

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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WEBPOWER, INC.,

FRIENDFINDER NETWORKS INC., STREAMRAY INC., WMM, LLC,  
WMM HOLDINGS, LLC, and MULTIMEDIA, LLC,

DUODECAD IT SERVICES LUXEMBOURG S.À R.L.,  
ACCRETIVE TECHNOLOGY GROUP INC., ICF TECHNOLOGY, INC.,  
RISER APPS LLC, and STREAMME, INC. (f/k/a VUBEOLOGY, INC.),

Petitioner,

v.

WAG ACQUISITION, LLC,  
Patent Owner.

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Case IPR2016-01238  
Patent 8,122,141 B2

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Before TREVOR M. JEFFERSON, BRIAN J. McNAMARA, and  
PATRICK M. BOUCHER, *Administrative Patent Judges*.

BOUCHER, *Administrative Patent Judge*.

JUDGMENT  
Final Written Decision on Remand  
Determining All Challenged Claims Unpatentable  
*35 U.S.C. §§ 144, 318(a) and 37 C.F.R. § 42.73*

I. INTRODUCTION

We address this case on remand after a decision by the U.S. Court of Appeals for the Federal Circuit in *WAG Acquisition, LLC v. Webpower, Inc.*, 781 F. App'x 1007 (Fed. Cir. 2019).

*A. Background*

In response to a Petition (Paper 1, “Pet.”) filed by WebPower, Inc., we instituted an *inter partes* review of claims 10–23 of U.S. Patent No. 8,122,141 B2 (“the ’141 patent”). Paper 7, 22–23. We subsequently joined FriendFinder Networks Inc., Steamray Inc., WWM, LLC, WWM Holdings, LLC, Multi Media, LLC, Duodecad IT Services Luxembourg S.à r.l., Accretive Technology Group, Inc., ICF Technology, Inc., Riser Apps LLC, and StreamMe, Inc. (f/k/a Vubeology, Inc.) as parties to the proceeding. Papers 12, 13. We refer collectively to all petitioners herein as “Petitioner.”

During the trial, WAG Acquisition, LLC (“Patent Owner”) timely filed a Response (Paper 11, “POResp.”), to which Petitioner timely filed a Reply (Paper 15, “Reply”). An oral hearing was held on September 25, 2017, and a copy of the transcript was entered into the record. Paper 21 (“Tr.”).

Following consideration of the fully developed record, we issued a Final Written Decision in which we concluded that Petitioner had shown, by a preponderance of the evidence, that claims 10–23 of the ’141 patent are

unpatentable. Paper 22 (“Dec.”). Patent Owner appealed our Decision to the Federal Circuit “as to claims 10–18.” *WAG Acquisition*, 781 F. App’x at 1008. The Federal Circuit vacated our Decision “as to the appealed claims” and remanded for further consideration whether claims 10–18 are unpatentable in light of the Court’s construction of a disputed limitation recited in independent claim 10. *Id.* Because Patent Owner did not appeal the Board’s prior conclusion that claims 19–23 are unpatentable, those claims and related issues are not before the Board on remand. *See id.* at 1009 n.2.

On remand, the parties jointly proposed submission of simultaneous briefs addressing the patentability of claims 10–18 in light of the Federal Circuit’s decision, and we adopted this procedure. Paper 25. Accordingly, Petitioner filed a Petitioner’s Brief on Remand (Paper 26, “Pet. Remand Br.”) and Patent Owner filed a Patent Owner’s Supplemental Brief After Remand (Paper 27, “PO Remand Br.”).

For the reasons discussed below, we conclude, in view of the Federal Circuit’s claim construction, and a full record that includes the parties’ remand briefs, that Petitioner shows, by a preponderance of the evidence, that claims 10–18 are unpatentable.

### *B. The ’141 Patent*

The ’141 patent describes a system for streaming media, such as audio or video, via the Internet with reduced playback interruptions. Ex. 1001, 4:39–44. A number of factors can affect the continuity of streaming media, including the quality of a user’s connection with the Internet, variations in Internet traffic that may cause congestion at various points along the route

that data flows, and the dropping of data packets by overloaded routers. *Id.* at 2:10–30. The '141 patent describes a buffering system for streaming media that seeks to limit such deficiencies. *Id.* at 4:33–35.

Figure 1 of the '141 patent is reproduced below.

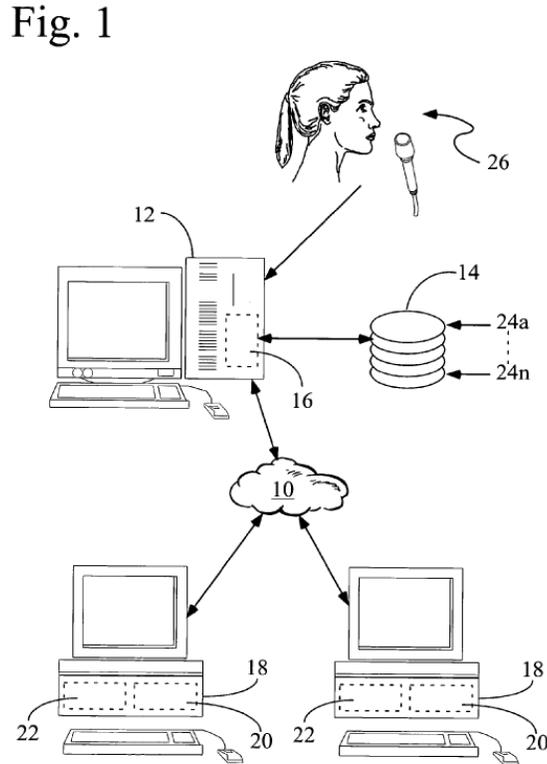


Figure 1 is a schematic diagram that illustrates elements of a streaming media buffering system. *Id.* at 10:7–9. Server 12 is connected to the Internet for transmitting sequenced streaming-media data elements. *Id.* at 10:22–25. Associated with server 12 are buffer manager 16 and first-in-first-out (“FIFO”) buffer 14, which stores at least one of the data elements for transmission. *Id.* at 10:25–27. Buffer manager 16 receives the media data, supplies the media data in order to FIFO buffer 14, and maintains pointers 24a–24n into the buffer for user computers, indicating the last media data element that has been sent to respective users and thus indicating the next element or elements to be sent. *Id.* at 10:30–38. Once FIFO buffer

14 is full, the oldest data elements in the buffer are deleted as new elements are received. *Id.* at 10:38–40. A predetermined number of data elements are kept in FIFO buffer 14. *Id.* at 10:40–41.

At least one user computer 18 is connected to server 12 via the Internet. *Id.* at 10:45–46. User buffer 20 is associated with user computer 18 and stores a predetermined number of the media data elements. *Id.* at 10:47–49. Buffer manager 22, associated with user computer 18, receives and stores a predetermined number of media data elements received by the media player, plays the data out sequentially as audio and/or video, and deletes media data elements from buffer 20 as they are played out to approximately maintain the predetermined number of data elements in the user's buffer. *Id.* at 10:53–59, 8:31–34.

In an alternative embodiment, buffer manager 22 (or the media source) provides for sequentially numbering the media data elements and does not maintain a pointer into buffer 20 for each user. *Id.* at 8:38–40. “Instead, the media player buffer manager in the user computer maintains a record of the serial number of the last data element that has been received.” *Id.* at 8:40–42. By using standard data communications protocol techniques, “such as TCP,” user computer 18 transmits requests to server 12 for data elements specified by their serial numbers. *Id.* at 8:42–46. Server 12 responds with the requested data elements, depending “upon the reliable transmission protocol” to assure delivery, with user computer 18 then continuing with additional data requests for the duration of playing the streamed material. *Id.* at 8:46–50. “In this manner, the user computer, not the server, maintains the record of the highest data element number stored in the user computer buffer.” *Id.* at 8:50–52.

*C. Illustrative Claim*

Independent claim 10 is illustrative of the claims at issue, and is reproduced below.

10. A server for distributing streaming media via a data communications medium such as the Internet to at least one user system of at least one user, the streaming media comprising a plurality of sequential media data elements for a digitally encoded audio or video program, said user system being assumed to have a media player for receiving and playing the streaming media on said user system, which is operable to obtain media data elements from said server by transmitting requests to said server to send one or more specified media data elements, said server comprising

at least one data storage device, memory for storing machine-readable executable routines and for providing a working memory area for routines executing on the server, a central processing unit for executing the machine-readable executable routines, an operating system, at least one connection to the communications medium, and a communications system providing a set of communications protocols for communicating through said at least one connection;

a machine-readable, executable routine containing instructions to cause the server to assign serial identifiers to the sequential media data elements comprising the program;

a machine-readable, executable routine containing instructions to cause the server to receive requests from the user system for one or more media data elements specifying the identifiers of the requested data elements; and

a machine-readable, executable routine containing instructions to cause the server to send media data elements to the user system responsive to said requests, at a rate more rapid than the rate at which said streaming media is played back by a user.

*Id.* at 13:63–14:28.

*D. Grounds of Unpatentability*

In relevant part, Petitioner relies on the following references. Pet. 8–10.

Carmel US 6,389,473 B1 May 14, 2002 Ex. 1003

International Standard ISO/IEC 11172-1, *Information Technology—Coding of moving pictures and associated audio for digital storage media at up to about 1,5 Mbit/s—Part 1: Systems* (ISO/IEC, August 1993) (Ex. 1018) (“ISO-11172-1”)

International Standard ISO/IEC 11172-2, *Information Technology—Coding of moving pictures and associated audio for digital storage media at up to about 1,5 Mbit/s—Part 2: Video* (ISO/IEC, August 1993) (Ex. 1019) (“ISO-11172-2”)

International Standard ISO/IEC 11172-3, *Information Technology—Coding of moving pictures and associated audio for digital storage media at up to about 1,5 Mbit/s—Part 3: Audio* (ISO/IEC, August 1993) (Ex. 1020) (“ISO-11172-3”)<sup>1</sup>

The following challenges are at issue. See Pet. 5.

<b>Claim(s) Challenged</b>	<b>35 U.S.C. §</b>	<b>References</b>
10, 11, 13–18	102(a), 102(e)	Carmel
12	103(a)	Carmel and ISO-11172

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<sup>1</sup> In its challenges, Petitioner refers collectively to ISO-11172-1, ISO-11172-2, and ISO-11172-3 as “ISO-11172.” Because the challenges involving these references are all under 35 U.S.C. § 103(a), and because their description of the same standard provides a self-evident reason to combine their teachings, we do not address whether they are properly considered as a single reference or as three separate references.

*E. Real Parties in Interest and Related Proceedings*

In addition to the parties identified in the caption, real parties in interest with one or more of the petitioners include Various, Inc., Interactive Network, Inc., DataTech Global, LLC, DataTech Systems, LLC, Docler Media, LLC, Docler Holding S.à r.l., Gattyàn Family Irrevocable Trust (including Mr. György Gattyàn in his capacity as Grantor and Investment Advisor), Duodecad IT Services Hungary KFT, WebMindLicenses KFT, and Gattyàn Group S.à r.l. Pet. 2; *FriendFinder Networks Inc. et al. v. WAG Acquisition, LLC*, Case No. IPR2017-00786, Paper 2, 1–2; *Duodecad IT Services Luxembourg S.à r.l. v. WAG Acquisition, LLC*, Case No. IPR2017-00820, Paper 2, 2. Patent Owner identifies only itself as a real party in interest. Paper 4, 2.

The parties identify the following matters as involving the '141 patent: (1) *WAG Acquisition, LLC v. Sobonito Investments, Ltd.*, No. 2A14-cv-1661-ES-MAH (D.N.J.); (2) *WAG Acquisition, LLC v. Multi Media, LLC*, No. 2:14-cv-2340-ES-MAH (D.N.J.); (3) *WAG Acquisition, LLC v. Data Conversions, Inc.*, No. 2:14-cv-2345-ES-MAH (D.N.J.); (4) *WAG Acquisition, LLC v. Flying Crocodile, Inc.*, No. 2:14-cv-2674-ES-MAH (D.N.J.); (5) *WAG Acquisition, LLC v. Gattyàn Group S.à r.l.*, No. 2:14-cv-2832-ES-MAH (D.N.J.); (6) *WAG Acquisition, LLC v. FriendFinder Networks Inc.*, No. 2:14-cv-3456-ES-MAH (D.N.J.); (7) *WAG Acquisition, LLC v. Vubeology, Inc.*, No. 2:14-cv-4531-ES-MAH (D.N.J.); (8) *WAG Acquisition, LLC v. Gamelink Int'l Ltd.* No. 2:15-cv-3416-ES-MAH (D.N.J.); (9) *WAG Acquisition LLC v. WebPower, Inc.*, No. 2:15-cv-3581-ES-MAH (D.N.J.); and (10) *WAG Acquisition, LLC v. MFCXY, Inc.*, No. 2:14-cv-3196-ES-MAH (D.N.J.). Pet. 2, Paper 4, 2–3.

The '141 patent is also the subject of IPR2015-01037, and a continuation of the '141 patent, U.S. Patent No. 8,327,011 B2, is the subject of IPR2015-01033 and IPR2016-01161. The petitions for institution of an *inter partes* review were denied for each of those proceedings. In addition, two other related patents were the subject of further *inter partes* review proceedings: (1) U.S. Patent No. 8,185,611 B2 was the subject of IPR2015-01035 and IPR2016-01162, both of whose petitions for institution of an *inter partes* review were denied; and (2) U.S. Patent No. 8,364,836 was the subject of IPR2015-01036, for which a final written decision was issued by the Board on October 20, 2016.

## II. ANALYSIS

### A. Claim Construction

In an *inter partes* review proceeding based on a petition filed prior to November 13, 2018, the Board interprets claims of an unexpired patent using the broadest reasonable construction in light of the specification in which they appear. *See* 37 C.F.R. § 42.100(b) (2017)<sup>2</sup>; *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard).

Petitioner asserts that, in this proceeding, “no constructions are necessary,” and “proposes . . . that all claim terms of the '141 patent take on their ordinary and customary meaning that the terms would have to one of

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<sup>2</sup> A recent amendment to this regulation does not apply here because the Petition was filed before November 13, 2018. *See* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b) effective November 13, 2018).

ordinary skill in the art.” Pet. 10. Patent Owner does not expressly address claim construction in its Response. Nevertheless, we determined in our Final Written Decision that it was necessary to construe the term “rate,” which is recited in independent claim 10 as part of the limitation “a machine-readable, executable routine containing instructions to cause the server to send media data elements to the user system responsive to said requests, at a *rate* more rapid than the *rate* at which said streaming media is played back by the user” (emphases added). Dec. 9–10.

The context provided by our prior construction, and the Federal Circuit’s disagreement with that construction, is relevant to the parties’ arguments on remand. In particular, we construed rate as an “overall rate” such as might be achieved with multiple links over which data elements are sent to the recited user system. *Id.* The Federal Circuit instead construed rate as “the rate at which each requested data element is transmitted from the server to the user computer.” *WAG Acquisition*, 781 F. App’x at 1011. In so construing the term, the Federal Circuit distinguished its construction as excluding the “overall rate” of our earlier construction: “The rate limitation in claim 10 therefore refers to the rate at which *requested* media data elements are sent, not the overall rate at which data is transmitted from the server to the user computer.” *Id.* at 1012.

We adopt the Federal Circuit’s construction for this Decision.

### *B. Legal Principles*

Petitioner makes both anticipation and obviousness challenges. A claim is unpatentable as anticipated under 35 U.S.C. § 102 if a single prior-art reference expressly or inherently describes each limitation set forth in the

claim. See *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1375 (Fed. Cir. 2005); *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987).

A claim is unpatentable for obviousness under 35 U.S.C. § 103 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 skill in the art; and (4) objective evidence of non-obviousness, i.e., secondary considerations.<sup>3</sup> *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

Additionally, the obviousness inquiry typically requires an analysis of “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (requiring “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)); see *In re Warsaw Orthopedic, Inc.*, 832 F.3d 1327, 1333 (Fed. Cir. 2016) (citing *DyStar Textilfarben GmbH & Co. Deutschland KG v. C. H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006)).

To prevail on its challenges, Petitioner must demonstrate by a preponderance of the evidence that the claims are unpatentable. 35 U.S.C.

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<sup>3</sup> The parties do not address secondary considerations, which, accordingly, do not form part of our analysis.

§ 316(e); 37 C.F.R. § 42.1(d). “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 grounds for the challenge to each claim”)). This burden never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)) (discussing the burden of proof in *inter partes* review). Furthermore, Petitioner does not satisfy its burden of proving obviousness by employing “mere conclusory statements.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

### C. *Level of Skill in the Art*

Petitioner’s declarant, Nathaniel Polish, Ph.D., asserts that a person of ordinary skill in the art “would have had a B.S. degree in computer science or electrical engineering (or comparable degree) and two years of experience in networking or streaming media, or a M.S. in computer science or electrical engineering (or comparable degree).” Ex. 1005 ¶ 21. Dr. Polish further states that “[t]hese descriptions are approximate, and a higher level of education or specific skill might make up for less experience, and vice-versa.” *Id.* ¶ 22.

Neither Patent Owner nor its declarant, Mung Chiang, Ph.D., proffers a characterization of the education and experience of a person of ordinary skill, although Dr. Chiang attests that his own qualifications permit him to

provide an opinion, “including what a person having ordinary skill in the art would have understood.” Ex. 2001 ¶ 10.

We find Dr. Polish’s statement of the level of ordinary skill in the art reasonable, and adopt it for this Final Written Decision.

#### *D. Carmel*

Carmel describes a method for streaming live or prerecorded media from a server to multiple client computers over the Internet. Ex. 1003, 2:1–21. Figure 2 of Carmel is reproduced below.

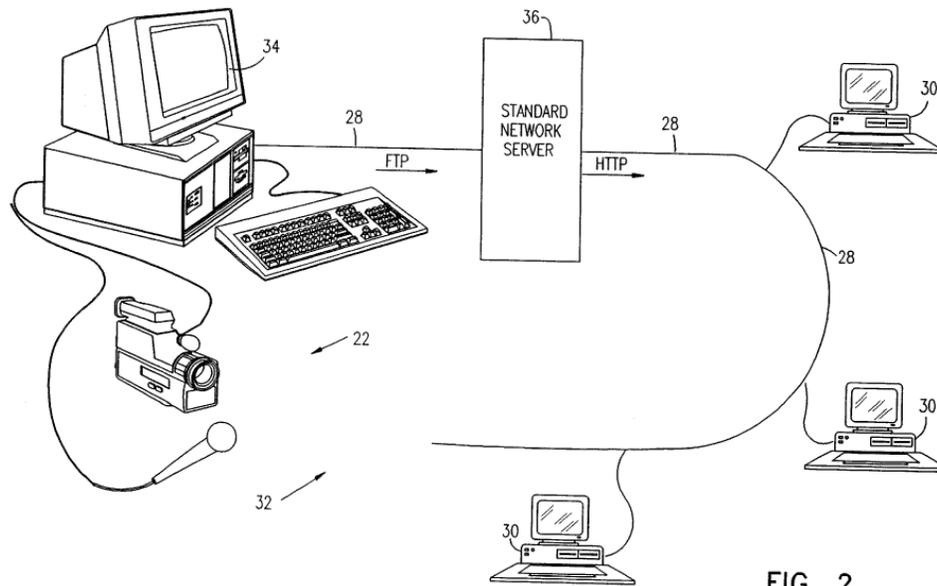


FIG. 2

Figure 2 is a schematic illustration of a computer broadcast network. *Id.* at 5:43–45. System 32 comprises transmitting computer 34 (which receives audiovisual input from devices 22), a plurality of clients 30, and network server 36, all of which communicate over network 28. *Id.* at 6:28–35. After preparing a multimedia sequence, computer 34 uploads the sequence over network 28, thereby allowing clients 30 connected with server 36 to receive the multimedia sequence in substantially real time. *Id.* at 6:50–7:17.

Figure 3A of Carmel is reproduced below.

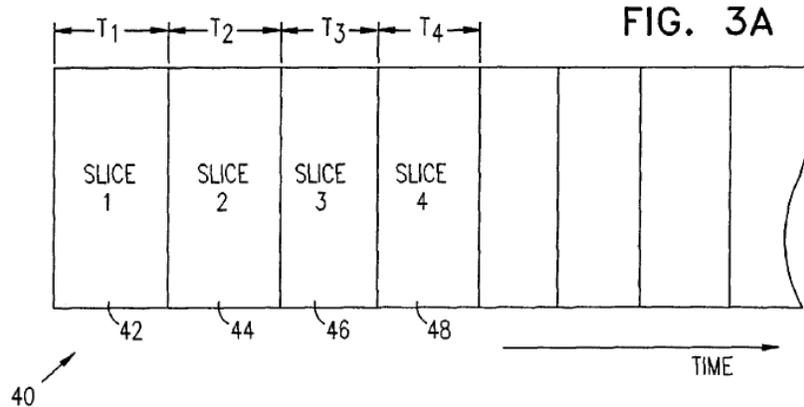


Figure 3A schematically illustrates the structure of broadcast data generated by computer 34, “typically corresponding to a multimedia data sequence.” *Id.* at 7:19–23. Data stream 40 comprises a series of data slices 42, 44, 46, 48, etc., with each slice containing a segment of video and/or audio data that corresponds to a respective, successive time interval T<sub>1</sub>, T<sub>2</sub>, T<sub>3</sub>, etc. *Id.* at 7:22–25. Each slice is stored as a corresponding file with a running slice index 1, 2, 3, . . . N, and perhaps also a time stamp that indicates a real time at which the data in the file were recorded or an elapsed time relative to the beginning of the stream. *Id.* at 7:27–32. An index file that comprises a slice ID is uploaded to a server, with the slice ID indicating the index of the file in the data stream that was most recently uploaded. *Id.* at 7:59–64. Each time a new file is uploaded, the slide ID is updated. *Id.* at 7:65–66.

Figure 4 of Carmel is reproduced below.

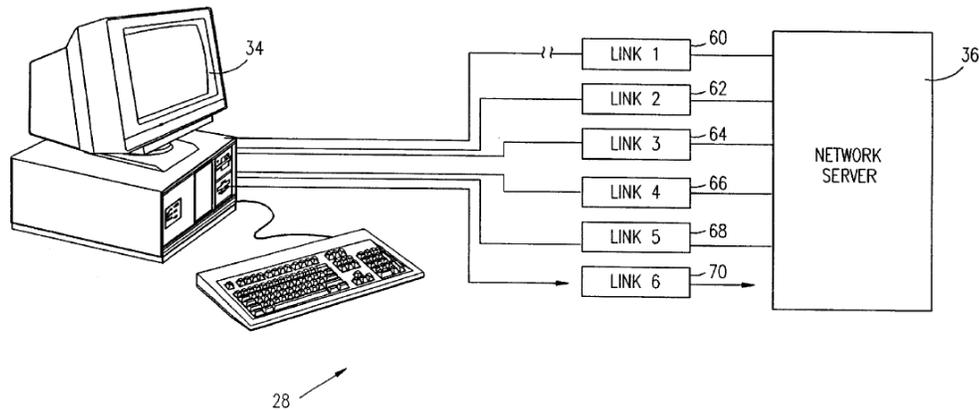


FIG. 4

Figure 4 schematically illustrates communication between computer 34 and server 36 over network 28. *Id.* at 9:10–13. According to Carmel, computer 34 “should preferably ensure that there is sufficient communication bandwidth between the computer and the server.” *Id.* at 9:13–17. Accordingly, the computer may open multiple links 60, 62, 64, 66, 68, 70, multiple of which may “operate simultaneously” over a single line or each of which may be “routed differently from the other links” through different lines. *Id.* at 9:17–23.

Computer 34 monitors the rate of data being transmitted over each of the links, and allocates files according to the data rates, perhaps varying file sizes by adjusting slice durations  $T_1$ ,  $T_2$ ,  $T_3$ , etc. *Id.* at 9:31–37. Carmel notes that “[t]he bandwidth open for transmission between computer 34 and server 36 is effectively roughly equal to a sum of the bandwidths of the plurality of open links.” *Id.* at 9:37–39. A similar process is performed when server 36 sends data stream 40 to client computers 30, but, in addition, client computer 30 can read the index file and determine from which slice to begin receiving the data stream. *Id.* at 8:1–9.

*1. Anticipation of Claim 10 by Carmel*

Petitioner challenges claim 10 as anticipated by Carmel. Pet. 65. Several limitations of claim 10 correspond to limitations recited in independent method claim 1, on which we did not institute review, and Petitioner refers to its analysis of claim 1 for those limitations. *Id.* We have accordingly reviewed Petitioner’s analysis for claim 1, *id.* at 50–62, as well as its identification of which elements of claim 10 have counterparts in claim 1, *see id.* at 31–38, and conclude that Petitioner demonstrates, by a preponderance of the evidence, that claim 10 is anticipated by Carmel. The parties dispute only a single, well-defined issue, namely whether Carmel discloses the last limitation of claim 10, which recites “a machine-readable, executable routine containing instructions to cause the server to send media data elements to the user system responsive to said requests, *at a rate more rapid than the rate at which said streaming media is played back by a user,*” in light of the Federal Circuit’s construction of “rate.” Ex. 1001, 14:24–28 (emphasis added); *see* Pet. Remand Br. 1 (“The question on remand is whether Carmel discloses the last limitation of the claim by sending individual requested media data elements (the same ‘one or more media data elements’ requested in the penultimate limitation) from the server to the user computer ‘at a rate more rapid than the rate at which [they are] played back.’”); PO Remand Br. 2 (“The final element, the ‘rate limitation’ was the sole point of dispute between the parties regarding claim 10 in this IPR.”).

Petitioner identifies two aspects of Carmel that it contends disclose the limitation. First, Petitioner contends that “Carmel discloses that the system in normal operation has a data rate for ‘**each slice**’ that is ‘generally equal to **or faster than**’ the playback rate.” Pet. Remand Br. 2. Second,

Petitioner contends that “Carmel discloses the system can recover from lag (*i.e.*, an interruption in transmission such that transmission is slower than playback) by requesting a lower quality level which will be transmitted faster than playback to catch up.” *Id.* In asserting that “Petitioner raised both during the original briefing and they can now be relied upon to meet the new construction,” Petitioner cites its Reply. *Id.* (citing Reply, 2, 5–11); *see also* Paper 21, 15:20–16:3 (Petitioner explaining, at oral hearing, responsive nature of argument in Reply).

We have reviewed Petitioner’s Reply argument, and agree that Petitioner’s discussion of these aspects of Carmel is properly responsive to Patent Owner’s argument in its Response that “Carmel does not disclose sending media data elements to a user system responsive to requests therefrom, at a rate more rapid than the rate at which the streaming media is played back by a user.” PO Resp. 3 (emphasis omitted). Patent Owner devoted a significant portion of its Response to that argument, and Petitioner was entitled to address it in its Reply—and now to address it further on remand in the context of the Federal Circuit’s claim construction. *See Idemitsu Kosan Co., Ltd. v. SFC Co. Ltd.*, 870 F.3d 1376, 1381 (“To the extent Idemitsu suggests that the Board could not reach a counterargument because it was not preemptively addressed by the petition or institution decision, Idemitsu is plainly mistaken.”); *Genzyme Therapeutic Prod. Ltd. P’ship v. Biomarin Pharm. Inc.*, 825 F.3d 1360, 1366 (Fed. Cir. 2016) (“There is no requirement, either in the Board’s regulations, in the APA, or as a matter of due process, for the institution decision to anticipate and set forth every legal or factual issue that might arise in the course of the trial.”).

*a. Normal Operation*

To support its contention that Carmel teaches sending media data elements at a rate more rapid than the playback rate during “normal operation,” Petitioner quotes the following disclosure:

In some preferred embodiments of the present invention, the transmitting computer and the clients monitor the uploading and downloading of data to and from the server, respectively, in order to determine **the amount of time required to convey each slice and to verify that the slices are conveyed at a sufficient rate.** When the data stream comprises multimedia data, **the data rate should be generally equal to or faster** than the rate at which the data are generated at the transmitting computer.

Pet. Remand Br. 3 (quoting Ex. 1003, 2:51–59) (emphasis by Petitioner).

As Petitioner correctly observes, “this passage is describing the ‘sufficient rate’ during normal streaming operation (uploading and downloading of data to and from the server), not the later-described embodiments using multiple links as one way to compensate for lag or slow connections.” *Id.* at 3–4.

Petitioner reasons that the last limitation of independent claim 10 is met because Carmel explicitly teaches that such normal operation may use a data rate that is “faster” than the rate at which the data are generated by the transmitting computer. *Id.*

In addition to this intrinsic evidence, Petitioner further supports its contention by pointing to testimony by Patent Owner’s expert, Mung Chiang, Ph.D. *See id.* at 5–6. On cross examination, Dr. Chiang explained that “Carmel adjusts the slices so that they are transmitted at about the playback rate.” Ex. 1022, 91:10–12. When Petitioner explored the consequences of what Dr. Chiang meant in describing transmission of slices

“at about the playback rate,” Dr. Chiang conceded that “[i]f it is transmitted slightly faster than playback rate and then slightly lower, slightly higher, slightly lower, which is what ‘about playback rate’ means.” *Id.* at 92:16–19.

Petitioner argues that, because Carmel teaches that transmission occurs, at least sometimes, at a rate greater than the playback rate, the last limitation of claim 10 is met. Pet. Remand Br. 6 (“This is a dispositive admission—transmitting at least sometimes ‘slightly faster’ than playback meets the claim limitation of sending ‘one or more’ requested data elements faster than playback is met.”). In advancing that argument, Petitioner relies on *Broadcom Corporation v. Emulex Corporation*, 732 F.3d 1325, 1333 (Fed. Cir. 2013) for the proposition that a claim limitation is met by a device that performs the function “some of the time.” *Id.*

Patent Owner does not specifically dispute that Carmel teaches transmission faster than the playback rate, but instead argues that “the flip is also true”: “Carmel’s sending at about the playback rate necessarily means that it sometimes sends slower than the playback rate.” PO Remand Br. 7. Although we agree with Patent Owner that Carmel thus also discloses sometimes transmitting slices at a rate slower than the playback rate, we do not agree with Patent Owner’s conclusion that “Carmel cannot teach that *each requested media data element* is sent faster than the playback rate, as required by the Federal Circuit’s construction of the rate limitation.” *Id.* That conclusion relies on an improper importation of an additional limitation into the claim, namely that *all* requested media data elements must be sent by the server at a rate more rapid than the rate at which the streaming media is played back by a user.

That is, Patent Owner appears to read the word “each” in the Federal Circuit’s construction as requiring that *all* media data elements be transmitted faster than the playback rate. As we summarize above, the context in which the Federal Circuit arrived at its construction distinguished from our prior construction of “rate” as corresponding to the “overall rate” of transmission from the server to the user computer, such as might be achieved with multiple links over which data elements are sent to the user system. In referring to “the rate at which each requested data element is transmitted,” the Federal Circuit is clearly excluding such an overall rate, as is apparent from its explanation that “[t]he rate limitation in claim 10 therefore refers to the rate at which *requested* media data elements are sent, not the overall rate at which data is transmitted from the server to the user computer.” *WAG Acquisition*, 781 F. App’x at 1012. We discern nothing in the Federal Circuit’s decision that compels Patent Owner’s implicit additional requirement that *all* media data elements be transmitted faster than the playback rate.

For method claims, it is well established that “part-time” satisfaction of a method claim is sufficient to establish anticipation. *See, e.g., Hewlett-Packard Co. v. Mustek Sys. Inc.*, 340 F.3d 1314 (Fed. Cir. 2003) (“a prior art product that sometimes, but not always, embodies a claimed method nonetheless teaches that aspect of the invention”). The same principle analogously applies to the software aspects of apparatus claim 10. That is, the mere fact that the server in Carmel might comprise a machine-readable, executable routine containing instructions to cause the server to send media data elements to the user system at a rate less rapid than the playback rate

does not diminish the fact that it also contains instructions for sending media data elements at a rate more rapid than the playback rate.

We accordingly find that Petitioner sufficiently identifies disclosure in Carmel that meets the last limitation of claim 10 under Carmel's normal operation.

*b. Lag Recovery*

As an alternative, Petitioner contends that "Carmel further discloses a faster-than-playback transmission rate when it states that '[i]n the event that a lag is detected, steps are taken to **increase the data transmission or reception rate.**'" Pet. Remand Br. 8 (quoting Ex. 1003, 7:39–42) (alterations by Petitioner). In particular, Carmel describes client 30 making an assessment of the rate of data transfer over the link from the server and, if necessary, changing the quality level accordingly. Ex. 1003, 11:9–11. "For example, if the rate is low, such that the time stamps 59 indicate that the slices need to be played as fast or faster than they are being received, the client will preferably select a lower quality level." *Id.* at 11:11–15.

Petitioner reasons that "[b]y the client selecting a lower quality level for the slices, each slice can be individually transmitted faster, and the slices would no longer be 'played as fast or faster than they are being received' thus recovering from lag." Pet. Remand Br. 9. After such a correction, the transmission of the media data elements is faster than the media being played, thereby meeting the claim limitation. *Id.*

As Petitioner notes, we asked at the oral hearing whether the lower-quality slices in Carmel are the same "media data elements" requested earlier in the claim. *See* Paper 21, 13:12–14:16. Petitioner articulates

persuasive reasoning in its remand brief that they are. Specifically, Petitioner observes that “[i]n Carmel, when the *client* determines a new quality level is needed, the *client request* will be for a lower quality level.” Pet. Remand Br. 9 (citing Ex. 1003, 11:11–15 (“the client will preferably select a lower quality level”)). Because Carmel teaches that “[e]ach time slice in stream 41 includes multimedia data at multiple levels,” Ex. 1003, 8:56–57, Petitioner reasons that, although a lower quality level has been requested, “these are still the same time slices (having a predetermined duration and identified by slice ID) that existed since the encoding step.” Pet. Remand Br. 9.

The point is illustrated with a specific example, identified by Petitioner, in which each slice has a quality levels described by Carmel as “level #1” and “level #2.” See Ex. 1003, 8:56–9:5. Carmel explains that “the level #1 slices have smaller data volume than the level #2 slices and can therefore be transmitted over a lower-bandwidth data link, while maintaining the required timing indicated by time stamps 59.” *Id.* at 8:57–66. Thus, Petitioner reasons, “when the client determines a new quality level is required, the client will request the lower quality level for that slice ID. Pet. Remand Br. 9–10 (citing Ex. 1003, 11:11–15 (“the client will preferably select a lower quality level”)). We agree that Carmel’s disclosure accordingly supports Petitioner’s assertion that “[t]he server does not ever send new or different files than the ones requested by clients,” *id.* at 10; rather each of the clients “chooses . . . the quality level appropriate to the bandwidth of its link on network 28 to server 36,” Ex. 1003, 9:6–9.

Patent Owner also addresses this lag-recovery mechanism in its brief. PO Remand Br. 8–9. Patent Owner’s assertion that “Carmel’s change in

quality only happens after slices are sent at or below the playback rate” is not inconsistent with Petitioner’s characterization of this mechanism. *See id.* at 8. But in arguing that “[s]ending slices at or below the playback rate fails to disclose that each requested media data element is sent faster than the playback rate,” Patent Owner again implicitly incorporates a requirement, beyond the Federal Circuit’s construction, that *every* media data element be transmitted faster than the playback rate. *Id.* at 8–9. For the reasons expressed above, we disagree that such a feature is part of the Federal Circuit’s construction of “rate.”

We accordingly find that Petitioner sufficiently identifies disclosure in Carmel that meets the last limitation of claim 10 under Carmel’s lag-recovery mechanism.

### *c. Conclusion*

As we note above, the parties dispute only whether the last limitation of independent claim 10 is taught by Carmel. Because we find that Petitioner identifies sufficient disclosure in Carmel to meet that limitation, under either normal operation or with a lag-recovery mechanism, we conclude that Petitioner shows, by a preponderance of the evidence, that independent claim 10 is anticipated by Carmel.

### *2. Anticipation of Claims 11 and 13–18 by Carmel*

Petitioner challenges claims 11 and 13–18 as anticipated by Carmel. Pet. 66. In doing so, the Petition makes reference to the analysis provided for corresponding limitations recited in claims that depend from claim 1. *Id.* (referring to analysis for claims 2 and 4–9). These dependent claims recite

that the serial identifiers are sequential (claim 11), that the media is encoded at a variable bit rate (claim 13), that the server is adapted to distribute the streaming media to a plurality of simultaneous users (claim 14), that the server does not maintain a pointer into a buffer established within the server (claim 15), that the operating system comprises a reception protocol “such as TCP” (claim 16), and that the server is adapted to obtain the streaming media from a live source (claim 17) or a disk file (claim 18). Ex. 1001, 14:29–48.

The parties do not separately address the patentability of these dependent claims on remand. We have reviewed the specific Carmel disclosures identified by Petitioner for each of these limitations, and agree that they disclose the respective limitations.<sup>4</sup> *See* Pet. 62–64. Accordingly, we conclude that Petitioner demonstrates, by a preponderance of the evidence, that claims 11 and 13–18 are anticipated by Carmel.

### 3. *Obviousness of Claim 12 over Carmel and ISO-11172*

Petitioner challenges claim 12, which depends from independent claim 10 and recites that “said media is encoded at a constant bit rate,” as unpatentable under 35 U.S.C. § 103(a) over Carmel and ISO-11172. Pet. 68. In doing so, the Petition makes reference to the analysis provided for claim 3, which recites the same limitation but depends from independent claim 1.

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<sup>4</sup> As noted in our prior Final Written Decision, Patent Owner also does not address the patentability of dependent claims 11, 13, 14, or 16–18 in its Response. *See* Dec. 23. With respect to claim 15, the Federal Circuit held that “[a] reasonable fact finder could find that Carmel does not require use of a pointer for the reasons stated by the Board.” *WAG Acquisition*, 781 F. App’x at 1013.

*Id.* at 67–68. The parties do not separately address the patentability of this claim on remand. For the reasons set forth in our prior Final Written Decision, we agree with Petitioner’s reasoning, set forth in its Petition, that, “if the use of a constant bit rate is not inherent in Carmel, a person of ordinary skill in the art would have been motivate to look to ISO-11172 to modify the teachings of Carmel to use a constant bit rate as ‘one of the well-known options’ of MPEG and ‘for the purposes of supporting a wider variety of [media data].” Dec. 27 (quoting Pet. 67–68).

Accordingly, we conclude that Petitioner demonstrates, by a preponderance of the evidence, that dependent claim 12 is unpatentable under 35 U.S.C. § 103(a) over Carmel and ISO-11172.

### III. CONCLUSION

In summary, we make the following conclusions.<sup>5</sup>

<b>Claims</b>	<b>35 U.S.C. §</b>	<b>Reference(s)</b>	<b>Claims Shown Unpatentable</b>	<b>Claims Not Shown Unpatentable</b>
10, 11, 13–18	102(a), 102(e)	Carmel	10, 11, 13–18	
12	103(a)	Carmel and ISO-11172	12	

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<sup>5</sup> 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).

#### IV. ORDER

It is

ORDERED that, based on a preponderance of the evidence, claims 10–18 of U.S. Patent No. 8,122,141 B2 are held to be unpatentable; and

FURTHER ORDERED that, because this is a final written decision, parties to this proceeding seeking judicial review of our decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2016-01238  
Patent 8,122,141 B2

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