more point, and that is their continued
2 reference to the part of our petition where we explain how Shin works, and
3 we say to do so, it classifies a voice. For some reason, they exclude the
4 paragraphs that follow. The paragraphs that follow explain how it does that.
5 So, on the petition at page 13, in the middle, we have the paragraph that they
6 put up. Starts with second, Shin discloses the voice classifying unit,
7 analyzes the voice to classify it as a first or second voice based on the user
8 device distance.

9 Third line down, the processor determines output scheme, which
10 includes the content and volume, based on the distance between the user and
11 electronic device. To do so, Shin's processor classifies the voice based on
12 distance. For some reason, they ignore everything that comes after that,
13 which explains how Shin's processor classifies the voice based on distance.
14 That's not the end of the argument.

15 An example is shown in Shin's table three. It's a continuation of
16 the argument that we're making. So, this idea that we never explain how that
17 happens, simply not true. In both grounds, there are a couple of paragraphs,
18 the tables, expert testimony, and a whole bunch of cites that explains how
19 Shin and in the Shimomura section -- Shimomura -- disclose analyzing a
20 voice to classify it based on distance again in exactly the same way that the
21 '337 patent describes. Unless the Board has any further questions, that's all I
22 have.

23 JUDGE ZECHER: Thank you, Mr. Heideman.

24 MR. HEIDEMAN: Thank you very much.

25 JUDGE ZECHER: Mr. Reynolds, we had you at nine minutes and

1 30 seconds. I'll just make that 10 minutes.

2 MR. REYNOLDS: Okay, I appreciate that, Your Honor. I don't
3 think we'll need that much.

4 JUDGE ZECHER: Okay. You can begin when you're ready.

5 MR. REYNOLDS: Mr. Heideman talked about Shin and
6 Shimomura, saying we are asserting they're black boxes. No. They're
7 telling you what they're doing. What we said is if you're going to assume
8 something else is going on in there, there's no way to do that. But Shin and
9 Shimomura are very clear about the fact that they're only operating on
10 distance. In our surreply, we cite Exhibit 2017 from the IPR in the '675
11 case, where he is unquestionably clear. Dr. Stern, question -- this is page 11
12 of the surreply -- table three classifies the distances between a user and the
13 electronic device, correct? Answer, yes. So --

14 JUDGE ZECHER: Mr. Reynolds, I saw that. I question whether
15 or not that's improper incorporation by reference for you to cite to another
16 paper in another proceeding that's not in this record. Why should we
17 consider it?

18 MR. REYNOLDS: Well, we did a combined deposition on the
19 reply stage.

20 JUDGE ZECHER: So, why didn't you just --

21 MR. REYNOLDS: For both.

22 JUDGE ZECHER: -- cite to what was in the record here?

23 MR. REYNOLDS: I mean, it's -- this is testimony from their
24 experts. You can impeach someone's testimony with prior statements.

25 JUDGE ZECHER: I understand that, but this is a paper filed in

1 another proceeding. Correct?

2 MR. REYNOLDS: That's correct.

3 JUDGE ZECHER: That is correct. And we have a rule against
4 improper incorporation by reference. Why don't you cite to a paper that was
5 filed in this proceeding?

6 MR. REYNOLDS: Well, we do. We cite to other things, as well.
7 We collected his testimony. If we made a procedural error there, then I
8 apologize, Your Honor. So, I'll move on. But the testimony we do cite,
9 where he says table three discloses distance and nothing more, yes, the
10 lawyer who was questioning said he kept trying to go back to the
11 classification argument. That aside, it still doesn't disclose anything about
12 voice, and so this is important because this is SoundClear 23, and this is
13 taken from an argument in our Patent Owner response.

14 If the claim just requires analyzing distance, that's what the
15 proximity sensor does, but this claim says analyze a voice spoken by a user.
16 So, if Mr. Heideman is saying, well, all you have to do is determine a voice
17 to meet the claims, and then adjust output based on it, okay, maybe we can
18 talk about where the analysis comes in, but there's no target of voice,
19 because the proximity sensor doesn't look at a voice. Proximity sensor is
20 like a laser pointer.

21 There's no way to squish limitations 1A and 1B together to say that
22 the claim only requires determining distance, because it says classify
23 -- voice classifying, use it to analyze a voice, so that has to be there. The
24 part of analyzing a voice, not to determine intent at the front end, you have
25 to analyze a voice to determine the distance, and you have to classify the

1 voice. So, the classification is there regardless of whether it's distance or no
2 distance, but it also -- you're analyzing a voice to determine distance, so
3 there's no way to support their argument without striking that part to analyze
4 a voice spoken by the user. The object of that analysis is voice. Something
5 has to be done on the voice.

6 And again, this is the opening part of the limitation. Classify a
7 voice. Why else would a Patentee write analyze a voice to classify the
8 voice, if we were just measuring distance and adjusting output based on the
9 distance? And we address this hypothetical with their expert. This would be
10 SoundClear -- somehow it's not going up anymore. Let me see if I can -- so,
11 I asked Dr. Stern, I said, hey, I want to invent something that we'll call a
12 motivational device, which takes input volume in and doubles it, doubles
13 that level of volume for the output. So, you ask a device something and it
14 screams back at you twice what you're saying.

15 And I said, in that hypothetical, is my device classifying inputs?
16 No, you're measuring an input. Now, he went on. We asked, why is that not
17 the case? And he mentioned, well, we bucket things at the output, so that's
18 the classification. But now he's admitting that you're bucketing an output,
19 you're not acting on the input anymore, and then I said, well, how do you
20 render that distinction if you're just discretizing outputs, because I said, well,
21 isn't doing something in the electronic sphere, you're always bucketing,
22 you're always digitizing, and he says we're still talking about presumably
23 unlimited number of continuous or discrete, but unlimited number of
24 possible outcomes. That's not classification. Okay, so there's no way to
25 determine classification just based on how you're measuring. It's just not

1 enough. That's all I have. Thank you very much for your time.

2 JUDGE ZECHER: Thank you, Mr. Reynolds. We appreciate the
3 parties coming today to present their case to us. As you know, we have a
4 one-year statutory deadline to issue a final written decision. We will do so
5 by that date. I would ask that the parties, once we leave the courtroom here,
6 that they stick around in case the Court Reporter has any questions regarding
7 spellings of references or experts or what not, but thank you for your time
8 today. The case has been submitted.

9 (Whereupon the above-entitled matter went off the record at 11:32
10 a.m.)

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