

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

VIRENTEM VENTURES, LLC,
Patent Owner.

Case IPR2019-01244
Patent No. 6,598,228

PATENT OWNER'S NOTICE OF APPEAL

Office of the General Counsel
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

Pursuant to 35 U.S.C. §§ 141-144 and 319, and 37 C.F.R. §§ 90.2 and 90.3, notice is hereby given that Patent Owner Virentem Ventures, LLC (“Virentem”) appeals to the United States Court of Appeals for the Federal Circuit from the Final Written Decision entered January 25, 2021 (Paper No. 39) by the U.S. Patent and Trademark Office, Patent Trial and Appeal Board (“Board”), and from all underlying findings, determinations, rulings, orders, and decisions regarding IPR2019-01244 and its Final Written Decision. A copy of the Final Written Decision is attached hereto as Exhibit A.

In accordance with 37 C.F.R. § 90.2(a)(3)(ii), Virentem further indicates that the issues on appeal may include, but are not limited to:

(1) the Board’s determination that Petitioner Google LLC met its burden of proving by a preponderance of the evidence that claims 3-7, 9, 12-14, 16, 17, 31, 33, and 34 of U.S. Patent No. 6,598,228 (“’228 Patent”) are unpatentable under 35 U.S.C. §§ 102 or 103, including whether Petitioner established a motivation to combine the asserted references;

(2) the Board’s claims constructions and other legal interpretations of claims

3-7, 9, 12-14, 16, 17, 31, 33, and 34 of the '228 Patent, including whether the Board properly applied the standards for claim construction set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005);

(3) the Board's findings that conflict with the evidence of record and are not supported by substantial evidence;

(4) the Board's impermissible shifting of the burden to Virentem to show patentability in violation of 35 U.S.C. § 316(e), 5 U.S.C. § 556(d), and 37 C.F.R. § 42.20(c);

(5) whether the determinations by the members of the Board in this proceeding, including the determination that claims 3-7, 9, 12-14, 16, 17, 31, 33, and 34 of the '228 Patent are unpatentable, are unconstitutional in view of, among other things, the principles in *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320 (Fed. Cir. 2019); and

(6) all other issues decided adversely to Virentem.

Pursuant to 37 C.F.R. § 90.3, this Notice of Appeal is timely, having been filed within 63 days after the date of the Final Written Decision.

Pursuant to 35 U.S.C. § 142 and 37 C.F.R. § 90.2(a), true and correct copies of this Notice of Appeal are being filed simultaneously with the Patent Trial and Appeal Board and the Clerk's Office for the United States Court of Appeals for the

Federal Circuit, along with the required docketing fee, and served on the Director of the Patent and Trademark Office, as described in the accompanying Certificate of Filing and Service. Furthermore, a copy of this Notice of Appeal is being served on Petitioner Google LLC.

Dated: March 26, 2021

Respectfully submitted,

By /s/ Lauren N. Robinson

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that, in addition to being filed electronically through the Patent Trial and Appeal Board's End to End System (PTAB E2E), the foregoing PATENT OWNER'S NOTICE OF APPEAL was served by Express Mail, tracking number 9470 1116 9900 0712 6235 10, March 26, 2021, on the Director of the United States Patent and Trademark Office, at the following address:

Office of the General Counsel
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

In addition, the undersigned certifies that a copy of the foregoing Notice of Appeal, along with the required docket fee, was filed on March 26, 2021, with the Clerk's Office for the United States Court of Appeals for the Federal Circuit through the Court's CM/ECF filing system.

The undersigned certifies pursuant to 37 C.F.R. § 42.6(e) that a true copy of the foregoing PATENT OWNER'S NOTICE OF APPEAL has been served in its entirety on March 26, 2021, by electronic mail on the Petitioner via its attorneys of record:

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

VIRENTEM VENTURES, LLC,
Patent Owner.

IPR2019-01244
Patent 6,598,228 B2

Before MEREDITH C. PETRAVICK, JENNIFER MEYER CHAGNON,
and TERRENCE W. McMILLIN, *Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge* McMILLIN.

Opinion Concurring Filed by *Administrative Patent Judge* PETRAVICK.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

A. *Background and Summary*

Google LLC (“Petitioner”)¹ filed a Petition to institute an *inter partes* review of claims 3–7, 9, 12–14, 16, 17, 31, 33, and 34 (“the challenged claims”) of U.S. Patent No. 6,598,228 B2 (Ex. 1001, “the ’228 patent”) pursuant to 35 U.S.C. § 311 *et seq.* Paper 1 (“Petition” or “Pet.”). Virentem Ventures, LLC (“Patent Owner”) filed a Preliminary Response to the Petition. Paper 12 (“Prelim. Resp.”). On January 28, 2020, we instituted trial. Paper 14 (“Inst. Dec.”). Patent Owner filed a Response. Paper 25 (“PO Resp.”). Petitioner filed a Reply. Paper 27 (“Pet. Reply”). Patent Owner filed a Sur-reply. Paper 29 (“PO Sur-reply”). An oral argument was held on November 9, 2020, and a transcript was entered into the record. Paper 38 (“Tr.”).

We have jurisdiction to conduct this *inter partes* review under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons discussed herein, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 3–7, 9, 12–14, 16, 17, 31, 33, and 34 of the ’228 patent are unpatentable.

B. *Related Matters*

The parties indicate that the ’228 patent has been asserted in the following case filed in the United States District Court for the District of Delaware on November 9, 2018: *Virentem Ventures, LLC v. YouTube, LLC*, Case No. 1:18-cv-00917. Pet. 1; Paper 4, 1. The District Court case has

¹ Petitioner identifies Google LLC and YouTube LLC as the real parties-in-interest to this proceeding. Pet. 1.

been stayed through the issuance of final written decisions by the Board.
Ex. 2004, 1.

C. *The '228 Patent*

The '228 patent is titled “Method and Apparatus for Controlling Time-Scale Modification During Multi-Media Broadcasts,” was filed on June 3, 1999², and issued July 22, 2003. Ex. 1001, codes (22), (45), (54). By way of background, the '228 patent explains that “digitally encoded audio and audio-visual works are stored as data on servers (such as file servers or streaming media servers) that are accessible via the Internet for users to download.” *Id.* at 1:21–25. The '228 patent further explains that streaming is a multimedia playback technique that involves downloading data and initiating playback before the entire work has been received. *Id.* at 1:42–44. Streaming is advantageous because the viewer/listener does not need to wait for the entire work to be downloaded before any portion of the work may be played. *Id.* at 1:46–54. The '228 patent identifies two disadvantages of streaming: (1) “playback is often interrupted when the flow of data is interrupted due to network traffic, congestion, transmission errors, and the like”; and (2) “a user or client is required to poll for additional data according to its rate of use of the data,” and thus “a user or client using data at a rapid rate has to make additional requests for data at a higher rate than a user or client using the data at a slower rate.” *Id.* at 1:54–67.

The '228 patent describes two prior art methods for broadcasting a work from a media server to multiple clients requesting data at arbitrary

² The '228 patent is a continuation-in-part of application No. 09/320,374, filed on May 26, 1999. Ex. 1001, code (63). The specific priority date of the challenged claims is not at issue in this proceeding, and we need not make any determination in this regard for purposes of this Decision.

times. *Id.* at 2:1–5. A first prior art approach is to re-broadcast the work at regular intervals, which is problematic because “clients must join a re-broadcast in the middle of the audio or audio-visual work currently being broadcast, or wait for the next re-broadcast to begin.” *Id.* at 2:6–14.

A second prior art method “initiates a re-broadcast of the audio or audio-visual work each time a client requests to view the audio or audio-visual work,” so clients don’t have to wait to view the start of the work. *Id.* at 2:15–19. A problem with the second method is that the “media server must monitor, track and fulfill the request of each client requesting data individually,” which causes a dramatic increase in server load and limits the media server’s capacity. *Id.* at 2:19–27.

The ’228 patent describes a need in the art for control of presentation rates of broadcast multi-media. *Id.* at 2:38–40. According to the ’228 patent, such a need exists for, e.g., “messages . . . of vital importance” such as “a public service announcement regarding emergency information, safety information, and the like [that] may be missed if a user is listening at a very fast rate,” such that “a need exists for [a] method and apparatus to restrict or direct the playback rate for a client apparatus in a client-server system and/or broadcaster-recipient system and/or to notify the client apparatus or recipient device of the importance of these messages.” *Id.* at 2:40–52. The ’228 patent further describes a need in the art for providing “different delivery times for specific types of content, such as commercial advertisements, station identification, violence, nudity, adult language, program schedule information, and program information pertaining to audience suitability or content.” *Id.* at 2:52–59.

One embodiment of the ’228 patent is a method for presentation of information received from a broadcaster, comprising steps of “(a) receiving

broadcast information; (b) receiving guidance information relating to presentation of the broadcast information; (c) analyzing the guidance information to determine a presentation rate; and (d) presenting the information at the presentation rate.” *Id.* at 2:66–3:5.

In embodiments of the ’228 patent, Presentation Rate Guidance Information (PRGI) is broadcast in conjunction with an audio or audio-visual work from a broadcast server “to restrict, or direct, playback rates at a client device receiving the audio or audio-visual work.” *Id.* at 27:56–28:7. “PRGI is information that is used to communicate a playback rate for an entire media work or one or more specific portions of the media work.” *Id.* at 28:42–44. As described in the ’228 patent, PRGI includes, among other things, “presentation rate information” which may include “a single value . . . representing a playback rate” for the media work or a value “representing an increment, decrement, or scale factor that is applied to the current playback rate.” *Id.* at 28:55–29:2; *see also id.* at 31:6–14 (discussing that PRGI may also include multiple playback rates).

Figure 14 of the '228 patent is reproduced below:

FIG. 14

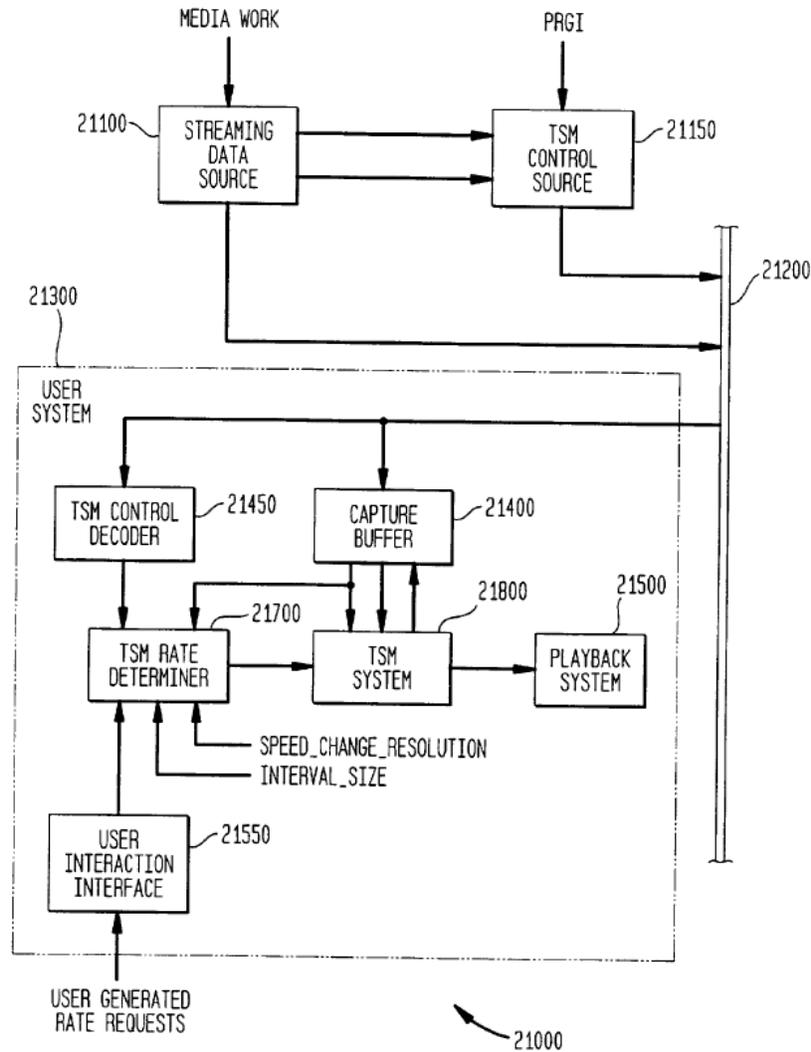


Figure 14 of the '228 patent, above, illustrates embodiment 21000 which transmits information relating to playback rate to clients receiving the media data. *Id.* at 4:13–17. User system 21300 is a client device capable of altering the presentation rate of streamed media based on the PRGI information sent in connection with the broadcast media. *Id.* at 27:56–28:7, 33:30–40. User system 21300 receives a streaming media work from streaming data source 21100 over network 21200. *Id.* at 31:52–67,

33:30–33. User system 21300 receives PRGI from TSM (time-scale modification) control source 21150. *See id.* at 33:30–34. User system 21300 decodes the PRGI at TSM control decoder 21450, and transmits it to the TSM rate determiner 21700. *Id.* at 34:8–15, 37:56–60. TSM control decoder 21450 may augment PRGI data by the application of rules, algorithms, and look-up tables to obtain PRGI data for output. *Id.* at 34:15–18. “TSM Rate Determiner 21700 produces, as output, a playback rate signal representing a TSM rate, or playback rate, which playback rate signal is applied as input to TSM System 21800.” *Id.* at 37:66–38:2. TSM system 21800 within user system 21300 modifies the streaming media work by, e.g., speeding up or slowing down visual information to match the audio in the audio-visual work. *Id.* at 6:35–7:37, 39:3–4.

D. Challenged Claims

Petitioner challenges claims 3–7, 9, 12–14, 16, 17, 31, 33, and 34 of the '228 patent. Pet. 2–3. Of the challenged claims, claims 3, 31, and 34 are independent, claims 4–7, 9, 12–14, 16, and 17 depend from claim 3, and claim 33 depends from claim 31. Claim 3 of the '228 patent recites:

3. A method for presentation of information received from a broadcaster by a client device, which device utilizes presentation rates to present information at various presentation rates, and which method comprises steps of:

receiving broadcast information;

receiving guidance information relating to presentation of the broadcast information;

analyzing the guidance information to determine a presentation rate; and

presenting the information at the presentation rate.

Ex. 1001, 42:61–43:3.

E. The Applied References

Petitioner relies on the following references in the asserted grounds.
Pet. 2–3.

Reference	Issue Date/ Publication Date	Exhibit
U.S. Patent No. 7,055,166 B1 (“Logan”)	May 30, 2006 ³	Ex. 1005
International Patent Appl. Pub. No. WO 1997/03521 (“De Lang”)	Jan. 30, 1997 ⁴	Ex. 1006
U.S. Patent No. 5,893,062 (“Bhadkamkar”)	Apr. 6, 1999 ⁵	Ex. 1007

Petitioner also relies on the Declaration of Dr. Dan Schonfeld (Ex. 1002) and Patent Owner relies on the Declaration of Dr. Charles Boncelet (Ex. 2016) to support their respective positions.

³ Logan was filed on January 27, 1999, and is prior art to the challenged claims at least under 35 U.S.C. § 102(e). *See* Ex. 1005, code (22); Pet. 3.

⁴ De Lang was filed on July 1, 1996, and is prior art to the challenged claims at least under 35 U.S.C. §§ 102(a), (b), (e). *See* Ex. 1006, code (22); Pet. 3.

⁵ Bhadkamkar was filed on December 5, 1996, and is prior art to the challenged claims at least under 35 U.S.C. §§ 102(a), (e). *See* Ex. 1007, code (22); Pet. 3.

F. The Asserted Grounds

Petitioner sets forth its challenges to claims 3–7, 9, 12–14, 16, 17, 31, 33, and 34 on the following grounds. Pet. 1–3.

Reference(s)	35 U.S.C. §	Claims Challenged
Logan	102 ⁶	3–7, 9, 12, 13, 17, 31, 33, 34
Logan	103	14, 16, 17
Logan and De Lang	103	3–7, 9, 12–14, 16, 17, 31, 33, 34
Logan and Bhadkamkar	103	6, 33
Logan, De Lang, Bhadkamkar	103	6, 33

II. ANALYSIS

A. Legal Standards

In order for a prior art reference to anticipate an invention, it must disclose every limitation of the claimed invention, either explicitly or inherently. *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997). Anticipation “requires that every element and limitation of the claim was previously described in a single prior art reference, either expressly or inherently, so as to place a person of ordinary skill in possession of the invention.” *Sanofi-Synthelabo v. Apotex, Inc.*, 550 F.3d 1075, 1082 (Fed. Cir. 2008) (citing *Schering Corp. v. Geneva Pharms., Inc.*, 339 F.3d 1373, 1379 (Fed. Cir. 2003); *Cont’l Can Co. USA v. Monsanto Co.*, 948 F.2d

⁶ Because the application leading to the ’228 patent was filed before March 16, 2013, patentability is governed by the version of 35 U.S.C. §§ 102 and 103 preceding the Leahy-Smith America Invents Act (“AIA”), Pub L. No. 112-29, 125 Stat. 284 (2011).

1264, 1267–69 (Fed. Cir. 1991)). “[U]nless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. § 102.” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008).

A patent 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. *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 ordinary skill in the art; and (4) when in evidence, objective evidence of nonobviousness.⁷ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Consideration of the Graham factors “helps inform the ultimate obviousness determination.” *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1048 (Fed. Cir. 2016) (en banc).

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the

⁷ Neither party presents any argument relating to objective evidence of nonobviousness.

grounds for the challenge to each claim’’)). This burden of persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).

B. Level of Ordinary Skill in the Art

With regard to the level of ordinary skill in the art, Petitioner contends that a person of ordinary skill would have either “(a) a Master’s or doctoral degree in computer science, electrical engineering, or a similar discipline” or “(b) a Bachelor’s degree in computer science, electrical engineering, or a similar discipline and at least two years of work experience in content presentation systems, or a related area.” Pet. 4 (citing Ex. 1002 (Schonfeld Decl.) ¶¶ 19–20). “Patent Owner accepts Petitioner’s proffered level of ordinary skill in the art in analyzing Petitioner’s allegations of anticipation and obviousness.” PO Resp. 15. We adopt Petitioner’s undisputed contention regarding the level of ordinary skill in the art. Further, we find that the prior art of record reflects the level of skill in the art at the time of the invention. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

C. Claim Construction

For this *inter partes* review proceeding, claim terms shall be construed 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 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.

Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340,

51,340, 51,358 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b) effective November 13, 2018) (now codified at 37 C.F.R. § 42.100(b) (2019)).

Further, “[a]ny prior claim construction determination concerning a term of the claim in a civil action, or a proceeding before the International Trade Commission, that is timely made of record in the *inter partes* review proceeding will be considered.”⁸ *Id.*

Under the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–19 (Fed. Cir. 2005) (en banc), claim terms are given their ordinary and customary meaning, as would have been understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history of record. *See Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365–66 (Fed. Cir. 2012). There is a “heavy presumption,” however, that a claim term carries its ordinary and customary meaning. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (citation omitted).

We are also guided by the principle that we only construe claim terms if, and to the extent that, it is necessary for the purpose of the proceeding. *See, e.g., Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011) (“[C]laim terms need only be construed ‘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)).

Petitioner proposes constructions for several claim terms, including “broadcast information,” “guidance information,” and “Time-Scale Modifying”/“Time-Scale Modification.” Pet. 10–11. Patent Owner

⁸ The District Court presiding over the litigation between the parties involving the ’228 patent issued an order construing certain claim terms (Ex. 2007), which we have considered.

proposes constructions for “guidance information,” “Time-Scale Modifying”/“Time-Scale Modification,” and “presentation rate,” and also requests that we determine that the preambles of the challenged, independent claims are limiting. PO Resp. 16.

“broadcast information”

The term “broadcast information” is recited in challenged claims 3, 5, 12, 13, 16, 31, and 33. Ex. 1001, 42:61–46:7. Patent Owner contends that construction of ‘Broadcast Information’ is not necessary for the final determination of anticipation and obviousness as alleged in the Petition.” See PO Resp. 16.⁹ We agree with Patent Owner that there is no dispute that requires us to construe “broadcast information.”

“guidance information”

The term “guidance information” is recited in challenged claims 3–5, 7, 9, 12–14, 16, 17, 31, and 34. Ex. 1001, 42:61–46:7. Petitioner contends “guidance information” means “information broadcast in conjunction with an audio or audio-visual work from a broadcast server to restrict, or direct, playback rates at a client device receiving the audio or audiovisual work.” Pet. 10 (citing Ex. 1001, 27:56–60; Ex. 1002 ¶¶ 41–42). Petitioner proposed this same construction in the litigation involving the ’228 patent and the District Court rejected it. Ex. 2007, 11–12. The District Court said:

The fifth term is “guidance information” found in the ’228 patent family. [Patent Owner] proposes “information that is broadcast to restrict or direct presentation rates.” [Petitioner] propose[s] “information broadcast in conjunction with broadcast information from a broadcast server to restrict, or

⁹ The District court did not construe “broadcast information.” See Ex. 2007, 2–4.

direct, playback rates at a client device receiving the broadcast information.”

The parties agree that the term includes information broadcast to restrict or direct playback or presentation rates. They disagree as to whether that information must be “broadcast in conjunction with broadcast information from a broadcast server” to a “client device receiving the broadcast information.”

[Petitioner] take[s] [its] language from column 27 of the ’228 patent. That, however, is not a clear definition – it refers to “an aspect” of the invention. That does not clearly limit it to all aspects of the invention.

In any event, the parties agree that “guidance information” is synonymous with “Presentation Rate Guidance Information” or “PRGI” in the patents. At column 28, lines 42 to 44, the ’228 patent states that “PRGI is information that is used to communicate a playback rate for an entire media work or one or more specific portions of the media work.” It then goes on to specify embodiments of what the presentation information may be comprised of. The language stating what PRGI is, however, is not an embodiment. It is a definition, and I will adopt it.

Id. (footnote omitted). In our Institution Decision, we found this reasoning persuasive and adopted the construction of “guidance information” that the District Court adopted. *See* Inst. Dec. 14–15 (citing Ex. 2007, 2; Ex. 1004, 289 (Appeal Brief filed during prosecution, stating “a client device receives guidance information; this is referred to in the specification as presentation rate guidance information (‘PRGI’)”). “Patent Owner agrees with the Board’s construction.” PO Resp. 43. Petitioner does not present additional arguments regarding this construction in its Reply. *See* Pet. Reply 13 (“[Petitioner] consents to the Board’s construction.”). We maintain our prior construction of “guidance information” as “information that is used to communicate a playback rate for an entire media work or one or more specific portions of the media work.”

“presentation rate” & “time-scale modifying”/“time-scale modification”

We analyze the terms “presentation rate” and “time-scale modifying/time-scale modification” together. The term “presentation rate” is recited in challenged, independent claims 3, 31, and 34 and dependent claims 4–7, 9, 12–14, 17, and 33. Ex. 1001, 42:61–46:7. “Time-scale modifying”/“time-scale modification” are recited in claims 6 and 33 of the ’228 patent, respectively. *Id.* at 43:12–15, 45:4–7. However, Patent Owner argues that “[t]he term ‘time-scale modification’ is incorporated in all the claims by virtue of the definition of ‘presentation rate.’” PO Resp. 30. Patent Owner contends that “presentation rate” means “the speed at which media is played back in a time-scale modification system” and that “time-scale modifying”/“time-scale modification” means “speeding up and slowing down the perceived rate of speech while substantially preserving both intelligibility and the perceived pitch for audio and audio-visual media.” *Id.* at 29–31. Petitioner argues that neither of Patent Owner’s proposed constructions should be adopted. Pet. Reply 6–10.

Patent Owner argues that its proposed construction of “presentation rate” was agreed to by the parties in the District Court litigation¹⁰ and

¹⁰ Petitioner argues that it did not agree to construction of “presentation rate” as “the speed at which media is played back in a time-scale modification system.” Pet. Reply 6–7 (“[A]s the district court observed, there was simply a lack of ‘dispute’ on the term in light of the court’s construction of ‘time-scale-modification.’”). However, at the claim construction hearing, the District Court asked Petitioner’s counsel if there was an agreement or a dispute as to the construction of “presentation rate.” *See* Ex. 1025, 109:3–110:10. Although reluctant to agree to inclusion of “in a time-scale modification system” in the construction, Petitioner’s counsel consented to the District Court construing “presentation rate” as “the speed at which media is played back in a time-scale modification system.” *Id.* In light of

adopted by the District Court and “[t]herefore, the Board should construe the term ‘presentation rate’ here as: ‘the speed at which media is played back in a time-scale modification system.’” PO Resp. 29–30. Patent Owner provides no additional reasoning or argument in support of its construction of “presentation rate.”¹¹ *Id.*

With regard to “time-scale modifying”/“time-scale modification,” Patent Owner proposes the same construction that it proposed in the District Court and that was rejected by the District Court. *See Ex. 2007, 8–10.* The District Court construed “time-scale modification/time-scale modified” as meaning “speeding up or slowing down the playback rate.” *Id.* at 2. Patent Owner does not explain why we should adopt the District Court’s construction of “presentation rate” and at the same time incorporate into the challenged claims a definition of “time-scale modifying”/“time-scale modification” that the District Court rejected. Adopting the District Court’s construction of “presentation rate,” but also incorporating a definition of

this exchange with the District Court, we determine Petitioner agreed to the construction of “presentation rate” in the District Court case.

¹¹ Patent Owner does point out that the Board adopted the District Court’s rationale and construction of “presentation rate” in its Decision on Institution in another IPR. PO Resp. 30 (citing IPR2019-01246, Paper 14 (Ex. 2012), 11). However, in that case, there was no dispute between the parties as to the construction of “presentation rate” (*see Ex. 2012, 11*) and the Board relied on the District Court’s construction only in making its preliminary decision as to whether to institute trial. In its Decision on Institution, the Board noted that the case was in a preliminary stage and “the Board has not made a final determination with respect to . . . any . . . factual and legal issues” including claim construction. *Id.* at 38. IPR2019-01246 was terminated because the Patent Owner abandoned the contest prior to the Board entering a final written decision (IPR2019-01246, Paper 30) and no final determination as to claim construction was made.

“time-scale modifying”/“time-scale modification” that was rejected by the District Court into the challenged claims, would result in a construction inconsistent with the District Court.¹²

Petitioner’s position on construction of “presentation rate” is inconsistent with the position taken by it before the District Court. In this proceeding, Petitioner argues:

[Patent Owner’s] construction improperly incorporates limitations into the claims by requiring playback to occur “in a timescale modification system.” Nothing in the intrinsic or extrinsic record supports reading “timescale modification system” into the claims, except inasmuch as “time-scale modification” may already be required by some of the claims (e.g., claims 6 and 33).

Pet. Reply 6–7. Despite the inconsistencies in Petitioner’s position, we agree with Petitioner that “time-scale modification” should not be read into the challenged claims through construction of “presentation rate.”

We determine that “presentation rate” should be interpreted according to its ordinary and customary meaning of “the speed of presentation.” This meaning is consistent with the portion of the District Court’s construction of “presentation rate” as “the speed at which media is played back.” As cited previously, there is a heavy presumption that a claim term has its ordinary and customary meaning. *CCS Fitness*, 288 F.3d at 1366. We have not been

¹² Patent Owner argues that the District Court’s claim construction is not controlling. PO Sur-reply, 14 (“The Delaware district court’s ruling should not control because the district court has already agreed that claim construction may need to be revisited to arrive at the correct construction following the IPR proceedings, suggesting that the Board may likely reach a different conclusion.”) (citing Ex. 2032, 1–2).

presented with any evidence to overcome that heavy presumption.¹³ Based on our independent analysis of the '228 patent and its file history, we do not discern any support for incorporating “in a time-scale modification system” into the meaning of “presentation rate” as recited in the claims of the '228 patent or otherwise limiting the construction of “presentation rate” from its ordinary and customary meaning. Indeed, construing “presentation rate” to include “in a time-scale modification system” would be contrary to the passage in the Specification of the '228 patent that states:

Although the detailed description used the terms playback rate^[14] and TSM rate, and the terms playback and playback apparatus, these terms should be understood to include any type of presentation rate (i.e., a rate of presentation of information) and any type of presentation apparatus. As such, these terms are to be understood as being used in the broadest sense.

Ex. 1001, 42:37–43. And, we determine that the ordinary and customary meaning of the term “presentation rate” is consistent with its use in the

¹³ Patent Owner cites paragraph 54 of the Boncelet Declaration (Ex. 2016) in its Response in support of its construction of “presentation rate.” PO Resp. 30. In paragraph 54 of his Declaration (Ex. 2016), Dr. Boncelet does not refer to any intrinsic or extrinsic evidence in support of this construction but, instead, merely cites the District Court’s claim construction order (Ex. 2007, 2, 10) and states, “I agree with this construction and have applied it in my analysis and opinions herein.”

¹⁴ Patent Owner acknowledges that “[p]layback rate and presentation rate are synonymous.” PO Resp. 43 n.11. We agree. And, determine that according “playback rate” and “presentation rate” the same meaning supports our conclusion that “presentation rate” should be construed as having its ordinary and common meaning of “the speed of presentation” (i.e., not including “in a time-scale modification system”).

claims of the '228 patent. The term “presentation rate” is recited in a similar way in challenged, independent method claim 3 and apparatus claim 31:

3. A method for presentation of information received from a broadcaster by a client device, which device utilizes *presentation rates* to present information at various *presentation rates*, and which method comprises steps of:

receiving broadcast information;

receiving guidance information relating to presentation of the broadcast information;

analyzing the guidance information to determine a *presentation rate*; and

presenting the information at the *presentation rate*.

31. An apparatus which presents information received from a broadcaster, which apparatus utilizes *presentation rates* to present information at various *presentation rates*, and which apparatus comprises:

a receiver of the broadcast information and guidance information relating to presentation of the broadcast information;

a rate determiner that analyzes the guidance information to determine a *presentation rate*; and

a presentation apparatus that, in response to the broadcast information and the *presentation rate*, presents the information.

Ex. 1001, 42:61–43:3, 44:53–64 (emphasis added). Dependent claims 6 and 33, which depend directly or indirectly from claims 3 and 31, explicitly recite “Time-Scale Modifying”/“Time-Scale Modification,” respectively.

Id. at 43:12–15, 45:4–7. Claims 6 and 33 recite:

6. The method of claim 5 [which depends from claim 3] wherein the step of presenting the information comprises *Time-Scale Modifying* the information in accordance with one or more *presentation rates*.

33. The apparatus of claim 31 wherein the presentation apparatus comprises ***Time-Scale Modification*** apparatus that presents a time-scale modified version of the broadcast information in accordance with the ***presentation rate***.

Id. (emphasis added). If, as Patent Owner contends, the meaning of “presentation rate” already includes “in a time-scale modification system,” it would be unnecessary to specifically recite “time-scale modifying”/“time-scale modification” in claims 6 and 33. *Cf. Phillips*, 415 F.3d at 1315 (“the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claims”). Adding “in a time-scale modification system” to the construction of “presentation rate” conflicts with the broader use of the term “presentation rate” in the claims and the Specification of the ’228 patent. We reject Patent Owner’s proposed construction of “presentation rate” because it is not supported by the language of the claims or the Specification of the ’228 patent. Thus, we construe the term “presentation rate” differently than the District Court, because the records in the District Court case and in this proceeding relating to construction of “presentation rate” are different. In the District Court proceeding, there was a construction of “presentation rate” that was agreed to by the parties. *See* Ex. 1025, 109:3–110:10. In this proceeding, there is a dispute between the parties as to the construction of “presentation rate.” *Compare* PO Resp. 29–30, *with* Pet. Reply 6–7. However, our conclusion that the challenged claims of the ’228 patent would have been unpatentable in view of the asserted art would not be different under either our construction or the District Court’s construction of “presentation rate.”

As discussed above, challenged, dependent claims 6 and 33 recite “time-scale modifying”/“time-scale modification.” Petitioner contends, “[t]he Board should interpret these terms as ‘playback rate modifying’ and ‘playback rate modification,’ respectively.” Pet. 10. In support, Petitioner argues, “[t]his interpretation is consistent with the ’228 patent specification, which uses the terms time-scale modification rate and playback rate interchangeably, and explains that time-scale modifying entails modifying a playback rate.” *Id.* at 10–11 (citing Ex. 1001, 3:31–35, 5:3–7, 5:9–12, 5:64–65, 6:12, 6:33, 6:45–46, 6:48–49, 19:47–48, 21:17, 37:67, 38:59–60). Patent Owner acknowledges that Petitioner’s proposed construction is consistent with the construction proffered by Petitioner in the District Court case and the construction adopted by the District Court. PO Resp. 31 (“The district court construed the term to mean ‘speeding up or slowing down the playback rate,’ which is the construction Petitioner advocated in the district court, and is generally the same scope as the construction that Petitioner has advocated here: ‘playback rate modifying’/‘playback rate modification.’”).

As noted previously, Patent Owner contends that “time-scale modifying”/“time-scale modification” means “speeding up and slowing down the perceived rate of speech while substantially preserving both intelligibility and the perceived pitch for audio and audio-visual media.” PO Resp. 31. Patent Owner contends that the Specification of the ’228 patent and the Specification of US Patent No. 5,175,769 (“the ’769 patent”) that is incorporated by reference into the Specification of the ’228 patent (Ex. 1001, 6:49–54) supports its proposed construction.¹⁵ *Id.* at 31–34. Patent Owner

¹⁵ The Patent Owner’s reliance on the ’769 patent is inconsistent with Patent Owner’s later argument that an unrelated patent, even if incorporated by reference, should not be relied on to limit the scope of the ’228 patent. *See*

made the same arguments before the District Court and the District Court rejected them. *See* Ex. 2007, 8–10.

As in the District Court, “[t]he dispute here is over [Patent Owner’s] attempt to read in ‘preserving both intelligibility and the perceived pitch.’” Ex. 2007, 8. However, as the District Court noted, “[t]he terms ‘intelligibility’ and ‘pitch’ do not appear in either the ’903^[16] or ’228 patent family. In fact, the term ‘pitch’ does not appear in any of the asserted patent families.” *Id.* The District Court said:

Plaintiff attempts to read those terms into time-scale modification through the ’769 patent, an earlier patent unrelated to the asserted patents but incorporated by reference in an example in the specification. The ’769 patent is about an improvement to prior art time-scale modification methods. That it was an improvement on time-scale modification methods sheds light on what time-scale modification means generally to a person of ordinary skill. For example, the ’769 patent states that “[t]he present invention relates to a method of time-scale modification (‘TSM’), i.e., changing the rate of reproduction of a signal” before going on to explain the improvement with more particularity.

In litigation involving the ’769 patent in California, the term “time-scale modification” was disputed. Plaintiff’s predecessor argued that the definition of “time-scale modification” in that patent did not include preserving pitch and

PO Resp. 43 (citing *e.Digital Corp. v. Futurewei Tech., Inc.*, 772 F.3d 723, 726 (Fed. Cir. 2014) for the proposition that “claims of unrelated patents must be construed separately, even if the unrelated patent is incorporated by reference into the patent being construed”). Patent Owner also argues, “[a]t a minimum, this construction from an unrelated patent should not be used to overcome the weight of the intrinsic record.” *Id.*

¹⁶ The ’903 patent family includes four patents asserted by the Patent Owner in the District Court case. *See* Ex. 2007, 7 n.4 (“The ’903 patent family includes U.S. Patent Nos. 7,683,903 (‘the ’903 Patent’), 8,068,108 (‘the ’108 Patent’), 8,345,050 (‘the ’050 Patent’) and 9,785,400 (‘the ’400 Patent’).”).

argued that the specification of the '769 patent provided a “clear statement” of a definition – one that did not include anything about pitch. It did so in order to argue that the invention in the '769 patent was a specific type of time-scale modification that preserves pitch.

The court in California agreed with the plaintiff in that case and did not read pitch into the meaning of the general term “time-scale modification” and construed the term to mean “speeding up or slowing down the playback rate.” The plaintiff in the California case stated that it “proposed a clear definition [i.e., the definition Defendants here propose] drawn directly from the patent specification. . . . In fact the specification [of the '769 patent] very clearly uses the term ‘time-scale modification’ to refer only to the speeding up or slowing down playback of a signal.” The court in California concluded that that construction was supported by the use of the term in the claims and the specification.

I find that Court’s reasoning persuasive. In addition, I find that the construction of time-scale modification that does not require preservation of intelligibility and pitch is supported by the intrinsic evidence of the asserted patents here.

For example, the description of “time-scale modification” at column 2, lines 24 through 28 of the '050 specification [in the '903 patent family] states that “Presentation Time and Data Time are identical in traditional players, because traditional players can only present media content at a fixed ‘normal’ rate. However, when a player is enhanced with a Time-Scale Modification (TSM) capability, it can present media content at various rates.”

Similarly, at column 5, lines 12 to 21, the '885 specification [in the '228 patent family] states: “Time-Scale Modification (TSM) methods are used to slow the playback rate of the audio or audiovisual work to substantially match a data drain rate required by Playback System 500 with a streaming data rate of the arriving data representing the audio or audiovisual work. As is well known to those of ordinary skill in the art, presently known methods for Time-Scale Modification (‘TSM’) enable digitally recorded audio to be modified so that

a perceived articulation rate of spoken passages, i.e., a speaking rate, can be modified dynamically during playback.”^[17]

None of these descriptions of time-scale modification mentions preservation of pitch or intelligibility.

That patents in the ’888 family^[18] refer to intelligibility does not change the result. In the background of the invention of the ’888 patent, it states that “[p]resently known methods for Time-Scale Modification (‘TSM’) enable digitally recorded audio to be modified so that a perceived articulation rate of spoken passages, i.e., a speaking rate, can be modified dynamically during playback.” It then goes on to discuss listener directed TSM [or LD-TSM] in which the intelligibility is preserved. That a version of TSM preserves intelligibility does not, however, mean that TSM in general also must.

Similarly, that the ’888 patent refers to it being well-known that “presently known methods for Time-Scale Modification (‘TSM’)” enable modification of articulation rate does not change the analysis. That refers to articulation rate. It’s a rate – which refers to speed. And that is consistent with how that term is used in the ’888 specification, which refers to articulation rate as, “i.e., a speaking rate, can be modified dynamically during playback.”

Finally, I note that Plaintiff’s construction is problematic insofar as it requires “substantially preserving pitch.” It is wholly unclear what “substantially” means in the context of these patents.

Ex. 2007, 8–10 (footnotes omitted) (alterations in original). We find the District Court’s reasoning persuasive and we adopt it and the District Court’s construction of “time-scale modifying”/“time-scale modification” as “speeding up or slowing down the playback rate.” *Id.* at 8.

¹⁷ The quoted passage appears at column 5, lines 3–12, of the ’228 patent.

¹⁸ The ’888 patent family includes four patents asserted by the Patent Owner in the District Court case. *See* Ex. 2007, 7 n.4 (“The ’888 patent family includes U.S. Patent Nos. 6,801,888 (‘the ’888 Patent’), 7,299,184 (‘the ’184 Patent’), 7,043,433 (‘the ’433 Patent’) and 9,185,380 (‘the ’380 Patent’).”).

Patent Owner also argues that skipping is not within the scope of “presentation rate.” PO Resp. 34–43. Patent Owner contends, “the ’228 Patent specification does not disclose that ‘skipping’ is a ‘presentation rate.’” *Id.* at 37. This is incorrect. In Figure 16 of the ’228 patent,¹⁹ “skip” is a rate or “speed value” shown under the headings “ABSOLUTE [playback rate values]” and “INCREMENTAL [playback rate values]” in table 30100. *See* Ex. 1001, 34:53–55 (“As further shown in FIG. 16, Playback Rate Look-up Table 30100 comprises absolute playback rate values and incremental playback rate values.”). In addition, the Specification of the ’228 patent describes methods of “playback rate adjustment for an audio-visual work” in which “frames are skipped.” *Id.* at 7:26–37. This passage from the Specification of the ’228 patent provides:

As one of ordinary skill in the art can readily appreciate, whenever embodiment 1000 provides playback rate adjustments for an audio-visual work, TSM System 800 speeds up or slows down visual information to match the audio in the audio-visual work. To do this in a preferred embodiment, the video signal is “Frame-subsampled” or “Frame-replicated” in accordance with any one of the many methods known to those of ordinary skill in the prior art to maintain synchronization between the audio and visual portions of the audio-visual work. Thus, if one speeds up the audio and samples are requested at a faster rate, the frame stream is subsampled, i.e. ***frames are skipped.***

Id. (emphasis added); *see also id.* at 6:35–41 (“In accordance with the present invention . . . [t]he Time-Scale modified output signal contains fewer

¹⁹ Figure 16 relates to the embodiment shown in Figure 14 of the ’228 patent. Ex. 1001, 4:22–26. Figure 14 is the embodiment in the ’228 patent that Patent Owner argues relates to the challenged claims. *See, e.g.*, PO Resp. 25 n.8 (“[I]t is Figure 14 that relates to the challenged claims.”).

samples per block of input data if Time-Scale Compression is applied.”). In addition, the Specification of the ’228 patent describes skipping as an alternative to fast-forwarding. *See id.* at 30:60–65 (“If the presentation of a media work occurs after the expiration date contained in the ‘time-stamp information,’ the outdated ‘playback rate insistence information’ may be ignored, overridden, or altered to allow users to *skip* or fast-forward through that portion of the work.”) (emphasis added). Thus, Patent Owner’s contention that the Specification of the ’228 patent does not disclose that skipping is a “presentation rate” is contradicted by passages in the Specification that do so. Based on these passages in the Specification of the ’228 patent, we determine that it would be inappropriate to exclude skipping from the ordinary and customary meaning of “presentation rate.”

Patent Owner argues that the recitation of “skipped” in claim 9 supports its argument that skipping is not a “presentation rate.” PO Resp. 39–40.²⁰ Claim 9 recites: “The method of claim 7 wherein the guidance information specifies that predetermined portions of a media work must be viewed at a predetermined presentation rate or *skipped*.” Ex. 1001, 43:23–26 (emphasis added). Patent Owner asserts: “the claims of the ’228 Patent—specifically dependent Claim 9—exclude ‘skipping’ from being within the scope of ‘presentation rate’ because ‘skipping’ is an alternative to presenting at a predetermined rate” and “[b]ecause Claim 9 indicates that ‘portions of a media work must be viewed [at] a predetermined presentation rate or skipped,’ skipped cannot fall within the scope of ‘presentation rate.’” PO

²⁰ Patent Owner also cites a passage from the Specification that contains language similar to claim 9. PO Resp. 39 (citing Ex. 1001, 28:17–19 (“predetermined portions of the media work must be viewed at a predetermined rate, or skipped altogether”)).

Resp. 39. We determine that a more natural reading of claim 9 is that “skipped” is an alternative to “viewed,” not “presentation rate.” “Viewed” and “skipped” are more natural alternatives because they are both past tense verbs. Interpreting claim 9 in this fashion, it reads “predetermined portions of a media work must be viewed . . . or skipped.” We do not find Petitioner’s argument strong enough to overcome the explicit passages in the Specification indicating that skipping is a presentation rate (*see, e.g.*, Ex. 1001, Fig. 16) or the strong presumption in favor of using the ordinary and customary meaning of claim terms.

Although it does not appear that the issue of whether the term “presentation rate” as recited in the claims of the ’228 patent excludes skipping was considered by the District Court, the District Court did construe “rate which causes a portion to be skipped” from the claims of the ’433 patent²¹ as “a rate of infinity or other indicium that will be similarly translated which directs the presentation system to skip a portion” at the request of Patent Owner. *See* Ex. 2007, 14–15.²² Patent Owner argues that it is improper to rely on the “unrelated” ’433 patent “to limit the scope of the ’228 patent.” PO Resp. 42–43. We do not do so. To the contrary, we determine that the District Court’s construction supports our conclusion that the ordinary and customary meaning of “presentation rate” as recited in the

²¹ The ’433 patent (US Patent No. 7,043,433) is a patent asserted in the District Court litigation but contains a different disclosure than the ’228 patent and is not in the ’228 patent family. *See* Ex. 2007, 7 n.4.

²² Before the District Court, Patent Owner agreed to a construction of “presentation rate” that did not specifically address whether the term should exclude skipping. Ex. 1025, 109:3–13.

claims of the '228 patent should not be limited so as to exclude a rate of infinity or skipping.

Preambles

Patent Owner contends that the preambles of independent claims 3, 31, and 34 are limiting. PO Resp. 17–29. The preambles of claims 3, 31, and 34 recite:

3. A method for presentation of information received from a broadcaster by a client device, ***which device utilizes presentation rates to present information at various presentation rates***, and which method comprises steps of:

31. An apparatus which presents information received from a broadcaster, ***which apparatus utilizes presentation rates to present information at various presentation rates***, and which apparatus comprises:

34. A method for broadcasting information to a client device, ***which device utilizes presentation rates to present information at various presentation rates***, and which method comprises steps of:

Ex. 1001, 42:61–64, 44:53–56, 45:8–46:2 (emphasis added). Patent Owner's argument focuses on the highlighted language in the preambles of the challenged, independent claims of the '228 patent. *See* PO Resp. 17.

Patent Owner presented the same or a similar argument in its Preliminary Response. *See* Prelim. Resp. 15 (characterizing the language in the preambles as the “‘smart client’ requirement of the claims”). In the Institution Decision, the Board considered this argument and preliminarily

rejected it. Inst. Dec. 19 (“At least at this stage of this proceeding, we do not find the preambles of the claims limit the invention to ‘smart devices.’”).²³

In response to Patent Owner’s argument, Petitioner argues:

In addressing the preambles of claims 3, 31, and 34, [Patent Owner] muddies two separate issues and attempts to portray them as one. (Resp., 17-29.) The first is whether the preambles are limiting at all. The second is whether the preambles’ recitation that the client device “utilizes presentation rates to present information at various presentation rates” should be further narrowed to require the client device to be capable of performing time-scale modification by itself to implement these various presentation rates. The former is irrelevant, as [Ppetitioner’s] petition addressed the preambles, and the latter is incorrect.

Pet. Reply 3. We agree with Petitioner. As discussed below, the Petitioner has established that all the elements of the preambles of the challenged, independent claims are disclosed in the cited art.²⁴ And, it would be contrary to the ordinary and customary meaning of the language of the preambles and the disclosure in the Specification to limit the claims to systems in which the client device is capable of performing time-scale modification by itself to implement various presentation rates (i.e., smart devices).

The relevant language in the preambles recites that a “device/apparatus utilizes presentation rates to present information at various presentation rates.” Ex. 1001, 42:61–64, 44:53–56, 45:8–46:2.

²³ It does not appear that the Patent Owner raised this claim construction issue before the District Court and it does not appear that the District Court considered this issue or made any related rulings. *See generally* Ex. 2007 (District Court’s claim construction order).

²⁴We need not, and do not, determine whether the preambles are limiting.

Considering and incorporating the ordinary and common meaning of “presentation rate” as “the speed of presentation,” the preamble language becomes “a device or apparatus that utilizes the speeds of the presentation to present information at various speeds of presentations.” Based on this interpretation, we determine that the preamble language, even if limiting, only requires that the device or apparatus be capable of using the speeds at which information is presented to present the information at various speeds. Accordingly, we reject Patent Owner’s contention that the preambles limit the scope of the claims to devices or apparatus that are capable of performing time-scale modification (“speeding up or slowing down the playback rate”) wherein the modification is performed by the device or apparatus itself. *See* PO Resp. 18–21. A device or apparatus that is capable of receiving information at various speeds and presenting at various speeds meets this preamble language, even if the device or apparatus itself cannot modify the playback rate (i.e., the device or apparatus is “dumb” (can only present the information at the speeds at which it is received)).

We also reject Patent Owner’s contention that the intrinsic evidence (the Specification and file history) supports limiting the claims to “smart devices”—a device or apparatus that can perform time-scale modification. *See* PO Resp. 21–29. First and foremost, the Specification of the ’228 patent directly contradicts this contention. The Specification of the ’228 provides:

It is within the spirit of the present invention that embodiments of the present invention include embodiments where the playback system is replaced by a distribution system, which distribution system is any device that can receive digital audio or audio-visual works and redistribute them to one or more other systems that replay or redistribute audio or audio-visual works. In such embodiments, the playback system is replaced by any one of a number of distribution applications and systems

which are well known to those of ordinary skill in the art that further distribute the audio or audio-visual work. ***It should be understood that the devices that ultimately receive the re-distributed data can be “dumb” devices that lack the ability to perform Time-Scale modification or “smart” devices that can perform Time-Scale Modification.***

Ex. 1001, 26:31–45 (emphasis added). Patent Owner argues that this portion of the Specification should not be used to construe the challenged, independent claims because it relates to embodiments in the Specification in which “time-scale modification is performed at the server, and then time-scale modified versions of content are transmitted to a client device.” PO Resp. 24. As discussed above, we determine that the claims are not limited to time-scale modification at the client device. And, “there is strong presumption against a claim construction that excludes a disclosed embodiment.” *Nobel Biocare Servs. AG v. Intradent USA, Inc.*, 903 F.3d 1365, 1381 (Fed. Cir. 2018) (quoting *In re Katz Interactive Call Processing Pat. Litig.*, 639 F.3d 1303,1324 (Fed. Cir. 2011)). Patent Owner has not overcome this presumption.

Moreover, the description of the Figure 14 embodiment that Patent Owner relies upon (*see* PO Resp. 25 n.8) also contradicts this argument. The description of Figure 14 in the Specification provides:

FIG. 14 shows a block diagram of embodiment 21000 of the present invention which transmits PRGI in an “out of band” mode to client devices receiving the media data.

* * *

Note that ***all or some components of embodiment 21000 may exist in separate locations***, which components are connected to one another via a network or any other communication means (where the use of the term means is used in the broad sense possible.)

* * *

TSM Rate Determiner 21700 [as shown in Figure 14 (Ex. 1001, 38:13)] may process the PRGI from TSM Control Decoder 21450 according to rule-sets or other algorithms specified by . . . (iii) a device programmed by the broadcaster ***which may exist in the client apparatus or elsewhere.***

* * *

Conversely, ***components of embodiment 21000 may exist in separate locations*** connected to one another via a network or any other communication means (where the use of the term means is used in the broadest sense possible).

Ex. 1001, 31:52–54, 32:8–10, 32:26–32, 38:50–55, 39:47–50 (emphasis added). These passages establish the claims should not be limited as Patent Owner contends.

With regard to Patent Owner’s argument that the prosecution history supports its proposed, limiting construction (*see* PO Resp. 26–29), the Board considered this contention in its Institution Decision and determined otherwise. Inst. Dec. 17–18. We have considered the additional arguments and evidence in Patent Owner’s Response relating to this contention showing the Applicant’s reliance on the preamble to distinguish the invention from the art cited during prosecution (*see* PO Resp. 26–28), but determine it does not dictate a different result. The intrinsic evidence as a whole, the ordinary and customary meaning of the language in the preamble, and the repeated statements in the Specification not to limit the invention, as argued by Patent Owner, substantially outweigh the evidentiary value of these statements by Applicant during prosecution. This is particularly true in this case because, as pointed out in the Institution Decision (*see* Inst.

Dec. 17), the Examiner relied on language outside the preamble in allowing the independent claims. *See* Ex. 1004, 346 (Examiner’s statement of reasons for allowance).

For these reasons, we determine that the preambles do not limit the scope of challenged, independent claims 3, 31, and 34 to “smart devices”—devices or apparatus that are capable of performing time-scale modification (“speeding up or slowing down the playback rate”), wherein the modification is performed by the device or apparatus itself.

D. Asserted Anticipation of Claims 3–7, 9, 12, 13, 17, 31, 33, and 34 Based on Logan

Petitioner challenges claims 3–7, 9, 12, 13, 17, 31, 33, and 34 as anticipated by Logan. Pet. 2, 11–42.

1. Logan (Ex. 1005)

Logan is titled, “Apparatus and Methods for Broadcast Monitoring.” Ex. 1005, code (54). Logan is directed to “editing the content of a broadcast programming signal to provide a proprietary program signal that has been tailored to the preferences of an individual monitoring the broadcast programming signal.” *Id.* at code (57) (Abstract). Logan “relates to systems and methods for monitoring broadcast programming and, more particularly, to systems and methods that can integrate broadcast programming signals with selected additional programming signals, and that can further edit the integrated signals to provide a user with a proprietary program signal.” *Id.* at 1:13–18. Logan discloses a system for monitoring a video broadcast programming signal, such as a television program, and for editing the monitored program to generate a proprietary program signal having features and information tailored to the preferences of a particular audience member. *Id.* at 7:51–56.

Figure 1 of Logan is reproduced below.

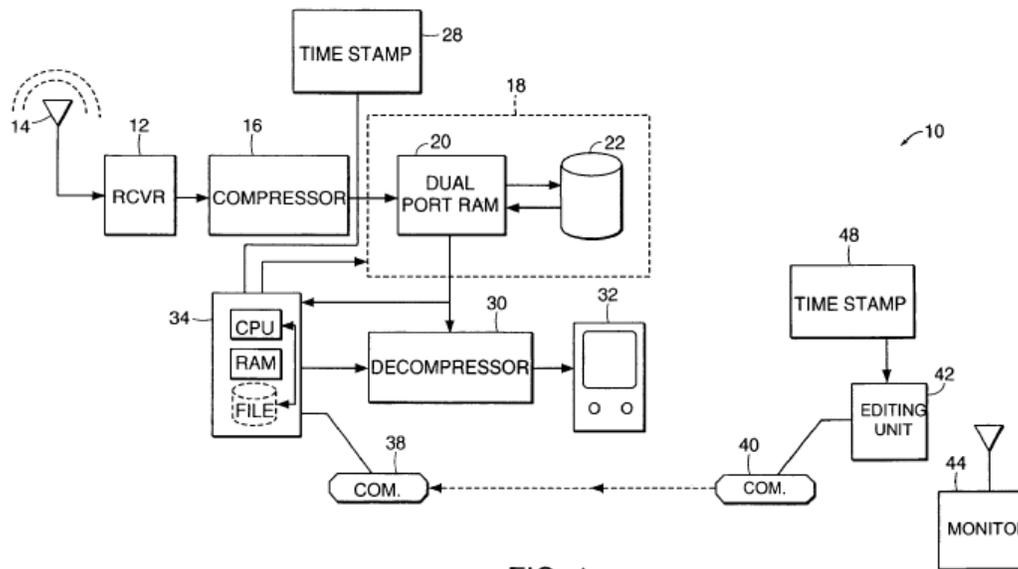


FIG. 1

Figure 1 of Logan (above) depicts system 10 for providing computer-enhanced broadcast monitoring. *Id.* at 7:49–50. As shown in Figure 1, system 10 includes receiver 12, antenna 14, compressor 16, memory system 18, dual port ram 20, persistent memory device 22, time stamp unit 28, decompressor 30, video monitor 32, processor 34, local communication system 38, remote communication system 40, editing unit 42, remote time stamp unit 48, and monitor 44. *Id.* at 7:64–8:3. Memory system 18 acts as a buffer memory for storing a compressed video signal generated by the compressor 16. *Id.* at 8:65–67. Memory system 18 includes high-speed random access electronic memory 20 depicted as a dual-port ram, and slower persistent memory 22. *Id.* at 8:67–9:3. Logan teaches that time stamp unit 28 generates a time stamp at set intervals, such as every five seconds, and the time stamp is multiplexed with the compressed broadcast signal and the multiplexed signal is stored by memory system 18 thereby providing a time-based index into the compressed programming data stored in the memory system 18. *Id.* at 9:11–21. Editing unit 42 can generate, in

response to the monitored broadcast programming signal, a marking signal that can provide instructions for modifying the broadcast programming signal. *Id.* at 10:16–19. A marking signal can be any signal that provides information supplemental to the broadcast programming signal. *Id.* at 11:49–51. Marking signals can carry information on content to allow screening of violent scenes, to allow deleting of time-outs in sport shows, or to allow editing of shows to show only highlights. *Id.* at 11:54–57. Logan discloses that a broadcaster may not wish commercials to be deleted or skipped in the viewing process and may embed marking signals representative of information that prevents portions of the broadcast programming signal from being skipped or deleted. *Id.* at 13:11–16.

2. *Analysis of Claim 3*

A method for presentation of information received from a broadcaster by a client device, which device utilizes presentation rates to present information at various presentation rates, and which method comprises steps of:

Petitioner asserts Logan discloses the preamble of claim 3. Pet. 11–13. In particular, Petitioner points to Logan’s “broadcast programming signal,” which according to Petitioner is “transmitted from a broadcaster to a user’s device [and] reads on the claimed ‘information received from a broadcaster by a client device.’” *Id.* at 11–12 (citing Ex. 1005, 2:26–47, 5:15–23, 5:59–6:25, 8:5–10, 8:27–47, 12:61–13:10; Ex. 1002 ¶¶ 48–50). Petitioner further asserts “while a user [of Logan’s system] has the ability to fast forward, pause, etc., using local controls, marking signals may be employed to restrict or direct playback rates, thus the presentation rate (*e.g.*, whether normal speed or fast forward),” and thus a person of ordinary skill in the art “would have understood Logan to disclose a ‘client device [that] utilizes presentation rates to present information at various

presentation rates,’ as recited in the preamble” of claim 3. *Id.* at 12–13 (citing Ex. 1005, 2:7–14, 2:26–47, 2:63–3:3, 5:59–6:25, 8:18–26, 11:51–54, 12:61–13:42, 13:11–30; Ex. 1002 ¶¶ 48–62).

Patent Owner argues that Logan does not disclose a “client device,” which “device utilizes presentation rates to present information at various presentation rates.” PO Resp. 45–53. Specifically, Patent Owner argues that the disclosure in Logan that discloses fast forwarding relates to an embodiment in which “the client does not *utilize presentation rates* to present information at various presentation rates—it simply plays what it gets at the speed that it gets it.” *Id.* at 53. Specifically, Patent Owner argues that “Logan discloses ‘fast-forward’ *only* in the context of the embodiment of Logan that does not have local storage” and “[i]n these video-on-demand systems (‘VoD’), modification to the broadcast programming signal, including fast forward, deleting or skipping, are implemented at the server, after being requested by the user via local controls.” *Id.* This argument is based on Patent Owner’s claim construction contention that the preamble limits the scope of the claims to systems in which the client device is a “smart” device that performs time-scale modification (changes the presentation rate) without the aid of any other component of the system. As discussed above, we have rejected this claim construction contention. The paragraph from Logan that refers to fast forwarding states:

The depicted receiver unit 12 couples to the antenna 14 to receive a broadcast programming signal. A broadcast programming signal includes television programs, including traditional broadcast television, satellite television and cable television programs, radio programs, Internet broadcast programs, or any other type of program that is transmitted for reception by an audience. This term also includes programming content that is already stored and that could be

viewed at any time, such as Internet downloads or other forms of video-on-demand, as well as material stored on DVD, CD, or video tape and distributed physically through stores or the mail. In the case of Internet downloads, or other forms of video-on-demand, there is no local storage of content. The storage takes place at a commonly-shared server, which then “dishes” out the content on demand. Typically, these systems allow the user to fast forward, pause, etc., using local controls. A marking signal of the invention is used to personalize such server-stored content in the same manner as it is used to personalize locally-stored content. The marking signal allows a user to personalize server-stored content by using the supplied marking signal in conjunction with the local controls supplied by the video-on-demand service provider.

Ex. 1005, 8:4–26. According the language in the preamble of claim 3 its ordinary and customary meaning, we find that this paragraph of Logan discloses all elements of the preamble. As disclosed in this paragraph in Logan and shown by Petitioner, the client device utilizes the normal rate of presentation and fast forwarding to present broadcast information at these two rates. Thus, this paragraph of Logan maps to the preamble without need to rely on any other embodiment or portion of its disclosure.

We find that the preponderance of the evidence establishes that Logan discloses the preamble of claim 3.

receiving broadcast information

Petitioner shows Logan discloses this limitation in the same paragraph quoted above in discussing the preamble. Pet. 13 (citing Ex. 1005, 8:4–5 (“receiver unit 12 couple[d] to the antenna 14 to receive a broadcast programming signal”)) (depicted in Fig. 1). Patent Owner does not argue this

limitation. *See generally* PO Resp. We find Logan discloses this limitation.²⁵

receiving guidance information relating to presentation of the broadcast information

Petitioner shows Logan discloses this limitation. Pet. 13–17. Petitioner relies on Logan’s disclosure relating to “marking signals” in the paragraph quoted above in discussing the preamble. *Id.* at 13 (“Logan discloses a ‘marking signal’ that may be received by a client device and ‘is used to personalize . . . server-stored content.’”). As shown in the Petition (*see id.* at 13–14), Logan further states with regard to “marking signals” that, “[t]he marking signal can, therefore, be any signal that provides information supplemental to the broadcast programming signal” (Ex. 1005, 11:49–51), and “[m]arking signals can carry information on content, to allow screening of violent scenes, to allow deleting of time-outs in sport shows, or to allow editing of shows to show only highlights” (*id.* at 11:54–57). “Marking signals” can also “provide additional information . . . to be used for selectively deleting the commercial sequence.” *Id.* at 11:22–24.

If a broadcaster does not wish to have commercials deleted or skipped, Logan discloses that marking signals can be embedded, which prevents portions of the broadcast programming signal from being skipped or deleted. *Id.* at 13:11–19. In this instance, “the marking signal may include a blocking signal,” which may “prevent a user from proceeding to the next portion of the broadcast programming signal until after a predefined segment of the broadcast programming signal has been viewed.” *Id.* at

²⁵ *See also In re NuVasive*, 841 F.3d 966, 974 (Fed. Cir. 2016) (explaining that the Board need not make specific findings as to claim limitations that Patent Owner does not dispute are disclosed in the prior art).

13:16–22. “Alternatively, the broadcaster may mark the broadcast programming signal so that the user cannot skip to another marked segment of the broadcast programming signal until after a commercial has been viewed.” *Id.* at 13:27–30. As indicated above (*supra* Section II.C.), we have construed “guidance information” to mean “information that is used to communicate a playback rate for an entire media work or one or more specific portions of the media work.” We find Logan discloses “guidance information” as construed.

With regard to the “receiving” portion of this limitation, Logan states:

These marking signals may be embedded in the programming signal itself either by using unused bandwidths, such as the vertical blanking channel in case of a TV broadcast, or by overlapping the marking signal data directly on the programming signal. The processor 34 would be able to decouple the marking signals from the programming signal, thereby allowing the marking signal to be used in the same way as if they had been communicated from the editing unit 42. Alternatively, the broadcaster may send the marking signals to the user in a different broadcast, on a different channel, over the Internet or in a number of different manners and provide a means to synchronize the marking signals with the associated broadcast.

Ex. 1005, 12:64–13:10.

Patent Owner argues this limitation on the bases that the construction of “presentation rate” excludes skipping and that “in the VoD embodiment, without local storage, marking signals are not received at the client device.” PO Resp. 54. Both these arguments rely on limiting claim constructions that we have not adopted. Accordingly, these arguments do not undermine Petitioner’s persuasive showing.

We find Logan discloses this limitation.

analyzing the guidance information to determine a presentation rate

Petitioner shows Logan discloses this limitation. *See* Pet. 17–19. In particular, Petitioner asserts “*Logan*’s disclosure of the user’s device, which is capable of analyzing the marking signal and other relevant information, and allowing or disallowing the user to employ different modes of presentation, such as playing at a default (x1) playback rate or skipping, teaches the feature of ‘analyzing the guidance information to determine a presentation rate,’” as recited in claim 3. *Id.* at 19.

As discussed with regard to the preceding limitation, Logan discloses the use of marking signals that are “guidance information” as recited in claim 3. These marking signals can be used to skip or delete commercial sequences, violent scenes, deleting time-outs in sport shows, or editing of shows to show only highlights. *See* Ex. 1005, 11:15–28, 11:54–57. The marking signals can include blocking signals to prevent a user from skipping commercials or to require a user to view a commercial before skipping to another segment. *See id.* at 13:11–30. Thus, the marking signals can be used to determine a presentation rate of the broadcast information.

Patent Owner contends “*Logan* does not disclose ‘analyzing the guidance information to determine a presentation rate,’” but this contention is not supported. PO Resp. 54. The entirety of Patent Owner’s argument with regard to this limitation is “[b]ecause ‘marking signals’ are not guidance information, *Logan* does not meet disclose [sic] this limitation.” *Id.*

We find Logan discloses this limitation.

presenting the information at the presentation rate.

Petitioner shows Logan discloses this limitation in two ways. Pet. 19–21. In the first way, Logan discloses that “compressor 16 [shown in Figure 1] converts the received programming signal into a compressed digital format suitable for storing in a digital memory system, such as the depicted memory system 18.” Ex. 1005, 8:49–52. Logan also discloses:

The depicted decompressor 30 couples via a transmission path to the memory system 18 and can receive the stored compressed programming data. The decompressor 30 can be an electrical circuit card assembly that includes a CODEC chip set that implements the MPEG decoding process for decompressing MPEG motion video into a format suitable for display on a conventional video monitor, such as the video monitor 32 depicted in FIG. 1.

Id. at 9:22–29. In the second way, Logan discloses:

The depicted monitor 44 [in Figure 1] can include an RF tuner for receiving the broadcast programming signal, which in this example is a television program. The monitor 44 can further include a video display element that can display to an operator at the editing unit 42 the television program being broadcast. In one embodiment, the monitor 44 is a conventional television receiver set that includes an RF tuner capable of receiving broadcast television programming signals, and a monitor element capable of displaying the television being broadcast.

Id. at 10:20–29.

As discussed above with respect to the preamble, Patent Owner contends Petitioner has not shown that the client device in Logan presents the information at multiple presentation rates. *See* PO Resp. 54–55. However, this limitation recites, “presenting the information at *the* presentation *rate*” (emphasis added). It is therefore met if the information is presented at *one* presentation rate. In addition, as noted previously, Logan

discloses the user can “fast forward, pause, etc., using local controls.” *Id.* at 8:19–20.

We find Logan discloses this limitation.

Conclusion as to Claim 3

For the reasons discussed above, we find Petitioner has shown that claim 3 of the '228 patent is anticipated by Logan. Patent Owner's arguments to the contrary are based on claim constructions that are not supported and do not undermine Petitioner's persuasive showing.

3. *Analysis of Claim 31*

Independent claim 31 contains limitations similar to the limitations of independent claim 3, except claim 31 is directed to an apparatus and claim 3 is directed to a method. *Compare* Ex. 1001, 42:61–43:2, *with id.* at 44:53–64. Petitioner relies on similar arguments and evidence for claim 31 as discussed above with respect to claim 3. *See* Pet. 35–37. Patent Owner does not present any arguments specifically directed towards Petitioner's showing with regard to claim 31. *See generally* PO Resp.

An apparatus which presents information received from a broadcaster, which apparatus utilizes presentation rates to present information at various presentation rates, and which apparatus comprises:

As shown above, Logan's Figure 1 and its related description (particularly, the paragraph quoted above in the section discussing the preamble of claim 3 (Ex. 1005, 8:4–26)), discloses “receiver unit 12 couple[d] to the antenna 14 to receive a broadcast programming signal” (*id.* at 8:4–5). And, Logan discloses presenting the received information at normal and fast forward rates. *See id.* at 8:15–26. For reasons similar to those discussed above, we find Logan discloses this limitation.

a receiver of the broadcast information and guidance information relating to presentation of the broadcast information

Again, Logan discloses “receiver unit 12 couple[d] to the antenna 14 to receive a broadcast programming signal.” Ex. 1005, 8:4–5. And, “as discussed above for claim 3 . . . Logan’s marking signal . . . disclos[es] the guidance information related to presentation of the broadcast information.” Pet. 36. For reasons similar to those discussed above, we find Logan discloses this limitation.

a rate determiner that analyzes the guidance information to determine a presentation rate;

With regard to this limitation, the Petition states: “[a]s discussed above for claim 3, a POSA [person of ordinary skill in the art] would have understood Logan’s disclosure of the user device including a processor capable of analyzing the marking signal and other relevant information to determine the presentation rate as teaching this feature in claim 31.” Pet. 36. For reasons similar to those discussed above, we find Logan discloses this limitation.

a presentation apparatus that, in response to the broadcast information and the presentation rate, presents the information

With regard to this limitation, the Petition states: “[a]s discussed above for claim 3, a POSA would have understood Logan’s disclosure of devices, such as a decompressor and monitor, used for presenting personalized broadcast programming signal as teaching this limitation.” Pet. 37. For reasons similar to those discussed above, we find Logan discloses this limitation.

We find that Petitioner has shown by a preponderance of the evidence that claim 31 is anticipated by Logan.

4. *Analysis of Claim 34*

Challenged, independent claim 34 of the '228 patent recites:

A method for broadcasting information to a client device, which device utilizes presentation rates to present information at various presentation rates, and which method comprises steps of:

broadcasting information having a first presentation rate; and
broadcasting guidance information used to determine a second presentation rate for use by the client device in presentation of the information.

Ex. 1001, 45:8–46:7 (emphasis added). The preamble of claim 34 recites, in part, “[a] method for broadcasting information,” and the body of claim 34 contains two steps that recite broadcasting information and broadcasting guidance information, but claim 34 does not recite any further steps (such as receiving, analyzing, and presenting the information as recited in independent, method claim 3). In other words, claim 34 only recites sending information. Thus, claim 34 has a much different, i.e., broader, scope than either claim 3 or 31.

Petitioner’s showing as to independent claim 34 is similar to its showing as to independent claims 3 and 31. *See* Pet. 38–42 (referring back to the arguments presented for claim 3, as discussed above). Patent Owner’s arguments with regard to claim 34 are also similar to the arguments that it makes for claims 3 and 31. *See* PO Resp. 44 (“*Logan* does not disclose each and every limitation of independent claims 3 and 34 as they are arranged in the claims”), 57–58. Accordingly, for the reasons discussed above with respect to claims 3 and 31, we find that Petitioner has shown by a preponderance of the evidence that claim 34 is anticipated by Logan.

5. *Analysis of Claims 4–7, 9, 12, 13, 17, and 33*

Petitioner asserts that Logan teaches each of the additional limitations of dependent claims 4–7, 9, 12, 13, 17, and 33. *See* Pet. 21–35, 37–38.

a) *Claim 4*

Claim 4 of the '228 patent recites:

The method of claim 3 which further comprises a step of receiving a user input presentation rate and wherein the step of analyzing includes a step of analyzing the guidance information and the user input presentation rate to determine the presentation rate.

Ex. 1001, 43:4–8. With regard to claim 4, the Petition states:

Logan discloses this limitation. (Ex. 1002, ¶¶63-64.) As discussed above with respect to claim 3, *Logan* discloses a “processor” for “analyzing the guidance information.” (*Supra* Sections IX.A.1.c-d; Ex. 1002, ¶¶52-60.) *Logan* discloses that its system “allow[s] the user to fast forward, pause, etc., using local controls.” (Ex. 1005, 8:18-20.) *Logan* discloses, for example, that based on the user’s payment status, the user may be allowed to “skip or delete portions of the broadcast programming signal, such as commercials, for example.” (*Id.*, 13:32-33.) As such, *Logan* discloses the use of a “marking signal,” which may include a “blocking signal,” in conjunction with “local controls,” which may allow the user to, for example, employ the “fast forward” or “pause” functionalities according to the user’s authorized viewing abilities. (*Id.*, 8:18-20, 11:51-54, 13:11-19.) *Logan* describes that “a user generates input data signals representative of instructions that will reference marking signals, which in turn are applied to the broadcast programming signal stored in buffer 140 as the signal is played back and displayed on display 144. The input signals may be representative of user-generated remote control instructions. These user-generated instructions direct the processor to skip to the next, previous, first or last marking signal, for example. The input signals may be in the form of infrared, radio-frequency, keyboard, or any other type of data transmission

suitable for allowing a user to provide input into the system.”
(*Id.*, 21:17-33; *see also id.*, 6:46-52, 2:48-52.)

Pet. 21–22. Patent Owner does not specifically address claim 4. *See generally* PO Resp.

Petitioner’s undisputed showing as to claim 4 is well-supported by the cited passages in Logan and the cited portions of Dr. Schonfeld’s Declaration. We find that claim 4 is anticipated by Logan.

b) Claim 5

Claim 5 of the ’228 patent recites:

The method of claim 3 wherein the guidance information comprises one or more presentation rates relating to one or more portions of the broadcast information.

Ex. 1001, 43:9–11. With regard to claim 5, the Petition states:

Logan discloses this limitation. (Ex. 1002, ¶¶65-67.) As discussed above with respect to claim 3, *Logan*’s “marking signal,” which may include a “blocking signal,” discloses “guidance information” in the claims. (*Supra* Section IX.A.1.c-d; Ex. 1002, ¶¶52-60.) As also discussed above for claim 3, *Logan* specifically discloses, for example, that “the marking signal may include a blocking signal, which instructs the processor that a particular portion of the broadcast programming signal may not be deleted or skipped.” (Ex. 1005, 13:16-19; *see also id.*, 2:63-3:3; *supra* Sections IX.A.1.c-d.) In this instance, the blocking signal may “prevent a user from proceeding to the next portion of the broadcast programming signal until after a predefined segment of the broadcast programming signal has been viewed.” (Ex. 1005, 13:20-22.)

Logan describes that the “predefined segment” in this case can be “any portion of the broadcast programming signal,” and the broadcaster “may mark commercials so that they cannot be deleted from the broadcast programming signal” or “mark the broadcast programming signal so that the user cannot skip to another marked segment of the broadcast programming

signal until after a commer[ci]al has been viewed.” (*Id.*, 13:23-30.) Also as discussed above for claim 3, *Logan* teaches providing a default (x1) presentation rate, which would be used to present broadcast programming signal, for example, in cases where, upon analysis of the “marking signal,” which may include a “blocking signal,” a user is disallowed from employing a presentation rate other than the normal (x1) rate. (*Supra* Sections IX.A.1.c-d; Ex. 1002, ¶¶52-60.)

Pet. 23–24. Patent Owner does not specifically address claim 5. *See generally* PO Resp.

Petitioner’s undisputed showing as to claim 5 is well-supported by the cited passages in *Logan* and the cited portions of Dr. Schonfeld’s Declaration. We find that claim 5 is anticipated by *Logan*.

c) Claims 6 and 33

Claims 6 and 33 of the ’228 patent recite:

6. The method of claim 5 wherein the step of presenting the information comprises Time-Scale Modifying the information in accordance with one or more presentation rates.

33. The apparatus of claim 31 wherein the presentation apparatus comprises Time-Scale Modification apparatus that presents a time-scale modified version of the broadcast information in accordance with the presentation rate.

Ex. 1001, 43:12–15, 45:4–7. With regard to claim 6, the Petition states:

Logan discloses this limitation. (Ex. 1002, ¶¶68-70.) As discussed above with respect to claims 3 and 5, *Logan* discloses “presenting the information” and “the one or more presentation rates.” (*Supra* Sections IX.A.1.e, 3.a; Ex. 1002, ¶¶61- 62, 65-67.) *Logan* also discloses using presentation systems having typical “local controls,” through which a user can employ certain playback functionalities, such as fast forward, to modify the playback rate. (Ex. 1005, 8:20-26.) As the ’228 patent acknowledged, the purported invention of the ’228 patent merely employed time-scale modification techniques well

known to a POSA. (Ex. 1001, 5:7-12 (“As is well known to those of ordinary skill in the art, presently known methods for Time-Scale Modification (‘TSM’) enable digitally recorded audio to be modified so that a perceived articulation rate of spoken passages, i.e., a speaking rate, can be modified dynamically during playback.”), 6:35-38 (“In accordance with the present invention, TSM System 800 modifies the input stream of data in accordance with well known TSM methods to produce, as output, a stream of samples that represents a Time-Scale Modified signal.”).) A POSA would have understood that *Logan*’s teaching of “the local controls supplied by the video-on-demand service provider,” which the user employs to play broadcast programming signal at normal or fast forward speed, as allowed upon analysis of the guidance information (*supra* Sections IX.A.1.c-d), as disclosing “Time-Scale Modifying the information in accordance with the one or more presentation rates” in claim 6. (Ex. 1005, 8:25-26; Ex. 1002, ¶¶44-45, 52-60, 68-70; *supra* Section VIII.C.)

Pet. 24–25. Petitioner relies on a similar argument and the same evidence for claim 33. *See id.* at 38–40. Patent Owner’s arguments relating to claim 6 and 33 are based on its claim construction contention that the claims are limited to time-scale modifying/time-scale modification that is done by the client device. PO Resp. 55–57. Patent Owner argues:

Petitioner ignores that the Time-Scale Modification of Claims 6 and 33 must be done **by the client device**, and thus does not even attempt to prove that *Logan* discloses it. Claim 6, which depends from claim 5, which in turn depends from claim 3, requires that the “step of presenting the information comprises Time-Scale Modifying the information in accordance with the one or more presentation rates.” In claim 3, the “step of presenting” is done **by the client device**. Thus, in claim 6, “Time-Scale Modifying the information” must also be done by the client device. The same is true with respect to claim 33, which requires that the “apparatus” of claim 31 also “comprises Time-Scale Modification apparatus.” *See also* EX2016, ¶122.

PO Resp. 55. As noted above (*supra* Section II.C.), the claims are not limited to time-scale modifying/time-scale modification that is done by the client device. Petitioner’s showing as to claims 6 and 33 is well-supported by the cited passages in Logan and the cited portions of Dr. Schonfeld’s Declaration.

We find that the preponderance of the evidence establishes that claims 6 and 33 are anticipated by Logan.

d) Claim 7

Claim 7 of the ’228 patent recites:

The method of claim 3 wherein the guidance information comprises information to provide presentation rates related to conceptual information content.

Ex. 43:16–18. With regard to claim 7, the Petition states:

Logan discloses this limitation. (Ex. 1002, ¶¶71-72.) As discussed above with respect to claim 3, *Logan* discloses “guidance information,” which is a “marking signal” that may include a “blocking signal.” (*Supra* Section IX.A.1.c; Ex. 1002, ¶¶52-57.) *Logan* further discloses that the “[m]arking signals can carry information on content, to allow screening of violent scenes, to allow deleting of time-outs in sports shows, or to allow editing of shows to show only highlights.” (Ex. 1005, 11:54-57; *see id.*, 10:34-45 (“The operator/editor can be the user of the system, the broadcaster of the content itself, or any third party. The operator employs the input device to create a marking signal that represents locations in the compressed programming signal stored in the memory system 18 that are associated with certain attributes of the content found before or after those locations. For example, an operator can generate a marking signal that represents a location in the content stream that denotes the beginning of a new news item in a news broadcast.”), 11:40-48.) *Logan* describes that its system may utilize data regarding “a menu of program segments, each corresponding to a particular marking signal. The computer-readable data may also include program segment information,

such as a summary, the total length of the broadcast programming signal, the length of the program segment, quality rating of the program segment, number of, and type of or identity of, previous viewers of the program segment, identification of the person monitoring and marking the program, feedback from other viewers or listeners who have already seen or heard the program, etc.” (*Id.*, 3:8-17; *see also id.*, 13:60-14:1, 14:9-33, 16:29-47.) *Logan* also discloses that “the broadcaster may mark commercials so that they cannot be deleted from the broadcast programming signal. Alternatively, the broadcaster may mark the broadcast programming signal so that the user cannot skip to another marked segment of the broadcast programming signal until after a commer[ci]al has been viewed.” (*Id.*, 13:25-30; *see also id.*, 2:63-3:3.) As previously discussed, *Logan* teaches using its “marking signal” to restrict or direct playback rates at a client device. (*Supra* Sections IX.A.1.c-d; Ex. 1002, ¶¶52- 60.)

Pet. 26–27. Patent Owner does not specifically address claim 7. *See generally* PO Resp.

Petitioner’s undisputed showing as to claim 7 is well-supported by the cited passages in *Logan* and the cited portions of Dr. Schonfeld’s Declaration. We find that claim 7 is anticipated by *Logan*.

e) Claim 9

Claim 9 of the ’228 patent recites:

The method of claim 7 wherein the guidance information specifies that predetermined portions of a media work must be viewed at a predetermined presentation rate or skipped.

Ex. 1001, 43:23–26. With regard to claim 9, the Petition states:

Logan discloses this limitation. (Ex. 1002, ¶¶73-75.) As discussed above with respect to claims 3 and 7, *Logan* discloses a “marking signal” (*i.e.*, “guidance information”), which includes information regarding presentation rates for portions of the broadcast information. (*Supra* Sections IX.A.1.c-d, 5.a; Ex. 1002, ¶¶52-60, 71-72.) As mentioned above, *Logan* discloses a

“marking signal” where “the broadcaster may mark the broadcast programming signal so that the user cannot skip to another marked segment of the broadcast programming signal until after a commercial has been viewed.” (Ex. 1005, 13:27-30; *see also id.*, 2:63-3:3.) Also as discussed above, *Logan* teaches the default (x1) presentation rate (*supra* Sections IX.A.1.c-d), which would correspond to “a predetermined presentation rate,” applying Patent Owner’s own understanding of the claim in district court. (Ex. 1009, 48; *see* Ex. 1008, ¶150.) As such, *Logan*’s description of the “marking signal” that restricts the playback rate the user can employ so that the user must play commercials (i.e., “predetermined portions of a media work”) at the default (x1) presentation rate and cannot fast forward or skip them, discloses “predetermined portions of a media work must be viewed at a predetermined presentation rate or skipped” in claim 9, since *Logan* requires, for example, commercials to be played at a predetermined presentation rate. (Ex. 1002, ¶¶73-75.)

Pet. 28–29. Patent Owner does not specifically address claim 9. *See generally* PO Resp.

Petitioner’s undisputed showing as to claim 9 is well-supported by the cited passages in *Logan* and the cited portions of Dr. Schonfeld’s Declaration. We find that claim 9 is anticipated by *Logan*.

f) Claim 12

Claim 12 of the ’228 patent recites:

The method of claim 3 wherein the guidance information specifies that predetermined portions of the broadcast information may be presented at presentation rates that are specified by one of more of a user interactively, a device programmed by the user, and a device programmed by a broadcaster.

Ex. 1001, 43:34–39. With regard to claim 12, the Petition states:

Logan discloses this limitation. (Ex. 1002, ¶¶76-80.) As discussed above with respect to claim 3, *Logan* discloses the

“guidance information” and that the “guidance information” can be used to determine the presentation rate of the broadcast information. (*Supra* Sections IX.A.1.c-d; Ex. 1002, ¶¶52-60.) In particular, *Logan* describes that its “the marking signal may include a blocking signal, which instructs the processor that a particular portion of the broadcast programming signal may not be deleted or skipped.” (Ex. 1005, 13:16-19; *see also id.*, 2:63-3:3, 12:61-13:10.) Also as previously discussed, *Logan* describes that “[t]he marking signal allows a user to personalize server-stored content by using the supplied marking signal in conjunction with the local controls supplied by the video on-demand service provider,” where “local controls” provide the user an option of, for example, fast forward, pause, etc. (*Supra* Section IX.A.1.a; Ex. 1005, 8:22-26; Ex. 1002, ¶¶48-50.) *Logan* further describes that “a user generates input data signals representative of instructions that will reference marking signals, which in turn are applied to the broadcast programming signal stored in buffer 140 as the signal is played back and displayed on display 144. The input signals may be representative of user-generated remote control instructions. These user-generated instructions direct the processor to skip to the next, previous, first or last marking signal, for example. The input signals may be in the form of infrared, radio-frequency, keyboard, or any other type of data transmission suitable for allowing a user to provide input into the system.” (Ex. 1005, 21:17-33; *see also id.*, 6:46-52, 20:14-38; *supra* Section IX.A.2.a.)

Pet. 30–31. Patent Owner does not specifically address claim 12. *See generally* PO Resp.

Petitioner’s undisputed showing as to claim 12 is well-supported by the cited passages in *Logan* and the cited portions of Dr. Schonfeld’s Declaration. We find that claim 12 is anticipated by *Logan*.

g) Claim 13

Claim 13 of the '228 patent recites:

The method of claim 3 wherein the client device uses the guidance information to provide presentation rates for portions of the broadcast information in conjunction with one or more of user interactive input, input from a device programmed by the user, and input from a device programmed by a broadcaster.

Ex. 1001, 43:40–45. With regard to claim 13, the Petition states:

Logan discloses this limitation. (Ex. 1002, ¶¶81-82.) As discussed above with respect to claim 3, *Logan* discloses client devices, which include a processor, using the “guidance information” to determine the presentation rate of the broadcast information. (*Supra* Sections IX.A.1.c-e; Ex. 1002, ¶¶52-62.) Also, *Logan* describes that its “marking signal may include a blocking signal, which instructs the processor that a particular portion of the broadcast programming signal may not be deleted or skipped.” (Ex. 1005, 13:16-19; *see also id.*, 2:63-3:3.) As also discussed previously, *Logan* describes that “[t]he marking signal allows a user to personalize server-stored content by using the supplied marking signal in conjunction with the local controls supplied by the video-on-demand service provider,” where the “local controls” provide the user an option of, for example, fast forward, pause, etc. (*Supra* Section IX.A.1.a; Ex. 1005, 8:22-26; Ex. 1002, ¶¶48-50.) Also as discussed with respect to claim 12, *Logan* describes various user devices and user generated instructions for presenting broadcast information. (*Supra* Section IX.A.7.a; Ex. 1005, 6:46-52, 21:17-33, 20:14-38; Ex. 1002, ¶¶76-82.)

Pet. 32–33. Patent Owner does not specifically address claim 13. *See generally* PO Resp.

Petitioner’s undisputed showing as to claim 13 is well-supported by the cited passages in *Logan* and the cited portions of Dr. Schonfeld’s Declaration. We find that claim 13 is anticipated by *Logan*.

h) Claim 17

Claim 17 of the '228 patent recites:

The method of claim 3 wherein the guidance information comprises insistence information that specifies a measure of importance of utilizing presentation rate information contained in the guidance information.

Ex. 1001, 43:61–64. With regard to claim 17, the Petition states:

Logan discloses this limitation. (Ex. 1002, ¶¶83-84.) As discussed above with respect to claim 3, *Logan*'s "marking signal," which may include "blocking signals," discloses the "guidance information" that contains information regarding presentation rate. (*Supra* Sections IX.A.1.c-d; Ex. 1002, ¶¶52-60.) *Logan* further discloses that its "marking signal" contains information regarding whether a user is allowed to employ playback options other than the normal (x1) play, such as fast forward, which would otherwise be available. (Ex. 1005, 13:11-22; 8:18-26.) For example, *Logan* teaches that "the broadcaster may not wish commercials to be deleted or skipped in the viewing process, and therefore may produce marking signals representative of information that prevents portions of the broadcast programming signal from being skipped or deleted." (*Id.*, 13:11-16; *see also id.*, 2:62-3:3, 11:9-28, 13:16-30.)

Pet. 34. Patent Owner does not specifically address claim 17. *See generally* PO Resp.

Petitioner's undisputed showing as to claim 17 is well-supported by the cited passages in *Logan* and the cited portions of Dr. Schonfeld's Declaration. We find that claim 17 is anticipated by *Logan*.

6. *Summary as to the Asserted Anticipation of Claims 3–7, 9, 12, 13, 17, 31, 33, and 34 Based on Logan*

We have fully considered Petitioner's showing that claims 3–7, 9, 12, 13, 17, 31, 33, and 34 are anticipated by *Logan* and all the contrary

arguments by Patent Owner. As indicated above with respect to each claim challenged on this ground, we find that Petitioner has shown by a preponderance of the evidence that claims 3–7, 9, 12, 13, 17, 31, 33, and 34 of the '228 patent are anticipated by Logan.

E. Asserted Obviousness of Claims 14, 16, and 17 in View of Logan

Petitioner challenges claims 14, 16, and 17 as having been obvious in view of Logan. Pet. 2, 42–48 (designated “Ground II” in the Petition). Patent Owner’s entire response to this ground is: “The claims challenged in Ground II (obviousness) depend from challenged independent claim 3. Therefore, based on Patent Owner’s response to Ground I, the claims addressed by Ground II are also patentable.” PO Resp. 59. As discussed above, we have considered Patent Owner’s arguments related to claim 3 and Ground I (anticipation by Logan) but find that they do not undermine Petitioner’s persuasive showing. As a result, we find the preponderance of the evidence shows that claim 3 is anticipated by Logan. Patent Owner presents no arguments specifically directed to the additional limitations recited in claims 14, 16, and 17. *See generally id.* As discussed below, Petitioner’s obviousness challenge to claims 14, 16, and 17 is well-supported, and we conclude claims 14, 16, and 17 would have been obvious in view of Logan.

1. Claim 14

Claim 14 of the '228 patent recites:

The method of claim 3 wherein the guidance information comprises a presentation rate along with an indication that the presentation rate should take effect immediately upon receipt.

Ex. 1001, 43:46–49. With regard to claim 14, the Petition states:

Logan discloses or suggests this limitation. (Ex. 1002, ¶¶97-100.) As discussed above with respect to claim 3, *Logan* discloses the “guidance information” including information regarding presentation rate. (*Supra* Section IX.A.1.c-d; Ex. 1002, ¶¶52-60.) *Logan* also describes “broadcaster-embedded marking signals” which are transmitted to the viewer along with the broadcast program. (Ex. 1005, 13:11-30; *see also id.*, 2:56-59.) In particular, as *Logan* describes an example, in which the allowed and disallowed presentation rate is already assigned for predetermined portions of the broadcast program, playing such content with the broadcaster-embedded marking signals would by default be played at the presentation rate preset by the broadcaster. (*Id.*; *see also id.*, 2:63-3:3.)

* * *

To the extent that the Patent Owner may argue that *Logan* does not explicitly disclose the “indication” for the presentation rate to take effect immediately upon receipt, it would have been obvious over *Logan*. (Ex. 1002, ¶¶99-100.) As discussed above for claim 3 in Ground 1 *Logan* teaches broadcaster-embedded marking signals that specify the preset presentation rate predetermined by the broadcaster. (*Supra* Section IX.A.1.c; Ex. 1002, ¶¶52-57.) While *Logan* may not explicitly disclose that such signals include an indication they should take effect immediately upon receipt, a POSA would have understood that to be the intention of *Logan*, and would have been motivated to implement *Logan* in this way. (Ex. 1002, ¶¶99-100.) This is so because *Logan* relies on the marking signals to control the playback rate associated with particular types of content as such content is broadcast to a user. (Ex. 1005, 11:54-57.) A POSA would have understood that it would not have made sense for the marking signals to take effect any time other than immediately, since otherwise their purpose would be defeated (e.g., while a broadcaster may wish to prevent a user from skipping commercials, as discussed above, if the marking signals did not take effect immediately than the user would not be prevented from skipping commercials). (Ex. 1002, ¶¶99-100.) Indeed, *Logan* discloses that a user may have to pay for this functionality (Ex. 1005,

13:34-38), and a POSA would have recognized that it would have thus been undesirable for the functionality not to take effect immediately. (*Id.*) A POSA would have recognized this to be a simple design choice that would not have otherwise affected how *Logan* functions. (*Id.*) Moreover, a POSA would have been motivated to make such modification to provide an explicit indication to provide more playback settings for the broadcaster as well as the viewer. (*Id.*) For example, providing such an explicit indication would allow the system to take into account other factors in determining which playback rate input should take precedent. (*Id.*) See *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007).

Pet. 42–44. Petitioner’s undisputed showing as to claim 14 is well-supported by the cited passages in *Logan* and the cited portions of Dr. Schonfeld’s Declaration. And, we find Petitioner’s reasoning as to how claim 14 would have been obvious in view of *Logan* to be sound. We find that claim 14 would have been obvious in view of *Logan*.

2. *Claim 16*

Claim 16 of the ’228 patent recites:

The method of claim 3 wherein the guidance information comprises a title of the broadcast information and one or more of time value, sample counts, timing-marks, segues, and indicators that identify segments or portions of the broadcast information.

Ex. 1001, 43:56–60. With regard to claim 16, the Petition states:

Logan discloses or suggests this limitation. (Ex. 1002, ¶¶101-104.) As discussed above with respect to claim 3, *Logan*’s “marking signal” discloses the “guidance information.” (*Supra* Sections IX.A.1.c-d; Ex. 1002, ¶¶52-60.) Moreover, as discussed above, the “[m]arking signals can carry information on content, to allow screening of violent scenes, to allow deleting of time-outs in sport shows, or to allow editing of shows to show only highlights.” (Ex. 1005, 11:54-57.) Marking signals can also “be generated to provide additional

information concerning the broadcast programming signal to be used for selectively deleting [a] commercial sequence.” (*Id.*, 11:22-24.) Therefore, the system disclosed in *Logan*, for example, “can remove from the captured broadcast programming signal a sequence of commercials that occurs intermittently within the broadcast programming signal.” (*Id.*, 11:25-28; *see also id.*, 13:16-30 (discussing marking of commercials).) Therefore, *Logan* discloses “guidance information comprises . . . indicators that identify segments or portions of the broadcast information,” as claimed.

To the extent that the Patent Owner may argue that *Logan* does not explicitly disclose the “guidance information” including the “title of the broadcast information,” it would have been obvious over *Logan*. (Ex. 1002, ¶¶102-104.) For example, *Logan* describes that its system may utilize data regarding “a menu of program segments, each corresponding to a particular marking signal. The computer-readable data may also include program segment information, such as a summary, the total length of the broadcast programming signal, the length of the program segment, quality rating of the program segment, number of, and type of or identity of, previous viewers of the program segment, identification of the person monitoring and marking the program, feedback from other viewers or listeners who have already seen or heard the program, etc.” (Ex. 1005, 3:8-17; *see also id.*, 13:60- 14:1, 14:9-33.) *Logan* also describes that “[t]he marking signal could also include text describing the content of the news segment to follow.” (*Id.*, 10:43-45.)

Pet. 44–46. Petitioner’s undisputed showing as to claim 16 is well-supported by the cited passages in *Logan* and the cited portions of Dr. Schonfeld’s Declaration. And, we find Petitioner’s reasoning as to how claim 16 would have been obvious in view of *Logan* to be sound. We find that claim 16 would have been obvious in view of *Logan*.

3. *Claim 17*

Claim 17 of the '228 patent recites:

The method of claim 3 wherein the guidance information comprises insistence information that specifies a measure of importance of utilizing presentation rate information contained in the guidance information.

Ex. 1001, 43:61–64. With regard to claim 17, the Petition states:

Logan discloses or suggests this limitation. (Ex. 1002, ¶¶105-108.) To the extent that Patent Owner may argue that *Logan* does not explicitly disclose the “insistence information that specifies the measure of importance” feature, it would have been obvious over *Logan*. (*Id.*) As discussed above with respect to claim element 3(d) (*supra* Section IX.A.1.d), *Logan* teaches that its marking signal, which may include a blocking signal, includes information that determines a presentation rate, such as a presentation rate for a commercial by allowing or disallowing a user to fast forward. A POSA reading *Logan* would have readily understood that this information is a form of “insistence information” that indicates the “measure of importance” of whether the user can use certain playback functionalities. (Ex. 1002, ¶¶58-60, 105-108.) As such, it would have been obvious for a POSA to have modified *Logan*’s marking signal and blocking signal to include, for example, certain numerical values specifying level of importance in insisting that only particular presentation rate should be allowed for one or more portions of the broadcast program. (*Id.*)

Indeed, such modification would have been an obvious variation of *Logan*’s system because *Logan*’s teaching of marking signal already relates to how the presentation of a broadcast program should be played. (*Id.*) It was well known in the art, for example, to include an additional data point that provides an explicit indication representative of the level of importance that a particular playback rate must be observed. (*Id.*)

Pet. 47–48. Petitioner’s undisputed showing as to claim 17 is well-supported by the cited passages in *Logan* and the cited portions of Dr.

Schonfeld's Declaration. And, we find Petitioner's reasoning as to how claim 17 would have been obvious in view of Logan to be sound. We find that claim 17 would have been obvious in view of Logan.

4. *Summary as to Asserted Obviousness of Claims 14, 16, and 17 in View of Logan*

We conclude, based on Petitioner's arguments and evidence, that Petitioner has shown by a preponderance of the evidence claims 14, 16, and 17 would have been obvious in view of Logan.

F. *Asserted Obviousness of Claims 3–7, 9, 12–14, 16, 17, 31, 33, and 34 in View of Logan and De Lang*

Petitioner contends that “[t]o the extent that *Logan* is not found to disclose the claimed ‘guidance information,’ it would have been obvious to combine the teachings of *Logan* and *De Lang* to implement this feature.” Pet. 49 (citing Ex. 1002 (Schonfeld Decl.) ¶¶ 110–118). As discussed above, we find that Logan discloses “guidance information” as recited in the challenged claims and that Logan anticipates the challenged claims of the ’228 patent. However, for completeness, we consider all grounds of unpatentability presented in the Petition.

In opposing this ground of unpatentability, Patent Owner also relies on its claim construction argument that the independent claims are limited by the preambles to “a client device/apparatus which itself ‘utilizes presentation rates to present information at various presentation rates.’” PO Resp. 59, *see also id.* at 61–63. As noted above, we are not persuaded by this claim construction argument and do not construe the preambles of the independent claims as requiring that the client device/apparatus is capable of performing time-scale modification by itself to implement various presentation rates (i.e., smart devices). And, Patent Owner acknowledges

that De Lang teaches a system in which the server alters the presentation rate of a media work (“normal, fast display, slow display, winding, rewinding, pause, etc.”) “in response to a presentation rate change request by a user at the client device” and that “[t]he *De Lang* client device presents the broadcast information it receives at the rate at which it was encoded at the server and received by the client.” PO Resp. 62.

Considering the arguments and evidence of the parties, we conclude that Petitioner has shown by a preponderance of the evidence that claims 3–7, 9, 12–14, 16, 17, 31, 33, and 34 would have been obvious in view of Logan and De Lang.

1. *De Lang (Ex. 1006)*

De Lang relates to “a video-on-demand system, comprising a video server for transmitting a selected television signal and provided with means for playing back the television signal in one of a plurality of playback modi defined by operating signals” and “a user station for receiving and displaying the television signal, and provided with an operating circuit for generating and transmitting said operating signals to the server.” Ex. 1006, 1:1–5. Figure 3 of De Lang is reproduced below.

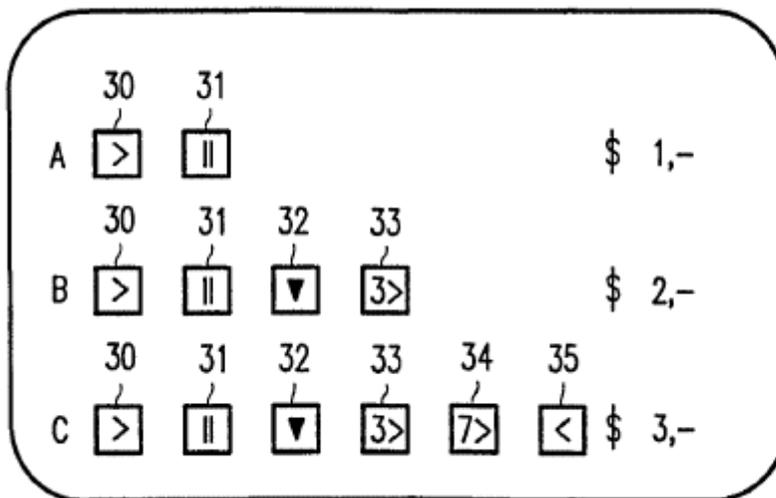


FIG. 3

Figure 3 of De Lang (above) depicts a menu of possibilities for selecting operating data. *Id.* at 2:30. The menu in Figure 3 includes three selection possibilities: selection A, which has only two operating facilities “play” and “stop” denoted by pictograms 30 and 31; selection B, which is more expensive and also provides the possibility of still pictures (pictogram 32) and display at threefold speed (pictogram 33); and selection C, which is the most expensive and provides further functions such as display at a sevenfold speed (pictogram 34) and reverse display (pictogram 35). *Id.* at 4:10–18.

2. *Analysis of Independent Claims 3, 31, and 34*

As shown above, independent claims 3, 31, and 34 contain limitations reciting “guidance information.” Method claim 3 recites, “receiving guidance information relating to presentation of the broadcast information” and “analyzing the guidance information to determine a presentation rate.” Ex. 1001, 42:66–43:2. Apparatus claim 31 recites, “a receiver of the broadcast information and guidance information relating to presentation of the broadcast information” and “a rate determiner that analyzes the guidance information to determine a presentation rate.” *Id.* at 44:57–61. Method claim 34 recites, “broadcasting guidance information used to determine a second presentation rate for use by the client device in presentation of the information.” *Id.* at 46:5–7.

With regard to whether De Lang teaches “guidance information,” Petitioner relies on De Lang’s disclosure of a menu in which a user may choose one of three options for playback (*see* Ex. 1006, Fig. 3) and the teachings that “the video server is therefore adapted to transmit operating data to the user station for defining the available playback modi. The operating circuit in the user station is adapted to receive and store the operating data and to generate the corresponding operating signals” (*see id.*

at 1:23–26). Pet. 49. The Petition provides the following explanation as to how De Lang processes the user’s menu choice to play back the media work:

De Lang further explains that “[t]he selection made by the user is transmitted to the server as a control signal C (see Fig. 1),” which is then “received by the server in a step 21,” and “[i]n response . . . , the server performs a step 22 in which it transmits operating data corresponding to the selection made to the user station as an operating signal D (see Fig. 1).” (*Id.*, 4:18-22.) This selection allows for a subsequent operation in which “playback of the selected television program is started in a step 24 and the supervisor waits, in a step 25, for an operating signal from the user station. When such an operating signal is received, for example a ‘fast display’ signal, the relevant playback mode is performed in a step 26.” (*Id.*, 4:29-5:7.)

The end result in *De Lang* is similar to that in *Logan*. That is, the user is provided certain viewing abilities based, for example, on the user’s payment of fees. According to *De Lang*, “a television program interrupted by commercials may be transmitted with operating data rendering only the playback functions ‘play’ and ‘pause’ possible. Alternatively, a television program may be transmitted with operating data rendering fast display possible. The latter television program may also comprise commercials, but these can now be skipped by the user or displayed fast.” (*Id.*, 1:27-2:5.) In other words, *De Lang* not only allows for commercials to be skipped, but also expressly allows for commercials to be displayed at a higher presentation rate.

Id. at 50–51. We have construed “guidance information” as “information that is used to communicate a playback rate for an entire media work or one or more specific portions of a media work.” *Supra* Section II.C. We find that the “operating data” and “operating signal(s)” of De Lang teach “guidance information” as recited in the challenged claims.

With regard to how the relevant teachings of *Logan* and *De Lang* are combined, the Petition states, “[b]oth *Logan* and *De Lang* relate to video

playback systems that allow personalization, and in viewing *Logan*, a POSA would have had reason to look to *De Lang* to, for example, to [sic] provide users particular playback rate options and implement more detailed levels of user authority that allow personalizing playback” and “a POSA would have appreciated that *De Lang*’s teaching of multiple levels of viewing authority corresponding to differing payment amounts and differing playback rate options (e.g., fast forward by (x3), fast forward by (x7), reverse) would provide the system in *Logan* with the additional benefit of providing the user express selections of playback options.” Pet. 51–52 (citing Ex. 1002 (Schonfeld Decl.) ¶¶ 111–118). With regard to the motivation to combine the relevant teachings of *Logan* and *De Lang*, the Petition provides that “to combine the teachings of *Logan* and *De Lang* [would] improve the playback system disclosed in *Logan*” by allowing the user “to select a specific level of authorization and a suite of playback options, including specific presentation rates” and “[a] POSA would have understood *De Lang* as furthering the goal of *Logan* as *De Lang* also discloses the guidance information that explicitly restricts or directs the playback rates at the client device.” *Id.* at 52–53.

Patent Owner argues that “Petitioner fails to explain how the proposed guidance information of *De Lang* would be applied in each instance in which appears [sic] in the challenged claims.” PO Resp. 60. Specifically, Patent Owner faults the Petitioner for failing to explain how the menu of *De Lang* would be implemented in the system of *Logan* to meet the “guidance information” limitations of the challenged, independent claims. *Id.* at 60–61. However, the Petition provides:

A POSA would have recognized that in view of *De Lang*, it would have been a predictable and simple modification of *Logan*’s system to have the user select a specific level of authorization and a suite of playback options, including specific

presentation rates, and accordingly determine whether and to what extent the user can alter its viewing abilities, such as skipping or fast forwarding commercials. (*Id.*) For instance, a POSA would have appreciated that since the marking signal in *Logan* already includes data as to how a video should be played that is sent to the user's device, and since *De Lang* discloses that the express levels of authorized presentation rates are likewise transmitted to the user's device, it would have been a straightforward modification to include levels of authorized presentation rates, like those described in *De Lang*, in the marking signal of *Logan*. (*Id.*) A POSA would have recognized this to be a combination of known prior art elements, according to known methods, to yield predictable results. (*Id.*) See *KSR*, 550 U.S. at 416.

Pet. 52. We find Petitioner's reasoning and explanation sufficient to explain how a skilled artisan would combine the teachings of the cited references. Accordingly, we do not find Patent Owner's argument undermines Petitioner's persuasive showing.

3. *Analysis of Dependent Claims 4–7, 9, 12–14, 16, 17, and 33*

With regard to the challenged, dependent claims, Petitioner relies on *Logan* for teaching or suggesting all the features of these claims (*see* Pet. 53–54) and further provides argument and evidence to show how the *Logan-De Lang* combination teaches or suggests the limitations recited in the challenged, dependent claims (*see id.* at 54–59). Patent Owner does not specifically challenge Petitioner's showing with regard to the challenged, dependent claims and the combination of *Logan* and *De Lang*. See PO Resp. 59–63. Petitioner's undisputed showing as to the dependent is well-supported and we conclude that these claims are unpatentable.

4. *Summary as to Asserted Obviousness of Claims 3–7, 9, 12–14, 16, 17, 31, 33, and 34 in View of Logan and De Lang*

Having considered the arguments and evidence of the parties, we conclude that Petitioner has shown by a preponderance of the evidence that claims 3–7, 9, 12–14, 16, 17, 31, 33, and 34 would have been obvious in view of Logan and De Lang.

G. *Asserted Obviousness of Claims 6 and 33 in View of Logan and Bhadkamkar*

Claims 6 and 33 specifically recite “Time-Scale Modifying” and “Time-Scale Modification,” respectively. Ex. 1001, 43:12–15, 45:4–7. Petitioner presents this ground of unpatentability in order to show unpatentability under the limiting constructions of “presentation rate” and “time-scale modifying/time/scale modification” proposed by Patent Owner. See Pet. 59–62. As discussed above, we have not adopted the limiting constructions of “presentation rate” and “time-scale modifying/time/scale modification” proposed by Patent Owner. See *supra* Section II.C. However, for completeness, we consider all grounds of unpatentability presented in the Petition.

1. *Bhadkamkar (Ex. 1007)*

Bhadkamkar is titled “Variable Rate Video Playback with Synchronized Audio,” and describes techniques for varying a display rate of an audiovisual display, for example, by “modify[ing] an original set of audio data in accordance with a target display rate, then modify[ing] a related original set of video data to conform to the modifications made to the audio data set, such that the modified audio and video data sets are synchronized.” Ex. 1007, codes (54), (57). The target display rate can be faster or slower than a normal display rate at which an audiovisual display system generates

an audiovisual display from the original sets of audio and video data. *Id.* The target display rate can be established solely by a user instruction, by analysis of the audiovisual data, or by modification of a user-specified nominal target display rate based upon analysis of the audiovisual data. *Id.*

2. *Claims 6 and 33*

For the most part, Petitioner relies on Logan as teaching the limitations of claims 6 and 33. Pet. 59 (“Logan discloses all the limitations of claim 6.”), 62 (“Logan discloses or suggests all the limitations of claim 33.”). With regard to Bhadkamkar, the Petition states:

Bhadkamkar, discloses various time-scale modification techniques that may be used in order to modify the display rate, including conventional time-scale modification methods where “the apparent display rate of an audiovisual display has been varied by deleting or repeating video data (e.g., video frames) in a uniform manner, as appropriate, and deleting or repeating audio data in a uniform manner that corresponds to the treatment of the video data (e.g., if the apparent display rate of the video display is speeded up to 2 times the original display rate by, for example, eliminating every other video frame, then the audio display is likewise speeded up by eliminating every other audio sample or every other set of a predetermined number of audio samples.)” (Ex. 1007, 1:60-2:2.)

Bhadkamkar also discloses other time-scale modification techniques that improve upon the conventional ones. (*See, e.g., id.*, 2:31-5:16, 10:5-39, 12:17-24.)

Id. at 60. With regard to combining the teachings of Logan and Bhadkamkar, Petitioner asserts, “a POSA would have recognized that it would be beneficial to implement the time-scale modification techniques taught in Bhadkamkar to the system disclosed in Logan to improve the process of modifying playback rates.” *Id.* at 61 (citing Ex. 1002 (Schonfeld Decl.) ¶¶ 130–132).

Here again, Patent Owner relies on its claim construction argument that the claims are limited to a “client device, which has the ability to utilize and alter the presentation rate of broadcast information.” PO Resp. 63. Specifically, Patent Owner argues that, in Bhadkamkar (as in Logan and De Lang), “the content is dished out *from the server* at whatever rate the user requests—whether that requested rate is simple fast forward or a faster or slower TSM rate” and “[t]he client device then plays it at the rate it was encoded and sent by the server and received by the client device.” *Id.* at 64. As noted above, we are not persuaded by this claim construction argument and do not construe the preambles of the independent claims as requiring that the client device/apparatus is capable of performing time-scale modification by itself to implement various presentation rates (i.e., smart devices).

Considering the arguments and evidence of the parties, we conclude that Petitioner has shown by a preponderance of the evidence that claims 6 and 33 would have been obvious in view of the combination of Logan and Bhadkamkar.

H. Asserted Obviousness of Claims 6 and 33 in View of Logan, De Lang, and Bhadkamkar

Claims 6 and 33 specifically recite “Time-Scale Modifying” and “Time-Scale Modification,” respectively. Ex. 1001, 43:12–15, 45:4–7. Petitioner relies on this ground of unpatentability “[t]o the extent that Patent Owner may argue that claims 6 and 33 would not have been obvious over either combination [of Logan and De Lang or Logan and Bhadkamkar], they would still have been obvious over Logan, in view of De Lang and Bhadkamkar.” Pet. 62 (citing Ex. 1002 (Schonfeld Decl.) ¶¶ 135–137).

Although we have found for Petitioner under previously considered grounds, we consider this additional ground for completeness.

Petitioner contends, “*Logan* in combination with *De Lang* and *Bhadkamkar* discloses or suggests the features of claims 6 and 33 for at least the same reasons as presented above for these claims in Grounds 3 and 4 [(i.e., obviousness based on *Logan* and *De Lang*, and obviousness based on *Logan* and *Bhadkamkar*)]” and “[t]he same analyses presented above for these claims in Grounds 3 and 4 are also applicable for combining *Logan* and *De Lang* and *Bhadkamkar*.” Pet. 62–63. Petitioner asserts:

As demonstrated above, a POSA would have been motivated to combine *Logan* with *De Lang* and *Bhadkamkar* to implement the system disclosed in *Logan* with the features of the specific indications of presentation rates as explicitly disclosed in *De Lang* and with the time-scale modification techniques disclosed in *Bhadkamkar*. (*Id.*) For instance, a POSA would have recognized that *Bhadkamkar*’s teaching of time-scale modifying techniques can be implemented in user devices to effectuate the various playback rates as specifically indicated by *De Lang*’s teachings, which together would improve *Logan*’s system of providing personalized broadcast program presentation. (*Id.*) A POSA would have recognized that providing the user with various levels of advanced playback rate options furthers the goal of providing personalization of broadcasting program for the users discussed in *Logan*. (*Id.*) The resulting combination would have been a combination of known elements in known ways that would have yielded predictable results. *See KSR*, 550 U.S. at 416.

* * *

[A] POSA would have understood that *Logan* discloses or suggests modifying the playback rate of a particular portion of the broadcast programming signal to a rate that is not the default (x1) rate, and a POSA would have recognized that implementing *Bhadkamkar*’s teaching of time-scale modification techniques would have improved the combined

Logan-De Lang system to provide the user more particularized and advanced playback rate modification options for particular portions of a broadcast program. (Ex. 1002, ¶¶110-127.) It would have been a routine exercise for a POSA to recognize such benefits and to modify the *Logan-De Lang* system to implement *Bhadkamkar*'s teachings to provide personalized presentation of broadcast programs. (*Id.*) See *KSR*, 550 U.S. at 416.

Id. at 63–64. Patent Owner argues that Petitioner has failed to establish why a skilled artisan would combine the relevant teachings of the three cited references. PO Resp. 64–66. We find Petitioner's argument more persuasive. We find Petitioner has presented persuasive reasoning and evidence that shows why the combination would have been made by a skilled artisan.

Considering the arguments and evidence of the parties, we conclude that Petitioner has shown by a preponderance of the evidence that claims 6 and 33 would have been obvious in view of the combination of Logan, De Lang, and Bhadkamkar.

III. CONCLUSION²⁶

For the foregoing reasons, we conclude that a preponderance of the evidence establishes that: (1) claims 3–7, 9, 12, 13, 17, 31, 33, and 34 are

²⁶ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

anticipated by Logan; (2) claims 14, 16, and 17 would have been obvious in view of Logan; (3) claims 3–7, 9, 12–14, 16, 17, 31, 33, and 34 would have been obvious in view of Logan and De Lang; (4) claims 6 and 33 would have been obvious in view of Logan and Bhadkamkar; and (5) claims 6 and 33 would have been obvious in view of Logan, De Lang, and Bhadkamkar.²⁷

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 3–7, 9, 12–14, 16, 17, 31, 33, and 34 of the '228 patent are unpatentable.

In summary:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
3–7, 9, 12, 13, 17, 31, 33, 34	102	Logan	3–7, 9, 12, 13, 17, 31, 33, 34	
14, 16, 17	103	Logan	14, 16, 17	
3–7, 9, 12–14, 16, 17, 31, 33, 34	103	Logan, De Lang	3–7, 9, 12–14, 16, 17, 31, 33, 34	
6, 33	103	Logan, Bhadkamkar	6, 33	

²⁷ In the Petitioner's Reply, Petitioner argues that Patent Owner's "arguments are subject to issue preclusion and the estoppel of 37 C.F.R. § 42.73(d) because the challenged claims of the '228 patent are not patentably distinct from the claims of a related patent that have already been found unpatentable." Pet. Reply 1–2. As we conclude that the challenged claims of the '228 patent are unpatentable on the merits of Petitioner's challenge, we do not consider this argument.

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6, 33	103	Logan, De Lang, Bhadkamkar	6, 33	
Overall Outcome			3-7, 9, 12-14, 16, 17, 31, 33, 34	

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

VIRENTEM VENTURES, LLC,
Patent Owner.

IPR2019-01244
Patent 6,598,228 B2

Before MEREDITH C. PETRAVICK, JENNIFER MEYER CHAGNON,
and TERRENCE W. McMILLIN, *Administrative Patent Judges*.

Opinion Concurring Filed by *Administrative Patent Judge* PETRAVICK.

I concur with the result of the majority decision.

The majority decision treats all the language in the challenged independent claims as having patentable weight in its analysis. I write separately to point out that limitations, such as “guidance information,” as recited in claim 34 are non-functional descriptive material (NFDM) and are entitled to no patentable weight.

Challenged independent claim 3 recites “[a] method for presentation of information received from a broadcaster by a client device, which device utilizes presentation rates to present information at various presentation rates.” Ex. 1001, 42:61–43:3. Challenged independent claim 31 recites an

apparatus that corresponds to the method of claim 3. *Id.* at 44:53–64. Challenged independent claim 34 is unlike claims 3 and 31 as it is directed to a method of broadcasting information and not a method of presentation of information by a client device. Claim 34 of the '228 patent recites:

A method for broadcasting information to a client device, which device utilizes presentation rates to present information at various presentation rates, and which method comprises steps of:

broadcasting information having a first presentation rate;
and
broadcasting guidance information used to determine a second presentation rate for use by the client device in presentation of the information.

Ex. 1001, 45:8–46:7 (emphasis added). The preamble of claim 34 recites, “[a] method for broadcasting information” and the body of claim 34 contains two steps that recite broadcasting information. But claim 34 does not recite any further steps of using the information, such a client device receiving, analyzing, and presenting the information as recited in independent claims 3 and 31. In other words, claim 34 only recites broadcasting or sending information.

I determine that the limitations related to the character of content of the information being broadcast (e.g., “guidance information used to determine a second presentation rate for use by the client device in presentation of the information”) in claim 34 recite non-functional descriptive material (NFDM) that is entitled to little or no patentable weight.²⁸ Thus, claim 34 has a much different scope than either claim 3 or

²⁸ This issue was raised by the Board at the oral argument and both parties were accorded an opportunity to address this issue. Tr. 30–31, 46–54.

31. Non-functional descriptive material (NFDM) in a claim cannot be relied upon to establish patentability over the prior art. *Ex parte Mathias*, 84 USPQ2d 1276, 1279 (BPAI 2005) (informative) (“[N]onfunctional descriptive material cannot lend patentability to an invention that would have otherwise been anticipated by the prior art.”), *aff’d*, 191 F. App’x 959 (Fed. Cir. 2006) (Rule 36); *Ex parte Curry*, 84 USPQ2d 1272, 1274 (BPAI 2005) (informative) (“Nonfunctional descriptive material cannot render nonobvious an invention that would have otherwise been obvious.”), *aff’d*, No. 06-1003 (Fed. Cir. June 12, 2006) (Rule 36).

The Federal Circuit has held that, in determining whether claim language is NFDM, “the relevant question is whether ‘there exists any new and unobvious functional relationship between the [printed] matter and the substrate.’” *King Pharm., Inc. v. Eon Labs, Inc.*, 616 F.3d 1267, 1279 (Fed. Cir. 2010) (citations omitted). *King Pharmaceuticals* involved a method patent related to the administration of a drug in which the claimed methods recited “informing the patient” that administration of the drug with food increased absorption of the drug.²⁹ *Id.* at 1277. The patentee argued that the patent should not have been found invalid because it was never found that the “informing” limitation was disclosed in the prior art. *Id.* at 1278. The Federal Circuit affirmed the finding that the claim was invalid as anticipated

²⁹ An independent method claim of the patent at issue “requir[ed] the administration of ‘a therapeutically effective amount of metaxalone in a pharmaceutical composition with food.’” *King Pharma.*, 616 F.3d at 1274. The dependent claim at issue recited the additional limitation of “informing the patient that administration of a therapeutically effective amount of metaxalone in a pharmaceutical composition with food results in an increase in the maximal plasma concentration (C_{max}) and extent of absorption (AUC_(last)) of metaxalone compared to administration without food.” *Id.* at 1277.

by prior art showing administration of the drug with food because the “informing” limitation did not depend on the method of administering the drug with food and the method did not depend on the “informing” limitation. *Id.* at 1279. In other words, the relationship between the “informing” limitation and the method of administering the drug with food was not functional. *Id.*

In *In re Distefano*, the Federal Circuit explained:

The first step of the printed matter analysis is the determination that the limitation in question is in fact directed toward printed matter. Our past cases establish a necessary condition for falling into the category of printed matter: a limitation is printed matter only if it claims the content of information
and

[o]nly if the limitation in question is determined to be printed matter does one turn to the question of whether the printed matter nevertheless should be given patentable weight. Printed matter is given such weight if the claimed informational content has a functional or structural relation to the substrate.

In re Distefano, 808 F.3d 845, 848–851 (Fed. Cir. 2015).

In *Ex parte Nehls*, 88 USPQ2d 1883, 1891 (BPAI 2008) (precedential), our predecessor Board of Patent Appeals and Interferences found that “merely information being manipulated by a computer” that “do[es] not affect how the method of the prior art is performed” “is properly considered to be nonfunctional” descriptive material (NFDm). *Nehls* involved a patent on a system for identifying nucleic acid fragments.³⁰ *Id.* at

³⁰ The claims at issue in *Nehls* recited:

13. A computer-based system for identifying nucleic acid fragments of the human genome of commercial importance comprising the following elements:
 - a) a data storage means comprising the sense or antisense

1884. The issue was whether the specific sequence of nucleotides (SEQ ID Nos 9-1008) recited in the claim was NFD. *Id.* at 1888–89. The Board determined that “the descriptive material (SEQ ID NOs) recited in the claims [wa]s not functional material.” *Id.* at 1891. The Board reasoned:

There is no evidence that SEQ ID NOs 9-1008 functionally affect the process of comparing a target sequence to a database by changing the efficiency or accuracy or any other characteristic of the comparison. Rather, the SEQ ID NOs are merely information being manipulated by a computer; the SEQ ID NOs are inputs used by a computer program that calculates the degree of similarity between a target sequence and each of the sequences in a database. The specific SEQ ID NOs recited in the claims do not affect how the method of the prior art is performed – the method is carried out the same way regardless of which specific sequences are included in the database.

* * *

The recited sequences are not functionally related to the computer system carrying out the comparison because the computer compares a target sequence to a database the same way regardless of whether the database includes any of SEQ ID Nos 9-1008: the SEQ ID NOs and the computer do not depend on each other for their function.

sequence of at least 18 contiguous nucleotides of any one of SEQ ID NOS:9-1,008;

b) search means for comparing a target sequence to each of the sequences of the data storage means of step a) to identify homologous sequence(s); and

c) retrieval means for obtaining said homologous sequence(s) of step (b).

14. The system of claim 13, wherein said data storage means comprises a combination of nucleic acid sequences comprising SEQ ID NOS:9-1,008.

Nehls, 88 USPQ2d 1883.

Id. (footnotes omitted).

As shown above, claim 34 contains only two method steps, both reciting broadcasting information. Ex. 1001, 45:8–46:7. These method steps are carried out in the same way regardless of the specific information being broadcast. *See, e.g.*, Ex. 1001, 27:55–31:51 (describing the recipient devices, not the broadcaster, using the guidance information). The function of “broadcasting information” (preamble) does not depend on the content of the “broadcast[] information” (first step of claim 34) or the “broadcast[] guidance information” (second step of claim 34). The “information” (first step of claim 34) and the “guidance information” (second step of claim 34) do not change or affect the function of “broadcasting information” (preamble). The method steps of “broadcasting information having a first presentation rate” (first step of claim 34) or of “broadcasting guidance information used to determine a second presentation rate for use by the client device in presentation of the information” (second step of claim 34) are not functionally different because of the nature or content of the data being broadcast. These steps would be functionally identical no matter the nature of the data being broadcast. We determine that the recited “broadcasting information having a first presentation rate” (first step of claim 34) and the “broadcasting guidance information used to determine a second presentation rate for use by a client device in presentation of the information” (second step of claim 34) in the context of claim 34 are non-functional descriptive material (NFDM).

Patent Owner acknowledges that “Logan teaches broadcasting signals.” Tr. 52:9–10. As the “broadcasting information” limitations of claim 34 recite the content of information and, in claim 34, do not functionally affect the “method of broadcasting information,” the

“broadcast[] information” is non-functional descriptive material (NFDM) that cannot serve to distinguish the claimed invention from the prior art. The “broadcast[] information” lacks a new (or nonobvious) functional relationship to the “broadcasting information” steps.

Accordingly, for this additional reason, I find that Petitioner has shown by a preponderance of the evidence that claim 34 is anticipated by Logan and obvious in view of Logan and De Lang.

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