

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
Patent 11,991,234 B2

Before THU A. DANG, JOHN A. HUDALLA, and
JULIET MITCHELL DIRBA, *Administrative Patent Judges*.

HUDALLA, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

Aylo Freesites Ltd (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–20 (“the challenged claims”) of U.S. Patent No. 11,991,234 B2 (Ex. 1001, “the ’234 patent”). Petitioner filed a Declaration of Henry Houh, Ph.D. (Ex. 1003) with its Petition. DISH Technologies L.L.C. (“Patent Owner”) filed a Preliminary Response (Paper 9, “Prelim. Resp.”). With our authorization, Petitioner filed a Preliminary Reply (Paper 10, “Pet. Prelim. Reply”) and Patent Owner filed a Preliminary Sur-reply (Paper 11, “PO Prelim. Sur-reply”) limited to addressing Patent Owner’s arguments for discretionary denial under 35 U.S.C. § 325(d).

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2023). Under 35 U.S.C. § 314(a), we may not authorize an *inter partes* review unless the information in the petition and the preliminary response “shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” For the reasons that follow, we institute an *inter partes* review as to claims 1–20 of the ’234 patent on all grounds of unpatentability presented.

I. BACKGROUND

A. *Real Parties-in-Interest*

Petitioner identifies Aylo Freesites Ltd (f/k/a MG Freesites Ltd), Aylo Premium Ltd (f/k/a MG Premium Ltd), and Aylo Billing Limited (f/k/a MG Billing Limited) as the real parties-in-interest. Pet. 1. Patent Owner identifies DISH Technologies L.L.C. and Sling TV L.L.C., as well as EchoStar Corporation, as the real parties-in-interest. Paper 4, 2.

B. Related Matters

As required by 37 C.F.R. § 42.8(b)(2), the parties identify various related matters. Pet. 1–3; Paper 4, 2–6.

Of note, Petitioner concurrently filed another petition challenging claims 1–20 of the ’234 patent in IPR2024-00941. Pet. 2. Petitioner also filed a ranking of the two petitions in which it ranked the instant Petition first and the petition in IPR2024-00941 second. Paper 3; Paper 4, 5.

Furthermore, both parties reference an investigation of the International Trade Commission (ITC) under 19 U.S.C. § 1337 styled *In the Matter of Certain Fitness Devices, Streaming Components Thereof, and Systems Containing Same*, Inv. No. 337-TA-1265 (ITC instituted May 13, 2021) (“the ITC Investigation”). See Pet. 12–14, 58–59; Paper 4, 3. Petitioner states that iFIT, Inc. and Patent Owner were involved in the ITC Investigation. Pet. 12.

C. The ’234 Patent

The ’234 patent is directed to “adaptive-rate shifting of streaming content” over packet-switched networks such as the Internet. Ex. 1001, 1:35–38. The ’234 patent addresses a purported need to “utilize multiple connections between a source and destination, requesting varying bitrate streams depending upon network conditions.” *Id.* at 2:67–3:3.

Figure 1 of the '234 patent is reproduced below.

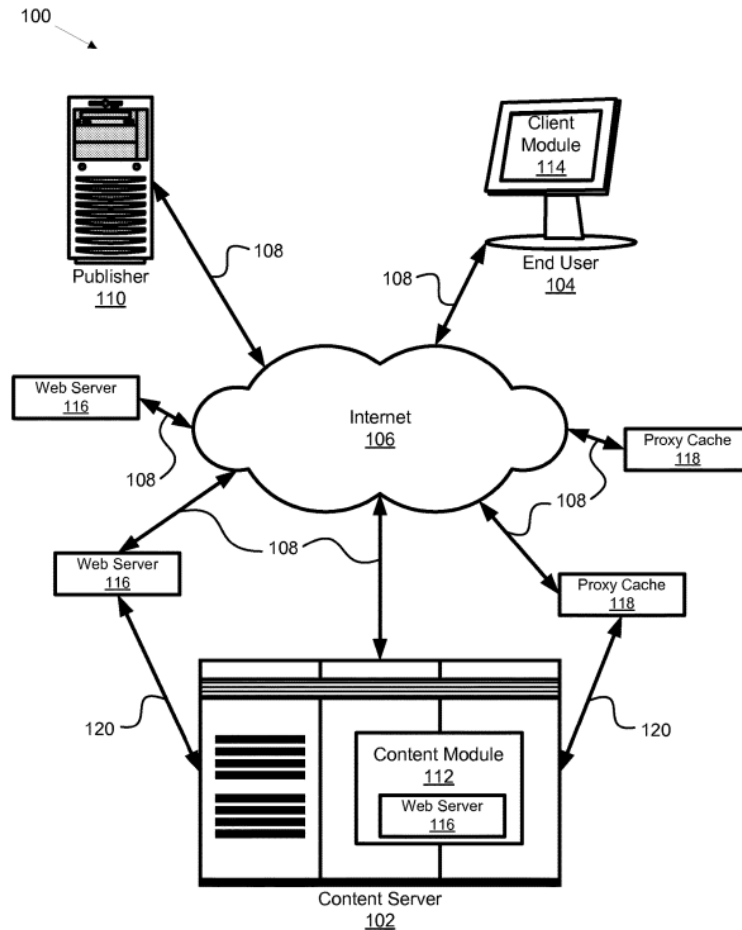


FIG. 1

Figure 1 depicts “system 100 for dynamic rate shifting of streaming content.” Ex. 1001, 6:36–38. System 100 includes content server 102, end user station 104, publisher 110, and web server 116. *Id.* at 6:39–55. Content may be transferred over Internet 106 to content server 102, and content from content server 102 may be replicated to other web servers 116. *Id.* at 6:59–61, 7:4–5.

Figure 2b of the '234 patent is reproduced below.

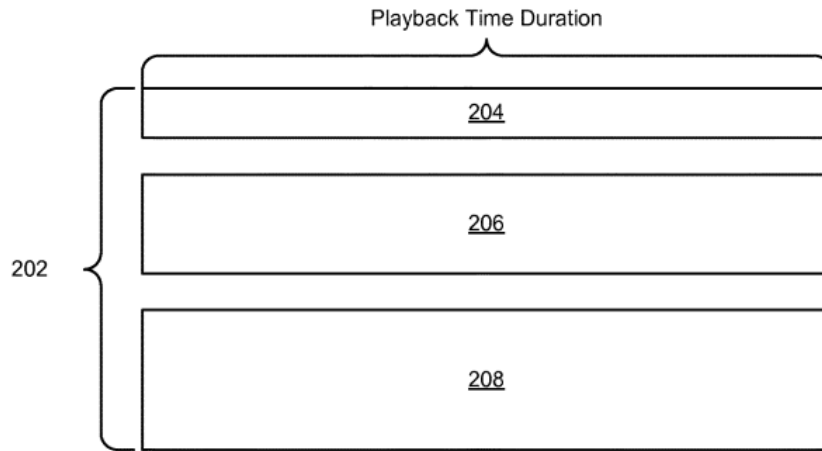


FIG. 2b

Figure 2b depicts “a plurality of streams 202 having varying degrees of quality and bandwidth.” Ex. 1001, 7:28–30. Streams 202 comprise low quality stream 204, medium quality stream 206, and high quality stream 208, and each of streams 204, 206, 208 is a copy of content file 200 encoded and compressed to varying bit rates. *Id.* at 7:30–34.

Figure 3a of the '234 patent is reproduced below.

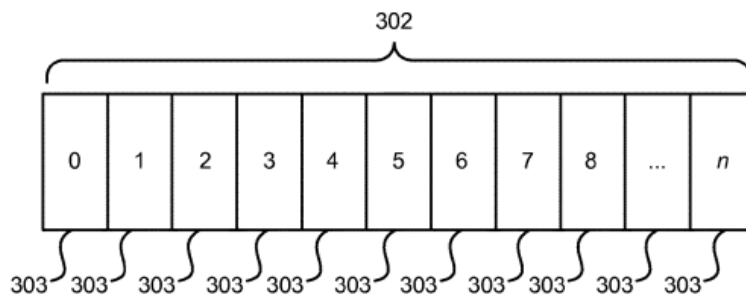


FIG. 3a

Figure 3a depicts “stream 302 divided into a plurality of source streamlets 303,” which are “any sized portion[s] of the content file 200.” Ex. 1001, 7:40–43.

Figure 3b of the '234 patent is reproduced below.

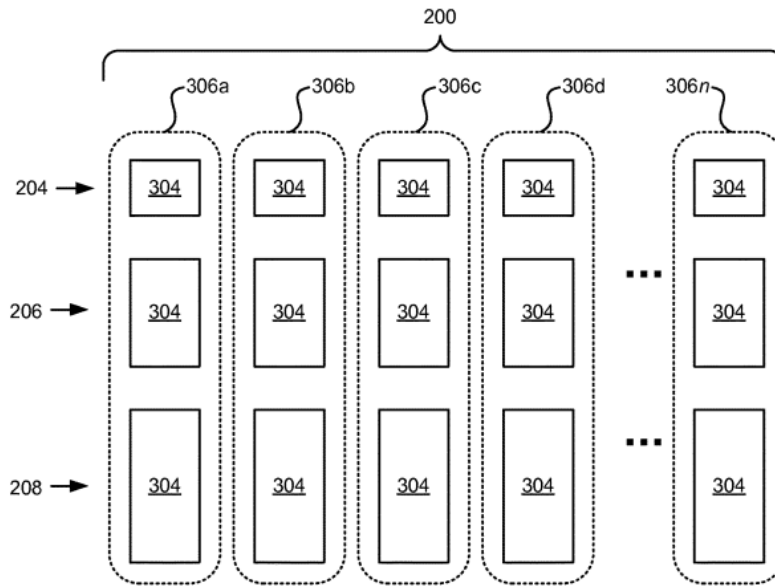


FIG. 3b

Figure 3b depicts “sets 306 of streamlets.” Ex. 1001, 7:58–59. A “set” is a “group of streamlets having identical time indices and durations but varying bitrates.” *Id.* at 7:60–62. For example, “set 306a includes encoded streamlets 304 having low, medium, and high 204, 206, 208 bitrates.” *Id.* at 7:64–65.

The application that led to the '234 patent was filed on December 21, 2022, and claims priority to, *inter alia*, a provisional application that was filed on April 30, 2004. Ex. 1001, codes (22), (60); *see also* Pet. 8, 11 (noting same). Petitioner assumes a priority date of April 30, 2004, for purposes of this proceeding (Pet. 11), so we apply that date for determining whether the asserted references qualify as prior art.

D. Illustrative Claim

Of the challenged claims, claims 1 and 12 are independent. Claims 2–11 depend directly or indirectly from claim 1, and claims 13–20 depend from claim 12. Claim 1 is illustrative of the challenged claims and recites:

1. An end user station for adaptive-rate content streaming of digital content comprising:

a client module configured to be connected to a network having at least one server and further configured to request digital content over the network via at least one transmission control protocol (TCP) connection, wherein at least two different copies of the digital content are each encoded at different bit rates and stored on the at least one server, wherein each copy of the digital content is divided into a plurality of streamlets, each of the plurality of streamlets of a corresponding copy comprising a different portion of the digital content during presentation, wherein corresponding streamlets across the at least two different copies comprise the same corresponding portions of the digital content during presentation, and wherein the client module streams the digital content by:

requesting a first streamlet from the at least one server;

automatically requesting from the at least one server subsequent portions of the digital content by requesting for each subsequent portion one of the streamlets from the different copies of the digital content dependent upon successive determinations by the client module to change a currently requested bit rate to a higher or lower bit rate, the automatically requesting including repeatedly generating a factor indicative of a current ability to receive digital content at a rate sufficient for presenting the digital content as the digital content is received;

making the successive determinations to change the digital content bit rate based on the factor using the streamlets of one of the different copies of the digital content having the highest bit rate determined receivable for presentation so that the client module selects a higher bit rate one of the different copies when the factor is greater than a first threshold and

selects a lower bit rate one of the different copies when the factor is less than a second threshold; and

arranging the streamlets requested from the at least one server in order of ascending presentation time for output to a presentation device.

Ex. 1001, 18:30–19:3.

E. Prior Art

Petitioner relies on the following prior art:

International Patent Publication No. WO 02/49343 A1, filed Dec. 14, 2001, published June 20, 2002 (Ex. 1004, “Leaning”);

U.S. Patent Application Publication No. 2003/0236906 A1, filed June 24, 2002, published Dec. 25, 2003 (Ex. 1006, “Klemets”);¹ and

U.S. Patent Application Publication No. 2004/0093420 A1, filed Nov. 13, 2002, published May 13, 2004 (Ex. 1020, “Gamble”).

F. The Asserted Grounds

Petitioner challenges claims 1–20 of the ’234 patent based on the following grounds (Pet. 4):

Claims Challenged	35 U.S.C. §	References
1–15, 17–20	103(a) ²	Leaning

¹ Petitioner mistakenly identifies this reference as “Klements” throughout the Petition.

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102 and 103. Because the ’234 patent claims priority to an application filed before March 16, 2013 (the effective date of the relevant amendments), we assume that the pre-AIA

Claims Challenged	35 U.S.C. §	References
1–15, 17–20	103(a)	Leaning, Klemets
16	103(a)	Leaning, Gamble
16	103(a)	Leaning, Klemets, Gamble

II. ANALYSIS

We now consider Petitioner’s asserted grounds and Patent Owner’s arguments to determine whether Petitioner has met the “reasonable likelihood” standard for institution under 35 U.S.C. § 314(a).

A. *Legal Standards*

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007).

The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations.³ *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

versions of §§ 102 and 103 apply. However, our decision would be the same under the current version of the statutes.

³ Although Petitioner references certain findings of the Administrative Law Judge in the ITC Investigation regarding secondary considerations of nonobviousness for a patent related to the ’234 patent (*see* Pet. 58–60),

We also recognize that prior art references must be “considered together with the knowledge of one of ordinary skill in the pertinent art.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (citing *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)).

B. Level of Ordinary Skill in the Art

Citing testimony from Dr. Houh, Petitioner contends a person of ordinary skill in the art “would have had at least a B.S. degree in computer science or electrical engineering (or comparable degree) and two years of experience in networking or streaming media, or a M.S. in computer science or electrical engineering (or comparable degree).” Pet. 12 (citing Ex. 1003 ¶ 45). Patent Owner “disputes Petitioner’s definition,” but does not explain what it disputes. Prelim. Resp. 5. Notwithstanding, Patent Owner asserts that “resolution of such dispute is not necessary for the Board to make a determination regarding institution.” *Id.*

For purposes of this Decision, we adopt Petitioner’s definition of the level of ordinary skill in the art. On the present record, we are satisfied that this definition of the level of skill is consistent with the teachings of the ’234 patent and the asserted prior art.

C. Claim Interpretation

In an *inter partes* review, we construe each claim using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with

Patent Owner does not present evidence of secondary considerations of nonobviousness for the challenged claims of the ’234 patent at this juncture.

the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b). Accordingly, our claim construction standard is the same as that of a district court. *See id.* Under the standard applied by district courts, claim terms are generally given their plain and ordinary meaning, as would have been understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). “There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

Although Petitioner states that “no constructions are necessary,” Petitioner proposes that the term “‘virtual timeline’ should be construed as ‘a playlist of entire content files.’” Pet. 12–13 (citing Ex. 1003 ¶¶ 43–46). Petitioner also references certain of Patent Owner’s claim construction positions from the ITC Investigation and various constructions made by the Administrative Law Judge (ALJ) in the ITC Investigation. *Id.* at 12–14. Patent Owner does not propose any terms for construction. Prelim. Resp. 4.

For purposes of this Decision, we determine that no aspects of the challenged claims require explicit construction. *See, e.g., Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Obviousness Ground Based on Leaning

Petitioner contends the subject matter of claims 1–15 and 17–20 would have been obvious over Leaning. Pet. 19–52. Patent Owner does not dispute the merits Petitioner’s contentions at this time, and instead relies on its arguments for discretionary denial, which are discussed below. Prelim. Resp. 4–18; *see infra* § II.G.

1. Leaning

Leaning is an international patent application publication directed to “the delivery, over a telecommunications link, of digitally coded material for presentation to a user.” Ex. 1004, 1:3–4. Figures 1 of Leaning is reproduced below.

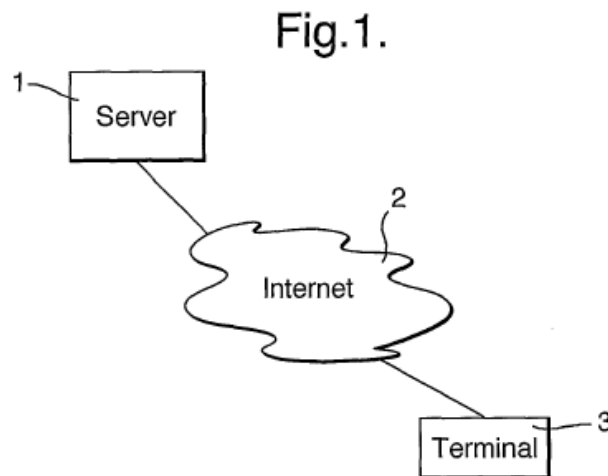


Figure 1 depicts a system where server 1 is connected via internet 2 to terminal 3. *Id.* at 2:15–16. Server 1 stores data files, and in response to a request for delivery of a data file from user terminal 3, server 1 transmits the file to terminal 3 via internet 2. *Id.* at 2:16–18. Although the system shown in Figure 1 delivers audio signals (for example, recorded music or speech),

Leaning states that its system may also be used to deliver video signals. *Id.* at 2:5–9; *see also, e.g., id.* at code (57), 16:6–10.

Figure 2 of Leaning is reproduced below.

Fig.2.

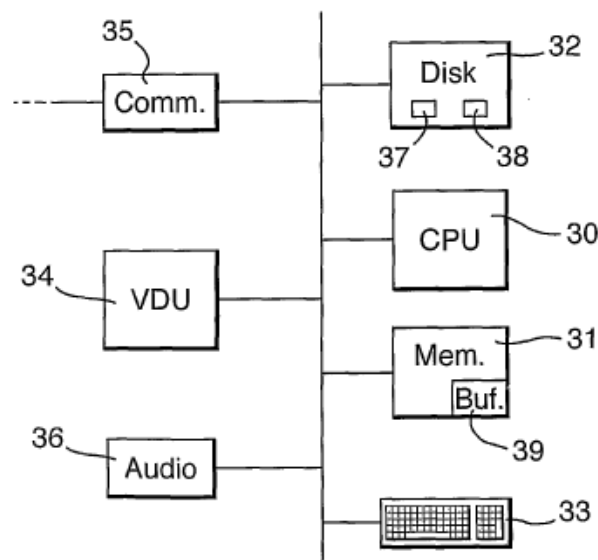


Figure 2 depicts terminal 3, which can take the form of a desktop computer, handheld computer, or mobile telephone. Ex. 1004, 4:4–7. Terminal 3 includes central processor 30, memory 31, disk store 32, keyboard 33, video display 34, communications interface 35, and interface 36. *Id.* at 4:7–9. Interface 36 can take the form of a sound card and/or a video card. *Id.* at 4:7–10. Memory 31 may include buffer 39. *Id.* at 4:15–16. Disk store 32 includes programs that may be retrieved into memory 31 for execution by processor 30. *Id.* at 4:10–11. For example, such programs may include communications program 37 for call-up and display of hypertext markup language (HTML) pages and player program 38 for playing audio and/or video files. *Id.* at 4:11–15, 16:6–10.

Leaning contemplates that server 1 may store two or more versions of a recording at different compression rates (e.g., recordings at compressions

corresponding to continuous data rates of 8, 16, 24, and 32 kbit/s) such that player program 38 may switch automatically among them. Ex. 1004, 6:13–15. In this scenario, the recording is encoded several times at different rates and partitioned into sub-files. *Id.* at 6:21–23. The sub-files can be loaded onto server 1 in separate directories corresponding to each different rate, e.g., with “008k” and “024k” in the directory name indicating a rate of 8 kbit/s or 24 kbit/s, respectively. *Id.* at 6:23–26. An index file can be used to list the data rates that are available. *Id.* at 6:27–28. Player program 38 can trigger rate changes based on buffer status, the measured data rate, and the current (selected) data rate, for example. *Id.* at 8:6–26.

Petitioner notes that Leaning was published on June 20, 2002, and contends that Leaning qualifies as prior art under 35 U.S.C. § 102(b). Pet. 15. Patent Owner does not dispute the prior art status of Leaning at this juncture. For purposes of this Decision, we determine that Leaning qualifies as prior art under 35 U.S.C. § 102(b) because Leaning’s publication date of June 20, 2002, is more than one year before the earliest effective filing date of the challenged claims, which is April 30, 2004. Ex. 1001, code (60); Ex. 1004, code (43).

2. *Claim 1*

a. Preamble (1[Pre])

The preamble of claim 1 recites “[a]n end user station for adaptive-rate content streaming of digital content.” Ex. 1001, 18:30–31. Petitioner cites Leaning’s teaching of delivering digitally coded audio or video material over a telecommunications link from a sever to a terminal. Pet. 19–20 (citing Ex. 1004, code (57), 1:3–29). For “adaptive-rate content,”

Petitioner cites Leaning’s teachings of the server storing recordings at different compression rates such that the user terminal’s “player program” is able to switch automatically between them. *Id.* at 20 (citing Ex. 1004, 6:13–15, 16:6–10, claim 1, Fig. 1).

Patent Owner does not dispute Petitioner’s analysis of the preamble at this time. Based on the present record, we are persuaded preliminarily that Leaning teaches the preamble.⁴ *See, e.g.*, Ex. 1004, code (57), 1:3–29, 6:13–15, 16:6–10, claim 1, Fig. 1.

b. Limitation 1[A][1]

Claim 1 further recites “a client module configured to be connected to a network having at least one server and further configured to request digital content over the network via at least one transmission control protocol (TCP) connection.” Ex. 1001, 18:32–35. Petitioner maps the recited “client module” to Leaning’s “player program” on user terminal 3, which “provides the functionality necessary for the playing of audio files.” Pet. 20 (citing Ex. 1004, 4:4–15, 5:1–14). Petitioner notes that the player program is connected to internet 2 (i.e., a “network”) and can request media files by constructing a request message for transmission to server 1 via internet 2. *Id.* (citing Ex. 1004, 5:8–14, Fig. 1). Petitioner contends that the requests are sent via a TCP connection based on Leaning’s disclosure that the player program makes requests using HTTP messages. *Id.* at 20–21 (citing

⁴ Because Petitioner shows sufficiently for purposes of institution that Leaning teaches the subject matter of the preamble, we need not determine whether the preamble is limiting. *See Realtime Data*, 912 F.3d at 1375.

Ex. 1004, 2:9–10, 2:15–16, 2:31–32⁵); *see also id.* at 21–23 (citing, *inter alia*, Ex. 1003 ¶¶ 60–63) (discussing the background knowledge that an ordinarily skilled artisan would have possessed regarding HTTP and TCP).

Petitioner further contends that,

to the extent Leaning does not explicitly disclose at least one TCP connection, a[n ordinarily skilled artisan] would have been motivated to modify Leaning such that Leaning’s HTTP requests to an ordinary webserver were made via at least one transmission control protocol (TCP) connection because essentially all such HTTP requests were made via at least one TCP connection at the time and such a modification would have yielded the predictable result of requesting and receiving desired files with the benefit of TCP’s built-in error checking capabilities to ensure every necessary file is received and put in order.

Id. at 22–23 (citing Ex. 1003 ¶ 63).

At this juncture, Patent Owner does not dispute Petitioner’s analysis of this limitation. Based on the present record, Petitioner has shown sufficiently that Leaning’s player program on the user terminal teaches the “client module” that is connected to a network and is capable of requesting digital content from a server on the network. *See, e.g.*, Ex. 1004, 4:4–15, 5:1–14, Fig. 1. We also are persuaded preliminarily that an ordinarily skilled artisan would have known Leaning to teach the use of a TCP connection based on Leaning’s disclosures regarding the use of HTTP messages. *See, e.g.*, Ex. 1003 ¶¶ 60–63; Ex. 1004, 2:9–10, 2:15–16, 2:31–32.

⁵ Petitioner mistakenly cites lines 29–30, but the context makes clear that Petitioner intended to cite lines 31–32.

c. Limitation 1[A][2]

Claim 1 further recites that “at least two different copies of the digital content are each encoded at different bit rates and stored on the at least one server.” Ex. 1001, 18:36–38. Petitioner cites Leaning’s teaching of the server storing “**two or more versions** of the recording, recorded at **different compression rates** (for example . . . **8, 16, 24 and 32 kbit/s respectively**).” Pet. 23 (quoting Ex. 1004, 6:13–26) (citing Ex. 1004, 9:3–7, 16:6–12). At this juncture, Patent Owner does not dispute Petitioner’s analysis. Based on the present record, we are persuaded preliminarily that Leaning teaches this limitation.

d. Limitation 1[A][3]

Claim 1 further recites that “each copy of the digital content is divided into a plurality of streamlets, each of the plurality of streamlets of a corresponding copy comprising a different portion of the digital content during presentation.” Ex. 1001, 18:38–42. Petitioner cites Leaning’s teachings of partitioning source files into a sequence of sub-files (i.e., “streamlets”) before storage on the server. Pet. 24 (citing Ex. 1004, code (57), 3:5–6, 6:21–22). Petitioner also cites Leaning’s disclosures that “a set of files represent[s] **successive temporal portions** of the said material” and “partitioning the material into a plurality of discrete files **each representing successive temporal portions of the said material**.” *Id.* (quoting Ex. 1004, 1:3–29). Petitioner additionally cites Leaning’s teaching that each sub-file corresponds to a fixed playing time (e.g., 4 seconds). *Id.* at 24–26 (citing Ex. 1004, 3:1–22, 5:4–6:8, 6:21–7:7, 12:8–34, 13:23–14:19, p. 7 (table)).

At this juncture, Patent Owner does not dispute Petitioner's analysis. Based on the present record, we are persuaded preliminarily that Leaning teaches this limitation.

e. Limitation 1[A][4]

Claim 1 further recites that “corresponding streamlets across the at least two different copies comprise the same corresponding portions of the digital content during presentation.” Ex. 1001, 18:42–45. Petitioner cites Leaning's teaching that each sub-file corresponds “**to a fixed playing time, perhaps four seconds,**” and that corresponding sets of sub-files encoded at different bitrates are stored in directories. Pet. 26 (citing Ex. 1004, 1:3–29, 3:5–18, 5:4–6:8, 6:21–7:2). Petitioner notes that, in the example shown in Leaning, a recording of Bach with a playing time of 9 minutes has corresponding sets of 135 sub-files encoded at each of the different bitrates. *Id.* Petitioner also cites Leaning's disclosure 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.” *Id.* at 27 (quoting Ex. 1004, 12:8–12).

At this juncture, Patent Owner does not dispute Petitioner's analysis. Based on the present record, we are persuaded preliminarily that Leaning teaches this limitation.

f. Limitation 1[A][5]

Claim 1 further recites that “the client module streams the digital content.” Ex. 1001, 18:45–46. Petitioner contends that Leaning's player program (i.e., the “client module”) on terminal 3 streams media files.

Pet. 27 (citing Ex. 1004, 4:13–15). At this juncture, Patent Owner does not dispute Petitioner’s analysis. Based on the present record, we are persuaded preliminarily that Leaning teaches this limitation.

g. Limitation 1[B]

Claim 1 further recites that “requesting a first streamlet from the at least one server.” Ex. 1001, 18:47. Petitioner cites Leaning’s teachings that the “‘player program, having received the URL [uniform resource locator for server 1], adds to this filename of **the first sub-file**, to produce a complete address for the sub-file – i.e. www.**server1**.com/mp3_bwv565/**000000.bin**’ and ‘constructs a request message’ for first sub-file 000000.bin ‘and transmits it to the server 1.’” Pet. 27–28 (alteration added) (quoting Ex. 1004, 5:4–9). In this scenario, Petitioner maps the recited “first streamlet” to the sub-file “000000.bin.” *See id.* At this juncture, Patent Owner does not dispute Petitioner’s analysis. Based on the present record, we are persuaded preliminarily that Leaning teaches this limitation.

h. Limitation 1[C][1]

Claim 1 further recites

automatically requesting from the at least one server subsequent portions of the digital content by requesting for each subsequent portion one of the streamlets from the different copies of the digital content dependent upon successive determinations by the client module to change a currently requested bit rate to a higher or lower bit rate.

Ex. 1001, 18:47–54. Building on its analysis from limitation 1[B], Petitioner cites Leaning’s teachings that the “player program increments the filename to 000001.bin and requests, receives, decodes and stores this

second subfile” and then “repeats this process.” Pet. 28 (citing Ex. 1004, 5:23–24). For “successive determinations . . . to change a currently requested bit rate,” Petitioner cites Leaning’s teachings of shifting the bitrate up or down based on, *inter alia*, buffer status, current rate, and measured rate. *Id.* at 28–29 (citing Ex. 1004, 8:17–26). Petitioner also notes Leaning’s teachings of the player program effecting rate changes by “changing the relevant part of the sub-file address for example, changing ‘008k’ to ‘024k’ to increase the data rate from 8 to 24 kbit/s and changing the current rate parameter to match” whereby “the next request to the server becomes a request for the higher (or lower) rate, and the sub-file from the new directory is received, decoded and entered into the buffer.” *Id.* at 29 (quoting Ex. 1004, 9:3–7, 9:9–11) (citing Ex. 1004, claims 4–6, 11, 12).

At this juncture, Patent Owner does not dispute Petitioner’s analysis. Based on the present record, we are persuaded preliminarily that Leaning teaches this limitation.

i. Limitation 1[C][2]

Claim 1 further recites “repeatedly generating a factor indicative of a current ability to receive digital content at a rate sufficient for presenting the digital content as the digital content is received.” Ex. 1001, 18:39–41. Petitioner contends that Leaning’s player program “repeatedly generates a ‘measured rate’ factor (the measured actual data rate being received from the server, averaged over a period of time) and compares it to a ‘current rate’ (the bitrate of the current sub-file being requested) to determine if the current stream is sustainable.” Pet. 30 (citing Ex. 1004, 8:7–26, claims 5, 6). Petitioner also contends that Leaning’s player program repeatedly generates

a “Buffer Low Percentage,” which is “the percentage of time that the buffer contents represent less than 25% of the playout time (i.e. the buffer is getting close to being empty).” *Id.* at 30–31 (citing Ex. 1004, 8:27–28). Petitioner argues that the measured rate and Buffer Low Percentage are indicators of whether the current streaming rate is sustainable. *Id.* at 31 (citing Ex. 1004, 8:11–11:1, 15:3–8).

At this juncture, Patent Owner does not dispute Petitioner’s analysis. Based on the present record, we are persuaded preliminarily that Leaning’s player program repeatedly generates a “measured rate” and “Buffer Low Percentage,” both of which indicate the ability of the player program to receive digital content at a sufficient rate. *See, e.g.*, Ex. 1004, 8:7–11:1, 15:3–8, claims 5, 6.

j. Limitation 1[D]

Claim 1 further recites

making the successive determinations to change the digital content bit rate based on the factor using the streamlets of one of the different copies of the digital content having the highest bit rate determined receivable for presentation so that the client module selects a higher bit rate one of the different copies when the factor is greater than a first threshold and selects a lower bit rate one of the different copies when the factor is less than a second threshold.

Ex. 1001, 18:59–67. Petitioner cites the same analysis from previous limitations and contends that “Leaning describes making successive determinations to change the digital content bit rate of requested sequential sub-files based on the factor (*e.g.*, ‘measured rate’).” Pet. 32. In particular, Petitioner cites the flowchart at pages 9–11 of Leaning and contends that

Leaning further describes requesting, or using, the streamlets (sub-files) from one of the different copies having the highest bit rate determined receivable for presentation where the client module (*i.e.* player program) selects a higher bit rate of one of the different copies when the factor (*e.g.*, measured rate) is greater than a first threshold (*e.g.*, next highest rate) for a period of time, then shifts up until no longer true—meaning shift up to highest version possible—and selects a lower bit rate one of the different copies when the factor (*e.g.*, measured rate) is less than a second threshold (*e.g.*, current rate).

Pet. 32 (citing Ex. 1004, 9–11 (flowchart)); *see also id.* at 32–34 (citing Ex. 1003 ¶¶ 77–79; Ex. 1004, 8:17–26, claims 4–6) (further analysis of the same).

At this juncture, Patent Owner does not dispute Petitioner’s analysis. As discussed above, we are persuaded preliminarily that Leaning teaches the recited “successive determinations” about selecting sub-files at a higher or lower bitrate and the recited “factor” (*e.g.*, the measured rate) indicative of sufficient content reception rate. *See supra* §§ II.D.2.h, II.D.2.i. We also are persuaded preliminarily that Leaning’s next highest rate teaches the recited “first threshold” and Leaning’s current rate teaches the recited “second threshold.” *See, e.g.*, Ex. 1003 ¶¶ 77–79; Ex. 1004, 8:17–26, 9–11 (flowchart), claims 4–6.

k. Limitation 1[E]

Claim 1 further recites “arranging the streamlets requested from the at least one server in order of ascending presentation time for output to a presentation device.” Ex. 1001, 19:1–3. Petitioner contends that “Leaning describes arranging the streamlets (sub-files) requested from the at least one server (server 1) in order of ascending presentation time” because “sub-files

are requested, received, decoded, and written to the buffer one after the other.” Pet. 34. Referring to the flowchart on page 10 of Leaning, Petitioner explains that, “[o]nce a sub-file is written to the buffer, the current sub-file number is increased (J2) and the next sub-file is requested (J1) sequentially in the order of ascending playback time (firstly sub-file 000000.bin, then sub-file 000001.bin, etc.).” *Id.* at 35 (citing Ex. 1004, 10 (flowchart)). Thus, according to Petitioner, “the buffer will subsequently store the decoded sub-files in the corresponding order for sequential playback (in order of ascending playback time) to enable proper sequential playback of the video or audio file.” *Id.* (citing Ex. 1004, 1:13–28, 4:4–21, 5:23–6:2, 12:16–18, 14:6–11, claim 1). Regarding the recited “presentation device,” Petitioner cites Leaning’s disclosure of video display 34 and sound card 36 at the user terminal. Pet. 35 (citing Ex. 1004, 4:7–9).

At this juncture, Patent Owner does not dispute Petitioner’s analysis. We are persuaded preliminarily that Leaning teaches arranging sub-files in presentation order because sub-files are requested, received, decoded, and written to a buffer sequentially for output. *See, e.g.*, Ex. 1004, 1:13–28, 4:4–21, 5:23–6:2, 12:16–18, 14:6–11, p. 10 (flowchart), claim 1. We also are persuaded preliminarily that Leaning’s video display and sound card at the user terminal teach the recited “presentation device.” *See, e.g., id.* at 4:7–9.

1. Conclusion Regarding Claim 1

Petitioner has shown sufficiently at this juncture that Leaning teaches all limitations of claim 1. Based on the present record, we determine that Petitioner has established a reasonable likelihood that it would prevail in

showing that the subject matter of claim 1 would have been obvious over Leaning.

3. *Claims 2–11*

We have reviewed Petitioner’s analysis for claims 2–11, which depend directly or indirectly from claim 1. Pet. 36–45. Patent Owner does not dispute the merits Petitioner’s contentions at this time. We are persuaded preliminarily by Petitioner’s analysis for claims 2–11. Based on the present record, Petitioner has established a reasonable likelihood that it would prevail in showing that the subject matter of claims 2–11 would have been obvious over Leaning.

4. *Claims 12–15 and 17–20*

Petitioner’s analysis for independent claim 12 is similar to that of claim 1. Pet. 45–49. Further, we have reviewed Petitioner’s analysis for claims 13–15 and 17–20, which each depend from claim 12.⁶ Pet. 50–52. Patent Owner does not dispute the merits Petitioner’s contentions at this time. We are persuaded preliminarily by Petitioner’s analysis for claims 12–15 and 17–20. Based on the present record, Petitioner has established a reasonable likelihood that it would prevail in showing that the subject matter of claims 12–15 and 17–20 would have been obvious over Leaning.

⁶ We understand Petitioner to contend that the limitations of claim 19 would have been obvious in view of Leaning, given the Petition’s statements that an ordinarily skilled artisan “would have been motivated to configure Leaning’s clients to connect to a cache server.” See Pet. 51–52.

E. Obviousness Grounds Based on Leaning and Klemets

Petitioner contends the subject matter of claims 1–15 and 17–20 would have been obvious over the combination Leaning and Klemets. Pet. 52–55. Patent Owner does not dispute the merits Petitioner’s contentions at this time, and instead relies on its arguments for discretionary denial, which are discussed below. Prelim. Resp. 4–18; *see infra* § II.G.

1. Klemets

Klemets is a U.S. patent application publication directed to “client-side caching of streaming media content.” Ex. 1006 ¶ 1. Klemets teaches that a “piece of media content” (e.g., audio and/or video content for a song) may include multiple streams encoded at a particular bit rate. *Id.* ¶¶ 36, 38. This allows for “selection of different combinations of these streams for playback by [a] media player” based on, for example, user preferences, available network bandwidth, and a desired bit rate for particular content. *Id.* ¶ 39. Streaming media communications can occur using a version of the HTTP using TCP data delivery. *Id.* ¶¶ 30, 99.

Petitioner contends that Klemets qualifies prior art under 35 U.S.C. § 102(e) based on its filing date. Pet. 17. Patent Owner does not contest the prior art status of Klemets at this juncture.

On the present record, we have no evidence of an invention date other than the earliest possible effective filing date of the challenged claims. For purposes of this Decision, we determine that Klemets qualifies as prior art under 35 U.S.C. § 102(e) because Klemets’s filing date of June 24, 2002, is before the earliest effective filing date of the challenged claims, which is April 30, 2004. Ex. 1001, code (60); Ex. 1006, code (22).

2. *Discussion*

We include the following discussion even though we will be instituting on all challenged claims and all grounds in the Petition. Building on its contentions in the Leaning ground, Petitioner cites Klemets “[t]o the extent it is argued that Leaning does not explicitly disclose or suggest making HTTP requests via at least one transmission control protocol (TCP) connection.” Pet. 52–53. In particular, Petitioner cites Klemets’s teaching of “requesting and receiving streaming media from servers via ‘HTTP . . . using TCP (Transmission Control Protocol) data delivery.’” *Id.* at 53 (quoting Ex. 1006⁷ ¶ 99). Petitioner contends that an ordinarily skilled artisan

would have been motivated to modify Leaning such that Leaning’s HTTP requests to an ordinary webserver were made via at least one transmission control protocol (TCP) connection, as taught by [Klemets], because essentially all such HTTP requests were made via at least one TCP connection at the time and because, beneficially, TCP connections were not typically blocked by firewalls.

Id. (citing Ex. 1003 ¶ 115). Petitioner also contends an ordinarily skilled artisan reasonably would have expected success in making this modification “because essentially all HTTP runs over TPC connections.” *Id.*

At this juncture, Patent Owner does not dispute Petitioner’s analysis. We are persuaded preliminarily that an ordinarily skilled artisan would have implemented Leaning’s HTTP requests using a TCP connection based on Klemets’s teachings, and reasonably would have expected success in doing so. *See, e.g.*, Ex. 1003 ¶ 115; Ex. 1006 ¶ 99.

⁷ Petitioner mistakenly cites to Exhibit 1005, but the context makes clear that Petitioner intended to cite Exhibit 1006.

F. Obviousness Grounds Based on “Leaning (with or without [Klemets]) and Gamble”

Petitioner contends the subject matter of claim 16 would have been obvious over the combinations of (1) Leaning and Gamble; or (2) Leaning, Klemets, and Gamble. Pet. 56–58. Patent Owner does not dispute the merits Petitioner’s contentions at this time, and instead relies on its arguments for discretionary denial, which are discussed below. Prelim. Resp. 4–18; *see infra* § II.G.

1. Gamble

Gamble is a U.S. patent application publication directed to “transferring large data files over parallel connections.” Ex. 1020 ¶ 1. In particular, Gamble teaches the use of multiple parallel connections for transferring data from a server to a client on the Internet using Transfer Control Protocol/Internet Protocol (TCP/IP) protocol layers. *Id.* ¶¶ 8, 34, 50. The TCP layer sequences and reorders data packets and ensures that packets are received at the client. *Id.* ¶¶ 36–37. Standard TCP congestion protocols can be implemented on a per-connection basis for the client. *Id.* ¶ 52.

Petitioner contends that Gamble qualifies prior art under 35 U.S.C. § 102(e) based on its filing date. Pet. 17. Patent Owner does not contest the prior art status of Gamble at this juncture.

On the present record, we have no evidence of an invention date other than the earliest possible effective filing date of the challenged claims. For purposes of this Decision, we determine that Gamble qualifies as prior art under 35 U.S.C. § 102(e) because Gamble’s filing date of November 13, 2002, is before the earliest effective filing date of the challenged claims, which is April 30, 2004. Ex. 1001, code (60); Ex. 1020, code (22).

2. *Discussion*

We include the following discussion even though we will be instituting on all challenged claims and all grounds in the Petition. Petitioner cites Gamble for teaching that “sub-parts of a plurality of files that are requested over a plurality of TCP connections and reassembled.” Pet. 56–57 (citing Ex. 1020 ¶¶ 50–52). Petitioner contends that an ordinarily skilled artisan “would have been motivated to configure Leaning’s apparatus to request sub-parts of the files (sub-files) over different TCP connections and reassemble the files from the received subparts, such as taught by Gamble,” to improve reliability and maximize throughput. *Id.* at 57–58 (citing, *inter alia*, Ex. 1003 ¶ 123). Based on the present record, we are persuaded preliminarily by Petitioner’s obviousness rationale.

G. *Patent Owner’s Arguments Regarding Discretionary Denial Under 35 U.S.C. § 325(d)*

Patent Owner argues that we should deny the Petition under 35 U.S.C. § 325(d) because “[a]ll three asserted references and substantially the same arguments were before the Examiner during prosecution, and Petitioner fails to identify any material error by the USPTO during the original examination.” Prelim. Resp. 4–18; *see also* Prelim. Sur-reply 1–5. Petitioner acknowledges that “Leaning, [Klemets], and Gamble were submitted in stamped IDSs [Information Disclosure Statements] during prosecution of the ’234 Patent,” but Petitioner argues that they were submitted “only after the Examiner had already decided to allow the claims” and that “none were used by the Examiner in any rejections or discussed in any way.” Pet. 62–65; *see also* Prelim. Reply 1–5.

1. Legal Standard

We may discretionarily deny institution of an *inter partes* review when a petition presents “the same or substantially the same prior art or arguments [that] previously were presented to the Office.” 35 U.S.C. § 325(d); *see* 37 C.F.R. § 42.4(a). To evaluate whether such a denial is appropriate, the Board determines:

- (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and
- (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential). In applying this two-part *Advanced Bionics* framework, we evaluate several non-exclusive factors, including:

- (a) the similarities and material differences between the asserted art and the prior art involved during examination;
- (b) the cumulative nature of the asserted art and the prior art evaluated during examination;
- (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
- (d) the extent of the overlap between the arguments made during examination and the manner in which petitioner relies on the prior art or patent owner distinguishes the prior art;
- (e) whether petitioner has pointed out sufficiently how the examiner erred in its evaluation of the asserted prior art; and

(f) the extent to which additional evidence and facts presented in the petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson & Co. v. B. Braun Melsungen AG, IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15, 2017) (precedential as to Section III.C.5, first paragraph). Factors (a), (b), and (d) relate to the first part of the *Advanced Bionics* framework (i.e., whether the art or arguments presented in the Petition are the same or substantially the same as those previously presented to the Office), and factors (c), (e), and (f) relate to the second part (i.e., “whether the petitioner has demonstrated a material error by the Office” in its prior consideration of the prior art or arguments). *Advanced Bionics*, Paper 6 at 10. “If a condition in the first part of the framework is satisfied and the petitioner fails to make a showing of material error, the Director generally will exercise discretion not to institute *inter partes* review.” *Id.* at 8–9. “[T]his framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.” *Id.* at 9.

2. Discussion

a. *Advanced Bionics* Part One

Patent Owner argues that the Examiner considered the same art (i.e., Leaning, Klemets, and Gamble) and substantially the same art (i.e., Leaning US⁸) during prosecution of the ’234 patent. Prelim. Resp. 5–8 (citing, *inter alia*, Ex. 1002, 47, 164, 171, 259, 1002, 1041). We agree.

⁸ U.S. Patent Application Publication No. 2004/0030547 A1 (Ex. 2001, “Leaning US”). For purposes of this Decision, we find that Leaning US is

Citing the applicants’ disclosure of *inter partes* review petitions involving Leaning, Patent Owner argues that the Examiner considered the same arguments during prosecution. Prelim. Resp. 10–14 (citing, *inter alia*, Ex. 1002, 1024). We assume (without deciding) that substantially the same arguments were presented to the Office during prosecution.

Accordingly, we find that part one of the *Advanced Bionics* framework is satisfied.

b. *Advanced Bionics* Part Two

To determine whether Petitioner has shown material error, we consider *Becton*, *Dickinson* factors (c), (e), and (f). *Advanced Bionics*, Paper 6 at 10. “Factor (c) focuses on the record developed by the Office in previously reviewing the art or arguments,” and if that record “is not well developed or silent, then a petitioner may show the Office erred by overlooking something persuasive under factors (e) and (f).” *Id.*

Petitioner contends that the Examiner erred in a manner material to patentability of the challenged claims. Pet. 62–64. Specifically, Petitioner cites the Examiner’s cited reasons for allowance stating that the prior art failed to disclose or render obvious limitations 1[C][1], 1[C][2], and 1[D]. *Id.* at 63 (citing Ex. 1002, 201); *see also id.* at 8–9 (discussing same). Petitioner counters the reasons for allowance by asserting its obviousness analysis based on Leaning for limitations 1[C][1], 1[C][2], and 1[D], as discussed above. *Id.*; *see also id.* at 28–34; *supra* §§ II.D.2.h–j. Petitioner contends that “the Examiner erred at least by not appreciating that Leaning

substantially the same as Leaning. *See* Ex. 2002 (redline of differences between Leaning and Leaning US).

disclosed or rendered obvious these limitations.” Pet. 63–64. Petitioner also contends that “the prosecution history provides no evidence that the Examiner meaningfully considered Leaning.”⁹ *Id.* at 64. Petitioner explains that “[t]he Examiner simply stamped the IDSs that were submitted and checked the box in the Notice of Allowance forms that the IDSs were considered.” *Id.*; *see also* Pet. Prelim. Reply 5 (“[T]he examiner provided no analysis or comparison of Leaning to any of the claim limitations, never used Leaning in a prior art rejection, and never provided reasons for allowance after disclosure of Leaning or the Leaning petitions.”).

Patent Owner responds that “Leaning was considered by the Examiner and was not just ‘simply stamped.’” Prelim. Resp. 15 (citing Ex. 1002, 1041, 1043). Patent Owner also notes that, in addition to Leaning, the *inter partes* review petitions relying on Leaning were before the Examiner. *Id.* at 16 (citing Ex. 1002, 1002–05). Patent Owner highlights that the Examiner initialed the Information Disclosure Statement with these petitions, and “the Examiner’s search notes indicate[] that the Examiner reviewed Petitioner’s

⁹ In its Preliminary Reply, Petitioner bases much of its analysis on language in a notice of proposed rulemaking stating that “section 325(d) should be limited to situations in which the prior art or arguments were **meaningfully addressed** by the office.” Pet. Prelim. Reply 1–4 (emphasis by Petitioner) (quoting PTAB Rules of Practice for Briefing Discretionary Denial Issues, and Rules for 325(d) Considerations, Instituting Parallel and Serial Petitions, and Termination Due to Settlement Agreement, 89 Fed. Reg. 28,693, 28,700 (Apr. 19, 2024)). Patent Owner disputes that statements in the notice control here, and Patent Owner argues that Petitioner’s references to the notice constitute improper reply argument. PO Prelim. Sur-reply 2–5. We need not and do not consider arguments based on the notice of proposed rulemaking in reaching our decision not to exercise discretion to deny institution.

petitions” and the references cited therein. *Id.* (citing Ex. 1002, 1328); *see also* PO Prelim. Sur-reply 4–5 (quoting Ex. 1002, 1328) (noting “11 individual entries explaining that the Examiner ‘Reviewed Petition[s] for Inter Partes Review’ and ‘Reviewed references cited in IPR[s].’”). As such, Patent Owner argues that the Examiner’s actions “go[] beyond merely stamping an IDS” and “demonstrate[] affirmative steps by the Examiner to investigate the related Prior Leaning Petitions and review their content and cited references.” PO Prelim. Sur-reply 5. Patent Owner additionally argues that any suggestion that the Examiner failed to appreciate Petitioner’s arguments regarding Leaning is mere speculation. Prelim. Resp. 16.

We agree with Petitioner that the record regarding the Office’s consideration of Leaning, Klemets, Gamble, Leaning US, and the Leaning *inter partes* review petitions is thin. Neither the applicants nor the Examiner discussed these references and petitions, and the Examiner did not use any of them as a basis of any rejection. Rather, the Examiner’s only interaction with these items appears to be within the context of receiving and responding to Information Disclosure Statements. *See* Ex. 1002, 47, 164, 171, 259, 1002, 1024, 1041. Given the volume of the applicants’ disclosures, it would not be surprising if the Examiner overlooked material information in them. Because the Office’s evaluation of Leaning, Klemets, Gamble, Leaning US, or the Leaning *inter partes* review petitions was minimal, we find that factor (c) weighs against exercising discretion to deny institution.

We also agree with Petitioner that the Office erred by overlooking persuasive unpatentability arguments related to Leaning. *See Advanced Bionics*, Paper 6 at 10 (stating that, where the record is silent, “a petitioner

may show the Office erred by overlooking something persuasive”). As discussed above, we are persuaded preliminarily that Leaning teaches or renders obvious every limitation of claims 1–15 and 17–20 (*see* Pet. 19–52; *supra* §§ II.D.1–4), and Patent Owner does not dispute Petitioner’s unpatentability contentions at this time (*see generally* Prelim. Resp.). At the very least, Petitioner’s obviousness analysis based on Leaning shows error in the Petitioner’s stated reasons for allowance with respect to limitations 1[C][1], 1[C][2], and 1[D]. *Compare* Ex. 1002, 201, with *supra* §§ II.D.2.h–j. Although the *Advanced Bionics* “framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown” (Paper 6 at 9), we are persuaded by Petitioner’s arguments that, to the degree the Examiner evaluated Leaning, Leaning US, or the *inter partes* review petitions based on Leaning, he misapprehended or overlooked Leaning’s salient disclosures. We also are persuaded that a reconsideration of Leaning is warranted.

We disagree with Patent Owner’s arguments that Petitioner did not sufficiently address material error (*see* Prelim. Resp. 15–18; *see* PO Prelim. Sur-reply 1–2) and that Petitioner’s grounds of unpatentability cannot establish material error (*see* PO Prelim. Sur-reply 1–2). It is difficult to characterize error in a nearly silent record, and we find that Petitioner has sufficiently demonstrated error based in part on its unpatentability contentions. *See, e.g., Quasar Science LLC v. Colt Int’l Clothing, Inc.*, IPR2023-00611, Paper 10 at 14 (PTAB Oct. 10, 2023) (“[A] petitioner’s showing that the challenged claims are unpatentable over the asserted prior art may itself be evidence of material error by the Office during prosecution.”); *cf. Keysight Techs., Inc. v. Centripetal Nets., Inc.*,

IPR2022-01421, Paper 14 at 6 (Vidal Aug. 24, 2023) (finding that Petitioner had established examiner error and citing the petition’s discussion of the grounds of unpatentability).

To the extent that Patent Owner’s arguments for discretionary denial relate to Klemets and Gamble (*see* Prelim. Resp. 5–10), we note that Petitioner does not rely on these references for teaching limitations 1[C][1], 1[C][2], and 1[D]. *See* Pet. 52–58. Given that Petitioner’s asserted obviousness combinations of Leaning with Klemets and/or Gamble incorporate Petitioner’s analysis based on Leaning for limitations 1[C][1], 1[C][2], and 1[D] (*see id.*), we find that the same Examiner error related to Leaning applies equally to Petitioner’s obviousness combinations with Klemets and Gamble.

For these reasons, we find that Petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

3. *Conclusion Regarding Discretionary Denial Under 35 U.S.C. § 325(d)*

Although the same art and arguments previously were presented to the Office, Petitioner has demonstrated Examiner error in a manner material to the patentability of challenged claims. Thus, we do not exercise our discretion to deny the Petition under 35 U.S.C. § 325(d).

III. CONCLUSION

After considering the evidence and arguments presented in the current record, we determine that Petitioner has demonstrated a reasonable likelihood that it would prevail with respect to at least one of the claims challenged in the Petition. Accordingly, we institute an *inter partes* review

on all of the challenged claims and all grounds presented in the Petition. At this stage of the proceeding, we have not made a final determination as to the patentability of the challenged claims.

IV. ORDER

Accordingly, it is

ORDERED that pursuant to 35 U.S.C. § 314, *inter partes* review is instituted as to claims 1–20 of the '234 patent with respect to all grounds of unpatentability presented in the Petition; and

FURTHER ORDERED that *inter partes* review is commenced on the entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

IPR2024-00940
Patent 11,991,234 B2

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