

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FUBOTV MEDIA INC. and YANKA INDUSTRIES, INC.,
Petitioner,

v.

DISH TECHNOLOGIES L.L.C.,
Patent Owner.

IPR2024-00917 (Patent 10,757,156 B2)
IPR2024-00918 (Patent 9,407,564 B2)
IPR2024-00919 (Patent 8,868,772 B2)

Record of Oral Hearing
Held: August 22, 2025

Before: THU A. DANG, KARL D. EASTHOM,
MICHELLE N. WORMMEESTER, and JOHN A. HUDALLA,
Administrative Patent Judges.

IPR2024-00917, Patent 10,757,156 B2
IPR2024-00918, Patent 9,407,564 B2
IPR2024-00919, Patent 8,868,772 B2

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P R O C E E D I N G S

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JUDGE WORMMEESTER: Good morning, everyone. This is our final hearing in IPR2024-00917, FuboTV Media, Inc. and Yanka Industries, Inc. v. Dish Technologies, LLC, which concerns U.S. Patent Number 10,757,156. This also is our final hearing in IPR2024-00918 and IPR2024-00919, Google TV Media, Inc., Yanka Industries, Inc. Webgroup Czech Republic, a.s., and NKL Associates, s.r.o. v. Dish Technologies, LLC, which concern U.S. Patent Numbers 9,407,564 and 8,868,772 respectively. In these last two cases, Webgroup Czech Republic and NKL Associates were joined as parties after they filed petitions in IPR2025-00347 and IPR2025-00348.

I'm Judge Wormmeester, appearing remotely in the Alexandria office. With me are Judges Easthom and Hudalla. Judge Dang is also appearing remotely. We are not an expanded panel. Three judges sit on each panel. Thank you for being here today.

Given this format, we want to start off by clarifying a few things. First, our primary concern is your right to be heard. If at any time during the hearing you encounter technical or other difficulties that undermine your ability to adequately represent your client, please let us know immediately, for example, by contacting the team members who provided you with connection information.

Second, for the benefit of the judges, opposing Counsel, and court reporter, please identify yourself each time you speak. When not speaking,

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1 please mute yourself. Third, we have the entire record, including
2 demonstratives. When referring to demonstratives, papers, or exhibits,
3 please be explicit and identify any slide numbers or page numbers. Finally,
4 please note that members of the public may be listening to this oral hearing.
5 Does anyone have concerns about that?

6 MR. WILLIAMS: No, Your Honor. Not for Patent Owner.

7 MS. OSMAN: No concerns for Petitioners. Your Honor.

8 JUDGE WORMMEESTER: Thank you. All right, let's get the
9 party's appearances, please. Who do we have for Petitioner?

10 MS. OSMAN: Good morning, Your Honor, my name is Inge
11 Osman on behalf of Petitioners FuboTV and Yanka Industries. With me, I
12 have my colleague, Ms. Rebecca Rabenstein, Mr. Rick Frenkel, and Ms.
13 Tara Elliott.

14 JUDGE WORMMEESTER: Thank you. And who will be
15 presenting the argument?

16 MS. OSMAN: I, Inge Osman, and my colleague, Ms. Rebecca
17 Rabenstein, will both be presenting the argument today.

18 JUDGE WORMMEESTER: Great. Thank you. Welcome. And
19 for Patent Owner (INDISCERNIBLE - TECHNICAL DIFFICULTY).

20 MR. WILLIAMS: Yes. Good morning, Your Honor. This is Eliot
21 Williams with Baker Botts. I'll be presenting for Patent Owner. I've got
22 several backup Counsel and some client representatives who are attending
23 via the public line as well.

24 JUDGE WORMMEESTER: Thank you. Good morning. We've

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1 set forth the procedure for today's hearing in our trial order. But just to
2 remind everyone the way this will work, each party will have 75 minutes to
3 present arguments. Petitioner will go first and may reserve rebuttal time.
4 Patent Owner will then present its response and may reserve surrebuttal
5 time. Please remember the demonstratives you submitted are not part of the
6 record. The record of the hearing will be the transcript. Are there any
7 questions before we proceed? Okay --

8 MS. OSMAN: None from Petitioners, Your Honor.

9 JUDGE WORMMEESTER: -- great.

10 MR. WILLIAMS: And none from Patent Owner.

11 JUDGE WORMMEESTER: Great. Thank you. Counsel, will
12 you be reserving any time?

13 MS. OSMAN: Yes, Your Honors. Petitioners will be reserving 20
14 minutes for rebuttal.

15 JUDGE WORMMEESTER: Okay. All right. Great.

16

17 Okay. You may begin when you're ready.

18 MS. OSMAN: Thank you, Your Honors. Good morning again,
19 Your Honors. My name is Inge Osman. I'm here today on behalf of
20 Petitioners FuboTV and Yanka Industries. I have with me today my
21 colleague, Ms. Rebecca Rabenstein. She and I will be splitting the argument
22 with Ms. Rabenstein addressing secondary considerations. Your Honors, we
23 believe this is a straightforward case. The claims are not complicated, and
24 the prior art teaches or renders obvious every limitation that appears in the

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1 claims. Patent Owner's arguments to the contrary amount to an effort to
2 deny what's written in black and white in the papers.

3 Now, if you start with the patent itself, Patent Owner tries to get
4 around obviousness by rewriting the claims. But the claim construction that
5 it proposes is so unduly narrow that it's forced to take one position on claim
6 construction when it's trying to distinguish the prior art and an entirely
7 different one on claim construction when it argues that its product, the
8 MOVE Networks Player, allegedly embodies the claims for the purposes of
9 its secondary considerations arguments. And then, turning to the prior art,
10 Patent Owner makes arguments about what it wishes the prior art said
11 instead of what the prior art actually teaches. So, for instance, Leaning, one
12 of the key prior art references in each of these three proceedings, teaches an
13 embodiment that it expressly describes as avoiding interruption. Patent
14 Owner asks the Board to ignore that disclosure and find that there would
15 have been interruption anyway. Patent Owner is inviting the Board to adopt
16 its mischaracterizations of the record. But the documents as written, show
17 that these claims would have been obvious. This is a theme that permeates
18 the entire case and that we'll see come up again and again today.

19 If you'll please turn to Petitioner Slide 2, you'll see on Slide 2 this
20 is the agenda for our discussion today. There are four topics on the agenda,
21 but I'm going to spend my time discussing the bottom three. I'll skip over
22 the challenged patents unless the Board has specific questions there. But I'd
23 like to talk first about claim construction. Now, claim construction is
24 important here because if the Board agrees with Petitioner on claim

1 construction, it resolves most of the issues in this case. Patent Owner's
2 arguments under the correct construction, most of them are moot. Second,
3 I'll explain how Leaning alone or in combination with other references
4 renders each of the challenged claims obvious. I'll address two subtopics
5 under this one. First, I'll explain why, even under Patent Owner's incorrect
6 construction, Leaning renders the claims obvious either alone or in
7 combination because it teaches uninterrupted playback. And then finally, I'll
8 address how Leaning renders obvious the use of multiple TCP connections.
9 So the third topic that we'll discuss here today is secondary considerations.
10 We'll explain how the secondary considerations don't overcome the strong
11 prima facie case of obviousness, and I'll turn it over to my colleague Ms.
12 Rabenstein to discuss that topic.

13 With that, if you'll please turn to Slide 7, we can get started talking
14 about secondary, excuse me, claim construction. The claim construction
15 dispute between the parties focuses and centers around the meaning of the
16 term, "shift the playback quality based on the factor to achieve continuous
17 playback." Patent Owner argues that this phrase requires actually achieving
18 continuous playback, which it defines as playback that is completely
19 uninterrupted in time and content. Petitioner's position is that the
20 highlighted phrase -- in the highlighted phrase achieving continuous
21 playback is aspirational. It is the intended purpose of shifting the playback
22 quality based on the factor, but it is not limiting. Our construction of this
23 term and our understanding of this term is supported by the plain language
24 which doesn't require achieving --

1 JUDGE HUDALLA: Counselor?

2 MS. OSMAN: Yes, Your Honor?

3 JUDGE HUDALLA: It's Judge Hudalla. I just wanted to ask you
4 about this. Patent Owner has said that it was incumbent upon you to argue
5 this in your petition if you thought it was non limiting or it was just merely
6 aspirational. How do you respond to that?

7 MS. OSMAN: Thank you, Your Honor. If you'll turn to Slide 16,
8 I just want to -- I think it's helpful to look at what we actually said in our
9 position. Because it's our position -- in our petition because it is our position
10 that we are taking the same position on claim construction today that we
11 took in our petition and that we took in our Petitioner reply. The petition
12 proposed that the Board construe this term, "to achieve continuous
13 playback," according to its plain and ordinary meaning. We're not proposing
14 a different construction today. The plain language of the term "shift
15 playback quality to achieve continuous playback" is aspirational and it's not
16 limiting. And that is the term -- that is the construction we proposed in the
17 -- in our petition. It's still the construction that we took today. When we
18 said plain and ordinary meaning, we didn't mean anything other than it's
19 intended purpose. And that's how the claim is written. Patent Owner in the
20 Patent Owner response proposed a narrowing construction. The narrowing
21 construction they proposed was not only is to shifting playback -- "to
22 achieve continuous playback" limiting, they said it requires playback that is
23 completely uninterrupted in time and content. Petitioners are entitled to
24 respond to that new construction and to rebut that new construction. This is

1 similar to --

2 JUDGE EASTHOM: Counselor.

3 MS. OSMAN: Yes, Your Honor?

4 JUDGE EASTHOM: This is Judge Easthom. What if we took
5 sort of an intermediate tact, sort of combine both of your constructions?
6 Because it looks like in your petition and your expert Dr. Houh you talk
7 about continuous and the -- in terms of the different streamlets line up in
8 time so that they are continuous. And I'm looking at this claim, and it seems
9 like the claims kind of requires you to line these up so that you at least have
10 two or three or four continuous streamlets lined up -- streamlets lined up in
11 time or files. They don't claim streamlets. Excuse me. I'm talking about the
12 disclosure when it describes streamlets. But let's say these files read on
13 streamlets. It seems like the claims require a couple iterations where these
14 -- you might have an upshift or downshift, but when you do, the -- you get a
15 continuous joining of one streamlet with the next one that's right in time
16 with it. And just to preface that, I don't know how much of that has to
17 happen, how many -- how long the video has to be continuous, but it has to
18 do it for two or three or four maybe time frames, I guess, if you will. And
19 that would seem to cover both of your claim constructions. What do you say
20 about that? Or what do you think about that?

21 MS. OSMAN: Well, Your Honor, I think there's actually two
22 discrete issues that maybe we can untangle a little bit. The first one is when
23 you look at that claim term "shift playback quality to achieve continuous
24 playback," the first question is, is that "to achieve continuous playback"

1 anything more than just an intended purpose? And if it's an intended
2 purpose, this is very much like the BMS case where the Federal Circuit said
3 intended purpose is not limiting. It's the intent. It's not a limitation. Now, if
4 the Board wants to look at what does it mean if we are going to decide that
5 "to achieve continuous playback is limiting," then the second question is,
6 well, then, what does it mean to achieve continuous playback? How do you
7 get continuous playback? And so, Patent Owners propose that not only is it
8 limiting, but that continuous playback requires playback that's completely
9 uninterrupted in time and content. What I understand your question is, well,
10 what if continuous playback really just means that you are taking one sub-
11 file after the next and sort of lining up the boundaries so that, when you're
12 shifting from one sub-file to the next, you are sort of lining up one sub-file
13 after the next and lining up the portions? Is that sort of what you're getting
14 at?

15 JUDGE EASTHOM: That's right. That's --

16 MS. OSMAN: Okay.

17 JUDGE EASTHOM: -- right. And in my view, I don't see the
18 claim, and I'm going to ask your friend, I don't see the claim as defining how
19 many of those you have to line up. I mean, it seems like it would read on
20 lining up 4 or 5 or even 3 minutes of video or something like that.

21 MS. OSMAN: I agree with that. I don't think there's anything in
22 the claim that would limit that. So I don't think it's limiting in that way. But
23 there is some support for that sort of interpretation of continuous playback in
24 the specification. If you turn to Slide 9, Petitioner Slide 9 -- excuse me. I

1 said specification. I meant the file history. To be clear, the specification
2 doesn't say anything or talk about continuous playback at all. It doesn't use
3 the words continuous playback. But the file history, in a point when the
4 applicant was distinguishing from a rejection that the examiner made based
5 on two references, Hughes and Li, the examiner explained, well, Hughes and
6 Li are different because this invention, when you shift playback quality, the
7 shifts happen along portion boundaries. The applicant explained that when
8 you shift along portion boundaries, that means playback is continuous. So --

9 JUDGE EASTHOM: Right. That's something I was referring to.
10 That prosecution history is defining continuous, and I forgot to say that. I'm
11 glad you brought that up.

12 MS. OSMAN: Okay. So it's --

13 JUDGE EASTHOM: Would you be happy with that construction
14 then? Or would you --

15 MS. OSMAN: Well, so, Your Honor, I think it's our position that
16 this achieve -- to achieve continuous playback is not limiting. It's an
17 intended purpose. And --

18 JUDGE EASTHOM: But what about this file history? Doesn't
19 that sort of give meaning to what this term means? Or are you saying this
20 file history is just not related to the same term that's in the claim?

21 MS. OSMAN: I wouldn't say it's not related to the same term. I
22 would say the plain and ordinary meaning of the term is clear based on the
23 plain language in the claim. And so the plain meaning is to achieve
24 continuous playback. It doesn't say achieving continuous playback. It

1 doesn't say wherein the playback is continuous. There's nothing like that
2 that suggests anything more than an intended purpose. Now, this portion of
3 the file history, it -- while it sort of reveals what the applicant maybe had in
4 mind, it doesn't rise to the level of lexicography, doesn't rise to the level of
5 disclaimer. It's certainly not a situation where you would say, well, now we
6 know to achieve continuous playback was intended to be limiting. So while
7 I think it makes clear that the applicant didn't have in mind completely
8 -- playback that is completely uninterrupted in time and content as Patent
9 Owner is now arguing, it also doesn't support making this claim limitation
10 limiting.

11 JUDGE EASTHOM: Okay.

12 JUDGE HUDALLA: Can I ask a follow up, Counsel, on that
13 point?

14 MS. OSMAN: Of course.

15 JUDGE HUDALLA: Going back to my original question, isn't
16 saying that a claim limitation is not limiting different than what you put in
17 your petition, which is that the claim terms should be accorded their ordinary
18 meaning?

19 MS. OSMAN: Your Honor, I don't think that it is. I think when
20 the claim terms -- when the plain meaning of the claim term makes it clear
21 that it is an intended purpose, that I think that the Federal Circuit case law is
22 clear. An intended purpose is not limiting. If you take a look at that BMS
23 case that I mentioned, and this is at Petitioner Slide 15, this case is very
24 similar to ours there. There, the issue that the Federal Circuit was thinking

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1 about and considering was what is the correct construction of the term
2 "antineoplastically effective amount," and it considered whether that term
3 was limiting. The Patent Owner argued that it was limiting. It was added
4 during prosecution to distinguish prior art according to the Patent Owner.
5 And the Federal Circuit disagreed. It said a statement of intended results,
6 and that's what this was, didn't limit the claims. And then the Federal Circuit
7 said that while it was added during prosecution, it wasn't added because the
8 examiner required it to be added. It was just added by the Patent Owner.
9 The Federal Circuit also there thought it was significant that the Patent
10 Owner was taking one position on invalidity and a different one on
11 infringement.

12 Now, Your Honor, there are a lot of parallels to our case here. The
13 language to achieve continuous playback is -- the plain language of it is an
14 intended purpose. It's nothing more. There's nothing in the file history to
15 suggest that it deserves more weight than that because it was not required by
16 the examiner. In fact, we can look at the file history, but it was part of a full
17 rewrite of the claim. So it wasn't like this was a limitation that was added in
18 response to a specific rejection. And we could take a look at that next. And
19 similarly, likewise here, Patent Owner is taking one position on the
20 construction when it's trying to distinguish Leaning and a different position
21 when it's trying to distinguish -- when it's trying to argue for secondary
22 considerations. So there are really a lot of parallels to this case, between this
23 case and this BMS Federal Circuit decision. And if we want to take a --

24 JUDGE DANG: Counselor? Excuse me --

1 MS. OSMAN: Yes, Your Honor?

2 JUDGE DANG: -- Counselor. This is Judge Dang. I have a
3 question with that. So are you saying we should just ignore a term that's in
4 the claim? Because the word to -- like you said, it could be an intended
5 purpose. But if you have an intended purpose, shouldn't the steps or
6 whatever be able to produce such results? So even if you don't -- you're not
7 required to have the results, but you have to be able to do it because you
8 have to do this in order to have a continuous result. So shouldn't we have to
9 at least address what is continuous?

10 MS. OSMAN: Well, Your Honor, I think the intent has to be to
11 produce continuous playback. You can't have a system that intends to
12 introduce interruption. And then to your point, that does bring up the
13 question of, well then, what does it mean to have an intent? What does it
14 mean to intend to have continuous playback? And the file history suggests
15 that what it means is you're shifting along portion boundaries. So you're
16 taking sub-files, and you're shifting along portion boundaries of the sub-
17 files. That's the intent. There's nothing in the specification or the file history
18 that would support interpreting this as requiring playback that is completely
19 without interruption in time or content. There's just no support for that. And
20 --

21 JUDGE DANG: So going to that. And that's why I just want to
22 clarify what this continuous is. I understand that it doesn't require
23 completely. But continuous, the word continuous itself, you have to be
24 continuing something. So it can't be just one here and one 10 portions later.

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1 It has to be -- wouldn't it have to be back to back?

2 MS. OSMAN: So, Your Honor, if we look back at Petitioner Slide
3 9, that's what the applicant suggested in response to a file history, a rejection
4 during prosecution, excuse me. That's what the applicant suggested. The
5 applicant said, when continuous playback means that you're shifting along
6 portion boundaries. In other words, just like Leaning does, when you get
7 one sub-file, you start the next sub-file where the other sub-file ended.
8 That's what the applicant said continuous means. And --

9 JUDGE DANG: Okay. Okay. Thank you.

10 MS. OSMAN: Apologies. And I just wanted to get back to Judge
11 Hudalla, your question about claim construction and whether this is a new
12 position. Just think it's important to look at the Federal Circuit decision in
13 Axonics where the Federal Circuit looked at -- said a Petitioner has to be
14 afforded a reasonable opportunity in reply to present both argument and
15 evidence under a new construction. Here, Patent Owner clearly presented a
16 new construction in their Patent Owner response, interpreting continuous
17 playback as not only just an intended purpose, but also as requiring playback
18 that is completely uninterrupted in time and content was certainly a new
19 construction. There's no support for that anywhere, not in the specification
20 and not in the file history. So, Your Honor, we believe that this is not an
21 improper new argument. We think it's consistent with the position we took
22 in the petition. And in addition, even if it is not -- even if we didn't explain
23 we were interpreting this as an intended purpose in the petition, we were
24 entitled to do so in the Petitioner reply based on Patent Owner's proposal of

1 entirely new construction that's not consistent with the record.

2 JUDGE HUDALLA: Thank you.

3 MS. OSMAN: Thank you. Unless there are more questions on
4 claim construction, I'd like to move on to the second topic and explain why
5 Leaning alone or in combination renders the challenge claims obvious. And
6 this is even under Patent Owner's construction. So even if the Board doesn't
7 agree and thinks that to achieve continuous playback is a statement of
8 intended -- is not a statement of intended purpose and is limiting, Leaning
9 still renders the challenge claims obvious.

10 Apologies. I do want to hit one more topic on claim construction
11 before we get there. Sorry about that. If you'll please turn briefly to Slide
12 14, Petitioner Slide 14, I think it's important to just look at the ITC decision
13 because Patent Owner cites to it and relies on it heavily in their claim
14 construction arguments. So before we get to the next topic, I just think it's
15 important to look at this. Patent Owners sort of suggest that the ITC
16 construed continuous playback as requiring playback that was completely
17 uninterrupted in time and content. And because our petition said, well, even
18 under the ITC constructions, you know, we're -- Leaning renders the claims
19 obvious, says, well, you adopted the ITC constructions. And now aren't you
20 taking a different position? But if you actually look at the ITC decision,
21 what the ITC decision actually said was, okay. Respondents concede that,
22 "at least in concept, a person of skill may have understood what it means to
23 achieve continuous playback," then in parentheses, "uninterrupted viewing
24 of the content." But then a few pages later, the ITC explains that, "the

1 phrase 'continuous playback of the video' is the goal sought through the
2 'determinations to shift' playback quality." That's the exact same position
3 we're taking now. So Your Honor, I think this is also responsive to is this a
4 new argument? We said the ITC decision. ITC decision took the same
5 position we took, which is continuous playback of the video is an intended
6 purpose. It's the goal. It's not anything more than that.

7 And then now actually moving to the next topic, with apologies for
8 moving backwards, again turning to Slide 18, Petitioner Slide 18, we could
9 talk about why Leaning alone or in combination renders the challenge claims
10 obvious. And it's our position that it renders the challenged claims obvious,
11 even under Patent Owners' construction. Turning to Slide 19, there are a
12 number of topics under this larger argument because there are a number of
13 arguments in these three IPR proceedings. But as I mentioned at the outset,
14 there are really two sub issues that I'd like to address. The first one being, of
15 course, I'll explain why Leaning teaches continuous playback, even if that
16 requires playback completely uninterrupted in time and content. Second, I'll
17 explain why Leaning renders obvious multiple TCP connections. If you'll
18 please turn to Slide 21, Leaning, as the Board is aware, teaches dividing files
19 into sub-files and creating copies of the sub-files at a number of different bit
20 rates or qualities. It teaches shifting between those different quality sub-files
21 in response to network performance, as claimed. It also expressly teaches
22 that interruption should be avoided, and it provides instructions to those of
23 skill in the art, for -- how to avoid that interruption.

24 So for instance, this is on this demonstrative, Demonstrative 21. It

1 explains that for many conventional sound cards, changing sampling rates
2 requires resetting the sound card. And it says, well, resetting the sound card
3 can introduce interruption. So, Leaning explains, you can run the audio card
4 -- audio sound card continuously at the highest sampling rate envisaged and
5 avoid interruption. It also says the sound card can be operated constantly in
6 stereo to avoid interruption because of stereo, and the number of bit rates
7 -- bits per sample can be adjusted by padding the samples with zeros. It's
8 teaching how to avoid interruptions. Leaning is saying, here are the steps
9 you take to avoid having to reset the card because resetting the card
10 introduces interruption. And then further, and this is at the second part of
11 Leaning on this demonstrative, it says in the context of rate switching,
12 Leaning explains that rate reductions are envisaged in the cases of buffer
13 underflow, which involve interruptions in the output. So Leaning explains
14 that it's preferable to anticipate the buffer underflow unavoids, thereby
15 again avoiding interruption.

16 Now, despite Leaning's teachings and focus on avoiding
17 interruption, Patent Owner makes a lot of arguments, a number of
18 arguments, to assert that the playback would have been interrupted anyway.
19 It first argues that Leaning requires cleaning the buffer -- clearing the buffer,
20 excuse me, even where it describes avoiding interruption, and that clearing
21 the buffer would always introduce an interruption. Now, we disagree. It's
22 our position that Leaning does not always require clearing the buffer and
23 that even if it did, clearing the buffer doesn't have to introduce an
24 interruption. So if you'll turn please to Slide 22 to see Dr. Houh, Petitioner's

1 expert, explained this. He said a person of ordinary skill in the art would
2 understand that the reason that you're clearing the buffer is because the
3 sound card is being reset. But Leaning teaches an alternative where -- that
4 we just looked at. He said you run the card at this highest sampling rate.
5 You run it in stereo, and the changes in bit rate are up-sampled. And so you
6 don't have to reset the card, you don't have to do this. And Dr. Houh
7 explained that a person of ordinary skill would have understood that this
8 embodiment teaches a general alternative to the flowchart, where a POSITA
9 would understand there's no need to clear the buffer.

10 As the Board's aware, Patent Owner disagrees. In Dish's
11 demonstratives at Slide 11, it cites the Leaning. This is Leaning at column
12 8, lines 20 through 23. But in fact that cited portion of Leaning, this is again
13 Leaning, column 8, lines 20 through 23. In that portion of Leaning, this
14 -- we maintain that that portion of Leaning actually shows -- it proves that
15 Dr. Houh is correct. The reason to have an empty buffer, the reason to clear
16 the buffer is because you are resetting or reconfiguring the sound card. So
17 let's look at what this passage the Patent Owner relies on actually says. The
18 relevant portion is in parentheses. It says changing at a time when the buffer
19 is already empty is advantageous as the sound card is not playing anything.
20 And it may be necessary to reconfigure it if the audio sampling rate, stereo
21 mono setting, or bit width in parentheses, number of bits per sample has
22 changed. Leaning is teaching that the reason that you need to clear the
23 buffer, the reason it's advantageous to have a clear buffer, is because you
24 might have to reset the sound card. In this embodiment we're relying on,

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1 Leaning is expressly teaching how to avoid resetting the sound card. A
2 person of ordinary skill in the art would understand that there's no reason to
3 clear the buffer if you're not resetting the sound card. Please turn to
4 Demonstrative 25.

5 JUDGE WORMMEESTER: Counsel, was that portion of Leaning
6 cited in the petition? Did you rely on that in explaining?

7 MS. OSMAN: This is in response to an argument Dish made on
8 its -- Dish's Demonstrative Slide 11. They raised this argument. They
9 raised this portion of Leaning to argue that Leaning always requires clearing
10 the buffer. This is not an argument that Petitioner raised. This is in response
11 to Dish's argument.

12 JUDGE WORMMEESTER: Okay. In Dish's response, Patent
13 Owner response?

14 MS. OSMAN: Correct.

15 JUDGE WORMMEESTER: Okay. Thank you for the
16 clarification.

17 MS. OSMAN: Sure. If you'll please turn to Demonstrative Slide
18 25, this is Petitioner's Demonstrative Slide 25. Now, Patent Owner also
19 emphasizes the use of the clear buffer command in the flowchart, as we
20 talked about, to say, well, clearing the buffer is always required. Now, of
21 course, it's our position that that's not true. But there's also a clear exception
22 in Leaning that shows that this clear the buffer command is not always
23 required. So we think it's not always required if you're not resetting the
24 sound card. But Leaning also expressly says it's not required if you're

1 jumping. So what is a jump? A jump is where, when you're watching a
2 video, for instance, you're going from one portion of the video to the next.
3 Maybe you're pressing the 10 seconds back or 10 seconds forward or just
4 dragging the bar to another portion of the video. You're jumping from one
5 portion to the next. And Leaning expressly says you don't have to clear the
6 buffer. It is not essential to clear the buffer in the context of a jump. And of
7 course, that makes sense. If you're jumping 10 seconds in the future, you
8 might already have that data in the buffer. It doesn't make sense to clear the
9 buffer. You might want to keep that and use that data. Likewise, a person
10 of ordinary skill would have understood that in the context of Leaning's
11 embodiment that up-samples audio and continuously runs the sound card at
12 the highest sampling rate, operates in serial mode, holds the number of bits
13 constant that we've just been talking about, there's no reason to clear the
14 buffer because you don't have to reset the sound card.

15 Turning to Slide 26, this again, Petitioner Slide 26, in its sur-reply
16 Patent Owner argues that Leaning has an embodiment where it exercises and
17 it operates that clear the buffer command, even where it uses a single fixed
18 sampling rate. Now, Your Honor, we disagree. That portion of Leaning
19 doesn't say that it's clearing the buffer, so we don't think that's supported.
20 This is a portion that's talking about the process of partitioning the original
21 file into sub-files. But it's also interesting to look at what Patent Owner
22 actually cites, which is that last sentence in the -- on the right of this
23 demonstrative, it says, "Note that in this embodiment of the invention, the
24 available data rates, though they are different -- though they have -- use,

1 excuse me, different degrees of quantisation and differ as to whether they
2 encode in mono or stereo, all use the same audio sampling rate." So to be
3 clear, these are not -- these, excuse me, so these sub-files have different bits
4 per sample, and they also have different -- are different in terms of whether
5 they code in mono to stereo.

6 Turning to Slide 27, it's also notable that a person of ordinary skill
7 in the art would have understood that video playback was different and did
8 not require clearing the buffer when changing the bit rate or the frame rate at
9 which the video player is operating. Instead, a computer monitor's refresh
10 rate can be static, even while a video player changes the bit rates, or while
11 different applications are opened on an operating system's windowing
12 interface and update their application window at different rates. The video
13 player application doesn't -- it doesn't concern itself with the refresh rate of
14 the display device. And Leaning actually suggests as much because it says
15 the player program incorporates a video decoder in software. So it says the
16 program has a decoder, suggesting that this is done in software. This isn't a
17 situation where you're having to reset the video card to adjust for a different
18 frame rate in a video. Now, to dispute this, Patent Owner cites to Exhibit
19 2139, which is U.S. Patent 6,678,332. And it uses that to argue that video
20 cards would need to be cleared and reset to decode a new bitstream. And
21 this is cited in Dish's Demonstrative 42. But Your Honors, that's false. And
22 if you actually look at that patent, what it says is one attempt to address
23 discontinuity when you're switching between MPEG transport streams
24 includes resetting a decoder. But if you keep reading a little bit, it says, "but

1 doing so will slow down the maximum rate at which a viewer can scan
2 through the channels." And it proposes as a preferred solution that
3 implements seamless splicing to permit decoding in the conventional fashion
4 without significant audio visual discontinuities and without a significant
5 delay. So, yes. Does this reference say reset? It says reset the decoder.
6 Does this reference suggest that it was conventional or that those of ordinary
7 skill in the art were resetting video cards? Not at all. To the contrary, it says
8 don't do that. It creates extra delay. Instead, do it in the conventional
9 fashion, which it implies doesn't involve resetting the video card. Turning
10 now to Slide 28.

11 JUDGE EASTHOM: Counsel, how does upping the sampling
12 rate, keeping it at a higher rate, allow you to not have problems with
13 different -- when you change the rate upward or you change the bit rate
14 coming in?

15 MS. OSMAN: So if you're upping the sampling rate, that means
16 -- one of the reasons to reset an audio card --

17 JUDGE EASTHOM: Not the sampling rate. I'm sorry. Look,
18 aren't there two different things? There's a --

19 MS. OSMAN: Yes.

20 JUDGE EASTHOM: -- sampling rate and then there's the video
21 rate, the bits per second coming. And the claim calls for you to change the
22 latter. It doesn't have anything to do with the sampling --

23 MS. OSMAN: Correct.

24 JUDGE EASTHOM: -- rate. Yeah, okay. Thank you. Go ahead.

1 Proceed.

2 MS. OSMAN: So, Your Honor, when the embodiment and
3 Leaning -- what the embodiment and Leaning is teaching is it's saying you
4 up-sample. You use the same -- you use the highest -- run the sound card at
5 the highest possible bit rate. You keep stereo or mono constant. You make
6 it always stereo, because then you can just take two mono signals and make
7 it stereo, make the sound stereo, and then you keep constant the number of
8 bits per sample. And that if you do that, you can avoid needing to
9 reconfigure or reset the card. And Leaning explains at this, and in particular
10 at this paragraph that Patent Owner relies on at eight -- column 8, 20 to 23
11 explains that if you're changing any one of these things, then you will -- then
12 you'll need to reconfigure or reset the sound card, which means you need the
13 buffer to be empty. So the reason for that clear buffer there is because you
14 need the buffer to be empty or -- you don't need it to be empty. But it's
15 helpful to have the buffer be empty when you're changing that
16 reconfiguration when you're reconfiguring or resetting. So that's why. And
17 it assumes that if you are changing bit rates, sort of as the flowchart teaches,
18 that you're probably -- that you could also be changing one of these things.
19 And so that's why this paragraph, while it doesn't expressly say that you're
20 changing the sampling rate or, or any of it actually -- well, I take that back.
21 It does discuss changing the sampling rate and the serial or mono and the
22 rates per sample, the number of bits per sample. But it suggests that if
23 you're changing bit rate, one of these three things may also be changing.
24 And so that's why that clear buffer command is there.

1 JUDGE EASTHOM: Okay. Thank you.

2 MS. OSMAN: Okay. If you'll turn back to Petitioner Slide 28, in
3 terms of video -- so we were talking about video and why video playback is
4 different and doesn't require clearing the buffer. Dr. Houh, our expert, also
5 explained that even if it's -- even if Patent Owner is right that a person of
6 ordinary skill might have still wanted to clear a video card, a person of
7 ordinary skill would've been able to implement the same teachings that
8 Leaning has with respect to audio and do it with video. So you would do the
9 equivalent of up-sampling video to the highest possible rate to avoid clearing
10 buffer. And Dr. Houh explained that a person would have known how to do
11 that. Now, in response, Patent Owner says, well, Dr. Houh didn't explain
12 how a person of ordinary skill in the art would have done that. That's not
13 entirely true. Dr. Houh cited to Exhibit 1049, which is U.S. Patent
14 6,304,297. And that just explains how a computer processing video data
15 where the display update rate of a video doesn't match the display refresh
16 rate of a monitor. So there the example was, like, the -- you might get a
17 video that's 59.94 hertz, but the computer monitor refresh rate might be 60
18 hertz. And so then you have to do sort of an adjustment in software so that
19 there's no discontinuities or mismatches because of the different frame rates.
20 And that patent says, well, you do it by adding or deleting frames. There are
21 ways to do this, and a person with ordinary skill in the art would have
22 known how to. So the suggestion that a person of ordinary skill would not
23 know how to up-sample or deal with these differences is just not supported
24 by the record.

1 Turning to the next argument Patent Owner raises on Slide
2 -- please turn to Slide 35. Patent Owner argues that despite Leaning's
3 disclosure of avoiding interruptions, there would still be an interruption
4 anyway because the playout time, according to Patent Owner, is 10 seconds.
5 And so recall that the playout time is the amount of data that you have to
6 have in the buffer before playback can begin. So Patent Owner says, well,
7 you have to have 10 seconds in the buffer before you can start playback.
8 And so that causes an interruption because you have to wait for the 10
9 seconds of data to show up. We disagree. We think that's incorrect. I'll
10 explain why if you could please turn to Slide 36.

11 Leaning is not limited to a playout time of 10 seconds. In fact, it
12 teaches that the sub-file can be up to 130 percent of the size of the playout
13 time. And we provided an example. Patent Owner disputes this example,
14 doesn't like the math, but I'll explain that too. That means that if the playout
15 time is about 3 seconds, the sub-file size can be about 4 seconds. So it's not
16 quite four. It's 3.9, but we wanted to use a whole number. Now the reason
17 this matters is if the size of a single sub-file is larger than the playout time,
18 TP, then the playout can begin as soon as you have that first sub-file. You
19 don't have to keep waiting. That's effectively instantaneous within the
20 constraints of computer networking.

21 Turning to Slide 37, now Patent Owner makes an argument about
22 Leaning's teachings with regard to selecting the sub-file size. Now, in
23 talking about what -- how big the sub-file should be as compared to the
24 playout time, Leaning says, well, be careful how you're selecting because

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1 you want to make sure you're avoiding delays, reducing delays. Now Patent
2 Owner says, well, doesn't this mean Leaning is assuming that there will
3 always be a delay? But we believe the Patent Owner is missing the point
4 entirely. Leaning is teaching avoiding those delays. And it's saying, look,
5 person of ordinary skill in the art, here's what you do to avoid delays. The
6 fact that downloading a sub-file will always take some time doesn't mean the
7 delay won't be perceived as continuous. Some delays are so short that
8 they're completely imperceptible. And to the extent that Patent Owner is
9 trying to interpret the claims to require something that's not possible, then
10 the Board shouldn't require that -- shouldn't interpret it to require an
11 impossibility. Because anytime you're downloading a file, even if the file is
12 being sent at the speed of light, still takes time to get where it's going, still
13 takes time to decode it. So to the extent they're requiring that this is -- has
14 absolutely instantaneous that's not -- that's an impossibility.

15 If you please turn to Slide 39, this is -- Patent Owner sort of makes
16 a new argument along these lines in its sur-reply. Now, this is improper
17 because it's a new argument that wasn't raised before. But Patent Owner
18 now argues that, well, even if TP doesn't have to be 10 seconds, Leaning still
19 requires downloading a sub-file before you can start playback and therefore
20 it's discontinuous. Now, this argument fails on the merits as well. It's new
21 and it fails on the merits. Leaning downloads a sub-file -- downloads the
22 next sub-file while a sub-file is being played. So there doesn't have to be
23 any delay at all. And again, as soon as the sub-file has played -- so the way
24 it works, let's imagine a sub-file is 130 percent of TP. So as soon as that 31

1 percent of that sub-file or the buffer is down to 99 percent of TP, then the
2 next sub-file will be requested. So you have a request outgoing while the
3 current sub-file is playing. So it's not true that there is any intrinsic delay or
4 there has to be a delay, as Patent Owner is arguing.

5 Turning to Slide 40, Patent Owner makes arguments about what
6 clearing the buffer means. Our position is again, clearing the buffer is not
7 required. But even if it were required, clearing the buffer can include doing
8 so by playing out the contents of the buffer until it's emptied, avoiding any
9 discontinuity.

10 Turning to Slide 41, in the context of changing bit rates, for
11 instance, Dr. Houh explained that clearing the buffer can and should be
12 implemented by playing out the sub-files in the buffer. According to Patent
13 Owner, when you're clearing the buffer every time, what you do is you take
14 the files that you've downloaded, everything you downloaded and decoded,
15 and you dump them out, just discard them. And then when you request the
16 new files, you don't request the files that you've just discarded. You request
17 the files that are next in line. So according to Patent Owner, not only are
18 you getting a temporal discontinuity, you're also getting a content
19 discontinuity because you're just losing all of that material that was
20 previously in the buffer. That just doesn't make sense. A person of ordinary
21 skill in the art would never do that. You've used network bandwidth.
22 You've put in the effort to download and decode these files. Why would you
23 dump them out? It just doesn't make sense.

24 As Dr. Houh explained, this is actually inconsistent with Leaning's

1 disclosure. Leaning's disclosure says avoid interruptions, and it also teaches
2 -- importantly, it also teaches it is highly desirable that the sub-file
3 boundaries are the same for each rate so that the first sub-file received for a
4 new rate continues from the same point in the recording that the last sub-file
5 at the old rate ended. This is really important because what this says is
6 Patent Owner's construction or interpretation of clear buffer cannot be
7 correct. Leaning is saying it's really important, if not actually essential, that
8 the sub-files match up. So where your last sub-file ends, the next sub-file
9 has to begin. Patent Owner's construction or interpretation of clear the
10 buffer would make it so that that is never possible.

11 Turn please to the next slide, Slide 42. Now, in its sur-reply,
12 Patent Owner raises an argument. Patent Owner --

13 JUDGE EASTHOM: Counsel, can I ask you a question?

14 MS. OSMAN: Yes, Your Honor.

15 JUDGE EASTHOM: This is Judge Easthom again. How does that
16 happen if you clear the buffer the way you say. So you play through the
17 -- you play through that file, and you get the buffer so that it goes to the
18 display and you're clearing it out. So are you suggesting that, as soon as it's
19 cleared out, that the next sub-file comes into the buffer?

20 MS. OSMAN: Yes, Your Honor. So the way it would work is
21 -- so clear the buffer means -- always means you end up in a place where
22 there is nothing in the buffer. So the only question is, how do you clear the
23 buffer? Clear the buffer always means you end up where there's nothing in
24 the buffer. But our position is --

1 JUDGE EASTHOM: Yeah. I understand that. So you've cleared
2 it because it's --you're playing it. You're looking at it on the video screen or
3 whatever.

4 MS. OSMAN: Right.

5 JUDGE EASTHOM: But then where's the -- how's the next sub-
6 file not --

7 MS. OSMAN: So --

8 JUDGE EASTHOM: Go ahead.

9 MS. OSMAN: Apologies. I didn't mean to interrupt you, Your
10 Honor. So the next sub-file, while you're clearing the buffer, Leaning is
11 already requesting the next sub-files and decoding them and storing them.
12 Like every system like this, there's not just one buffer. So Leaning is
13 decoding sub-files. So as you're clearing the buffer, the other sub-files are
14 decoded and waiting to be put in that buffer. It's not true --

15 JUDGE EASTHOM: But --

16 MS. OSMAN: -- that there's any delay. Excuse me.

17 JUDGE EASTHOM: But I don't understand. I mean, I don't think
18 Leaning discloses different -- several buffers. Are you relying on that? Or
19 are you saying -- in other words, you still got to put that in the buffer --

20 MS. OSMAN: That's right.

21 JUDGE EASTHOM: -- the one that's waiting.

22 MS. OSMAN: And just to be clear, Leaning doesn't expressly say
23 there's another buffer. But what I'm explaining is -- so you are playing
24 through the buffer until the buffer goes down to zero. Then the next sub-

1 files have already been requested and are being decoded. They can be stored
2 elsewhere until that buffer is emptied. So they can be placed immediately in
3 the buffer to avoid interruption.

4 JUDGE EASTHOM: But they would still have to be -- it would
5 take time for it to -- so that you have to put enough of it to go over TP.

6 MS. OSMAN: Well, Your Honor, if TP is less than the size of a
7 single sub-file, it wouldn't take time. You can already have that single sub-
8 file decoded and ready to be placed in the buffer as the current sub-files are
9 being played out. So it doesn't have to take any time at all.

10 JUDGE EASTHOM: You're saying you're going to -- I see. You
11 can put it in the buffer in parallel and the slots in the buffer --

12 MS. OSMAN: Immediately (CROSSTALK).

13 JUDGE EASTHOM: -- I think I understand. Okay.

14 MS. OSMAN: So there's no delay between when you -- when the
15 current files in the buffer are all played out and the next file in the buffer is
16 placed in the buffer because it's already been downloaded and decoded and
17 is waiting.

18 JUDGE EASTHOM: It just gets clocked in the next cycle or
19 something. Okay.

20 MS. OSMAN: Exactly. Yeah.

21 JUDGE EASTHOM: I think there were disclosures about
22 overlapping the same bits and successive sub-files, but I don't know if that's
23 part of how it keeps it from being discontinuous or not.

24 MS. OSMAN: There is an embodiment in Leaning that talks about

1 overlapping bits, but I think that one is distinct. We're not expressly relying
2 on that embodiment.

3 JUDGE EASTHOM: Okay.

4 MS. OSMAN: On the clear buffer issue, Patent Owner raises an
5 argument about jumps. And what does it -- and it says sort of that, well, our
6 interpretation of clearing the buffer can't be right because Leaning says we
7 prefer, in the case of the jump, to suspend decoding and clear the buffer so
8 that the new request is sent immediately. But this is not actually essential.
9 Now, according to Patent Owner, this means that clearing the buffer must
10 always be done by discarding what's in the buffer. We disagree. We think
11 clearing the buffer always means the same thing. It always means that the
12 buffer has to be cleared, has to end up empty. But how you clear the buffer
13 might change based on context. So when you're jumping from one part of
14 the video to another, it might make sense to playout the contents of the
15 video, or it might make sense to discard what's in the video. So you might
16 playout the contents. If you're waiting for, for instance, something 10
17 minutes ahead in the video and you don't have those files, maybe it makes
18 sense to playout the contents to clear the buffer so that you're not just
19 looking at nothing while you're waiting. Maybe it makes sense not to.
20 Maybe it makes sense to discard and let the user see nothing while you're
21 waiting for the next files to come in. Clearing the buffer always means you
22 end up with an empty buffer. But you can do it in different ways. This is
23 sort of similar to when I tell my kids to clear their plate at dinner time. If
24 we're sitting at dinner and we've just started dinner, clearing your plate

1 means eat your food, eat your dinner. If the dinner hour is over and we're
2 leaving the table, clear your plate means do it by cleaning your plate. The
3 end result is the same, but how you do it is different.

4 JUDGE EASTHOM: But other than that, the discussion about
5 jumps. The claims don't require jumps, do they? Or do some of the
6 dependent claims require that?

7 MS. OSMAN: They don't expressly require jumps. I think there is
8 a dependent claim that requires contiguous files to enable jumps. Apologies.
9 I'm not getting the claim language exactly correct. So there is, I think, at
10 least one dependent claim that said something about jumps, but the
11 independent --

12 JUDGE EASTHOM: Okay.

13 MS. OSMAN: -- claims do not. With that, Your Honor, I'd like to
14 turn to Slide 44 about encoding and segmentation. This is the fourth and
15 final argument that Patent Owner makes about -- asserting that Leaning's
16 playback would be discontinuous. And it argues that by teaching encoding
17 and segmenting video, Leaning introduces discontinuities through
18 mistracking. And so this mistracking is when -- Patent Owner provided
19 examples of it. It's when you're looking at a video, the video just looks
20 funny, just looks incorrect. So if you'll turn to Slide 46, there's a lot of
21 arguments about encoding and segmenting and would a person of ordinary
22 skill in the art know how to encode and segment. And Patent Owner spends
23 a lot of time arguing about how Leaning would introduce mistracking. The
24 problem with this argument is that the challenged claims and the

1 specification don't say anything about mistracking of video. They don't
2 claim avoiding mistracking. The specification doesn't say anything about
3 how to do it. It just assumes that a person of ordinary skill in the art would
4 know how to do this. And it does that correctly because a person of ordinary
5 skill in the art would, in fact, know how to avoid mistracking. This is very
6 similar to the Federal Circuit's decision in Uber Tech, where the Federal
7 Circuit explained that where a patent is entirely silent on how to implement a
8 certain technology, this suggests that a person of ordinary skill would have
9 been more than capable of doing it. And that's certainly true here.

10 Turning to Slide 47, while the challenged patents don't say
11 anything about how to avoid mistracking, Leaning has a lot of teachings of
12 how to avoid mistracking. So there are three different categories of
13 Leaning's teachings. Leaning says, first, for video recordings, where every
14 frame is coded independently. So this is a coding standard where every
15 frame is independently coded, or an I-Frame. For these, it's enough, Leaning
16 says, that the sub-file contains a whole number of frames of a picture. You
17 don't need to do anything else there. That's it. That's all you need to do.
18 There will be no mistracking. Second, Leaning says for inter-frame coding
19 standards, those are coding standards where you have some independently
20 coded frames and some dependently coded frames. There, Leaning says the
21 way you deal with this is by beginning every sub-file with an I-Frame. If
22 you do that, there will be no mistracking. And then third, and finally,
23 Leaning has a third category. And it says for coding standards where you
24 don't really have I-Frames, there there's a potential, only in that

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1 circumstance, there's a potential for serious mistracking of the decoder. But
2 there, Leaning teaches how to fix that too. It says you use these bridging
3 sub-files to avoid serious mistracking. Now, I'm not even going to talk
4 about that third category because Leaning provides two other options that
5 use regular coding standards that a person of ordinary skill in the art would
6 have been able to do to avoid any kind of mistracking. So, turning very
7 quickly to Slide 48.

8 JUDGE WORMMEESTER: Counsel, I just want to let you know
9 you have about 27 minutes left.

10 MS. OSMAN: Okay.

11 JUDGE EASTHOM: That includes your rebuttal time too. So I
12 don't know if you want to --

13 MS. OSMAN: Understood.

14 JUDGE EASTHOM: Okay.

15 MS. OSMAN: Thank you, Your Honor. Okay. So very briefly,
16 Patent Owner doesn't say anything about the independently coded standard,
17 doesn't mention it at all. So that independently coded standard, we provided
18 an example of it in a brief, in our petition and reply.

19 If you turn to Slide 51, before I hand it over to my colleague, I just
20 wanted to mention that Patent Owner, in trying to argue that there would be
21 mistracking, has its expert, Dr. Jeffay, put together these videos. And these
22 are in Patent Owner's demonstratives as well, so you'll see them. These
23 videos allegedly show mistracking under Leaning's teachings. The problem
24 with the videos is Patent Owner's expert went out of his way to make sure

1 that mistracking would occur. Instead of following Leaning's teachings,
2 which say every sub-file has to begin with an I-Frame, an independently
3 coded frame, Dr. Jeffay, Patent Owner's expert, made sure he guaranteed
4 that no sub-file after the very first one would have an I-Frame in it. So the
5 way you know this is at the top of Slide -- Petitioner Slide 51, you see the
6 command for encoding. This is from Dr. Jeffay's expert declaration. And
7 there's a dash G followed by 99,999. That number is the number of frames
8 between I-Frames. And he used this command to segment a video that was
9 300 frames long. When you do that, you guarantee that there's only one I-
10 Frame in that entire in that video, and that every sub-file after the first one
11 won't have an I-Frame in it.

12 When Dr. Houh, our expert, replicated Dr. Jeffay's commands, he
13 used the same program. He replicated the same commands. He got an error.
14 So you see that highlighted on the bottom half of Demonstrative 51, it says
15 key frame interval too large, reducing it from 99,999 to 600. Was there a
16 question? Apologies. So even after it was reduced automatically by the
17 program because the keyframe interval was too large, it was still the -- the
18 interval between I-Frames was still 600 frames, which still worked out for
19 Dr. Jeffay because he was segmenting a video that was only 300 frames
20 long. Now, Dr. Houh replicated Dr. Jeffay's commands using the same
21 program with a reasonable keyframe interval that did what Leaning teaches,
22 which is start every I-Frame with -- excuse me, start every sub-file with an I-
23 Frame. Then there were no problems. There was no mistracking. And with
24 that, I'll turn it over to my colleague, Ms. Rabenstein, to address secondary

1 considerations.

2 MS. RABENSTEIN: Good morning, Your Honors. I'm Reba
3 Rabenstein, and I'll be addressing secondary considerations on behalf of
4 Petitioners. Nearly all of Patent Owner's arguments on secondary
5 considerations will sound familiar, and that's because the Board has already
6 heard and rejected them in the Ogden IPRs. The Patent Owner has not cured
7 the deficiencies that the Board identified in the Ogden IPR final written
8 decisions. And so, for similar reasons, the Board should reject the Patent
9 Owner's reliance on secondary considerations here. Now, I'm happy to take
10 specific questions in the interest of time if you have them, or I can continue
11 with my argument. Whatever you prefer.

12 Moving forward, if you turn please to Slide 104, as in the Ogden
13 IPRs as a threshold point, Patent Owner relies on improper incorporation by
14 reference for the purposes of showing nexus. Patent Owner's response does
15 not explain how the MOVE Media Player or Sling TV embodies the claims.
16 Rather, Patent Owner quote, "provides Dish's and the ITC's analysis
17 showing how these products meet the claims." That's the full extent of their
18 explanation in their briefing. This violates the Patent Office regulation
19 which expressly states that arguments must not be incorporated by reference
20 into another document. And it's a prohibition that has been backed up by the
21 Federal Circuit and Paris Holdings.

22 If you turn please to Slide 105, compounding this problem of
23 incorporation by reference, the material Patent Owner seeks to incorporate
24 does not even address all of the challenged claims. With respect to the

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1 MOVE Player, Patent Owner provides exemplary charts that only cover
2 three of 55 claims that are challenged. So we have no evidence even trying
3 to be incorporated by reference of 52 claims that are at issue.

4 If you turn to Slide 56, as the Board recognized in the Ogden IPRs,
5 Patent Owner improperly incorporated by reference with respect to a second
6 product, what Patent Owner has called here Sling TV, by reliance on the ITC
7 decision. And in the Ogden IPRs, as in here, the Board explained this is the
8 epitome of improper incorporation by reference. If you turn to Slide 107,
9 this problem with incorporating by reference the ITC decision is further
10 compounded because Patent Owner claims that the ITC relied on the same
11 evidence presented below in these proceedings as it did -- that is presented
12 below with respect to nexus. But that's not true. The Board has recognized
13 in the Ogden IPRs that for nexus purposes, the ITC relied on a concession by
14 the respondents there who were relying on a 2005 public use of the MOVE
15 Media Player as an invalidating public use. There is no such concession
16 here. Petitioners do not concede that that was an invalidating use. And that
17 matters because conceding that was an invalidated use means that they were
18 conceding that each and every element of the challenge claims was met.
19 That's an evidentiary difference from what we have here. And if you look at
20 Slide 108, you can see we have the cite for where in the Ogden IPR final
21 written decisions the Board recognized that there was a concession in the
22 ITC that is not present.

23 JUDGE EASTHOM: But do you argue something's not present
24 other than the continuous limitation?

1 MS. RABENSTEIN: I think the problem, Your Honor, is because
2 the record is so different from the ITC and that Patent Owner chose not to
3 submit all of the evidence that was before the ITC in these proceedings, we
4 had no evidence in order to make that concession at all. We have not seen
5 the evidence that -- the detailed evidence about the Sling players, the
6 detailed evidence about MOVE that the ITC had access to in this instance.
7 Patent Owner has chosen not to provide that information. And so there's
8 nothing for us to concede because we don't know the details of those players.
9 Does that answer your question, sir?

10 JUDGE EASTHOM: Yeah. Thank you.

11 MS. RABENSTEIN: I think one last point that I want to make
12 knowing that we're on time and then I'll save the rest for rebuttal is, if you
13 turn Please to Slide 109, in Patent Owner's sur-reply, it claims that the
14 evidence before the ITC -- and we had identified certain example exhibits
15 that were before the ITC. The Patent Owner Claims that the same evidence
16 was provided here. And this one example I want to call out, this is
17 RX0001C from the ITC proceedings. The Patent Owner admits that that
18 wasn't provided here, but it tries to dismiss it by saying in its sur-reply that
19 this statement concerns confidential infringement, not validity. But if you
20 actually turn to the ITC decision itself, so that's Exhibit 1009, and it's page
21 219 of the exhibit, page 212 of the ITC decision. The ITC decision explains
22 that characterization is wrong. The ITC decision rather states, quote,
23 "respondents have proffered the testimony of Dr. Richardson to rebut the
24 presumption of nexus." And it cites Exhibit RX0001C, and it describes that

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1 exhibit as the Richardson Direct Witness Statement, or DWS. So looking
2 again at exhibit, excuse me, at our slides at 109, Exhibit RX001C is a direct
3 witness statement that concerns validity counter to Patent Owner's claims
4 that this address -- that this statement only addressed confidential
5 infringement, and that information was not provided here.

6 One last thing, if you look and turn to Slide 110, there are some
7 additional problems with the ITC's analysis of whether or not the Sling TV
8 app meets the various claims that are at issue. And the ITC only assessed
9 one claim. But what I want to call out here again is something that underlies
10 the fact that the record before the ITC was completely different and has
11 information that was not present here. If you look on the left on the ITC
12 decision where it is assessing whether the preamble of the claim it's
13 assessing is met, it states quote, "Use of the Dish set top boxes and the Sling
14 Fire app meets this limitation." And then it cites an Exhibit CX0010C which
15 it calls the Negus DWS or Direct Witness Statement. That witness
16 statement, there is no declaration from someone with the last name Negus in
17 this issue. So the ITC was relying on some analysis that was done by a
18 witness, and we have no evidence of that here in the IPRs. So the
19 characterization that the -- that somehow this Board should just accept and
20 defer to the ITC's decision because the same evidence is here as it was there,
21 it's just wrong.

22 Now that issue goes to nexus. As I say in my remainder of my
23 slides and in our briefing, we explain why each of the individual nexus
24 points that Petitioner makes with respect to each secondary consideration

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1 fails. That there is no nexus there. That in fact all of it either relies on, like,
2 critical unclaimed features. It relies on general adaptive bit rate streaming
3 which the Board has already found is known in the prior art and was taught
4 by Ogden and Leaning. And all of these issues preclude and have a
5 fundamental -- show that there is a fundamental flaw in Patent Owner's
6 nexus analysis. And so unless there are further questions, I'd like to save the
7 remainder of my time for rebuttal.

8 JUDGE EASTHOM: What about, real quickly, the findings in the
9 prior FWDs that the TCP connections were important as part of a nexus?
10 Because some of these claims do have that. So isn't that --

11 MS. RABENSTEIN: Yes.

12 JUDGE EASTHOM: -- sort of -- go ahead.

13 MS. RABENSTEIN: So Your Honor, if you turn please to Slide
14 125, thank you for bringing that up. This fails for a couple of reasons. The
15 first one is Patent Owner did not claim in its response that the multiple TCP
16 IT -- multiple TCP connections or HTTP requests were the basis for forming
17 nexus. This is a new argument that was raised in their sur-reply and it's
18 improper. With respect to other important features that are available here, I
19 should also say Patent Owner misstates what the Ogden IPR final written
20 decisions relied on. The Patent Owner says that the only rationale for
21 denying nexus in Ogden was these multiple TCP and HTTP requests, and
22 that's incorrect. As you can see, we've listed a number of reasons why the
23 Board denied nexus in the Ogden in final round written IPRs there.

24 But if you turn back a slide -- so please go to Slide 124, getting to

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1 your question about is -- isn't it just multiple TCP connections or HTTP?
2 That is the critical unclaimed feature. That's not the only important
3 unclaimed feature that is present in here. And that's not what MOVE itself
4 or Patent Owner itself, its predecessor and interest, said was the only critical
5 unclaimed feature. On the right here we have Exhibit 2048, which is an
6 article that Patent Owner relies on and its expert both rely on an excerpt and
7 in fact rewrite an excerpt in it their papers. In Exhibit 2048, the Patent
8 Owner's vice president of marketing was talking to the article author, and he
9 explained that the key is in the plugin -- the key to the MOVE Player in the
10 plugin. And then he said why that's key. It manages delivery, assembles
11 and renders the stream and offers DRM or Digital Rights Management, geo
12 targeting, and extremely in depth reporting. That's what's key. DRM, geo
13 targeting and extremely in depth reporting is not claimed in these patent
14 claims here. That's separate and apart from the multiple TCP connections or
15 HTTP requests. Does that fully answer your question, Your Honor?

16 JUDGE EASTHOM: Thank you. Yes.

17 MS. RABENSTEIN: And with that, are there any other questions?
18 Otherwise, I'm happy to reserve time for rebuttal.

19 JUDGE WORMMEESTER: No. Thank you. Counsel, you have
20 about 14 minutes in rebuttal.

21 MS. RABENSTEIN: Thank you very much.

22 JUDGE WORMMEESTER: Mr. Williams, will you be reserving
23 any time?

24 MR. WILLIAMS: Yeah. I'd like to reserve 15 minutes if I could,

1 Your Honor.

2 JUDGE WORMMEESTER: 15 minutes?

3 MR. WILLIAMS: Yes.

4 JUDGE WORMMEESTER: All right. We'll set the clock. Just
5 give us a second, please.

6 MR. WILLIAMS: Okay. Yeah.

7 JUDGE WORMMEESTER: Let me --

8 MR. WILLIAMS: If I share my demonstratives, would you be
9 able to see them from your -- your hearing room or --

10 JUDGE WORMMEESTER: You're welcome to share them. But
11 why don't you still refer to the numbers just in case we aren't able to follow
12 along?

13 MR. WILLIAMS: Yeah. Absolutely. I will do that.

14 JUDGE WORMMEESTER: Thank you.

15 MR. WILLIAMS: And are you seeing the demonstratives now?

16 JUDGE WORMMEESTER: We are not.

17 JUDGE DANG: I can see it.

18 MR. WILLIAMS: Okay. All right. So Judge Dang can see it, but
19 I guess the hearing room doesn't see them.

20 JUDGE WORMMEESTER: Yeah. That's what it seems like.

21 MR. WILLIAMS: Okay. That's fine. It's only going to be
22 important with one -- with respect to one demonstrative, but we'll work
23 through it when we get there, I think. Okay. Your Honor, let me just begin
24 by kind of talking about the main -- obviously one of the main issues in this

1 case has to do with changing arguments the Petitioner has been making
2 throughout the whole case, including some new arguments I heard even just
3 now about Leaning's buffer is somehow failed in parallel, which I will try to
4 address here at the hearing. But obviously it's a new argument we object to.
5 Let's just start with the main point, which is all the claims as shown on
6 Claim 6 of our demonstratives. All the claims in this -- in these proceedings
7 require -- sorry. Did --

8 [Technical Problems Off-Record Occurred]

9 MR. WILLIAMS: Okay. Sorry. So, as I said, all the claims that
10 are involved in this proceeding have the language to achieve continuous
11 playback of the video that's shown on Slide 6. The petition asserted that
12 Leaning disclosed that feature. So, for instance, Slide 23 is an example from
13 one of the petitions, but they all have substantially the same language here.
14 And as you see, as in regards to this element, what the Petitioner said is that
15 Leaning discloses it. There's no discussion there of Leaning when modified
16 discloses it or that a change is made to Leaning that would be within
17 (INDISCERNIBLE) disclosed this feature. It was relying on Leaning itself.
18 But as we noted in the patent response, Petitioner failed to explain how this
19 is so when it's very clear that Leaning does not meet this limitation.

20 Also note, if you look at Slide 24, you'll see that these again are
21 excerpts from the petition, including the box on the left, which is an
22 annotated flowchart that comes from the petition itself. So this is
23 Petitioner's own explanation of how Leaning was satisfying the claims,
24 including a claim that requires this continuous playback requirement. If you

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1 look on the top right box of Slide 24, you'll see an excerpt from page 36 of
2 the '772 petition. And again, all the petitions are substantially identical in
3 this regard. In particular, the Petitioner relied on and specifically mentioned
4 the fact that Leaning determines if the buffer is empty. So this is a portion
5 of Leaning that was relied on in the petition to support their theory of
6 invalidity. And of course, as we'll talk about in reply, they completely
7 abandoned this. They move on to a completely new theory where this is not
8 done anymore. And we'll talk about why that's both improper and doesn't
9 help them anyway. But --

10 JUDGE EASTHOM: Counsel?

11 MR. WILLIAMS: Yes?

12 JUDGE EASTHOM: Can I ask a question? I'm talking about the
13 '918 petition. It's on page 38 of that petition.

14 MR. WILLIAMS: I'm sorry --

15 JUDGE EASTHOM: (CROSSTALK).

16 MR. WILLIAMS: -- yeah. Which patent?

17 JUDGE EASTHOM: It's the '918. I'm sorry. It's a '919 IPR. So
18 it's the '772 patent.

19 MR. WILLIAMS: Okay.

20 JUDGE EASTHOM: Yeah. Yes. This Petitioner says here
21 Leaning also explains quote, "That that interruption of the video stream can
22 be avoided and therefore it's preferable to employ a criterion which
23 anticipates underflow and avoids it in the majority of cases by omitting that
24 first determination, i.e. whether the buffer is completely empty and

1 generating a measured rate."

2 MR. WILLIAMS: Yep.

3 JUDGE EASTHOM: Is that right? I mean, that would seem to
4 satisfy -- that would seem to even address right on point your argument that
5 Leaning doesn't show continuity.

6 MR. WILLIAMS: I see the language. I see the language, Your
7 Honor. Yeah. First of all, that quote is not from Leaning. So Leaning never
8 says that interruption. So I don't know what those quotation marks are
9 supposed to be reflecting. But we can look at Leaning at page 8. But you'll
10 see if you go to that actual citation as he says, such interruption.

11 JUDGE EASTHOM: I mean the --

12 MR. WILLIAMS: It'll be addressed. Yeah.

13 JUDGE EASTHOM: -- (CROSSTALK) Petitioner addressed it.
14 Yeah.

15 MR. WILLIAMS: Yeah. Well, let me address that. There's a
16 couple things I want to say about that. So first of all, this is an incoherent in
17 the petition because this is now a different embodiment of Leaning. I just
18 showed on Slide 23 -- I'm sorry, Slide 24, Petitioner expressly relies -- when
19 discussing how Leaning does its shifting of bit rates, it specifically relies on
20 determining if the buffer is empty. The section that you are talking about,
21 Your Honor, in the petition relates to Leaning's alternative embodiment
22 where it doesn't perform that step of first checking if the buffer is empty. So
23 the petition there is -- it's just incoherent and if --

24 JUDGE EASTHOM: Well, it's not that incoherent. It's pretty self-

1 explanatory. You skip the part up the top where you or wherever it's
2 -- where you don't have to clear the buffer. I thought it was pretty -- and
3 then they use the rest of that. It's sort of like --

4 MR. WILLIAMS: No. Yeah. Okay.

5 JUDGE EASTHOM: Okay. Go ahead.

6 MR. WILLIAMS: Yeah, sorry. So there is a whole lot to it. It's a
7 great question, by the way, you, Honor, because unpacking that is going to
8 take probably about three minutes of our time today. But it's very important,
9 and I certainly intend to unpack it in a lot of detail. But just to give you the
10 very high-level picture of why I think that's not what's going on there. What
11 that's talking about, if you look into the flowchart on -- so my Demonstrative
12 24. What that's talking about in Leaning is eliminating the step of -- so if
13 you see just below Step J4 there's this criteria that says if buffer fullness
14 equals zero, and there's some other criteria that are involved there. And if
15 any of them -- if either of those are true, then you go to the Stepdown
16 function. What Leaning is saying is in one embodiment where you're doing
17 something different with the sound card, you could eliminate the step of
18 testing if the buffer fullness is zero. So you don't have to check that. That's
19 what Leaning is saying. But the problem is that doesn't eliminate. Then
20 when you actually go to the Stepdown function or you go to the Stepup
21 function, either one, the very first thing you're going to do is clear buffer that
22 the -- Leaning tells you to do. So all he's talking about there is saying, okay,
23 in this one embodiment I have where I run my sound card in this special
24 way, you don't have to do this first step of checking if the buffer fullness

1 equals to zero. That doesn't resolve the other discontinuities and Leaning.
2 I'm going to, again, I'm going to spend a lot of time on that. So I'll get there,
3 Your Honor. But that's where this is going to go.

4 JUDGE EASTHOM: Okay.

5 MR. WILLIAMS: And, you know, keep following along. If you
6 don't think I'm explaining that, I'm not living up to the promise here, let me
7 know. But I think that's going to be in very, you know, very simplified
8 version of why I think it doesn't --

9 JUDGE EASTHOM: Well, just --

10 MR. WILLIAMS: (INDISCERNIBLE - TECHNICAL
11 DIFFICULTY).

12 JUDGE EASTHOM: Maybe if we go along and -- what if we
13 were to decide that they raised the issue sufficiently in the petition to
14 respond in the reply. Is there still a -- I guess your position is there's still a
15 problem because they're just combining different embodiments of Leaning
16 (INDISCERNIBLE - TECHNICAL DIFFICULTY).

17 MR. WILLIAMS: Yeah. The only thing that's even -- so if you're
18 giving credit for that sentence in the petition as -- which I think is what
19 you're saying. You're saying, okay. They do mention this other
20 embodiment in the petition, so maybe that's what they really meant to rely
21 on. Okay. Fine. It's still going to blend into the problem of discontinuities.
22 And I'm going to explain why that is. I'll get there. But it has to do with
23 -- one of the reasons is because you're still going to have to do the clear
24 buffer every time you switch rates, as I --

1 JUDGE EASTHOM: Okay.

2 MR. WILLIAMS: -- as I just indicated.

3 JUDGE EASTHOM: And just to the next part of that. So if we
4 find that there's no clear buffer always happening in Leaning, that Leaning
5 doesn't always have to clear the buffer I should say, is that fatal to your
6 position that it doesn't satisfy the -- that aspect, the continuous aspect?

7 MR. WILLIAMS: So, no. It's not fatal. There's still reasons why
8 not doing clear buffer doesn't get you to continuous. But again, that's a
9 modification that is nowhere in the petition. And it's not even in the reply.
10 So that would be an additional modification that you're suggesting to make
11 here, which is not doing the clear buffer step that Leaning expressly teaches
12 you to do. And so --

13 JUDGE EASTHOM: I don't understand -- I'm sorry. I think their
14 position is Leaning doesn't have to clear the buffer. And my question is, if
15 that's true, and we agree with that, does that mean that Leaning satisfies your
16 arguments about the continuous limitation?

17 MR. WILLIAMS: Yeah. And the answer is going to be no.

18 JUDGE EASTHOM: No.

19 MR. WILLIAMS: I'm going to get there because I have to go
20 through the actual modifications they're making to show you why that is.
21 But the answer will be no.

22 JUDGE EASTHOM: Okay. Thank you.

23 MR. WILLIAMS: Okay.

24 JUDGE WORMMEESTER: And before you continue, sorry. I

1 just wanted to point out something in Leaning that I'd like you to address in
2 your explanation because I'll probably ask about it. It is on page 15 of
3 Leaning where the modification does -- it seems that Leaning is saying that
4 the modification of -- and I believe it's talking about running the sound card
5 continuously. It does address the interruptions in the output and explicitly
6 says interruption can be avoided. So if you could tie that into your
7 explanation, I would appreciate that.

8 MR. WILLIAMS: Yeah. Yeah, I will. And so again, this is what
9 I was getting at earlier when this is, I think, the section of the -- this is the
10 thing that's quoted in the section of the petition that we were just talking
11 about, where Petitioner says it -- says that interruption is avoided. But it's
12 not what it says. It says such interruption is avoided, meaning that it's a
13 particular interruption that Leaning is talking about at that section. I think
14 you're talking, Your Honor, about line 3, the paragraph starting at line 3 of
15 Leaning on page 15. And what he's saying there is again, what I just said in
16 that flowchart that we see on the Demonstrative Slide 24, is you eliminate
17 that first step of checking if the buffer fullness is equal to zero. And if you
18 do that, you can avoid the interruption that would happen when the buffer
19 empties. But the problem is you then move immediately into the next step
20 of the flow, which is either Stepup or Stepdown, and there would definitely
21 be an interruption that happens as soon as you get there. So you might
22 eliminate one interruption if you follow Leaning's teachings there. But
23 Leaning never tells you how to avoid the other interruption that's going to
24 happen when you go into the actual rate switching. So what he's saying is,

1 when determining whether it's a rate switch, you don't have to wait until the
2 buffer is empty in this one embodiment.

3 JUDGE EASTHOM: Okay.

4 MR. WILLIAMS: But then --

5 JUDGE EASTHOM: Well, that makes sense --

6 MR. WILLIAMS: -- as soon as you --

7 JUDGE EASTHOM: -- I mean, I don't see how that makes sense
8 in light of -- they're saying you want to avoid an interruption, but we're
9 going to send you to another step, and you're going to get the same
10 interruption. That's how you're reading it.

11 MR. WILLIAMS: Yeah. I mean, I'm not reading it that way.
12 That's what Leaning is teaching. And the reason Leaning does that has to do
13 with the fact that Leaning, obviously, the great bulk of Leaning is talking
14 about audio streaming. I mean, these claims, of course, are about video
15 streaming. I admit Leaning does say you can extend this technique into
16 video streaming, and we'll talk about that in a few minutes. But with respect
17 to audio streaming, the reason Leaning is doing that is exactly what he says.
18 It's because the audio card otherwise wouldn't be able to decode the data.
19 When you're doing a rate switch, you got to have the same type of data in
20 the buffer before and after the rate switch for the audio card to work, or else
21 it's going to run to these problems. Dr. Houh explained this during his
22 deposition. He said, yeah. It would sound like someone was talking with
23 helium if you were to play back two different audio streams after a rate
24 switch without clearing the buffer. So there's a very definite need. There's a

1 technical need for doing this. And when you get to video, the problem
2 becomes even more difficult. And that's why we're going to talk about the
3 problems with moving this into video. And ultimately the way Leaning
4 addresses that with respect to video is through the bridging files, which is
5 the technique that he teaches. It does not rely on the bridging files. And the
6 reason is because the bridging files also include discontinuities.

7 But the bottom line, I mean just to back up and give you a high-
8 level picture of what I think is going on with Leaning. Leaning has come up
9 with the idea of a client-side adaptive bit rate approach to streaming. But he
10 hasn't figured out how to make it continuous, and he doesn't even try. All he
11 wants to do is make sure that you will at least be able to get some video over
12 an internet connection or some audio over an internet connection. He
13 doesn't say that he's going to be able to do this in a continuous way, in a way
14 that achieves broadcast quality. Those techniques only come from the
15 patents. And that's why the secondary Dish is going to be so important
16 because you'll see that once we're able -- once we show you how the MOVE
17 Players showed the public how to, in the industry how to achieve this
18 continuous playback, it became fantastically successful. Leaning didn't do
19 that, and he wasn't even trying. So, yeah. There are suggestions here on
20 trying to reduce some interruptions because of course everyone realizes you
21 want to get some interruptions, as many interruptions as you can out. No
22 one's denying that that's not something people would want to try to do. But
23 Leaning never got there. And even when he talks about video, his ultimate
24 solution still creates these disruptions in playback.

1 JUDGE HUDALLA: Mr. Williams, does Leaning teach
2 sometimes avoiding interruptions?

3 MR. WILLIAMS: Not in doing a rate switch, no. So if you're not
4 switching rates, yes. That's right. There would presumably not be
5 interruptions as long as you're not switching rates.

6 JUDGE HUDALLA: So your contention is that if I follow
7 Leaning's teachings and I do a rate switch, I will never have uninterrupted --

8 MR. WILLIAMS: Correct.

9 JUDGE HUDALLA: -- video?

10 MR. WILLIAMS: Correct.

11 JUDGE HUDALLA: It doesn't happen sometimes?

12 MR. WILLIAMS: It would never happen during a rate switch.

13 And that's the demonstrative that I'm not going to be able to display, I think,
14 because of the problems we're having here. It's on our slide, Demonstrative
15 Slide 14. It's also in the record at Exhibit 2133 is a video that our expert
16 -- demonstrative video our expert prepared to show what Leaning's
17 flowchart actually does and the reasons why you get these disruptions with
18 every single rate switch. They come in two types. I guess we should tee up
19 what those two types are. So one disruption occurs when you clear the
20 buffer. If there's data there, then you lose the data. So that's one obvious
21 problem. One obvious discontinuity is that there's data in the buffer, and
22 you clear it to do the rate switch, then you're not going to see that data. But
23 more problematic is the fact that once you rate switch, from that point on,
24 you've got to refill the buffer. So you decided to make a rate switch. You're

1 going to move to a new rate. Now you got to download the file, put it in
2 your buffer, wait until you get to TP, and then start playing back. And that
3 will take time. At that point, the way Leaning's logic works, every single
4 time you do a rate switch, whether up or down, you're going to run into that
5 discontinuity, that interruption in your playback.

6 JUDGE HUDALLA: I am having real trouble with that, Counsel,
7 because I basically have to completely ignore the teachings that Judge
8 Wormmeester just talked about on page 15. It talks about data rate
9 switching, and it says interruption can be avoided. And you're saying it
10 never avoids interruption in that instance. And I'm having trouble with that.

11 MR. WILLIAMS: Yeah. What Leaning says at that page is such
12 interruption. And the interruption he's talking about is the interruption
13 caused by having to change -- to reset the settings on your sound card.
14 That's the interruption that's being talked about on Slide 15, excuse me, on
15 page 15 of Leaning. Leaning never, never talks about getting rid of the clear
16 buffer command and the requirement that there would be a delay. And in
17 fact, if we want to look at --

18 JUDGE HUDALLA: So your contention then is that a person of
19 ordinary skill in the art looking at this would never know to avoid clearing
20 the buffer? I mean --

21 MR. WILLIAMS: Never.

22 JUDGE HUDALLA: -- I'm trying to -- No. I'm sorry. It's the
23 second paragraph of page 15 in conjunction with these flowcharts that you
24 keep citing.

1 MR. WILLIAMS: You're proposing a modification --

2 JUDGE HUDALLA: It has to be --

3 MR. WILLIAMS: -- I'm sorry. Go ahead, Your Honor.

4 JUDGE HUDALLA: I'm just trying to read them and try to figure
5 out how we should talk about whatever inconsistencies you're seeing
6 between these two teachings. And I keep coming back to, shouldn't I be
7 looking at this reference for all that it teaches?

8 MR. WILLIAMS: Well, you should be looking at the reference
9 for all that it teaches. I agree with that. But you also have -- you're limited
10 in doing so by what the Petitioner's argument is in the petition. And the
11 petition never proposed eliminating the step of clearing the buffer that
12 Leaning teaches you do every single time. They don't even suggest
13 eliminating that in reply. All they say in reply is that, well, clear buffer
14 could mean just playing out the buffer and not actually clearing it. They
15 concede that clearing buffer means at some point it's going to empty. So
16 what you're proposing -- the problem I'm having, Your Honor, is you're
17 proposing yet a further modification that's not in the petition or in the reply.
18 Now, if you were to ask the question, could someone have written a petition
19 arguing for why you would eliminate the steps of clearing the buffer and
20 make other modifications to Leaning to make that work for video, could that
21 be a coherent obviousness theory? Maybe, but that's not the case we have,
22 and that's not what this IPR is about. So it's hard for me to respond to that
23 because I've never -- no one's ever put that argument before as such that we
24 needed to put in our responsive evidence to it.

1 JUDGE EASTHOM: Are you saying the Petitioner never said that
2 they are going to avoid clearing the buffer in --

3 MR. WILLIAMS: Yes.

4 JUDGE EASTHOM: -- Leaning? I thought they did say that. I
5 thought it's in their reply.

6 MR. WILLIAMS: It is not. What they say in the reply is that
7 there is a step in the jump command where you may not clear -- where you
8 might not clear the buffer, but it's preferred that you clear the buffer. The
9 jump command is not to Stepdown or Stepup. Those are two things the
10 petition never addresses. There's no argument in either the petition or the
11 reply for why POSITA would have eliminated the clear buffer command in
12 the Stepup and Stepdown, especially where Leaning teaches you that it's
13 very important to do it because of the way the audio cards work. So I don't
14 think that's anywhere in the petition or reply.

15 Again, the only thing that's talked about in reply is the fact that
16 when you do a jump, which is totally unrelated to changing bit rates, by the
17 way. Jump is just you're moving to a different part of the video, which I
18 think everyone would expect there to be a gap in playback when you jump.
19 If you jump an hour forward in your movie, no one's expecting that to
20 happen immediately. And that's not obviously what the claims are about.
21 The claims are about what happens when you change a bit rate as you're
22 moving through the video. So, yeah. This is, I think, a very important point
23 that I just want to make clear what our position is. And no place in the
24 petition or the reply was there an explanation from anyone about why you

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1 would remove this clear buffer step, what would have been entailed in doing
2 it, and what would have happened if you tried? Would the video playback
3 have worked in the way that, certainly in the way Leaning is talking about
4 it? I'm going to get there in just a couple more minutes. Let me just see if
5 there's anything else I want to cover before I move on to that.

6 JUDGE EASTHOM: I mean, I'm looking at the reply on page 9,
7 and the headline says video playback did not require clearing the buffer. It's
8 (CROSSTALK) --

9 MR. WILLIAMS: This is '772. I'm sorry. Which reply?

10 JUDGE EASTHOM: This one is the '918 IPR. So it's --

11 JUDGE WORMMEESTER: That's five --

12 JUDGE EASTHOM: -- '564. Yeah. Thank you.

13 MR. WILLIAMS: Sorry. I happen to have the '156 open. What's
14 the language you're looking at? Sorry.

15 JUDGE EASTHOM: Just the heading section 3 right at the third
16 line of the page.

17 MR. WILLIAMS: Yeah. They said that it doesn't require a
18 hardware rate reset. That's the argument that they're making. I'm going to
19 get to that, why we disagree with that. This is an explanation for a change
20 you would make to Leaning to move it into a software decoder and therefore
21 avoid the clear buffer command. That would be a further modification
22 Leaning that would allow you to remove the clear buffer command. It's a
23 fair point. I guess you could read this section to say you'd eliminate the
24 clear buffer command, but it's only after you make an additional change, the

1 Leaning. Again I would say this is a whole new theory that's definitely not
2 in the petition for sure. I'll come back around. Your Honor, if I could, just
3 give me one more minute to -- and I'll come back to all these modifications
4 in the reply, and we'll talk about our response to them in addition to the
5 obvious objection we have to it being a whole new theory of the case that's
6 presented in reply. Okay. Before I do that, I guess --

7 JUDGE EASTHOM: Okay. Well, can I just -- can we just
8 continue on with this because --

9 MR. WILLIAMS: Yeah.

10 JUDGE EASTHOM: -- the last sentence said even if the video
11 cards need to be reset--they did not--POSITA would have understood
12 Leaning's techniques that clearing the buffer could be avoided by running
13 the sound card continuously at the highest sampling rate. So that's not
14 asking --

15 MR. WILLIAMS: Yeah. But --

16 JUDGE EASTHOM: -- for software.

17 MR. WILLIAMS: No, that's true. But that's not what Leaning
18 says. Remember, Leaning doesn't say you avoid clearing the buffer.
19 Leaning --

20 JUDGE EASTHOM: Well, that's not the question. I thought, you
21 know, I thought we were run -- we were --

22 MR. WILLIAMS: Yeah, yeah.

23 JUDGE EASTHOM: -- trying to figure out -- raise that. You can
24 dispute factually whether Leaning does that. That's a different question.

1 MR. WILLIAMS: Sure. Fair enough. Yeah, I think it's fair. So I
2 think your question is, can you read this portion reply as raising a theory that
3 you would perform --

4 JUDGE EASTHOM: You don't have to clear the buffer
5 (CROSSTALK).

6 MR. WILLIAMS: (CROSSTALK) without clearing the buffer.
7 Yeah. I think you're right. I think it does -- I think it is making that
8 argument. So let me --

9 JUDGE EASTHOM: Okay.

10 MR. WILLIAMS: -- clarify here. I apologize if I said something
11 inconsistent with that earlier.

12 JUDGE EASTHOM: That's all right. That's what we're here for.
13 We're trying to get this all straight. We don't know everything here. We
14 need all the help --

15 MR. WILLIAMS: Fair enough.

16 JUDGE EASTHOM: -- you can give us.

17 MR. WILLIAMS: Fair enough. So I am going to dispute
18 obviously that -- I mean, obviously, as I said, this is a theory not in the
19 petition. But I will get to why we think it fails on the merits. Just before I
20 did that, it might make sense to talk about claim construction for a second
21 because I don't want to let that go. And I saw that there were some
22 questions about it. So it would be all right if I just moved on to that for a
23 moment?

24 JUDGE EASTHOM: Sure. That'd be helpful --

1 MR. WILLIAMS: Yep.

2 JUDGE EASTHOM: -- appreciate that.

3 MR. WILLIAMS: So a couple things to say, I guess, about claim
4 construction. Obviously, the petition does not argue that this step of
5 continuous playback is not limiting. And the petition just says no
6 construction is necessary. And their expert said he applied the ordinary and
7 customary meaning of the terms. It was Petitioner itself that introduced into
8 evidence the ITC decision. So on Slide 26, we have an excerpt of that where
9 you can see the petitions cite to this ITC decision. In fact, they cite to the
10 exact pages where the ALJ said a person of skill in the art may have
11 understood what it means to achieve continuous playback per an
12 uninterrupted viewing of the content. So this was not a construction that
13 was unexpected that we were offering in our patent response. This is in fact
14 the construction that everyone had been applying in the ITC, which
15 Petitioners knew about. Petitioners also introduced it to evidence to file
16 history and discuss it in pages 8 and 9 of the petition. They talk about the
17 amendments made in the '772 patent in particular, and this claim limitation
18 of achieving continuous playback to overcome Radford.

19 And then when you look at the actual file history, which we have
20 on Slide 28 of our demonstratives, you can see here that the applicant
21 specifically told the examiner that they were adding this feature to achieve
22 continuous playback of the video to overcome that reference, which it said
23 was, quote, "marred by interruptions." So there's no doubt that it was added
24 -- that the point of adding continuous playback was not just to merely

1 describe some nice intended feature. It was a requirement of the claim. It
2 was added to distinguish over a reference because that reference was marred
3 by interruptions. So this was --

4 JUDGE EASTHOM: Counselor, it does say --

5 MR. WILLIAMS: -- (CROSSTALK) change.

6 JUDGE EASTHOM: -- say streamed by data deteriorates
7 -- deterioration or is marred by interruptions. Then when I read Radford,
8 those paragraphs, the interruptions they're talking about interruptions in the
9 data stream X. Those are interruptions that you can't control with your video
10 player. You know what I mean? The interruptions that Radford was talking
11 about are interruptions when there's too much data in the bandwidth and
12 stuff like that.

13 MR. WILLIAMS: Yeah. So we --

14 JUDGE EASTHOM: Well, that's another question. Is that what
15 you're talking about? I don't understand how your player would -- the
16 MOVE Player would even try -- how could it control for interruptions that
17 are exterior to the MOVE Player? I don't understand that.

18 MR. WILLIAMS: Well, it controls for interruptions in network
19 bandwidth availability by changing the bit rate of the video that the client is
20 requesting and by constantly looking forward to see that it's going to have
21 enough data to continue playing. And if not, it's going to start --

22 JUDGE EASTHOM: It --

23 MR. WILLIAMS: -- seeking.

24 JUDGE EASTHOM: It could downshift. I understand that part.

1 But let's say it's just one of the -- there's all kinds of reasons for
2 interruptions, but the -- just the data just is something that a downshift isn't
3 going to accommodate.

4 MR. WILLIAMS: Well, the power goes out. Or you lose your
5 internet connection. Is that the kind of thing you're asking about? Yeah.

6 JUDGE EASTHOM: Thank you. Not just that, but, maybe, I
7 don't know, packets get out of order, all kinds of things. But you're --

8 MR. WILLIAMS: Well --

9 JUDGE EASTHOM: -- right. Yeah.

10 MR. WILLIAMS: Well, packets --

11 JUDGE EASTHOM: (CROSSTALK).

12 MR. WILLIAMS: -- getting out of order -- sorry. Go ahead.

13 JUDGE EASTHOM: Yeah. Or a lot of noise on the channel or
14 -- yes. Just maybe one of the routers goes out. That's right. Something like
15 that.

16 MR. WILLIAMS: Yeah.

17 JUDGE EASTHOM: Or temporarily goes out.

18 MR. WILLIAMS: Yeah. So there's a lot of things. I mean, there's
19 a lot of different options, some of which we can correct for and discuss in
20 the patent how we do that, and some of which we can't, obviously. So if the
21 internet goes out, you lose your power. Well, there's nothing we can do.
22 That obviously could always happen, but it is extremely rare. And when you
23 get into conjecture, initially you'll see that the MOVE Player, obviously,
24 when you did have power and you had normal internet connectivity, it

1 adjusted just fine and showed fluid playback. If you're asking in particular
2 what are the techniques described in the patent to sort of address some of the
3 problems like receiving packets out of order, well, we have a whole staging
4 module discussion that talks about that. The staging module happens
5 outside of the buffer. It's the thing that's going to receive these files and get
6 them ready and put them back in the right order. And there's a lot of logic
7 that goes into --

8 JUDGE EASTHOM: I'm sorry, I shouldn't have raised that issue.
9 I think you're right. Your patent does fix that problem.

10 MR. WILLIAMS: Okay. And then there's other things it does,
11 like anticipating. So it has a minimum, what we call the minimum safety
12 margin or the read-ahead margin, that's going to look to make sure that
13 you've got -- you're going to have enough packets in the buffer to play back
14 based on looks like your current network conditions. So it will inevitably
15 start pulling in the right ones to make sure that if there's an internet
16 disruption such that -- whereas before you were getting 200,000 and now
17 you're only getting 100,000, it'll see that and will adjust for it. So that's how
18 it adjusts. That's how it deals with those kinds of interruptions and ensures
19 the continuous playback the extent it's possible to have continuous playback.

20 JUDGE EASTHOM: How do you respond to your friend's
21 position about the other prosecution history that we were talking about
22 where the -- you essentially define what continuous means by saying it
23 means lining up these different -- lining up the streams so that the outputs
24 match the previous one.

1 MR. WILLIAMS: Yeah. Well, I think the -- I don't read that part
2 of the file history as defining what continuous means. It obviously is
3 responding to a different type of argument that was being made by the
4 examiner. Just to get to the bigger -- what I think the bigger question is,
5 could we -- would it be possible construe continuous to mean sequentially
6 arranging? And I think the answer to that is no. If the inventor meant that
7 continuous playback just means putting them in order, he already had a
8 phrase for that. And that's sequentially arranging. And it's in, for instance,
9 '772 Claim 8. That's what the dependent claim says.

10 JUDGE EASTHOM: No, it's not continually arranging. It's lining
11 them up so that one video stream exactly coincides in time with the other
12 one so that there's no -- you're not waiting for the next, getting a blip
13 between the two.

14 MR. WILLIAMS: Yeah. That just has to do with the streamlets.
15 There's other prospects of the claim that define the streamlet format, and that
16 is very clearly what the streamlet is. It's gotta be data files arranged in that
17 way where the portions --

18 JUDGE EASTHOM: And that's the whole purpose of your -- I
19 mean that's what adaptive bit rate is. You're able to line those up when you
20 have different bit rates.

21 MR. WILLIAMS: I would say that is the purpose of the streamlet.
22 Yeah, of the streamlet format that these claims are talking about. Yes. But
23 you could definitely have a streamlet and play it back in a way that's not
24 continuous. And that's Leaning. That's the example I gave you with

1 Leaning.

2 JUDGE EASTHOM: That's when you have to clear -- that's if

3 Leaning clears the buffer?

4 MR. WILLIAMS: Yeah. We'll talk about the ways that it does

5 that, but yes. That's right. So there are two different things I would say.

6 Putting them in order and arranging them sequentially and ensuring that

7 you've got the whole content of the video in the streamlet and that you're not

8 missing pieces. That's the streamlet itself. Continuous playback is an

9 additional feature of these claims that requires something more. It requires

10 that as you're playing them back, it's continuous playback. There is not

11 interruptions in your playback.

12 JUDGE HUDALLA: How continuous does continuous have to

13 be? I mean, we put two sub-files together and they play uninterrupted, is

14 that continuous?

15 MR. WILLIAMS: I would say that definitely would qualify.

16 Yeah.

17 JUDGE HUDALLA: So that seems like a very minimal

18 requirement though, doesn't it?

19 MR. WILLIAMS: Well, if there's a 4 minute gap between them,

20 that would not be continuous I would say.

21 JUDGE HUDALLA: So would you agree if Petitioner can prove

22 that two sub-files get played uninterrupted, that's enough to meet your

23 limitation?

24 MR. WILLIAMS: If when switching between two different bit

1 rates, because the claims -- again, the continuous playback here is tied to a
2 bit rate switch. So if there were two -- I would need to -- to be honest here, I
3 need to brief that. That hasn't really been addressed here because the claims
4 talk about the -- this in terms of the video. And so I would need to think
5 about how many of the streamlets would be necessary in order to practice
6 this claim element. But I would say at the very least, you would need two
7 during a rate switch. So switching from one to the other, that played back
8 continuously. So at the very least, you would need that. And that's what
9 Leaning is missing.

10 JUDGE HUDALLA: Okay. Thank you.

11 MR. WILLIAMS: Okay. Get this back to where I was on the
12 playback. I think in terms of the claim construction issue, I don't know that I
13 had any other comments unless the Board had questions. Okay. So let me
14 move back into Leaning and we get to this discussion we were having a
15 minute ago. Okay. As I understand it, the Board, I think, has understood
16 what I was saying about the Leaning flowchart that's shown, for instance, on
17 Slide 32 of our demonstratives, where we got the bulk of that Leaning
18 flowchart sort of reproduced there and all of its flows. As I've explained,
19 during the Stepup or the Stepdown, the first thing you're going to do is clear
20 a buffer. And that is going to require -- the implication of that is then now
21 you're going to have to refill that buffer with something and start playing it
22 back. And, again, in Leaning, playback doesn't happen until you've got at
23 least TP worth of data, which you can think about is the number of seconds
24 of data of playback. So you need to have at least 10 seconds of video in that

1 buffer before you're going to start playing back. And if you clear the buffer,
2 you're going to have zero. So at the very least, every time you do a rate
3 shift, you're going to have to address this problem of the buffer being empty.
4 I don't think there's -- there's no dispute that when the buffer is empty, you're
5 going to have a discontinuity in playback. Obviously Dr. Jeffay explains
6 why that's true. And then even Aylo, or at least its affiliate, in describing
7 Leaning to the European Patent Office and the opposition shown on Slide 34
8 has essentially admitted as much that clearing that buffer would mean that
9 there's going to be this jump in the file, they call it, by some number of
10 seconds.

11 JUDGE EASTHOM: Your friend said you took that out of
12 context. You didn't reproduce the whole colloquy there. And I thought they
13 said that in the next sentence or two the expert said this doesn't make sense
14 or --

15 MR. WILLIAMS: Yeah. No, no.

16 JUDGE EASTHOM: -- something like that.

17 MR. WILLIAMS: Well, I mean, I'm not taking it out of context.
18 They're saying the same thing we are, which is if you do -- if you do
19 Leaning like Leaning says to do it, you don't get continuity. And so in the
20 EP they go on to explain why you would modify Leaning. So I mean, I'm
21 not -- I'm certainly not trying to suggest that that's not what they said. I'm
22 just saying they admit there that if you do Leaning like Leaning says to do it,
23 you run into this discontinuity. And so in EP they go on to make
24 modifications and explain why those are. But that's not, again, that's not the

1 position we have. They shift and reply to try to start making those
2 modifications to Leaning and explain why someone would have made those
3 modifications to Leaning. So I'm not saying they're --

4 JUDGE EASTHOM: No. I --

5 MR. WILLIAMS: -- being consistent.

6 JUDGE EASTHOM: I understand what you're saying. Thank you
7 for that clarification.

8 MR. WILLIAMS: Yep. Okay. So the whole point -- the point of
9 that discussion was to show that if you rely on what they've said in the
10 petition, which is you rely on Leaning with the embodiment that Leaning
11 has, the one that they actually point to in the petition, you don't get -- you
12 don't get continuous playback. So now you have to start making
13 modifications. And that's what they do in reply. And we have a lot of
14 problems with that. I'm not going to say much about the motion to strike,
15 but I think the case law on -- that we provide to the Board is very clear that
16 what's going on here is not merely responding to Patent Owner's arguments.
17 But what they're really doing is shifting embodiments now and making a
18 whole new theory. I mean this is just a completely new, meaningfully
19 distinct contention they're making between Leaning discloses continuous
20 playback -- that's what they said -- to now we're going to make some
21 modifications to Leaning to get to continuous playback. That is a very
22 different theory of the case. If that was the petition we had, we would have
23 a much different case. That's just, as we point out, severely unfair to Patent
24 Owner to have to respond to whole new theories in reply. But let me get to -

1 but having said that, let me now talk about why even those new theories
2 don't work. And we think that the modified version of Leaning doesn't get
3 you there.

4 Okay. So Slide 36, we sort of go through what we think these
5 -- kind of characterize these new theories. And --

6 JUDGE EASTHOM: Can you also address your friend's argument
7 that in the ITC also -- your friend had a slide up there that the ITC said that
8 this was intended use or -- I'm not sure what the exact language is, but it's
9 aspirational. They said something about you were trying to achieve
10 (CROSSTALK) --

11 MR. WILLIAMS: Yeah. I mean, I think that's what that sentence
12 says. But if you look at what the ITC actually did, it interpreted the claim to
13 mean uninterrupted playback. And that was a requirement that the Board
14 -- that the ITC relied on. So in no way did the ITC say this is not a
15 limitation or that this is merely an intended use. And you can read --

16 JUDGE EASTHOM: Okay.

17 MR. WILLIAMS: -- you can read the whole ITC decision, but,
18 you'll -- in nowhere was that found to be not limitation to the claims that
19 required continuous playback.

20 JUDGE EASTHOM: Okay.

21 MR. WILLIAMS: Okay. So the first modification. We started
22 talking about this already. We started to talk about this. This is now shown
23 on Slide 37. Petitioner argues that POSITA would remove Leaning's clear
24 buffer instruction. This is relying on an alternative embodiment of Leaning

1 where the sound card is run at the highest sampling rate. As I indicated,
2 what Leaning says is this -- first of all, this only applies to downshifts. And
3 the only thing it does is removes this first limitation of checking if the buffer
4 is already empty. So you don't have to first check if the bumper is empty
5 before you decide to do your Stepdown is the only thing Leaning is actually
6 expressly teaching. And when you look at actually what Leaning -- how
7 Leaning talks about this on Slide 38, you'll see that's what he says at the very
8 bottom of the section on Slide 38. "In this case the first of the three AND
9 condition mentioned above would be omitted." Okay. Fine. Yeah, he does
10 say that. Even if you give the petition credit for having relied on this portion
11 of Leaning, which is a mutually exclusive embodiment to the one where you
12 do check if the buffer is empty, which they expressly do rely on for other
13 claim elements, you still run to the problem that's only the step of checking
14 if the buffer is full. He never says you don't do the clear buffer command.
15 There's no other teaching of Leaning that would suggest that you remove the
16 clear buffer command. So if you want to suggest that you're going to
17 remove the clear buffer command from Leaning, you're going to have to
18 have a reason to do it and show a reasonable expectation of success. You
19 need to do a whole new obviousness theory which we talked -- we just
20 talked about where they apparently start to try to do that. For instance, and
21 that's heading 3 about video playback did not require clearing the buffer.
22 But that's not enough. You'd have to go further and explain why you
23 actually wouldn't do it, how that would work for video, and whether
24 POSITA would have expected success, which -- none of which they do.

1 And there's going to be several problems with it that we're going to talk
2 about in a second.

3 The next modification that they make in connection with that is
4 shown on Slide 40 where they say, well, we'll up-sample the video. So this
5 is trying to parallel -- give kind of parallel reasoning to what Leaning talks
6 about in his alternative embodiment for audio where you would run the
7 audio card at the highest sampling rate in his alternative embodiment. Dr.
8 Jeffay explains this -- there is no kind of analog to the video sampling rate
9 that there is in the audio sampling rate. So it just doesn't make sense this
10 idea that you could extend this audio sampling to video. And that is nothing
11 -- there's nothing to think Leaning -- Leaning never says this either, by the
12 way. This is just Petitioner's theory in reply that seems to be supported only
13 by Dr. Houh's say so. Dr. Jeffay and Slide 41 shows that, and this is
14 corroborated by his citation to other contemporaneous video streaming
15 patents, that when you change video bit rates, you would still need to clear
16 the buffer. The buffer and the sound in the video card would still need to be
17 cleared in order to deal with a new video encoding scheme.

18 If you go to Slide 42, you'll see Petitioners attempt to suggest that
19 the video could be decoded via software. I mean, that's another new
20 modification. It is nowhere in Leaning, as you see on the top of Leaning.
21 Leaning makes clear that he's, when he's talking about video, he's using a
22 video card, not software. It would be used in addition to or in place of the
23 audio card. But there's no suggestion that you don't need a video card if
24 you're doing video in Leaning. So further modification that finds no support

1 in Leaning or even in the reply evidence we have.

2 The next modification that we see in the reply is this shortening the
3 TP threshold. This is shown on Slide 43. And there all they say is that you
4 could change the TP threshold to 3 seconds instead of 10 seconds, and the
5 delay would be shortened. Okay. I mean, even if that's true, it still wouldn't
6 eliminate the problem. You still have to download that new data and fill the
7 buffer to at least TP before you start playing it back. So there's going to be
8 interruption. There's no notion in Leaning of sort of looking forward and
9 getting these things ready and staged somewhere else so that you'd have
10 them in case of a change in rate. This is the discussion you got into, I think,
11 with my friend about how can Leaning clear the buffer and fill the buffer at
12 the same time? You can't. You need some other thing like our staging
13 module in the challenge patents, for instance, in order to do this. But
14 Leaning has no such thing or discussion of it.

15 So then we get into the argument that what Leaning actually means
16 by clear the buffer is just play it back. I mean, that is just the wrong way to
17 read Leaning. Leaning has a command for playing out the buffer, as you see
18 on Slide 44. That's the playing out of the buffer command, which I think is
19 -- I can't read it. I think it's J3, but there's definitely a command shown in
20 green there for what it is to playout the buffer that is very distinct from
21 clearing the buffer. Moreover, and this is where kind of the -- I think the
22 discussion of the jump command has some relevance because again, as we
23 talked about, there's a clear buffer command shown for both jumping the
24 Stepup and the Stepdown. And in the case of the jumping command, he is

1 explicit about, well, when we say clear buffer there, what we mean is getting
2 rid of the data in the buffer so that you can immediately start requesting the
3 new data. So it's very clear that clear buffer means to delete it, not to just
4 continue to let it play out. Because what he says in connection with jump
5 command makes super clear that if you don't do the clear buffer command,
6 then there's still data there. And if you do the clear buffer command, you
7 immediately delete it, and it can move on to getting the new data. And then
8 again, we also talk about how before Dr. Houh's reply declaration, when we
9 cross examined him about this clear buffer, the testimony he gave, it's shown
10 -- some of it's shown on Slide 45. It's pretty clear he understood clear buffer
11 meant to delete it, not let it play back because otherwise he explains that if
12 you let it play back, you would get this situation where it sounds like
13 someone's breathing helium.

14 Unless there's any further questions about that, let me move on to
15 the next theory, which is this mistracking. It has to do with mistracking.
16 This was a little bit more complicated. So let me just talk about it for a
17 minute. On Slide 46 --

18 JUDGE WORMMEESTER: Counselor, I just want to let you
19 know. Sorry. You have 15 more minutes before you head into your --

20 MR. WILLIAMS: Rebuttal?

21 JUDGE WORMMEESTER: Sure.

22 MR. WILLIAMS: Okay. Thank you, Your Honor. I may eat into
23 that a little bit, but I'll do what I can here. So on Slide 46, you'll see a
24 discussion of what Leaning talks about when you make a change to go over

1 to video. He says, look, this is going to be more complicated now when you
2 move to video. You've got to deal with these other problems that are going
3 to come up with video, including the fact that there's the probability of
4 mistracking, which happens because of compression. And there's a couple
5 different compression frames he talks about in Leaning. The main one that
6 he focused on is H261.

7 I think it's the (INDISCERNIBLE - TECHNICAL DIFFICULTY)
8 by H261. There's no audio at H261. This is video only standard, as Dr.
9 Jeffay explains in his declaration. So you would need to separately send the
10 audio and synchronize it, which you can do. I'm not going to say you can't
11 do that. But the point is Leaning admits in H261, you don't have these intra-
12 frames or they're not very frequent. And by the way, that is exactly why Dr.
13 Jeffay, when he ran his simulation of Leaning, set the inter-frame gap rate to
14 be very large. Because Leaning explicitly tells you that you're not going to
15 have frequent inter-frames. So he's trying to show what that would look
16 like. If you don't have frequent inter-frames, what would happen? That's
17 the point of his demonstrative, to show -- just to you what mistracking
18 actually looks like.

19 So let me now move on to Slide 48. So the problem that comes up
20 with this modification and the -- kind of what Leaning talks about here is
21 that Leaning says, well, you can solve some of these problems with
22 compression by just starting with an I-Frame. But that's not true. And the
23 problem here is that Leaning never actually took the steps of figuring out
24 how you would implement it. And it's very clear when you're reading from

1 Leaning, he never actually figured out how do you implement doing a
2 regular MPEG encoding scheme that would avoid mistracking. Instead,
3 what he does is he said, well, you can use my other bridging solution to
4 solve these problems. And again, that's not relied on here. But what would
5 happen in practice if you were to try to do this with an encoded MPEG
6 stream is what we're getting at here on page 48. And the problem is you're
7 going to run into this issue of B frames. So in an MPEG file, for instance,
8 on Slide 49, you'll see this on the top right, we've got what's going on here.
9 So the I-Frames are the ones that are just -- you encode them solely in terms
10 of themselves. So if you just got the I-Frame, you could decode it and
11 display that single frame of video. P frames are sort of progressive. They're
12 predictive frames. They're using past data. They're saying, okay, what
13 changed from the last frame? I'll just encode that. B frames are the most
14 complicated. They're the ones that use both directions. So they say, okay,
15 what happened? What was the last frame, and what is the next frame? And
16 I can figure out now what's happening in this frame. So it's using both data
17 in the past and data in the future. And this is exactly the problem because, if
18 you look at that example on page on Slide 49, frame B6 is encoded both in
19 terms of a future I-Frame and a past P frame. So if you try to implement this
20 modification that the Petitioner is proposing here, you would run into the
21 problem of these B frames being encoded against two different bit rates, and
22 they would not be able to be decoded correctly. And so on the bottom left,
23 you see the mistracking that occurs, for instance, with B6 when you try to
24 decode it because it's been encoded now against a P frame at the old data

1 rate and an I-Frame at the new data rate. And it doesn't know what to do
2 with that. Leaning never solves this problem. Dr. Houh doesn't explain how
3 you solve this problem. It would lead to this discontinuity. It would
4 certainly not be continuous plug playback. And so this is the last problem
5 we have with the modifications to Leaning.

6 JUDGE EASTHOM: So --

7 JUDGE WORMMEESTER: I'm sorry. Can I --

8 JUDGE EASTHOM: No. Go ahead.

9 JUDGE WORMMEESTER: What if you're not using the
10 predictive technique and you're just coding each one independently?
11 Because I think that's contemplated in Leaning. I --

12 MR. WILLIAMS: So --

13 JUDGE WORMMEESTER: -- don't (INDISCERNIBLE -
14 TECHNICAL DIFFICULTY) the most efficient thing to do. But if you're
15 coding each frame independently, you don't have this mistracking problem,
16 right?

17 MR. WILLIAMS: Yeah. So if you didn't compress the video,
18 basically, if the only compression was happening was within a frame. I
19 think that's right. As we point out, no one would actually do this. The data
20 rates that you would need to do that were not supported at the time. It
21 wouldn't have worked at the time of Leaning. I don't know if it would work
22 now to actually try to do that. Dr. Jeffay explains in his declaration why this
23 would just be impossible to do practically. So would a POSITA have
24 expected success with this? No. I would say the answer -- that would be the

1 main problem with that approach. And certainly Leaning doesn't show an
2 implementation of doing that and nor could he with the bit rates he had
3 available. That's why he was forced to try to use H261 and then come up
4 with a solution to avoiding this mistracking problem, which was his bridging
5 files. So he didn't have that solution, and he didn't think that anyone would
6 do it either. But, yeah. I mean, I think technically you're right. If you
7 decided not to compress, then this mistracking problem is not your issue.
8 The issue is you're not going to be able to get the data to your customer.

9 JUDGE WORMMEESTER: I mean, what does Leaning mean on
10 page 16? "In this case of recordings where each frame of a picture is coded
11 independently it is sufficient."

12 MR. WILLIAMS: Yeah.

13 JUDGE WORMMEESTER: Yeah. That.

14 MR. WILLIAMS: Yeah, yeah.

15 JUDGE WORMMEESTER: I guess --

16 MR. WILLIAMS: No. I --

17 JUDGE WORMMEESTER: -- he seems he's --

18 MR. WILLIAMS: I agree --

19 JUDGE WORMMEESTER: (CROSSTALK).

20 MR. WILLIAMS: -- he's talking about that. Yeah.

21 JUDGE WORMMEESTER: Okay.

22 MR. WILLIAMS: Yeah. I think that is the -- I think that is the
23 example you're talking -- sorry, Your Honor. Yeah. I thought that was the
24 example you were asking about. So, yes. He says that if you have --

1 JUDGE WORMMEESTER: Okay.

2 MR. WILLIAMS: -- a compression scheme where each picture is
3 coded independently, then you don't have the mistracking problem. But
4 again, that's --

5 JUDGE WORMMEESTER: Okay.

6 MR. WILLIAMS: -- not the solution he comes up with.

7 JUDGE WORMMEESTER: Thank you. Did you have a
8 question?

9 MR. WILLIAMS: Okay. Let me -- I'm sorry --

10 JUDGE EASTHOM: So is your --

11 MR. WILLIAMS: -- so there's another question?

12 JUDGE EASTHOM: -- position is that when Leaning says that it's
13 not possible to do that, is that --

14 MR. WILLIAMS: I would say it would not have been -- I mean,
15 Dr. Jeffay explains. It's not just me saying that. Dr. Jeffay explains that
16 wouldn't have been possible with the data rates that were available at the
17 time, given how large those files would be if you didn't compress them using
18 something like H261 or MPEG's approach.

19 JUDGE EASTHOM: Well, this sort of gets back to my colleague's
20 question. How many of these -- would it be prohibitive in terms of data rate
21 if you only, say, ran 3 minutes of video?

22 MR. WILLIAMS: I mean, the answer is probably yes. If you had
23 a video that was only 3 minutes and you didn't have any compression -- if
24 you didn't have an inter-frame compression in it, would that have been a

1 practical solution that would have been accepted in the marketplace? I think
2 the answer is no because the only way to do that then would just be to do
3 progressive downloads. You'd have to download 95 percent of the file
4 before you could start playing. And I think everyone would have realized
5 that is not a -- I mean, that was a prior art problem that this patent tries to
6 solve is the problem of progressive download. So I think the summary of
7 -- what do I say about the modifications is that they all have -- these are all
8 new modifications in the reply, and nowhere does Petitioner show that those
9 modifications that they want to make to the embodiments they originally
10 relied on --

11 JUDGE EASTHOM: But why isn't that --

12 MR. WILLIAMS: -- succeeded.

13 JUDGE EASTHOM: -- in the scope of your claim? I'm having a
14 hard time figuring out why your claim doesn't cover that, assuming that the
15 --

16 MR. WILLIAMS: Yeah.

17 JUDGE EASTHOM: -- continuity aspect --

18 MR. WILLIAMS: Yeah. I'm not trying to say -- I don't think
19 we've said that the claim wouldn't (INDISCERNIBLE). What I'm saying is
20 a person of skill in the art wouldn't have expected success in making that
21 modification, and so it wouldn't have been pursued. And Petitioner --

22 JUDGE EASTHOM: Yeah. But --

23 MR. WILLIAMS: -- doesn't say that they would have.

24 JUDGE EASTHOM: Well, Leaning's presumed enabled, right?

1 It's a prior art reference. It's a document. It doesn't even have to be prior art
2 from what I understand the Federal Circuit tells us.

3 MR. WILLIAMS: I'm not sure what that last part meant, but I
4 mean, Leaning is presumed to be enabled as prior art. Is that what you're
5 -- is that the question you're putting to me?

6 JUDGE EASTHOM: Well, no. Prior art patents and publications
7 are presumed enabled according to the Federal Circuit.

8 MR. WILLIAMS: Yeah. I've seen that case as well. Not sure
9 exactly what it means in this context, but again, this is a --

10 JUDGE EASTHOM: Well, what I'm saying is if you're saying this
11 -- I guess the question is if you agree that your claim covers a situation
12 where you might have 3 minutes of video and you have these frames that
13 aren't all decoded dependently or they're not compressed. You say that's not
14 a marketplace solution, but we're trying to figure out if your claim covers
15 that and if -- whether it's enabled in Leaning.

16 MR. WILLIAMS: Yeah. Well, I mean, all Leaning says is that if
17 you had a encoding mechanism where you didn't have this problem of inter-
18 frame compression, you could use that. So that's what he says. Does he
19 enable that? Does he explain what that encoding system is, how big these
20 files are, and could it work? I mean, he never says that. But this is a
21 modification from the actual embodiment that they rely on in the petition.
22 And so our point is, it's Petitioner's burden to show that this modification
23 would have -- that a POSITA would have expected success with this
24 modification. And as we show in the (INDISCERNIBLE - TECHNICAL

1 DIFFICULTY), they wouldn't have.

2 JUDGE EASTHOM: I don't think it's a modification. It's a
3 disclosure straight out of Leaning. It's not a modification. I mean, you keep
4 calling it a modification, but it's a disclosure in Leaning. I don't understand
5 why you keep calling that a modification.

6 MR. WILLIAMS: At most, it's an embodiment of Leaning. It's a
7 sentence that says, in the case of recordings. That is an embodiment of
8 Leaning. I would agree with you. But it's not the one that's in the petition.
9 And so now the question is, if you're going to modify with the embodiment
10 that's in the petition to incorporate this additional embodiment of Leaning,
11 would you have expected success? And our answer is no, for the reason that
12 we point out in our papers and as Slide 47 summarizes some of that
13 evidence.

14 JUDGE WORMMEESTER: I don't know if -- I'm going to go to
15 the petition in the '156 patent. So that's --

16 MR. WILLIAMS: Okay.

17 JUDGE WORMMEESTER: -- the '917 case. The petition --

18 MR. WILLIAMS: (CROSSTALK) -- sorry, Your Honor.

19 JUDGE WORMMEESTER: I'm sorry. I'm on page 39 of that
20 petition. So when I look at this citation here of this figure in the petition, I
21 think the Petitioner, to me, is emphasizing the fact that there's this rate shift.
22 You're going to Stepup. And I think then Patent Owner comes and says,
23 well -- and fixates on this clear buffer. There's a clear buffer. But I think
24 Petitioner just wanted to illustrate there's a rate shift here. And then Patent

1 Owner has found this clear buffer.

2 And so in the reply, it seems that Petitioner is just saying, well,
3 okay, so maybe there it says clear buffer. But there are disclosures in
4 Leaning that say the clear buffer isn't necessary. I don't know that Petitioner
5 is modifying this embodiment. I think Petitioner is just replying or
6 responding to Patent Owner pointing out this clear buffer. Because if you
7 look at what Petitioner is pointing to, it's just saying it's going from this step
8 to a rate shift, Stepup, and then it loops around. I don't think it's limited
9 necessarily to this little flowchart here.

10 MR. WILLIAMS: Okay. Well, first, I'd like to --

11 JUDGE WORMMEESTER: That's what I have.

12 MR. WILLIAMS: Yeah, yeah. Let me just --

13 JUDGE WORMMEESTER: (CROSSTALK) --

14 MR. WILLIAMS: Sorry. Go ahead.

15 JUDGE WORMMEESTER: -- pointed out earlier elsewhere in the
16 petition, Petitioner points to other embodiments. And that's why it may -- if
17 you're limiting Petitioner to this embodiment, it may seem incoherent to
18 Patent Owner. But that's why it seems that Petitioner has pointed to other
19 embodiments.

20 MR. WILLIAMS: Okay. Thank you for the question. First, let
21 me just pause there because you're going back to the clear buffer, which
22 -- totally fair. I'll address it. But before I do, what I want to say in response
23 to my last series of answers just make clear is this alternative embodiment of
24 using a not -- sort of a non-compressed video stream would solve the

1 mistracking problem. It wouldn't solve the problem that you still have to
2 create the buffer and there'd still be discontinuity. So I just want to be clear
3 about that. I don't know if I was totally clear on my answer before. But, I
4 mean --

5 JUDGE WORMMEESTER: So, I mean, I --

6 MR. WILLIAMS: -- probably a bit. Still want to be clear.

7 JUDGE WORMMEESTER: (INDISCERNIBLE - TECHNICAL
8 DIFFICULTY) but I think just throughout your argument you keep talking
9 about modifying.

10 MR. WILLIAMS: Yep. I mean --

11 JUDGE WORMMEESTER: It's the document.

12 MR. WILLIAMS: -- it's not just me. I mean, Patent Owner's
13 expert admitted that there were different embodiments he was combining.

14 JUDGE WORMMEESTER: I don't know if it's a modification
15 because like my colleague said, it's a disclosure. It's there. Petitioner hasn't
16 said let's modify this. Leaning has said on their (INDISCERNIBLE -
17 TECHNICAL DIFFICULTY).

18 MR. WILLIAMS: Okay. So I mean, the disclosure that is there in
19 Leaning and in the petition is performing clearing the buffer. So let's just be
20 clear. Nowhere in the petition does it say you don't do the clear buffer. I
21 can see that in reply they finally get to the argument that, yeah, you would
22 not do the clear buffer step. But that's not on the petition. What is in the
23 petition, it --

24 JUDGE EASTHOM: Now, we think we pointed out where -- I'm

1 sorry. We pointed out where it was in the petition. Remember --

2 MR. WILLIAMS: I think --

3 JUDGE EASTHOM: -- the citation on page 15?

4 MR. WILLIAMS: Yeah. Which that had to do with not checking
5 if the buffer full is zero before doing the Stepdown. As we point out that
6 that has nothing to do with this Stepup feature. But also in both the Stepup
7 and the Stepdown function, you still have the clear buffer command you got
8 to deal with. So, yeah. The petition talks about this other embodiment of
9 Leaning, which is there. And it says don't do buffer fullness equals zero
10 check. But Leaning never says don't do the clear buffer step. There's
11 nowhere in Leaning -- there is not a single word of Leaning that says don't
12 do the clear buffer step. So that is definitely a modification that has to be
13 made if you want to get there.

14 JUDGE EASTHOM: I don't understand because I'm reading it
15 again on page 15, lines 3 to 8, and it says --

16 MR. WILLIAMS: Is this Leaning?

17 JUDGE EASTHOM: Yes --

18 MR. WILLIAMS: Okay.

19 JUDGE EASTHOM: -- you anticipate underflow and avoid it in
20 the majority of the cases. And isn't that avoiding clearing the buffer?

21 MR. WILLIAMS: I mean, that's avoiding underflow by not doing
22 the check if buffer is zero. Yeah. But then he says -- okay. So we've
23 avoided the underflow condition. But to switch rates, we have to clear the
24 buffer. He's never solving this problem of switching rates. What do you do

1 when you switch rates? When you switch rates, you're going to have to
2 refill the buffer. He does not solve this problem. And this is the
3 fundamental point. He never gets there. He says, we can make it better by
4 not doing this one step. In one embodiment, we can avoid that one step,
5 which would make things better. But it doesn't avoid the problem of having
6 to clear the buffer and then refill it. You can anticipate that it's coming.
7 You can see that -- okay. We're probably going to run out of buffer space.
8 So let's think about changing rates now. And he gives you -- I admit that he
9 teaches that. And I admit the petition cites that even though they also cite to
10 the alternative embodiment in the petition. So then we can ask if they didn't
11 intend to rely on that embodiment at all, why is it cited in the petition? It's
12 not like me -- I'm not myopically focusing on the fact that they cite on it. I
13 mean, they could have not cited it. That's fine. But it is there, and that's a
14 mutually exclusive embodiment. So they're both being mapped in the
15 petition. And then in the reply, they're now picking one of them and saying,
16 in addition to that modification -- in addition to using that embodiment, I'm
17 also going to modify Leaning by not doing clear buffer. And that's a
18 solution Leaning doesn't have --

19 JUDGE EASTHOM: Leaning doesn't know that. For example,
20 you have a prior art disclosure for a machine, and the machine could be
21 either copper. And then all the description is about a copper machine, and at
22 the end it says it could be silver. And you're saying, that's a new
23 embodiment. All those other things that you talked about with a copper
24 machine don't have anything to do with the silver machine. That's kind of

1 what you're arguing here.

2 MR. WILLIAMS: I don't think so. I'm saying, okay. Let's give
3 him credit for the alternative embodiment --

4 JUDGE EASTHOM: They're mutually exclusive. Copper is
5 mutually exclusive --

6 MR. WILLIAMS: Yeah.

7 JUDGE EASTHOM: -- to silver, but --

8 MR. WILLIAMS: Which it is. Then if you're trying to then say I
9 would do copper and gold. Well, I mean, explain how that's going to work.
10 I don't know. But let's just concede that that's what they meant to rely on all
11 along is the alternative embodiment where you don't do buffer full equals
12 zero.

13 JUDGE EASTHOM: Fine. Okay.

14 MR. WILLIAMS: I don't agree with that. But I'll --

15 JUDGE EASTHOM: And then, you just said -- let's just say with
16 the first three AND conditions mentioned above, namely the buffer is empty.

17 MR. WILLIAMS: Yeah.

18 JUDGE EASTHOM: In the case of the first of the three, you won't
19 have to do those. But then you would do the other two. Now, do those
20 involve clearing --

21 MR. WILLIAMS: They do. Yeah.

22 JUDGE EASTHOM: -- the buffer?

23 MR. WILLIAMS: They do. And we explain that in the papers.

24 And you know, given that I'm already down to 12 minutes, I'm not going to

1 go into great detail about those. But yes.

2 JUDGE EASTHOM: Okay. I understand what you're saying --

3 MR. WILLIAMS: Yeah.

4 JUDGE EASTHOM: -- and I understand. I'm sorry to re-ask you
5 that. I just want to make that clear. So, okay --

6 MR. WILLIAMS: No, no, no.

7 JUDGE EASTHOM: You're saying those involved to clear
8 -- okay.

9 MR. WILLIAMS: They would because of the way the math
10 works. And Leaning is -- to get, to get to those other steps, you have to have
11 also got the buffer so low that it will have emptied. We explain that in the
12 petition I have a slide for. It's in the demonstratives as well. But, yes. So
13 that is definitely going to happen. And then also this has nothing to do with
14 the Stepup. So then there's still a Stepup with a clear buffer. Leaning says
15 nothing about how you solve that problem. Again, the point is Leaning just
16 doesn't address this problem. This is not what Leaning was thinking about.
17 Leaning wasn't worried about having to refill the buffer. He's just accepting
18 that there's going to be some delay when you do a rate switch and then refill
19 the buffer. He's trying to minimize it. And at other points when he's talking
20 about doing other things, he says, yeah, we want to avoid the extra delay of
21 doing this other thing, which -- okay. That's an effective concession of
22 Leaning's that there is going to be delay. He just --

23 JUDGE EASTHOM: Okay.

24 MR. WILLIAMS: -- accepts that.

1 JUDGE EASTHOM: Okay.

2 MR. WILLIAMS: It's the fundamental problem with Leaning.

3 Now can you solve that problem with Leaning? You know, maybe you can
4 modify Leaning and solve the problem, but that is not the case we have. We
5 don't have that in petition. We don't really even have this in reply. There's
6 not a sufficient justification for any of this stuff in reply. And we've talked
7 about the problems of then trying to eliminate those delays with Leaning and
8 the problems that a POSITA would have run into and why they wouldn't
9 have pursued it. So I think that's going to have to be my answer given the
10 amount of time I have left.

11 Let me just say a couple more things before I reserve the little time
12 I have left. I don't want to waive any -- I'm not intending to waive any of the
13 arguments we have about the other dependent claims, including multiple
14 TCP connections that are in all three of the patents in various claims. And
15 the fact that our patents Claim 6 of the '772 and then Claim 7 of the '564 and
16 Claim 10 to '156 all require you first you have instant playback, which
17 means that you're going to just essentially load the lowest quality. You can
18 start from there and then ramp up. We have obviously arguments in the
19 patent on response about why Leaning and the modified versions that they're
20 proposing reply don't address that at all. In fact, what Leaning discloses
21 using is one of the highest bit rates to start. With respect to arranging, which
22 is the sequential arranging claim '772, Claim 8, Leaning has sort of no
23 requirement to do sequential arranging of files because Leaning is just going
24 to request one at a time and expects them in order. There's no need to do

1 any arranging of the files there. He's just anticipating they will come in the
2 way he's asking for them. And if they don't, then he gets an error, and that
3 that will stop the playback.

4 The last thing I just want to say is that if there was any doubt about
5 the patentability of these claims over Leaning, you can look to the objective
6 indicia and should look to the objective indicia to see that what Leaning was
7 proposing was not the solution that MOVE had. And if it was, then Leaning
8 would have patented this idea and been fantastically successful with his
9 technology. But as we talked about, BT did not implement Leaning. They
10 implemented a server-driven solution, not a client-driven solution. And
11 once the MOVE Player was actually released to the market, people were
12 talking in great detail about how fluid the stream was, how there was no
13 buffering, no stalling, and it was a dramatically better viewing experience. It
14 led to many companies partnering with MOVE, including Microsoft, that
15 had its own at that time competing version of streaming, but they adopted
16 ours instead. And we received two Emmys on the technology from our
17 peers. So with that, I would like to reserve the remaining time, although
18 obviously, if the Board has any questions about secondary indicia before I
19 do that, I'm happy to answer them.

20 JUDGE EASTHOM: Just real quickly, with your licenses, are
21 there any -- is there any specifics on those? I looked through. And I know
22 you cited to a lot of them. All the sites I saw just has the fact that you got a
23 license. Is that fair?

24 MR. WILLIAMS: I think we have -- so I think in the papers we

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IPR2024-00919, Patent 8,868,772 B2

1 talk about Dish's acquisition of MOVE, which entailed not just the license,
2 obviously, but buying the rights to the product and the patent. I think we
3 have -- that's definitely in the papers. I can't remember if the number that we
4 paid is in there, although I think it is. And then also the license that was paid
5 as a result of settling the ITC action is mentioned. The amount of that
6 license is mentioned in the papers.

7 JUDGE EASTHOM: Okay. Thank you. I'll look for that or
8 maybe on rebuttal, if you could point me to that.

9 MR. WILLIAMS: Yeah. I mean, some of them are obviously -- a
10 fair number of the licenses are confidential, so we couldn't disclose those
11 publicly. But at least those two (INDISCERNIBLE - TECHNICAL
12 DIFFICULTY) --

13 JUDGE EASTHOM: Were you able --

14 MR. WILLIAMS: -- first, and I'll see if I've got any others I can
15 point you to.

16 JUDGE EASTHOM: Appreciate that. Okay. I mean, we have a
17 -- if they're sealed and they're in the record and they're confidential, you can
18 just give me the cite, right?

19 MR. WILLIAMS: Yeah. Let me get to that in rebuttal, Your
20 Honor.

21 JUDGE EASTHOM: Thank you.

22 MR. WILLIAMS: Are there any other questions? Otherwise, I'll
23 reserve the remainder.

24 JUDGE WORMMEESTER: I'm sorry. I do have another

1 question, and I know you're running low. So we can give you a couple more
2 minutes if you need it in surrebuttal. But I just wanted to ask you a question
3 on -- in Leaning, it was cited in the reply on page 18 of Leaning.

4 MR. WILLIAMS: Sorry. Was it reply on page 18 or Leaning
5 page? Where would it be? I'm not hearing you. I'm sorry, Your Honor. I'm
6 not hearing you if you're talking.

7 JUDGE WORMMEESTER: Leaning page 18.

8 MR. WILLIAMS: Okay.

9 JUDGE WORMMEESTER: Sorry.

10 MR. WILLIAMS: Yeah, I may have missed your question
11 because I didn't --

12 JUDGE WORMMEESTER: Yeah. Sure. No problem. Toward
13 the bottom, it's talking about this. That it may not be acceptable for there to
14 be a freezing of the picture in rate switching. And so there's this bridging
15 sequence. So this was cited in the reply. And I was just wondering
16 -- Petitioners cited this for -- to show that this shows continuous playback.
17 And I just wanted to know what your position --

18 MR. WILLIAMS: Yeah. So this discussion is talking about
19 Leaning's bridging files. And I don't think they cited to this. And I heard
20 my friend say that they weren't relying on the bridging files in her comments
21 earlier. So is there a portion of the reply where you saw that cited? I just
22 want to make sure we're on the same page here.

23 JUDGE WORMMEESTER: Yeah. Sure. In the '917 case, which
24 involves the '156 patent on page 10 of the reply.

1 MR. WILLIAMS: Okay. Let me just get there.

2 JUDGE WORMMEESTER: It's under the section video playback
3 did not require clearing the buffer. And it's the last sentence of that section.

4 MR. WILLIAMS: Okay. They're citing to the EPO's discussion.
5 Okay. Yeah. So again, this is a bridging file. This was an argument that
6 was made in the EP opposition but not here. Petitioner has never argued that
7 the bridging files satisfy the claims. I think probably for the reason that you
8 just read because Leaning's bridging files would include at least freezing the
9 frames. And the actual solution, if we want to talk about the bridging files,
10 I'm happy to. But the actual solution that he gives in the bridging files, if
11 you go on and keep reading, is that you have to develop these specialized
12 kind of bridging streamlets that sit in between two different streamlets.
13 Lincoln doesn't use word streamlets, obviously, but I think he called them
14 sub-files. And then when you go on and actually read his solution, you'll see
15 that there are 96 frames of them would be copies of each other. So you
16 would just watch the same frame 96 times. This is certainly not continuous
17 playback. So we strongly disagree with what the EP did in that case, and do
18 not think that this teaches continuous playback. And not even Petitioner is
19 really making the argument that this teaches continuous playback.

20 JUDGE WORMMEESTER: Okay. Thank you. Thank you. So
21 you'll have five minutes, but we'll give you a couple more.

22 MR. WILLIAMS: Thank you, Your Honor.

23 JUDGE WORMMEESTER: All right, Ms. Osman.

24 MS. OSMAN: Thank you, Your Honor. My colleague, Ms.

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IPR2024-00919, Patent 8,868,772 B2

1 Rabenstein will start rebuttal.

2 JUDGE WORMMEESTER: Okay. Great. So you'll have 14
3 minutes, then. You may begin when you're ready.

4 MS. RABENSTEIN: Thank you very much, Your Honors. I
5 wanted to pick up on something that you requested from Patent Owner's
6 Counsel just before we switched over. And that was for a citation to the
7 licenses in the record. Now in Patent Owner's sur-reply, they at page 27
8 -- and this is of the '917 IPR -- they cite a bunch of exhibits. I believe it's 34
9 exhibits before they cite a case in Ancora Techs talking about licenses.
10 None of those 34 exhibits and no exhibit in this record is any of the licenses
11 that they're relying on. Those licenses, Patent Owner chose not to put those
12 licenses in the record not filed under confidential seal or otherwise. When
13 you look at -- I believe the closest thing they get to citing the licenses or
14 including anything related to the settlement of the ITC action is they cite six-
15 to seven-page briefs where they ask the ITC to terminate the -- to terminate
16 the investigation. They never put in the actual license. And that's a
17 distinguishing fact from the Ancora Techs case that they rely on. And I'll
18 just note that Ancora Techs came out after our reply was due, so we never
19 got a chance to respond to it. And then Ancora Techs, when they were
20 explaining the factual situation there, they noted that, quote, "the evidence
21 reflected that the licenses were directed to the challenge patent, were all
22 entered into or near the end of the litigation involving the same claims in
23 prior art as an issue in this case, the ITC case and were for payments that far
24 exceeded the cost of litigation." That's a very, very different factual record

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1 that we have here. We don't have the licenses. We don't have the same
2 claims. And we don't have the same priority issue. So that case is
3 distinguishable here. If there's any questions on that, happy to take them.
4 Otherwise, there's one other point I'd like to jump to. And that --

5 JUDGE EASTHOM: Is the amount of settlement in there? Is the
6 amount of settlement?

7 MS. RABENSTEIN: Not in what they cited, Your Honor. They
8 might have cited a Law360 article that might have the amount in there in the
9 settlement. I think maybe that -- maybe they cited that because that amount
10 was public. But we don't have the licenses. We can't tell what patents were
11 licensed. We don't know the scope of what was licensed. And that was all
12 within Patent Owners control. They chose not to submit those. They chose
13 to keep that out of the record. And frankly, Your Honor, if they wanted to
14 make this out and if they wanted to make out the licensing -- the tie to
15 licensing as a secondary consideration, it's their burden to put that
16 information in the record, and they chose not to do it.

17 I did want to respond to one comment from my colleague where he
18 had said that Leaning didn't solve the continuous playback issue. And I'd
19 like to direct you first to Slide 141 of our of our demonstratives. And this is
20 talking about a fight that came up a little bit -- you might remember there
21 was a teleconference over it relating to a declaration from an individual at
22 British Telecom who is the assignee of Leaning where Patent Owner had
23 asserted that British Telecom had not actually commercialized Leaning.
24 Now, we deposed him. We deposed this individual, and we showed him a

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1 brochure from British Telecom advertising potential licensing opportunities
2 of instant video streaming technology. And that brochure is exhibit 1036.
3 Now, despite Patent Owner relying on Mr. Ratcliffe's detailed search of
4 British Telecom's records, he didn't come up with this. He didn't find this
5 program. And when we put it in front of him and said -- and let him look at
6 it and examine it, he admitted that he did not doubt the British Telecom
7 commercialized streaming technology where a key feature was the patented
8 use of switching frames between multiple video streams encoded at different
9 data rates. He admitted that. He said, I don't doubt we did that. Somewhere
10 someone had to have a reason to write those words.

11 And if you look at the previous slide, Slide 140 in our presentation,
12 this is, I think, a key point that refutes something that Patent Owner argued,
13 which is he's saying, look, you have to have continuousness between when
14 you're switching. You can't have a delay. You can't have a break when
15 you're switching. Well, here in Exhibit 1036, which is this FastNets
16 program that British Telecom commercialized, it's explaining exactly what
17 Patent Owner is saying is the continuous feedback breakthrough that it came
18 through in its patents. You see here the key feature of FastNets is the
19 patented use of switching frames to switch between multiple video streams
20 encoded at different bit rates. And because of that, you see that that
21 switching between the streams, between those different encoding -- different
22 bit rates, quote, "this can be done without pause or glitch in the displayed
23 picture." And it repeats it again when you switch back. It says that can be
24 done again without any pause in video playback. So the evidence that we

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1 have in the record and the evidence from British Telecom's own licensing
2 materials are that, look, FastNets, this video program, this video instant
3 streaming program, it did this switching without pause -- without any pause,
4 without any buffering, without any problem to the same extent the Patent
5 Owner is claiming its technology did that. And so unless you have any
6 questions on that, I'll turn it back over to my colleague Ms. Osman.

7 JUDGE HUDALLA: Could you respond to Patent Owner's
8 argument? I think Patent Owner says for FastNets there's a push or pull
9 difference between FastNets and what's being claimed here. Could you
10 respond to that?

11 MS. RABENSTEIN: Certainly. So two points to that, Your
12 Honor. That push or pull argument that Patent Owner makes comes up in
13 their sur-reply. They didn't bring it up anywhere else. And frankly, it's pure
14 attorney argument. They don't have any expert testimony explaining that or
15 looking at it. They're just pointing to a document and saying that's the case.
16 Now, there's nothing that they point to that actually excludes push or pull or
17 says that FastNets is one or the other. It can actually be both in those
18 documents. You will see, I believe, in their Patent Owner sur-reply, when
19 they're talking about this push or pull, they make an argument that the push
20 and pull systems were disfavored. And they cite to a paragraph in their
21 expert report, Dr. Jeffay's report, for that. But when you actually look at that
22 paragraph, he doesn't talk about push or pull systems at all. He doesn't
23 identify whatever programs he's working with in that paragraph as being
24 push or pull systems. And I believe that's Exhibit 2141, paragraph 223 is the

1 one that they cite at their Patent Ownership sur-reply at page 29 in the '917
2 IPR. That paragraph, again, says nothing about push or pull. And in fact,
3 the word push only appears once in their expert's declaration in a separate
4 paragraph, paragraph 207, where the expert states that companies were
5 trying to push streaming forward. So there's no expert evidence explaining
6 what FastNets was or was not. It's pure attorney argument on their hand.
7 And we submit that there's no limitation to FastNets being only push versus
8 only pull.

9 JUDGE HUDALLA: Thank you.

10 MS. OSMAN: Thank you, Your Honor. Just very briefly, a
11 couple of points on the merits that I wanted to raise. The first one is there
12 was a discussion about whether or not the Petitioner reply argued that
13 clearing the buffer was not necessary in this continuous embodiment that we
14 rely on. Your Honors, page 9 of the reply, certainly argued there. It's also
15 argued beginning on page 4 of each of the replies. I think it's the same
16 pagination throughout the three proceedings, but it's at least page 4 of the
17 00919 proceeding where we say Leaning teaches by running the sound card
18 at the highest sampling rate envisaged and up-sampling all audio to the
19 highest rate before placement in the buffer. The system can adjust the
20 communicated data rate based on network conditions and without clearing
21 the buffer. And so there's the discussion of how Leaning teaches not
22 clearing the buffer.

23 And this is related to the last question, or I think one of the last
24 questions you asked my colleague on the other side about column 18, line 19

1 through 23 in Leaning. While it is true that we're not relying on bridging,
2 this is important because it shows that Leaning is expressly considering that
3 during a rate shift, clearing the buffer may not be subjectively acceptable.
4 Certainly it's not subjectively acceptable when you are avoiding
5 interruptions in the particular embodiment that we're not relying -- that we
6 are relying on. Excuse me.

7 There was a question about the third-party testimony that Patent
8 Owner relies on. And if you'll please turn to Petitioner Slide 29. I just want
9 to -- I think it's important to look at the testimony because I think the way it
10 was characterized is maybe perhaps not exactly what happened. So Patent
11 Owner said that there was a concession by this third party. Again, it's not
12 relevant because we didn't make this concession, but by a third party that
13 Leaning would always have sort of a discontinuity on a jump. In fact, if you
14 read what the paper actually says, that's not what happened. What the paper
15 actually says is a person of ordinary skill in the art reading Leaning would
16 understand that there is no way that that's what is intended by Leaning. And
17 that must be the case. I mean, it's inconsistent with a lot of other -- a lot of
18 Leaning's teachings. It just can't possibly be the correct interpretation. And
19 that's what the argument was at the EP.

20 Please turn to Slide 34. I want to briefly address another argument
21 that was made very quickly. But there was sort of a suggestion that even
22 -- that you can't skip clearing the buffer because even if you get rid of that
23 first condition, that is the buffer fullness equal to zero, the other conditions
24 still require that you clear the buffer. This is an argument that Patent Owner

1 made for the first time in their sur-reply, but it's also just not correct. Patent
2 Owner is depending on this last of the three conditions. Buffer low percent
3 is bigger than TD. So the buffer low percent, Leaning explains, is the
4 percentage of time that the buffer is under 25 percent full. So if that
5 percentage of time that the buffer is less than 25 percent full is bigger than
6 TD, then you meet the condition. TD is a threshold, and you can set the
7 threshold to whatever you'd like. So Patent Owner argues this means that
8 you have to empty the buffer multiple times to Stepdown. You have to have
9 multiple empties. But that's just simply not supported. You can have a
10 percent of time that the buffer is less than 25 percent full without the buffer
11 being zero. There's just no reason this condition requires clearing the buffer.
12 It's just not supported. So the argument fails on the merits. It's also a brand
13 new argument that was raised in the Patent Owner sur-reply, so we haven't
14 had an opportunity to respond to it on the papers. But I just want to be very
15 clear. It's just not correct.

16 I'd like to turn very briefly to -- I'd like to address very briefly the
17 encoding argument. So at Petitioner's slide -- take a look at please Petitioner
18 Slide 49. There was a discussion and argument about Leaning's disclosure
19 of encoding and segmenting where you're using a standard that has only
20 independently coated frames. And so Patent Owner in sur-reply argues, no,
21 no. You couldn't do that. But I just want to be clear. There is nothing in the
22 record -- and Patent Owners Counsel said that Dr. Jeffay explained that this
23 wasn't possible. I have not seen those paragraphs in his declaration. I
24 haven't seen any argument in the record saying that independently coded

1 standards wouldn't work. This is because this is an argument Patent Owner
2 raised in its sur-reply. It wasn't in the Patent Owner response. This
3 disclosure in Leaning was just completely skipped over. So I haven't seen it.
4 If it's there, maybe I missed it. But I just have not seen it. What we have in
5 the record, what's actually in the record if you turn to -- actually it's on this
6 -- I think it's on the very next slide. Nope. Sorry. It's on Slide 48. What is
7 in the record is that Dr. Houh explained, Petitioner's expert explained that
8 you could use an independently coded standard. And there is an article
9 about a specific independently coded standard MPEG -- Motion JPEG 2000
10 for wireless applications, comparing it to MPEG 4 and saying that no
11 actually Motion JPEG 2000, which uses only independently coded frames,
12 was superior in some ways. So you know this is disclosed in Leaning. This
13 is expressly disclosed. It's not a modification. We don't need to show a
14 reasonable expectation of success because Leaning as a part or reference is
15 presumed to be enabled.

16 I'd like to briefly address the ITC -- what the claim construction
17 said. Just two slides very quickly. I see I'm running out of time. So ITC
18 Slide 14. Patent Owner's Counsel suggested that the ITC interpreted
19 continuous playback. That was not a claim term that was up for construction
20 at the ITC. I want to be very clear. The ITC did not construe continuous
21 playback. The closest it came was saying respondents concede. That's not a
22 construction. And then it said the phrase continuous playback is the goal
23 sought through the determination to shift playback quality. Also not a
24 construction. But it does suggest that they're reading it in the same way that

1 Petitioners are. It is an intended purpose.

2 And I see I have 20 seconds. Slide 10, please. Very briefly, on the
3 prior art rejection regarding Radford. I think with respect to this rejection, I
4 think it's really important to note this isn't a case where the applicant added a
5 single limitation to achieve continuous playback to overcome a rejection.

6 The applicant rewrote the claim entirely, added at least five other limitations.

7 There's nothing about this language that suggests that to achieve continuous
8 playback is anything other than an aspiration to be achieved. And I see I'm
9 out of time, so I want to be respectful of the panel's time. So unless there are
10 any questions, I will sit down.

11 JUDGE WORMMEESTER: No further questions. Thank you so
12 much.

13 MS. OSMAN: Thank you, Your Honor.

14 JUDGE EASTHOM: Can I just ask you one question? I think you
15 answered it. But just to be clear, your friend said that you can't skip those
16 two clear buffer steps that are in the Stepup and Stepdown process. And I
17 think you just said that as long as those conditions are met on that slide with
18 TP being less than the buffer less full 25 percent thing, then you don't have
19 to clear the buffer. Is that right?

20 MS. OSMAN: That's correct. Clearing the buffer is not necessary.
21 It's not --

22 JUDGE EASTHOM: Okay.

23 MS. OSMAN: -- necessary to (INDISCERNIBLE - TECHNICAL
24 DIFFICULTY).

1 MS. OSMAN: Correct.

2 JUDGE EASTHOM: Okay. Thank you.

3 MS. OSMAN: Thank you, Your Honor.

4 JUDGE WORMMEESTER: Mr. Williams.

5 MR. WILLIAMS: Okay. Let me just start by getting to the
6 license evidence quickly.

7 JUDGE WORMMEESTER: Thank you. So --

8 MR. WILLIAMS: Okay.

9 JUDGE WORMMEESTER: -- you have 5 minutes, and we'll give
10 you an extra 2 minutes if you need since my last question took 2 minutes.

11 MR. WILLIAMS: That's fine, Your Honor. Okay. With respect
12 to respect to the licensing evidence that I promised to get back to you on, I
13 think the best place to look is in a patent response starting around line 49
14 where we explain that first, the amount of -- the acquisition of MOVE.
15 MOVE was essentially a one product company. These patents and the
16 MOVE Player were what were required. And you'll see that -- I'm pretty
17 sure in the public record we've said that's \$45 million is what was paid to
18 acquire the technology when it was acquired. We also have in the record
19 Exhibit 2125, which is a Microsoft document that has -- it's not a license
20 itself, but you'll see it's an affidavit that talks about the licensing discussions
21 that happened. The other thing I would say about license -- those are the
22 only two, I think specific -- and then the Peloton iFit ITC settlement is
23 described in -- and I think Dr. Jeffay gives the number for that which he
24 corroborated with a public press report of the amount of the payment there,

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1 which was \$75 million. The other licensing evidence is sort of by
2 implications. So you can look at the objective initiative evidence, Your
3 Honor, and see that Level3, which was a massive content distribution
4 network player who was providing streaming services for the NHL,
5 partnered with MOVE to use its technology, as did ABC and ESPN, to
6 broadcast their networks. That's all evidence that is in the record of
7 objective indicia. So those are the particular licenses that I would direct the
8 court -- the Board's attention to.

9 JUDGE EASTHOM: So Dr. Jeffay -- excuse me. Dr. Jeffay
10 testified somewhere that they sold the MOVE patents for 75 million. Is that
11 right?

12 MR. WILLIAMS: No. I think that was the amount of the Peloton
13 license agreement. The sale of the MOVE patents and MOVE technology
14 was 45 million.

15 JUDGE EASTHOM: Does it say what the Peloton license
16 involves? Does it say (INDISCERNIBLE - TECHNICAL DIFFICULTY)?

17 MR. WILLIAMS: It will tell you which patents were involved in
18 the ITC matter. Yeah. We didn't have permission from Peloton to get -- to
19 put the license into the record, so we did not.

20 JUDGE EASTHOM: So was that one of these patents? Were they
21 involved?

22 MR. WILLIAMS: Yeah. The ITC involved the '564 and the '156
23 patents, among others.

24 JUDGE HUDALLA: But that acquisition could cover way more

1 than just what's in this case?

2 MR. WILLIAMS: The acquisition of MOVE? That what you're
3 saying?

4 JUDGE HUDALLA: I'm sorry. I should have said the settlement
5 --

6 MR. WILLIAMS: Yes. Sorry.

7 JUDGE HUDALLA: -- not (CROSSTALK) --

8 MR. WILLIAMS: The settlement would have covered other
9 patents in this portfolio, I think is what you're asking. And, yeah, that
10 answer is yes.

11 JUDGE HUDALLA: Okay. Thank you.

12 MR. WILLIAMS: Yeah. Okay. Let me talk about BT for one
13 second. So we have a slide on this in 109. I think it's kind of unfair for
14 them to charge us with making new arguments in sur-reply when it was only
15 in the reply that we see this argument about BT somehow having this other
16 technology. As you see from Slide 109, which is an excerpt from Exhibit
17 1036 and 1041, it's very clear that this product of BT that they're pointing to
18 was -- did not have requests coming from the client. These were streamlets
19 being -- or to the extent that there were streamlets at all, there were being
20 streamlets that were being pushed down to the client from the server. So the
21 server was deciding whether to make rate changes, not the client. And that
22 is a very important distinction, obviously, in these claims that this is a client-
23 driven approach because it allows you to do these things with cheap and
24 easy HTTP servers rather than a complicated media server.

1 With respect to all the modifications in this case that Petitioner is
2 proposing and the ones I went through, essentially they need to get all of
3 them into the record in order to have continuous playback under their theory.
4 They haven't shown any reasonable expectations of success for any of them,
5 as we pointed out. As I talked about, when you look at Leaning's approach,
6 Leaning has this buffering requirement that you have to clear the buffer
7 when you do any rate changes. And he never once says that you wouldn't do
8 it. The only place he even hints that you might not do a clear buffer is when
9 you do a jump. And even then he says you should do it. It's our preference
10 to do it, but you could not do it. So again, I think this is the fundamental
11 problem with Leaning. He was just not focused on this issue of eliminating
12 all of the delays inherent in this streaming approach. Instead he was --

13 JUDGE HUDALLA: Could you (CROSSTALK) --

14 MR. WILLIAMS: -- focused on extra delays. Yeah.

15 JUDGE HUDALLA: Could you respond to Ms. Osman's -- her
16 argument just a moment ago about that buffer low percentage thing, that
17 sometimes that the buffer low percentage variable is such that the buffer
18 purge is skipped?

19 MR. WILLIAMS: The buffer purge is skipped. It's not so much
20 that the buffer purge is skipped. What Leaning talks about in connection
21 with that step, which is again, this is one of the criteria Leaning uses before
22 he does a Stepdown. And this is discussed in Leaning at the bottom of page
23 8 and over onto page 9. He describes that buffer low percentage. And he
24 says it's the percentage of the time that the buffer is below 25 percent of the

1 payout time. And if you continue to read that discussion, as Dr. Jeffay
2 explains, what this means is that because Leaning still says that you're going
3 to use this additional check, you're still going to check the buffer low
4 percentage before switching. And his point is that by doing that, you're
5 going to necessarily require some buffer empties. And he's not just saying
6 that. That's what Leaning says at the bottom of page 8 and over to 9. He
7 said further buffer empties will cause this measured rate to increase and will
8 eventually empty the buffer with a buffer load percentage exceeding 5
9 percent. So he's just relying on how Leaning is explaining how this works,
10 that it would require a buffer empty a couple times before you get that
11 threshold down low enough to trigger that other criteria.

12 JUDGE HUDALLA: But is it true that there are going to be times
13 where the buffer is not cleared then if you get to the right criteria that -- as
14 she just stated?

15 MR. WILLIAMS: We haven't seen any explanation by their
16 expert that that's true. Dr. Jeffay says the answer is no. He says following
17 that teaching of Leaning, the only way that criteria is satisfied is if it -- if the
18 buffer has emptied at least once. Is there some mathematical hypothetical
19 where you could satisfy that criteria without a buffer empty? We haven't
20 seen it, and there's no testimony in the record that there is. There's just Dr.
21 Jeffay's testimony that no, that requires you emptying the buffer before you
22 would trigger that additional criteria.

23 The other thing of note -- notably about that is again, this is -- all
24 we're talking about in this whole section is the criteria for doing a Stepdown,

1 which Leaning teaches a couple. And he teaches you could skip one of
2 them. He doesn't say you would skip this one. And even if you did skip this
3 one, you would still get into the problem that Leaning teaches you clear the
4 buffer as your first step of moving on to a new data rate. And it's simply
5 because he has no other place to put the data. There is no second buffer.
6 There's no staging module. There's no place where you can possibly deal
7 with the fact that you're getting multiple bit rates of data and trying to splice
8 them together. This is just how Leaning works. He's got one buffer. It gets
9 empty. It gets filled up again. That's the delay. I think that timer is
10 counting up, which means I'm over time. But I'm happy to answer any other
11 questions you have.

12 JUDGE EASTHOM: I'm still having a hard time with that one
13 section on the bottom of page 8 of Leaning. Maybe you can help me out. It
14 seems that it's saying that there may be buffer empties. It says further buffer
15 empties will obviously cause this measure rate to increase and will
16 eventually empty the buffer again with the buffer low percentage value
17 exceeding 5 percent if the rate cannot be sustained.

18 MR. WILLIAMS: Yeah. Okay. So just to give you the big
19 picture, Your Honor. If you remember, there's a section of the flowchart that
20 says if buffer fullness equals zero and (INDISCERNIBLE) rate is less than
21 current rate, and buffer low percentage is greater than TD, go to Stepdown.
22 So there's three criteria that need to be true before you go to Stepdown.
23 Leaning says you can skip the first one. Okay. So you don't have to check
24 if buffer fullness is zero. Okay, fine. You still then have these other two

1 criteria.

2 One is, is your measured rate less than your current rate? Which
3 just means does it look like your network conditions are such that you're
4 going to need to Stepdown? You're streaming at 200 KB, and it looks like
5 you got 150 KB. So what we're talking about here is this third criteria,
6 which is, is the buffer low percentage greater than TD, which is a threshold
7 if you go to Stepdown. And Dr. Jeffay explains, using this section of
8 Leaning, what that means is that you would still -- for that criteria to be
9 triggered, you would still have had to have had some buffer empties in order
10 to get that buffer low percentage to be down at that number, such that it
11 would trigger the Stepdown (INDISCERNIBLE - TECHNICAL
12 DIFFICULTY) Stepdown.

13 JUDGE EASTHOM: You mean because the average is

14 MR. WILLIAMS: Yeah.

15 JUDGE EASTHOM: -- greater than five so --

16 MR. WILLIAMS: Yeah. Because this is how Leaning explains
17 how this buffer low percentage works. He says, it gets changed by the fact
18 that you're going to run into these situations where you have low buffer,
19 including the buffer being empty.

20 JUDGE EASTHOM: So that buffer low percentage means that it's
21 empty more than -- less than 5 percent of the time? Or is that --

22 MR. WILLIAMS: Yeah. Because now I got to remember my
23 Leaning parameters. Yeah. It is a percentage of time the buffer is lower
24 than some percentage of that TP threshold. And the sum percentage is 25 is

1 what he said. I think he says it's 25 percent of TP and that's the Stepdown
2 threshold, which is the TP, is, I think, 5 percent. That's the default that he
3 gives.

4 JUDGE EASTHOM: I mean, I just don't understand why it
5 requires it to be empty there with the percentage of time it spends -- I'll have
6 to think about it. I don't want to bore you or --

7 MR. WILLIAMS: Well, you may be pushing beyond the law
8 -- the limits of my technical knowledge as well because Dr. Jeffay explains
9 this in his declaration. So I'd encourage you to take a look at that. And we
10 cite to it where --

11 JUDGE EASTHOM: I will.

12 MR. WILLIAMS: -- we talk about this element in the --

13 JUDGE EASTHOM: I appreciate that. And then is there any
14 rebuttal to that testimony or -- of Dr. Jeffay, or is that uncontradicted?

15 MR. WILLIAMS: I don't recall off my head what Patent Owner's
16 response to that is. But I don't believe they -- well, you heard what the
17 Counsel said a minute ago about it, which I guess is her suggestion that there
18 is. It's not true. But I don't --

19 JUDGE EASTHOM: All right. That's perfect.

20 MR. WILLIAMS: -- think that there's evidence in the record to
21 support that.

22 JUDGE EASTHOM: Okay. I'll look at it. Yeah. I think they
23 have a reply deck obviously. I'll look through that. But we'll figure it out. I
24 just wanted to tell you thank you both for helping me out.

1 MR. WILLIAMS: Yeah. No problem. The only thing I'm going
2 to say about that is I think what this is showing -- the point of this -- point
3 that we rely on this section for obviously is that Leaning is clearly saying
4 that there are going to be discontinuities. Okay. I'm sorry, Your Honor.
5 Yeah.

6 JUDGE WORMMEESTER: I'm sorry. You're out of time. So I'm
7 just going to let you finish that thought and then (INDISCERNIBLE -
8 TECHNICAL DIFFICULTY).

9 MR. WILLIAMS: Yeah. All I'm going to say is that Leaning is
10 there recognizing there's going to be discontinuities because he's conceding
11 there's going to be buffer empties caused by his logic. That was the only
12 thing I wanted to say.

13 JUDGE WORMMEESTER: Thank you. Are there any further
14 questions? Okay. That concludes our hearing. Thank you to both parties
15 for your time. It was very helpful. The case is submitted.

16 (Whereupon, the above-entitled matter went off the record at 11:52
17 a.m.)

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