

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AYLO FREESITES LTD,
Petitioner

v.

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

IPR2024-00940
U.S. Patent No. 11,991,234

PETITIONER'S REPLY TO PATENT OWNER RESPONSE

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PETITIONER’S EXHIBIT LIST

Updated Exhibit List for U.S. Pat. 11,991,234 Petition for *Inter Partes* Review

Exhibit Number	Description
1001	U.S. Pat. 11,991,234 (“the ’234 Patent”)
1002	File History of the ’234 Patent
1003	Declaration of Dr. Henry Houh including Curriculum Vitae (“Houh declaration”)
1004	International P.C.T. Publication WO 2002049343 to Leaning et al. (“Leaning”)
1005	<RESERVED>
1006	U.S. Patent Publication No. 2003/0236906 to Klements (“Klements”)
1007	U.S. Patent No. 6,848,004 to Chang (“Chang”)
1008	WO1997044942 to Kliger (“Kliger”)
1009	337-TA-1265 ITC Investigation Initial Determination
1010	337-TA-1265 ITC September 11, 2023 Enforcement Complaint
1011	Internet Archive Affidavit for URLs including EX1019
1012	Gourley, David, and Brian Totty. HTTP: the definitive guide. O’Reilly Media, Inc., 2002 (“Gourley”). available at https://archive.org/details/httpdefinitivegu00gour/page/n1/mode/2up .
1013	Patent Owner Preliminary Response in IPR2024-00514
1014	DISH May 7, 2024 letter in support of its motion for leave to file first amended complaint in <i>DISH Technologies L.L.C. et. Al. v. fuboTV Media Inc.</i> , 1:23-cv-00986-GBW (D. Del.)
1015	Excerpted transcript from March 27, 2024 hearing at United Kingdom High Court of Justice in <i>DISH Technologies, L.L.C. et al. v. Aylo Premium Ltd et al.</i> , Claim No. HP-2023-000043
1016	File History of U.S. Pat. No. 11,470,138 (“’138 Patent”)
1017	Petition for IPR in IPR2024-00512
1018	File History of U.S. Pat. No. 8,868,772
1019	HTTP 1.1 Protocol - RCF2616 (https://web.archive.org/web/20020802040147/https://www.ietf.org/rfc/rfc2616.txt)
1020	U.S. Patent Publication No. 2004/0093420 to Gamble (“Gamble”)

1021	Transcript of Conference Call with the Board regarding Petitioners' request for discovery in IPR2024-00940 and in -917, -918, -919 on May 29, 2025
1022	Supplemental Declaration of Dr. Henry Houh
1023	Deposition Transcript of Dr. Kevin Jeffay, May 8, 2025
1024	EPO Preliminary opinion for Opposition against EP 3 822 805 March 26, 2025
1025	Deposition Transcript of Drew Major, May 14, 2025
1026	Deposition Transcript of Mark Mitchell, May 30, 2025
1027	Deposition Transcript of David Ericson, May 9, 2025
1028	Deposition Transcript of Drew Major, Ogdon IPRs, September 17, 2024
1029	Excerpted infringement chart appended to complaint from DISH Technologies L.L.C. and Sling TV L.L.C. v. Aylo Freesites Ltd and 9219-1568 Quebec Inc. Case No. 2:24-cv-00066
1030	IPR2024-00046 Ogdon IPR Final Written Decision
1031	IPR2024-00046 Ogdon IPR Patent Owner Response
1032	US 6,389,473 ("Carmel")
1033	US 6,175,862 ("Chen/Feig")
1034	US 2002/0143973A1 ("Price")
1035	Willebeek-LeMair -- Bamba - Audio and Video Streaming over the Internet
1036	Dr. Jeffay Declaration from IPR2022-01430
1037	Deposition Transcript of Peter Ratcliffe, May 15, 2025
1038	Ratcliffe Exhibit 1 – Innovative Research BT Research & Venturing IPR Overview: Issue 1.7 (23 rd February 2007)

I. INTRODUCTION

Petitioner Aylo Freesites Ltd challenges claims 1-15 and 17-20 of U.S. Patent No. 11,991,234 as obvious over Leaning and obvious over Leaning and Klemets. Petitioner also challenges claim 16 as obvious over Leaning (with or without Klemets) and Gamble.

The '234 Patent has two independent claims—claims 1 and 12. Regarding claim 1, Patent Owner DISH Technologies L.L.C. makes *only one* argument that Leaning (alone or with Klemets) does not render the claim obvious. Specifically, although DISH admits that Leaning “discloses requesting each sub-file,” “saving [each] sub-file in the buffer,” and playing each sub-file in sequence (POR, 24-25), DISH contends that Leaning somehow does not disclose arranging sub-files in order of ascending playout time.

Regarding claim 12, DISH argues Leaning does not disclose “to achieve continuous presentation” based on an overly narrow interpretation that precludes any disruption during playback. Based on this interpretation, DISH argues Leaning teaches away because it allegedly requires clearing the buffer every rate switch, causing disruption. DISH’s claim interpretation and descriptions of Leaning are wrong. The language “to achieve continuous presentation” is merely aspirational and, in any event, Leaning does not require clearing the buffer.

Finally, DISH’s secondary considerations arguments mimic those it made in IPRs challenging related patents based on the Ogdon reference. Just as the Board held in the Ogdon IPRs, DISH fails to show presumption of nexus, and its evidence is not tied to any unique characteristics of the claimed invention.

II. CLAIM CONSTRUCTION

DISH argues claim construction is not required (POR, 17), but its argument concerning “to achieve continuous presentation” rests upon this term requiring no disruption during playback. *E.g.*, POR, 10, 21. DISH’s narrow interpretation has no support. The phrase “continuous presentation” does not appear anywhere in the specification, nor is there anything to suggest that this term requires uninterrupted playback. At most, “to achieve continuous presentation” is merely aspirational; it is a “statement of purpose and intended result.” *Bristol-Myers Squibb v. Ben Venue Lab’ys.*, 246 F.3d 1368, 1376 (Fed. Cir. 2001); *see also* EX2141, ¶46 (Dr. Jeffay admitting continuous playback is a “stated goal”). Actually achieving uninterrupted, continuous playback is not required. EX1022, ¶12. Indeed, that a rate change is made to “achieve” continuous presentation indicates that there was no continuous presentation prior to the rate change.

Notably, DISH did not argue that claims 1-11 require continuous playback because, otherwise, the term “to achieve continuous presentation” in claim 12 would be superfluous. Outside of this IPR, however, DISH has consistently argued that its

patents require continuous playback. For example, in IPR2024-00046, DISH argued that its related U.S. Patent No. 10,951,680 “permits continuous playback of the video as network conditions change, rather than pausing playback (i.e., buffering).” IPR2024-00046, Paper 18 (EX1031), 8. The ’680 Patent claims do *not* recite “to achieve continuous presentation.”

In any event, whether “to achieve continuous presentation” requires avoiding any disruptions or is merely aspirational, Leaning renders the claims unpatentable. EX1022, ¶¶1-24.

III. LEANING DOES NOT REQUIRE CLEARING THE BUFFER

The foundation of DISH’s POR is that Leaning requires clearing the buffer upon every rate switch. *E.g.*, POR, 18-23. DISH is wrong.

A. The “Clear Buffer” Step Is Optional

DISH myopically focuses on the words “clear buffer” in Leaning’s exemplary flowchart and ignores all of Leaning’s other teachings. POR, 11-23. That flowchart relates to a specific audio streaming situation when needing to reset old sound cards from the 1990s. EX1004, 14:25-29 (“Many conventional sound cards ... require re-setting in order to change sampling rate, and necessarily this causes an interruption in its audio output.”); EX2129, 97:6-9; EX1022, ¶13. As explained by Dr. Houh, old sounds cards sometimes needed to be reset because they had fixed internal clocks

and converters requiring hard resets when sampling rates were changed. EX1022,

¶¶13-15.

Importantly, Leaning teaches solutions that do *not* require clearing the buffer even when using old sound cards. For example:

[T]he sound card could be *run continuously at the highest sampling rate envisaged*. When the player program is supplying, *to the buffer*, data at a lower sampling rate, this data is then *up-sampled to this highest rate before or after the buffer*. Similarly, if the card is always operated in stereo mode, decoded mono signals can be fed in parallel so feed both the left and right channels of the sound card input.

EX1004, 14:29-33.¹ By running the sound card at the highest sampling rate possible and up-sampling sub-files before or after buffering, there is no need to reset the sound card and no need to clear the buffer. EX1022, ¶¶16-17.

Dr. Houh cited the above disclosure of Leaning during his deposition and testified that a POSITA would understand that in the instance where the sound card does not need to be reset there would be no need to clear the buffer. EX2129, 95:19-97:23; 102:2-103:17. And there is additional evidence that clearing the buffer is not required. EX1022, ¶¶13-18. For example, DISH cites the “clear buffer” step for the “jump” command in Leaning’s flowchart (POR, 13), but ignores that Leaning teaches that “[w]e prefer, in the case of the jump, to suspend decoding and clear the

¹ All emphases added unless indicated.

buffer so that the new request is sent immediately, *but this is not actually essential.*”

EX1004, 11:19-20; EX1022, ¶18. Dr. Jeffay agreed that where Leaning discloses something is “not essential, Leaning is teaching that it is not required.” EX1023, 59:8-13. Thus, clearing the buffer is not even required in the flowchart example cited by DISH.

B. Leaning Teaches Video Streaming Without Clearing the Buffer

The above relates to audio streaming. Leaning also teaches video streaming where clearing the buffer is not required. Specifically, Leaning explains “[t]he same [audio] principle may be applied to the delivery of video recordings ... [where] the system differs from the audio version only in that the file is a video file (e.g. in H.261 or *MPEG* format) and the *player program incorporates a video decoder*” but “[t]he manner of partitioning the file into sub-files is unchanged.” EX1004, 16:6-10; *see also id.*, 16:17-23 (explaining that each video sub-file should begin with an I-frame to avoid decoding errors when rate-switching between copies). A POSITA would understand that video such as MPEG would have been decoded using software incorporated into the player program. EX1022, ¶19. Thus, it would not make sense to clear the buffer because there would be no video card that required re-setting and no interruptions upon rate switching since every sub-file begins with an independently decodable I-frame. EX1022, ¶19.

Dr. Jeffay purports that Leaning’s video embodiments require video cards “for decompression and display” of video “which also would have needed to be cleared and reset in order to decode video.” EX2141, ¶¶89-90. This is false, as explained above, but in any event, the same teachings from Leaning about running an audio card at the highest sampling rate and up-sampling would apply to video cards. Section III.A; EX1022, ¶20; EX1004, 16:6-7 (“The same principle may be applied to the delivery of video recordings.”).

C. DISH Misrepresents Petitioner’s Arguments Before the EPO

European Patent Office (“EPO”) decisions and decisions by foreign tribunals are not binding on the Board, but DISH injected the EPO into this dispute by brazenly misrepresenting that Petitioner allegedly admitted to the EPO that Leaning results in a “glaring two-minute discontinuity at every upshift.” POR, 21. In reality, however, Petitioner repeatedly criticized DISH’s argument that Leaning requires clearing the buffer. Remarkably, DISH omits the very next sentence after the one it quotes, which states: “*This would not make any technical sense at all.*” EX2016, 9; *see also id.* at 8 (“[C]learing the buffer would not even have made any technical sense at all.”). Far from admitting that Leaning requires clearing the buffer at every upshift, Petitioner repeatedly argued to the EPO that DISH’s argument was absurd.

If there was any doubt that DISH misrepresented Petitioner’s EPO arguments, the EPO ruled in favor of Petitioner. It issued an opinion rejecting DISH’s

arguments that Leaning requires “clearing the buffer at each rate switch and refilling the buffer beyond playout time T_P ,” which results “in interruptions of playback upon upshifting.” EX1024, ¶6.1.6. The EPO relied on the same points Dr. Houh explains here: “[Leaning] sets out that interruption in the audio output is caused by *re-setting the sound card* in order to change sampling rate.” *Id.* And to avoid that problem, Leaning teaches “run[ning] the sound card continuously at the highest sampling rate so as to *avoid interruption* in the audio output.” *Id.* In addition, the EPO found that Leaning also discloses video streaming without clearing the buffer, another point raised by Dr. Houh here: “[T]he skilled person would recognise that *no such resetting of the video card is necessary* in the case of rate-switching. As set out in page 18, lines 19-23 [of Leaning], frame freezing may be not acceptable for rate-switching in video, which also points to *continuous playback of the video.*” *Id.*

D. Leaning Does Not Result in Temporal or Content-Based Discontinuities

Based on its erroneous argument that Leaning requires clearing the buffer, DISH further mischaracterizes Leaning.

First, DISH argues Leaning has “temporal discontinuities” because “playout time” T_P is allegedly set at 10 seconds “in Leaning’s only example” and, after a rate shift, Leaning clears the buffer and “halts audio playback ... until there is another 10 seconds of content” in the buffer. POR, 12-15. DISH is wrong. Setting T_P to 10 seconds is just an example. EX1004, 4:16-18 (Leaning teaches that “*typically*” the

playout time T_P “*might* be 10 seconds”); *id.*, 5:20-21 (“In this *example* it is set at 10 seconds”); EX1023, 55:18-56:3, 61:2-6 (Dr. Jeffay admitting that “the 10-second value is just an example” and that “ T_P is not limited to 10 seconds”); EX1022, ¶21.

Leaning discloses that sub-file size could be “between 30% and 130% of the playout time” (EX1004, 12:33-34), and T_P “could be made user-selectable” (*id.*, 5:20-21). Thus, Leaning teaches examples where the duration of a sub-file is equal to or greater than the playout time, e.g., $T_P \sim 3$ seconds for 4-second sub-files, or where T_P time is user-selectable. Moreover, Dr. Jeffay testified that he “[did not] see any issue with” the duration of the sub-file being equal to T_P . EX1023, 65:18-66:5. In these examples, there would be no temporal discontinuities because if the buffer were cleared, the next sub-file would begin playing immediately. EX1022, ¶22.

DISH relies heavily on the sentence from Leaning that if “the buffer becomes empty, the player program simply *ceases playing until further data arrives.*” POR, 15 (quoting EX1004, 6:10-11) (emphasis in original). But on its face this sentence describes an embodiment of Leaning that did not provide for rate switching. Just a few sentences later, Leaning explains that “the system described above” does not “offer any remedy for the possibility of buffer underflow (due for example to network congestion). Therefore a second, more sophisticated embodiment of the invention, now to be described, offers the following further features.” EX1004, 6:9-

28. Leaning then describes the rate-shifting embodiment relied upon in the Petition that seeks to remedy buffer underflow due to network congestion. *Id.*; EX1022, ¶23; *see also* EX1004, 15:3-6.

Second, DISH argues Leaning has “content-based discontinuities” because when the buffer is cleared, “any sub-files stored in the buffer ... will be skipped because they will be purged from the buffer,” and Leaning allegedly requests the next sub-file without accounting for purged sub-files. POR, 15-17. This incorrectly assumes that clearing the buffer is required, and it also assumes that clearing the buffer requires content to be discarded instead of playing out the content remaining in the buffer (i.e., let the buffer “clear” by playing out all the sub-files therein). EX1022, ¶24.

DISH also ignores Leaning’s teaching that “[i]n the case of rate switching, it is, if not actually essential, highly desirable that the sub-file boundaries are the same for each rate, so that the first sub-file received for a new rate *continues from the same point in the recording that the last sub-file at the old rate ended.*” EX1004, 12:16-18. Finally, DISH again assumes that T_P must be set to 10 seconds. As mentioned above, T_P could be set equal to or less than the duration of sub-files in which case there would be no content-based discontinuities because even if the buffer is cleared, the next sub-file in sequence would be requested and played back. EX1022, ¶24.

IV. THE CHALLENGED CLAIMS ARE UNPATENTABLE

A. Leaning Discloses “arranging” Sub-files (Claims 1 and 12)

DISH’s only argument against claim 1 (which it repeats for claim 12) is that Leaning does not teach “arranging” sub-files. POR, 23-26. However, the claims simply recite “arranging the [streamlets/individually-requestable portions] requested from the at least one server in order of ascending presentation time.” EX1001, claims 1, 12. Leaning teaches this. DISH admits that Leaning “discloses *requesting each sub-file individually* in a predefined sequence” and “decoding and *saving the sub-file in the buffer.*” POR, 24. DISH further admits that sub-files are then played out as they were arranged using their “file names which include a serial number indicative of their sequence in the original file,” which are in order of ascending presentation time. *Id.*, 24-25. This is all the claims require.

DISH argues Leaning’s sub-files are requested and arranged in a predefined sequence according to their file names. *Id.*, 25. But that is not prohibited by the claim language and, in fact, resembles an embodiment of the ’234 Patent. Indeed, the ’234 Patent teaches that its client is “configured to arrange the streamlets 304 in order of ascending playback time,” where “the streamlets 304 are numbered 0, 1, 2, 3, 4, etc.” or “identified with a unique filename.” EX1001, 13:34-41. This is shown in Figure 7 of the ’234 Patent, where streamlets 304 are requested and saved in the streamlet cache 710 (i.e., the buffer). The streamlets are named with numbers in

their filenames indicative of their sequence in the original file, e.g., 1, 2, 3, ... 14, 15. The streamlets are played back by the Viewer 708 according to the order of their filenames. *Id.*, Fig. 7. That is what Leaning teaches. In fact, Drew Major, the lead inventor, agreed that “if a client requests streamlets individually, one at a time, in order of ascending playout time” that is “covered by [the] invention.” EX1025, 65:8-14.

Moreover, DISH is wrong that “Leaning only disclos[es] its sub-files being stored and played back in the order in which they are received.” POR, 24. First, while storing sub-files in received order and naming them using “a simple fixed length sequence of numbers starting with zero[] is preferred,” Leaning explains that “*any* naming convention can be used provided the player program either contains (or is sent) the name of the first sub-file *and an algorithm enabling it to calculate succeeding ones*, or alternatively is sent a list of the filenames.” EX1004, 6:6-8. Second, Leaning also explains that to guard against playback running faster than the generation of sub-files for a live stream, “it may be arranged that the player program *checks each sub-file it receives* to ascertain whether it is marked with a later time than the previous one: if not the sub-file is discarded.” *Id.*, 21:30-22:3. Leaning also contemplates that its player “make[es] a note of the *play time* of the sub-file,” (*id.*, 5:15-17), which a POSITA would have understood ensures sub-files are written into the buffer in the correct play time order. EX1022, ¶¶25-27.

B. Leaning Teaches “to achieve continuous presentation” (Claim 12)

1. The Claim Language is Aspirational but Leaning Discloses It Even Under DISH’s Narrow Interpretation

As discussed above, the language “to achieve continuous presentation” is at most aspirational. Section II. It is a goal, and one of Leaning’s goals is to prevent disruption and achieve continuous playback. *E.g.*, EX1004, 12:16-18, 15:3-6; EX1022, ¶28. Importantly, DISH alleges that its MOVE player practices the “to achieve continuous presentation” limitation, but the MOVE player *never actually achieved continuous presentation*. Indeed, according to DISH’s own cited MOVE internal document, the MOVE player tracked and reported “stalls” and “blip[s]” that occurred during playback and other metrics such as the minimum, maximum, and average duration “for the content to resume playing after a stall.” EX2022, 29.

- **stallCount** – a stall is basically when any kind of a blip occurs during play
- **mindur** – minimum duration of all the stalls users experienced (in ms)
- **avgdur** – average duration of all the stalls users experienced
- **maxdur** – maximum duration of all the stalls users experienced
- **enddurstall** – 1 if the user exited the browser during a stall; 0 if not
- **seekcount** – number of times a user used the seek function
- **mindelay** – minimum duration for the content to resume playing after a stall (in ms)
- **avgdelay** – average duration for the content to resume playing after a stall
- **maxdelay** – max duration for the content to resume playing after a stall

Id. And consistent with its internal MOVE documents, DISH’s declarants conceded that the MOVE player experienced playback discontinuities. EX1025, 126:6-128:8;

EX1026, 54:7-55:14, 71:12-75:8; EX1027, 212:18-213:21; EX1023, 208:15-219:12; *see also* EX1028, 42:12-17, 70:9-16 (Mr. Major testifying in the Ogdon IPRs that freezing or buffering was possible—“it can happen”); EX1022, ¶¶28-32.

Regardless, even if DISH’s narrow interpretation applies and continuous presentation must actually be achieved, Leaning discloses it. The *only* argument DISH makes that Leaning does not achieve continuous presentation is its erroneous argument that Leaning requires clearing the buffer every rate switch. As discussed above in detail, Leaning does not require clearing the buffer. Section III.

2. The Petition Addresses the Limitation

Recognizing the weakness of its arguments, DISH tries to avoid the Petition’s merits. First, DISH argues that the Petition is “entirely silent” and fails to address the “to achieve continuous presentation” limitation because “the Petition merely references the analysis of independent Claim 1, which does not contain this limitation.” POR, 18. DISH’s logic is flawed. Simply because claim 1 does not recite this limitation does not mean the cited evidence does not disclose it. DISH knows this. Indeed, in DISH’s infringement charts in its district-court action against Petitioner, DISH did the exact same thing—for claim 12, it cross-referenced to its allegations for claim 1 without mentioning “continuous presentation.” EX1029.

DISH’s argument is also factually incorrect. For limitation 12[D], the Petition cites the analysis of limitation 1[D], which further cites the analysis of limitations

1[C][1]-1[C][2], all of which show that Leaning teaches the “to achieve continuous presentation” limitation. Petition, 49, 28-32; EX1022, ¶32. For example, the Petition argues that “Leaning also explains ‘that *interruption*’ of the video stream ‘can be *avoided* and therefore it is *preferable* to employ a criterion which *anticipates underflow and avoids it* in the majority of cases.’” *Id.*, 31. The Petition also quotes from Leaning’s claims 4, 5, and 6, each of which teach continuous presentation when rate switching by requesting for playback sub-files of a different rate *immediately following the last sub-file requested* and each do not mention clearing a buffer. *Id.*, 33-34. The Federal Circuit has approved of cross-referencing limitations that have different claim language where the referenced analysis covers the additional claim language. See *Voice Tech Corp. v. Unified Pats.*, 110 F.4th 1331, 1338 (Fed. Cir. 2024).

3. Petitioner is Not Raising New Theories

DISH’s next tactic is to argue that Petitioner is raising new theories (without even seeing Petitioner’s reply). POR, 4. Its argument appears to be that Petitioner cannot cite any portion of Leaning that was not cited in the Petition and doing so is necessarily raising a new theory. *Id.* But the *Ariosa* case cited by DISH does not support this. *Id.* In *Ariosa*, the petitioner relied on new portions of a reference “to make a *meaningfully distinct* contention” that was not presented in the Petition. *Ariosa Diagnostics v. Verinata Health*, 805 F.3d 1359, 1367 (Fed. Cir. 2015). Here,

Petitioner argues just as it did in the Petition that Leaning discloses continuous presentation because Leaning discloses uninterrupted playback and clearing the buffer is not required. Petition, 49, 28-32. DISH cannot cite any case where a party was not permitted to cite additional portions of a reference to support an argument raised in the petition and to rebut the patent owner's response.

Similarly, the *Yita* case is inapposite. POR, 22-23. In *Yita*, the Federal Circuit held that the Board may decline to consider a “***new*** theory of unpatentability ***raised for the first time.***” *Yita LLC v. MacNeil IP*, 69 F.4th 1356, 1366-67 (Fed. Cir. 2023). It further held that petitioners are always free to “respond to arguments” in the POR. *Id.* at 1365-66. DISH also cites *Intelligent Bio-Systems* (POR, 22), but that case also involved grounds “raised for the first time in [petitioner's] reply brief.” *Intelligent Bio-Sys. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369-70 (Fed. Cir. 2016). Finally, DISH cites to *NuVasive* (POR, 22), which concerned ***the Board's*** ability to rely on a “new ground.” *In re NuVasive, Inc.*, 841 F.3d 966, 972 (Fed. Cir. 2016).

Lastly, DISH advances a new construction of “to achieve continuous playback” to support its arguments. Petitioner is entitled to respond to the extent the Board adopts DISH's construction. *Axonics v. Medtronic*, 75 F.4th 1374, 1382 (Fed. Cir. 2023) (“[P]etitioner is entitled under the APA to respond to new claim construction arguments made by a patent owner ... after an institution decision.”);

ParkerVision, Inc. v. Vidal, 88 F.4th 969, 979 (Fed. Cir. 2023) (Board is “obligated” to afford petitioner opportunity to respond).

C. Leaning (With or Without Klemets) and Gamble Teach Requesting Sub-parts of Sub-files Over Different TCP Connections (Claim 16)

As an initial matter, the Petition argued that Leaning, or Leaning in view of Klemets, “teaches that at least one TCP connection over which the files are requested may comprise a plurality of TCP connections” and cites to the analyses for claim 3. Pet., 56. The Petition explained that “it was common for a client to establish multiple connections with multiple servers and request different files from different servers” and a POSITA would have been motivated to create such an arrangement. Pet., 37-38 (citing EX1012, 88, FIG. 4-11; EX1003, ¶¶83-85). And the Petition further explained that, alternatively, Klemets teaches such an arrangement with multiple TCP connections. Pet., 53-54 (citing EX1003, 116). Neither DISH nor Dr. Jeffay even address, let alone attempt to rebut, these arguments.

DISH admits that Leaning’s clients use “HTTP” to make requests from an “ordinary ‘web server’” (POR, 27; EX2141, ¶109), and DISH does not dispute that Leaning teaches requesting sub-files using at least one TCP connection (HTTP operates over TCP/IP) (Petition, 14, 20-23). DISH argues Leaning never mentions *multiple* TCP connections (POR, 27), but this was not Petitioner’s contention. Petitioner argued that Leaning in view of Gamble and the knowledge of a POSITA

renders this limitation obvious. The Petition set forth how a POSITA understood that “the TCP protocol allows for *multiple* connections, and utilizing *multiple* connections to request and retrieve different parts of a single file was well known, as exemplified by Gamble.” Petition, 58; EX1022, ¶33. Dr. Jeffay does not dispute that RANGE requests for sub-parts of files were well known. EX2141, ¶179. And Dr. Jeffay agreed that Leaning “discloses the use of HTTP 1.1” (EX1023, 83:12-14) and that HTTP 1.1 discloses maintaining multiple simultaneous persistent TCP connections for HTTP requests (*id.*, 86:18-21). *See also* EX1019, 41, 119-121 (HTTP RANGE requests); Petition, 57. DISH does not rebut these points.

Instead, DISH makes irrelevant arguments about Leaning’s use of a “file not found error” response to indicate the end of a stream. POR, 27-30. DISH speculates (incorrectly) that “[a] TCP error message also may satisfy the ‘If error message received, Stop’ condition in Leaning’s playback process,” which allegedly would cause interruptions and shows that Leaning does not use multiple TCP connections. POR, 28 (citing EX2141, ¶110). This is incorrect from a technical point of view because “file not found” errors are different from TCP connection errors. EX1022, ¶¶34-37. It is also irrelevant to whether the asserted Ground of Leaning plus Gamble in view of the knowledge of a POSITA teaches requesting sub-parts of sub-files over multiple TCP connections.

DISH also makes the conclusory assertion that “while Gamble discusses *transmitting* ‘segments’ of a larger file over multiple ‘connections,’ Gamble fails to disclose or suggest ‘*requesting*’ segments, files, or even sub-files over multiple TCP connections.” POR, 31 (emphases in original). But the Petition explains how a POSITA would have implemented these teachings using well-known HTTP RANGE *requests* for portions of sub-files. Petition, 57; EX1022, ¶38. DISH does not rebut this argument either.

D. Leaning (With or Without Klemets) Teaches “arranging” “using the virtual timeline”

As with claim 1, DISH’s entire argument for claim 9 hinges upon reading additional limitations into the word “arrange.” The only claim language at issue here is whether the client module is configured to “arrange the streamlets requested from the at least one server using the virtual timeline.” EX1001, claim 9.

DISH does not dispute that Leaning’s client module *requests* and *receives* a virtual timeline (e.g. “menu.htm” and/or index file e.g. “http:\\server1.com/mp3_bwv565_link.htm”). POR, 32-33. Nor does it dispute that Leaning’s client module requests, receives, and writes to the buffer each sequential sub-file in the proper order. POR, 32-34. DISH states that “all Leaning’s user terminal needs to do to request a sub-file is to add the sequential serial number to the URL received from the server ‘to produce a complete address for the sub-file – i.e. *www.server1.com/mp3_bwv565/000000.bin.*” POR, 34 (quoting EX1004, 5:4-6).

Thus, DISH effectively admits that Leaning’s client module requests (and arranges) each sub-file *using* the virtual timeline because it appends the next sub-file name to the URL from the virtual timeline. EX1022, ¶¶39-41.

DISH argues that Leaning does not “arrange” sub-files for the same reasons as claim 1—i.e., that each sub-file is requested and saved in the buffer in order so they cannot be “arranged.” POR, 32-37. This fails for the same reasons explained above. Section IV.A; EX1022, ¶41.

V. SECONDARY CONSIDERATIONS DO NOT OVERCOME OBVIOUSNESS

DISH argues secondary considerations only with respect to claims 12-20 and essentially abandons claims 1-11. POR, 37. And its arguments are essentially the same as those that were rejected in the Ogdon IPRs.

A. DISH Has Not Shown a Presumption of Nexus

To start, the ITC’s findings concerning different patents and different prior art (POR, 39-40) are not binding, or even relevant, as explained in the Petition (Petition, 58-61). Indeed, the Board noted in the Ogdon IPRs that “the ITC’s finding of a presumption of nexus was premised on the Respondents’ concession about an invalidating public use of the MOVE media player in 2005” but Petitioner made “no such concession.” *E.g.*, EX1030, 43 n.9 (citing ITC Initial Determination, 212-13). That applies equally here. EX1022, ¶44.

Further, DISH makes conclusory assertions that it is entitled to a presumption of nexus but provides no arguments or evidence. POR, 40-41; EX1022, ¶¶42-43 (Dr. Jeffay cites no exhibit charting any claim of the '234 Patent). Rather, DISH improperly incorporates by reference a claim chart allegedly from Dr. Jeffay, testimony from Dr. Jeffay, and the ITC decision. POR, 40-41 (citing EX2071, EX1009, EX2041, ¶¶193-209). This is improper and should be disregarded. 37 C.F.R. § 42.6(a)(3) (“Arguments must not be incorporated by reference from one document into another document.”); *Cisco Sys. v. C-Cation Techs.*, IPR2014-00454, Paper 12 at 10 (PTAB Aug. 29, 2014) (informative). DISH did the same thing in the Ogdon IPRs, which the Board found to be “the epitome of improper incorporation by reference.” EX1030, 44 n.11.

Even considering the improper material, DISH cannot show a presumption of nexus because Dr. Jeffay’s claim chart remarkably *only charts claim 1* of the '234 Patent, which does not contain the “to achieve continuous presentation” limitation. EX2071, 1 (“The following claim chart shows exemplary aspects ... *that practice the limitations of claim 1 of the '234 Patent.*”); EX2141, ¶¶191-93 (referencing an entirely different patent); EX1022, ¶¶44-45. Thus, both the claim chart and Dr. Jeffay’s testimony are irrelevant to any presumption of nexus *for claims 12-20*—the only claims DISH is arguing secondary considerations. POR, 37.

B. The Claims Lack a Critical Unclaimed Feature

DISH argues “the MOVE Media Player is essentially the claimed invention” and “no critical unclaimed features remain,” citing to equally conclusory statements by Dr. Jeffay. POR, 41. However, the MOVE player, which implemented DISH’s so-called “quantum streaming,” contains at least one critical unclaimed feature—requesting in parallel streamlets over multiple TCP connections. EX1022, ¶45.

DISH’s own cited internal MOVE document explains that “use of multiple TCP connections between the client and the origin web server” was the “*single innovation*” of MOVE’s quantum streaming that “solves or alleviates to the extent possible, the problems of reliability, efficiency, and latency.” EX2021, 6. More specifically, “[b]y requesting more than one streamlet at a time (‘parallel retrieval’) with each request on a different connection, *efficiency is raised to near maximum and latency is virtually eliminated.*” *Id.* The Board in the Ogdon IPRs agreed and found “using multiple TCP connections is a critical unclaimed feature of the MOVE Media Player.”² *E.g.*, EX1030, 45-46; *see also Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1375 (Fed. Cir. 2019) (“In light of the patentee’s own assertions

² Claim 16 of the ’234 Patent recites “a plurality of different TCP connections,” but DISH does not assert nexus based on any of claim 16’s limitations nor argue that claim 16 requires parallel retrieval of streamlets.

about the significance of the unclaimed features, no reasonable fact finder could conclude that these features are insignificant.”).

C. The Alleged Unique Characteristics were Already in the Prior Art

Absent a presumption of nexus, a patentee must link secondary considerations to “unique characteristics” of the claims. *Id.* at 1374, 1378. But “there must be a nexus to some aspect of the claim not already in the prior art.” *In re Huai-Hung Kao*, 639 F.3d 1057, 1069 (Fed. Cir. 2011). DISH again makes the conclusory assertion that “MOVE’s success is the result of the unique characteristics of the claimed invention” but does not explain what the unique characteristics are and improperly incorporates six paragraphs from Dr. Jeffay’s declaration. POR, 43; EX1022, ¶46. In the Ogdon IPRs, DISH argued that the “unique characteristics” were “actively adjusting ... video quality to the bandwidth available” and “delivering pieces of content progressively.” EX1031, 53-54 (internal quotations omitted). DISH should be held to those features here, which the Board found “were already in the prior art.” *E.g.*, EX1030, 48-49.

To the extent DISH is allowed to now assert that “continuous playback” is the “unique characteristic” (POR, 45-60), this too is already disclosed in the prior art by Leaning and other references. Sections II-III; EX1032, 1:51-54; EX1033, 5:47-53; EX1034, ¶45; EX1035, 270; EX1022, ¶46. In fact, Dr. Jeffay argued on behalf of Amazon in IPR2022-01430 that continuous playback was nothing new.

Specifically, Dr. Jeffay sought to invalidate a patent claiming priority to 2000 titled “Streaming media delivery system.” EX1036, ¶¶31-32. The patent claimed a system where “media data can be played out to the user *continuously* ‘despite data reception interruptions of less than a minute.’” *Id.*, ¶37. To invalidate it, Dr. Jeffay relied on references that taught “continuous playback.” For example, Dr. Jeffay relied on Carmel to argue: “A POSITA would have understood that the sequence of recorded media stream segments would be the same sequence used for *continuous playback*, otherwise the played stream would not maintain *the same temporal continuity* and would be subject to jumps that may disorient the user.” *Id.*, ¶163. Dr. Jeffay also relied on Feig, which disclosed using HTTP Get requests to stream “video ... from beginning to end in a *continuous* manner.” *Id.*, ¶74. Finally, Dr. Jeffay relied on Willebeek, which used “a standard HTTP Web server” and “TCP/IP” (*id.*, ¶76) to deliver “*continuous playback*” during “congestion or insufficient bandwidth availability.” EX1035, 270; *see also id.*, 269 (“continuous and smooth playback”).

D. DISH’s Arguments Regarding British Telecom Are Irrelevant and Factually Unreliable

DISH argues that British Telecom (“BT”) found “no records that the video aspects of Leaning were ever commercialized,” but that is irrelevant. POR, 45. First, DISH fails to cite any case supporting its argument that BT’s commercialization of

Leaning is relevant to its secondary-considerations arguments.³ The Board has held it is not. *Samsung Electronics Co. v. Lynk Labs.*, IPR2021-01299, Paper 32 at 19 (P.T.A.B. Mar. 7, 2023) (“[T]his argument is conclusory and unpersuasive”). Second, the BT declarant confirmed that at least the “audio teachings of the [’234 Patent] were commercialized.” EX2126, ¶10. The claims of the ’234 Patent recite “digital content” and do not differentiate between video and audio. Third, it appears BT did commercialize the video teachings of Leaning. The BT declarant testified that DISH instructed him to investigate only a single product called Voyager 2000. EX1037, 12:8-21:4. He did not investigate other products, including Fastnets. Fastnets was a BT product developed in the 2000s that “eliminates some of the worst problems of video streaming: slow start, picture freezing on network congestion, and poor video quality.” EX1038, 1. “The key feature of Fastnets is the *patented* use of SP (switching) frames to *switch between multiple video streams encoded at*

³ On May 27, 2025, DISH emailed the Board cases, but those cases were not cited in DISH’s POR. In any event, those cases concerned long felt but *unsolved* need, where *no one* (not just the prior artist) commercialized a product. Here, in addition to BT, Microsoft, DISH, Apple, and others commercialized products within a few years of Leaning’s publication date.

*different data rates.” Id., 2. “This can be done **without pause or glitch** in the displayed picture.” Id. “Faced with congestion that restricts throughput, the picture quality reduces but **the video continues – drastically reducing pausing and rebuffering.**” Id., 1. These are features of Leaning. EX1022, ¶¶47-48.*

E. Petitioner’s Obviousness Case is Strong

Ultimately, even considering DISH’s evidence of secondary considerations, DISH cannot overcome the strong prima facie case of obviousness shown through Leaning. *See Wyers v. Master Lock*, 616 F.3d 1231, 1246 (Fed. Cir. 2010).

VI. CONCLUSION

In view of the foregoing, Petitioner requests cancellation of claims 1-20.

DATED: June 9, 2025

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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), Petitioner certifies that this Petitioner's Reply contains 5,555 words as measured by the word processing software used to prepare the document, excluding the cover page, signature block, and portions exempted under 37 C.F.R. § 42.24(a).

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CERTIFICATE OF SERVICE

I hereby certify that on June 9, 2025 I caused a true and correct copy of the foregoing Petitioner's Reply to Patent Owner's Response to be served via email to counsel of record:

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