

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FACEBOOK, INC. and INSTAGRAM, LLC,
Petitioner,

v.

VOXER IP LLC,
Patent Owner.

IPR2021-00112
Patent 10,511,557 B2

Before LYNNE E. PETTIGREW, MICHELLE N. ANKENBRAND, and
IFTIKHAR AHMED, *Administrative Patent Judges*.

PETTIGREW, *Administrative Patent Judge*.

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

I. INTRODUCTION

Facebook, Inc. and Instagram, LLC (collectively, “Petitioner”) filed a Petition for *inter partes* review of claims 1–3, 8, 9, 14, 16, 18, and 23 of U.S. Patent No. 10,511,557 B2 (Ex. 1001, “the ’557 patent”). Paper 1 (“Pet.”). Voxer IP LLC (“Patent Owner”) filed a Preliminary Response. Paper 13 (“Prelim. Resp.”).

Under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a), we have authority to institute an *inter partes* review if “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). After considering the parties’ briefing and the evidence of record, we conclude the information presented does not show there is a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of at least one of claims 1–3, 8, 9, 14, 16, 18, and 23 of the ’557 patent. Accordingly, we do not institute an *inter partes* review.

II. BACKGROUND

A. Related Matters

The parties identify the following district court proceeding related to the ’557 patent: *Voxer, Inc. v. Facebook, Inc.*, No. 1:20-cv-00655 (W.D. Tex.). Pet. 1; Paper 7, 1 (Patent Owner’s Mandatory Notices). The parties also identify the following matters pending before the Board involving the ’557 patent and related patents: IPR2021-00113 (challenging different claims of the ’557 patent), IPR2021-00114 (U.S. Patent No. 8,180,030 B2), and IPR2021-00115 (U.S. Patent No. 10,142,270 B2). Pet. 1; Paper 7, 1.

B. Overview of the '557 Patent

The '557 patent generally describes

a telecommunication and multimedia management method and apparatus that enables users to review the messages of conversations in either a live mode or a time-shifted mode and to transition the conversation back and forth between the two modes, participate in multiple conversations and to archive the messages of conversations for later review or processing.

Ex. 1001, 1:34–40. In particular, the '557 patent describes “optimizing the transmission of data over a network,” with “[t]he system actively manag[ing] the delivery of payloads to a recipient engaged in a conversation in real time when network conditions are less than ideal.” *Id.* at 5:6–9. As an example, the system may “intentionally reduce[] the quality of the data for transmission to the point where it is ‘good enough’ to be rendered upon receipt by the recipient” in response to poor network conditions. *Id.* at 5:10–14. This tradeoff of timeliness for media quality, as well as measurement of various network conditions, optimizes network bandwidth utilization. *Id.* at 5:19–25.

The '557 patent explains that a “conversation consists of a series of discrete recorded messages, which are recorded in a number of locations, which may include the encoding device of the sender, (e.g. a phone or computer), servers on multiple transmission hops across the network, and the receiver’s rendering device.” *Id.* at 4:47–52.

Figure 1 of the '557 patent is reproduced below.

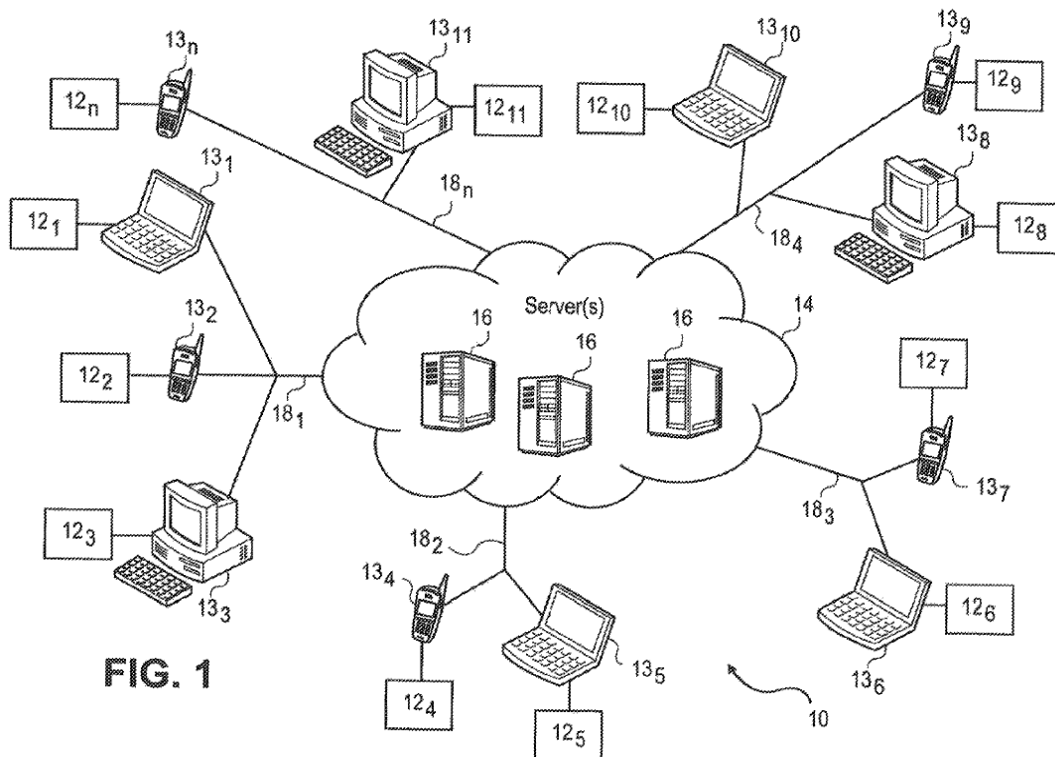


Figure 1 illustrates the system architecture of the '557 patent's communication and media management system. *Id.* at 5:44–45. The '557 patent explains that

system 10 includes a plurality of Clients 12₁ through 12_n, running on Devices 13₁ through 13_n respectively. The Devices 13 communicate with one another over a communication services network 14, including one or more Servers 16. One or more networks 18₁ through 18_n, is provided to couple the plurality of Devices 13₁ through 13_n to the communication services network 14.

Id. at 11:56–63.

The system further utilizes a Store and Stream (SAS) module 24 as part of Client 12, with the SAS module “optimiz[ing] the delivery speed and bandwidth usage across the network” such that “[t]he module [] adapts and

optimizes Media delivery commensurate with the quality and capacity of the underlying network.” *Id.* at 17:51–59; *see id.* at 12:10–22.

The system permits “enabling the system to optimize the utilization of network bandwidth by making tradeoffs between timeliness and media quality, using . . . measures of network latency, network degradation, packet loss or damage, and/or current bandwidth conditions.” *Id.* at 7:28–34. This system function “allows users to begin conversations, participate in conversations, and review previously received time-shifted messages of conversations even when there is no network available, when the network is of poor quality, or other participants are unavailable.” *Id.* at 6:50–55.

C. Illustrative Claim

Petitioner challenges claims 1–3, 8, 9, 14, 16, 18, and 23 of the ’557 patent. Claim 1 is independent, and claims 2, 3, 8, 9, 14, 16, 18, and 23 depend directly or indirectly from claim 1. Claim 1 is illustrative and is reproduced below:

1. A method for operating a video message service infrastructure on a network, the method comprising:
receiving, at the video message service infrastructure, a video message transmitted by a sending device, the video message containing video media, the video media being transmitted as the video media is created;
generating, by the video message service infrastructure, two or more degraded versions of the video media of the video message, where each of the two or more degraded versions is created by degrading the quality of the video media by a different amount;
selecting one of the degraded versions of the video media based on an ascertained bandwidth on the network for delivering the video media from the video message

service infrastructure to a recipient device on the network; and

transmitting the selected degraded version of the video media from the video message service infrastructure to the recipient device so that the recipient device can render at least a portion of the video media on the recipient device, the video message service infrastructure operating so that the rendering occurs:

- (i) while the video media of the video message is being created and transmitted over the network by the sending device; and
- (ii) without having to first establish an end-to-end connection over the network between the sending device and the recipient device before the sending device begins to transmit the video media of the video message.

Ex. 1001, 44:27–56.

D. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–3, 8, 9, 14, 16, 18, and 23 are unpatentable based on the following grounds (Pet. 2–3):

Claim(s) Challenged	35 U.S.C. §¹	Reference(s)
1–3, 8, 9, 14, 18	103(a)	Brueck ²
8, 9, 14	103(a)	Brueck, Brooks ³
16	103(a)	Brueck, Mullig ⁴
23	103(a)	Brueck, Kalaboukis, ⁵ Mangal ⁶

III. DISCUSSION

A. Principles of Law

A claim is unpatentable under § 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

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103. Because the ’557 patent has an effective filing date before the effective date of the applicable AIA amendments, we refer to the pre-AIA version of 35 U.S.C. § 103.

² U.S. Patent No. 7,818,444 B2, filed Feb. 9, 2007, issued Oct. 19, 2010 (Ex. 1005, “Brueck”).

³ U.S. Patent No. 7,339,993 B1, filed Feb. 10, 2000, issued Mar. 4, 2008 (Ex. 1006, “Brooks”).

⁴ U.S. Patent No. 7,930,419 B2, filed Dec. 4, 2006, issued Apr. 19, 2011 (Ex. 1007, “Mullig”).

⁵ U.S. Patent No. 9,762,861 B2, filed Dec. 5, 2006, issued Sept. 12, 2017 (Ex. 1008, “Kalaboukis”).

⁶ U.S. Patent No. 6,865,398 B2, filed Feb. 4, 2002, issued Mar. 8, 2005 (Ex. 1009, “Mangal”).

between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective indicia of non-obviousness.⁷ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

Citing the Declaration of Dr. Kevin Jeffay, Petitioner contends that a person of ordinary skill in the art at the time of the invention “would have had a bachelor’s degree in computer science, computer engineering, or an equivalent degree, and 2–3 years of professional experience with distributed multimedia systems.” Pet. 4 (citing Ex. 1002 ¶¶ 92–97). Patent Owner contends that a person of ordinary skill in the art:

would have at least (1) a Bachelor’s degree in electrical or computer engineering or a related course of study with at least two years of work experience in industry in the areas of computer networking, multimedia processing, or a related area of work or (2) a Master’s degree in electrical or computer engineering or a related course of study, with at least one year of experience in industry in the areas of computer networking, multimedia processing, or a related area of work.

Prelim. Resp. 10. We agree with Patent Owner that its “description of the level of ordinary skill in the art is essentially the same as that of the Petitioner,” with only minor differences. *Id.*

To the extent necessary, and for purposes of this Decision, we adopt Petitioner’s assessment of the level of ordinary skill in the art, as set forth in Dr. Jeffay’s declaration, as it is consistent with the ’557 patent and the asserted prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir.

⁷ With respect to the fourth *Graham* factor, the parties at this time do not present arguments or evidence regarding objective indicia of non-obviousness. *See* Pet. 70. Therefore, the obviousness analysis at this stage of the proceeding is based on the first three *Graham* factors.

2001). We also agree with the parties that more work experience could compensate for less formal education, and vice versa. *See* Pet. 4; Prelim. Resp. 10. We note that our analysis herein would be the same under either party's proposal.

C. Claim Construction

In this *inter partes* review, we apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b) (2020). In applying this standard, we generally give claim terms their ordinary and customary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).

Petitioner does not propose specific constructions for any claim terms and submits that “the claims of the ’557 patent should be given their plain meaning.” Pet. 12. Patent Owner agrees that no terms require specific construction. Prelim. Resp. 11. For purposes of this decision, it is unnecessary for us to construe any claim terms expressly. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (holding that only claim terms in controversy need to be construed, and only to the extent necessary to resolve the controversy (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Asserted Obviousness over Brueck

Petitioner contends that claims 1–3, 8, 9, 14, and 18 of the ’557 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Brueck. Pet. 12–39. Petitioner relies on the Declaration of Dr. Jeffay in support of its showing. *Id.* (citing Ex. 1002). For the reasons discussed below, we

conclude that Petitioner has not demonstrated a reasonable likelihood it would prevail in showing that claims 1–3, 8, 9, 14, and 18 are unpatentable on this asserted ground.

1. Overview of Brueck

Brueck “relates to video streaming over packet switched networks such as the Internet, and more particularly relates to adaptive-rate shifting of streaming content over such networks.” Ex. 1005, 1:15–19. Brueck explains that “[t]he apparatus for adaptive-rate content streaming” contains a plurality of modules, such as “a receiving module configured to receive media content, a streamlet module configured to segment the media content and generate a plurality of sequential streamlets, and an encoding module configured to encode each streamlet as a separate content file.” *Id.* at 2:58–65.

Figure 1 of Brueck, reproduced below, is a schematic block diagram illustrating a “system for dynamic rate shifting of streaming content”:

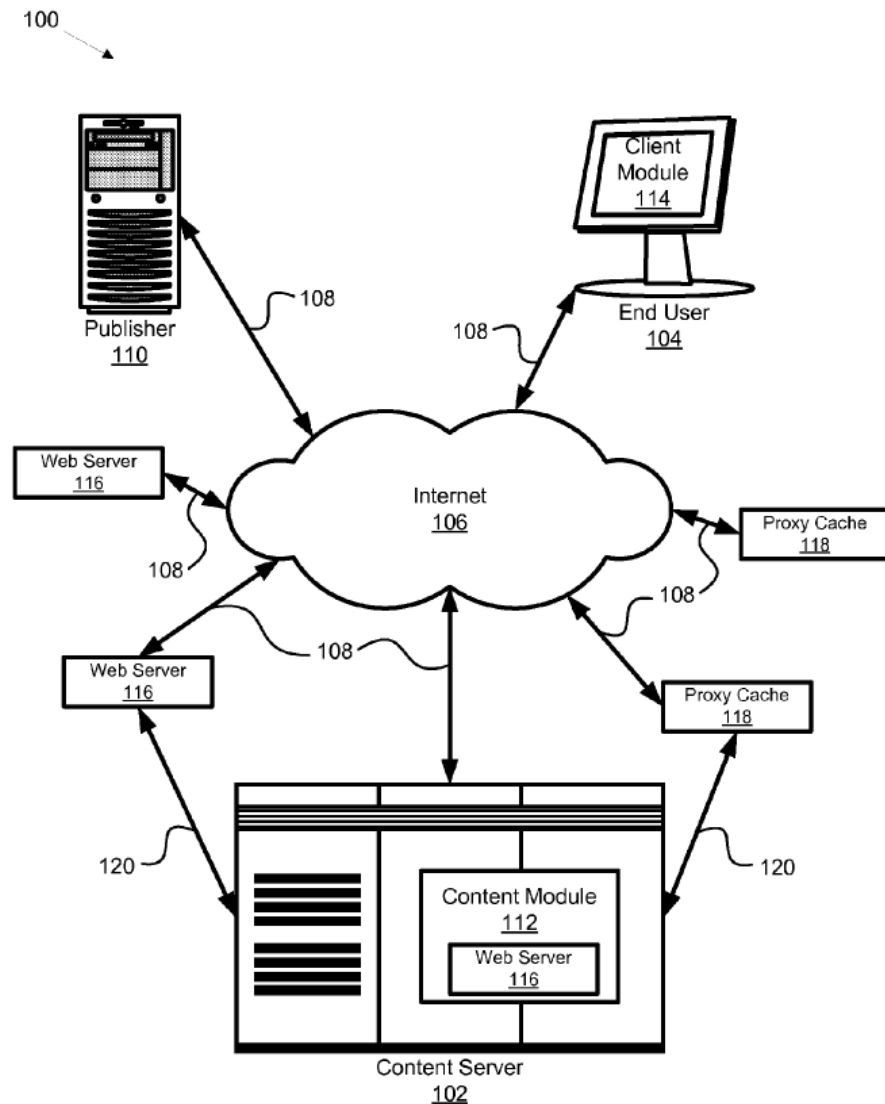


FIG. 1

Id. at 4:20–22. Figure 1 illustrates system 100 comprising content server 102, end user station 104, and publisher 110—all of which may be coupled via communications network 106 and connections 108. *Id.* at 5:64–6:16. The publisher may create and distribute content, including streaming a

television broadcast program. *Id.* at 6:15–20. Content module 112 of the content server may receive, process, and store content transmitted over the network. *Id.* at 6:20–24. The end user station may be a personal computer or other portable electronic device (e.g., cell phone or portable computing device) and may contain client module 114, which may be configured to access, receive, and play content from a plurality of locations, including the content server. *Id.* at 6:15–30.

In one embodiment, content module 112 of content server 102 includes a streamlet module and an encoder module. *Id.* at 7:40–45, Fig. 4. After the content module receives a content file from the publisher, the streamlet module segments the content file and generates source streamlets (i.e., portions of a media content file). *Id.* at 7:62–8:5. The encoder module receives the source streamlets and generates a plurality of streams of varying qualities (e.g., streams having different bit rates corresponding to low, medium, and high quality streams). *Id.* at 6:54–65, 8:6–25.

In one embodiment, client module 114 of end user 104 includes an agent controller module that selects a quality level of streamlets to provide to a viewer. *Id.* at 12:38–39. The agent controller module “requests lower or higher quality streams based upon continuous observation of time intervals between successive receive times of each requested streamlet.” *Id.* at 12:40–42. Brueck describes one embodiment of “a method for requesting streamlets within a[n] adaptive-rate shifting content streaming environment” in which the agent controller decides whether to upshift or downshift to a higher or lower quality stream by calculating a performance ratio based on the time intervals between successive receive times and comparing the performance ratio to a trigger threshold. *Id.* at 4:64–67, 16:11–17:29, Fig. 10.

2. Analysis

Petitioner contends that Brueck teaches or suggests every limitation of independent claim 1. Pet. 12–27. Patent Owner argues that Brueck fails to teach or suggest multiple limitations of claim 1, including “selecting one of the degraded versions of the video media based on an ascertained bandwidth on the network for delivering the video media from the video message service infrastructure to a recipient device on the network.” Prelim. Resp. 24–25. Our discussion below focuses on this limitation after briefly addressing the limitations preceding it.

Claim 1 recites “[a] method for operating a video message service infrastructure on a network” comprising the step of “receiving, at the video message service infrastructure, a video message transmitted by a sending device, the video message containing video media, the video media being transmitted as the video media is created.” Ex. 1001, 44:27–32. Petitioner contends that Brueck discloses a “video message service infrastructure” comprising content server 102 with content module 112 and web server 116. Pet. 13 (citing Ex. 1005, 6:31–33, Fig. 1; Ex. 1002 ¶ 127). Petitioner further contends that Brueck’s publisher 110 is a “sending device” that transmits content, which may be a “video message containing video media,” over the Internet. *Id.* at 14–15 (citing Ex. 1005, 6:16–17, 6:20–30, 6:40–49, 7:40–8:55, 11:22–31, Figs. 1, 4; Ex. 1002 ¶¶ 128–129). Petitioner also contends that Brueck’s content module 112 receives the video message transmitted by publisher 110 “as it is created.” *Id.* at 15 (citing Ex. 1005, 6:16–17, 6:45–47, 9:61–10:13, 10:44–60, 11:23–33, 12:1–9; Ex. 1002 ¶¶ 132–133).

Next, claim 1 recites “generating, by the video message service infrastructure, two or more degraded versions of the video media of the video message, where each of the two or more degraded versions is created

by degrading the quality of the video media by a different amount.”

Ex. 1001, 44:33–37. Petitioner asserts that once a content file is received at Brueck’s content server, the streamlet module segments the content file into streamlets and the encoder module “generates a plurality of streams comprising sets of streamlets having varying qualities.” Pet. 16–17 (citing Ex. 1005, 7:62–8:2, 8:6–8, 8:16–25, Fig. 4; Ex. 1002 ¶ 135). Petitioner cites Brueck’s example of a low quality stream, medium quality stream, and high quality stream, each of which is a copy of the content file encoded and compressed to a different bit rate. *Id.* at 18 (citing Ex. 1005, 6:59–65). According to Petitioner, one of ordinary skill in the art “would have recognized that the streams generated by Brueck’s encoder module are degraded versions of the video media received from the publisher.” *Id.* (citing Ex. 1002 ¶ 139).

As noted above, claim 1 further recites “selecting one of the degraded versions of the video media based on an ascertained bandwidth on the network for delivering the video media from the video message service infrastructure to a recipient device on the network.” Ex. 1001, 44:38–42. Petitioner contends that this limitation is performed by client module 114 of Brueck’s end user station 104 (“a recipient device”), which is in communication with a web server and receives media transmitted over the Internet by the web server. Pet. 19–20 (citing Ex. 1005, 6:24–30, 8:53–9:1, 17:15–18, Figs. 4, 7; Ex. 1002 ¶¶ 141–142). Petitioner asserts that “Brueck teaches that the agent controller module 702 of client module 114 is ‘configured to select a quality level of streamlets to transmit to the viewer 708,’” and that “[t]he agent controller module 702 requests lower or higher quality streams based upon continuous observation of time intervals between

successive receive times of each requested streamlet.” *Id.* at 20–21 (citing Ex. 1005, 8:23–25, 12:38–42, 16:11–17:21, Figs. 7, 10).

Relying on the testimony of Dr. Jeffay, Petitioner asserts that a person of ordinary skill in the art “would have understood that the observed time intervals between successive receive times of the requested streamlets represents an indication of whether the requested streamlets are being received in real-time (*e.g.*, whether or not streamlets representing *x* seconds of video are being received in more or less time than one every *x* seconds).” *Id.* at 21 (citing Ex. 1002 ¶ 145). Petitioner further asserts that one of ordinary skill in the art would have understood “these observations to yield an approximation of the effective bandwidth on the network between the server and the recipient device.” *Id.* (citing Ex. 1002 ¶ 145). Thus, Petitioner contends, by continuously observing these time intervals, Brueck’s agent controller module is “ascertaining the bandwidth on the network available for delivering the streamlets (the video media) to the recipient device in real-time.” *Id.* (citing Ex. 1005, 8:23–25; Ex. 1002 ¶ 145).

Petitioner contends further that one of ordinary skill in the art “would have understood that Brueck’s agent controller module **selects** a degraded version [of the video media] based on ascertained bandwidth on the network” because “if network conditions result in less bandwidth being available between Brueck’s server and end user station, a lower quality version would be selected.” *Id.* at 21–22 (citing Ex. 1005, 15:57–61, 17:8–18, Figs. 9, 10; Ex. 1002 ¶ 147). With reference to Brueck’s Figure 10, Petitioner explains that the agent controller module decides whether to shift to a lower or higher quality stream based on a calculated performance ratio that determines whether media is “received in real-time.” *Id.* at 22–23

(citing Ex. 1005, 16:16–17:21, Fig. 10; Ex. 1002 ¶¶ 148–149). Petitioner contends that the performance ratio “reflects an ascertained effective bandwidth” and a person of ordinary skill in the art would have understood that shifting to a lower-quality stream would involve “selecting a degraded version based on an ascertained bandwidth on the network.” *Id.* at 23 (citing Ex. 1002 ¶¶ 149–150).

In its Preliminary Response, Patent Owner asserts that “Petitioner’s interpretation of Brueck is incorrect,” and that the network analysis of Brueck “is never described as being based on ‘bandwidth.’” Prelim. Resp. 24. Patent Owner contends that the network analysis described in Brueck—calculation of a performance ratio that is used to determine which video streamlet to select—is “based exclusively on the ‘receive time of the requested streamlet.’” *Id.* at 24–25 (citing Ex. 1005, 16:11–17:21). Patent Owner contends that all of the network calculations disclosed by Brueck “compute *latency*, rather than *bandwidth*,” and further explains that “[a]s is well-known in the art, bandwidth and latency are different measurements that are not directly correlated.” *Id.* (citing Ex. 2006, 1). According to Patent Owner, the Petition does not address this distinction between bandwidth and latency, and the measurement described in Brueck “cannot, without something more, be used to show a computation of bandwidth.” *Id.* at 25.

On the record before us, we are not persuaded that Petitioner has shown sufficiently that Brueck teaches or suggests selecting a “degraded version[] of the video media *based on an ascertained bandwidth* on the network,” as recited in claim 1. For the claimed “ascertained bandwidth,” Petitioner relies on Brueck’s disclosure of the agent controller module requesting different quality video streamlets “based upon continuous

observation of time intervals between successive receive times of each requested streamlet,” and Dr. Jeffay’s opinion that a person of ordinary skill in the art would have understood “these observations to yield an approximation of the effective bandwidth on the network.” Pet. 21 (citing Ex. 1005, 8:23–25, 12:39–42; Ex. 1002 ¶ 145). In the method disclosed in Brueck, the agent controller module uses the measured time intervals to calculate a performance ratio, or a geometric mean thereof, and decides whether to upshift or downshift to a stream with a higher or lower quality level by comparing the calculated performance ratio to a threshold value. Ex. 1005, 16:25–17:21. Petitioner asserts that this performance ratio “reflects an ascertained effective bandwidth on the network for the media being transmitted over the particular window of samples.” Pet. 23 (citing Ex. 1002 ¶ 149).

As Patent Owner correctly points out, Brueck describes the calculation of a performance ratio based only on “time intervals [] between successive receive times for each streamlet response” measured by the agent controller module, not on any measure or ascertainment of bandwidth on the network. Ex. 1005, 16:19–49; *see* Prelim. Resp. 24. Patent Owner persuasively argues that Brueck’s agent controller module measures delay or latency, which is different from bandwidth. *See* Prelim. Resp. 25 (citing Ex. 2006, 1); *see also* Ex. 1001, 3:64–4:1 (the ’557 patent referring to network latency and bandwidth conditions as two separate factors generally considered to determine how much data to transmit). On this record, we agree with Patent Owner that Brueck’s performance ratio measurement cannot, “without something more, be used to show a computation of bandwidth.” Prelim. Resp. 25.

In an apparent attempt to tie Brueck’s calculation of the performance ratio to network bandwidth, Petitioner cites Brueck’s disclosure that a “plurality of streams 202 may comprise any number of streams *deemed necessary to accommodate end user bandwidth*.” Pet. 21 (citing Ex. 1005, 8:23–25) (emphasis added). That disclosure, however, describes streams generated by the encoder module within content module 112 of content server 102. Ex. 1005, 8:16–25 (“[T]he encoding module 406 is configured to generate a . . . plurality of streams 202[, which] may comprise [low, medium, and high quality streams or] [a]lternatively . . . may comprise any number of streams deemed necessary to accommodate end user bandwidth.”). The encoder module of the content server (part of the claimed “video message service infrastructure” in Petitioner’s mapping) is separate and distinct from the agent controller module of the client module (part of the claimed “recipient device”), which Petitioner contends performs the claimed “selecting” step when it requests a higher or lower quality stream based on a performance ratio calculated from measured time intervals between successive receive times. On the present record, Petitioner does not explain sufficiently how Brueck’s disclosure of the encoder module generating a number of streams “deemed necessary to accommodate end user bandwidth” supports Petitioner’s contention that a person of ordinary skill in the art would have understood the agent controller module’s observation of time intervals between successive receive times of streamlets to be “an approximation of the effective bandwidth on the network” or would have understood the calculated performance ratio to “reflect[] an ascertained effective bandwidth.” Pet. 21, 23.

For at least these reasons, based on the record before us, Petitioner has not shown sufficiently that Brueck teaches or suggests “selecting one of the

degraded versions of the video media based on an ascertained bandwidth on the network for delivering the video media from the video message service infrastructure to a recipient device on the network,” as recited in claim 1. Challenged claims 2, 3, 8, 9, 14, and 18 depend from claim 1. Therefore, we conclude the information presented does not demonstrate a reasonable likelihood that Petitioner would prevail in establishing that claims 1–3, 8, 9, 14, and 18 of the ’557 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Brueck.

E. Remaining Obviousness Grounds

Petitioner further challenges claims 8, 9, and 14 by adding the teachings of Brooks to the teachings of Brueck discussed above, challenges claim 16 by adding the teachings of Mullig to the teachings of Brueck as discussed above, and challenges claim 23 by adding the teachings of Kalaboukis and Mangal to the teachings of Brueck as discussed above. Pet. 39–70. Petitioner relies on Brooks, Mullig, Kalaboukis, and Mangal only for teaching limitations of dependent claims, not the subject matter of independent claim 1, and therefore these additional references do not remedy the deficiencies addressed above with respect to claim 1. *Id.* Thus, for the same reasons discussed above, the information presented does not demonstrate a reasonable likelihood that Petitioner would prevail in showing that claims 8, 9, 14, 16, and 23 are unpatentable as obvious over the asserted combinations of references.

IV. CONCLUSION

After considering the parties’ evidence and arguments, we determine that the information presented does not show a reasonable likelihood that Petitioner would prevail in establishing that at least one of claims 1–3, 8, 9,

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14, 16, 18, and 23 of the '557 patent is unpatentable on the grounds asserted in the Petition.

V. ORDER

Accordingly, it is

ORDERED that the Petition is *denied*, and no *inter partes* review is instituted.

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FOR PETITIONER:

Eugene Paige
KEKER, VAN NEST & PETERS LLP
epaige@kvn.com

FOR PATENT OWNER:

James Glass
QUINN EMANUEL URQUHART & SULLIVAN, LLP
jimglass@quinnemanuel.com