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Paper 7
Date: June 21, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NETFLIX, INC.,
Petitioner,

v.

AVAGO TECHNOLOGIES INTERNATIONAL SALES PTE. LIMITED,
Patent Owner.

IPR2021-00303
Patent 8,270,992 B2

Before MELISSA A. HAAPALA, *Senior Administrative Patent Judge*, KRISTEN L. DROESCH, and NATHAN A. ENGELS, *Administrative Patent Judges.*

ENGELS, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314, 37 C.F.R. § 42.4

I. INTRODUCTION

Petitioner Netflix, Inc. filed a Petition (Paper 2, "Pet.") requesting *inter partes* review of claims 1–14 and 16–19 of U.S. Patent No. 8,270,992 B2 (Ex. 1001, "the '992 patent"). Patent Owner Avago Technologies International Sale Pte. Limited filed a Preliminary Response. Paper 6 ("Prelim. Resp.").

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the Petition and any response thereto shows "there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." Upon consideration of the Petition and the evidence of record, we determine Petitioner has demonstrated a reasonable likelihood of prevailing in establishing unpatentability of at least one claim of the '992 patent. Accordingly, we institute *inter partes* review.

A. Related Matters

The parties state that the '992 patent has been asserted in *Broadcom Corp. et al. v. Netflix, Inc.*, Case No. 3:20-cv-04677 (N.D. Cal. 2020), which was originally filed as *Broadcom Corp. et al. v. Netflix, Inc.*, Case No. 8:20-cv-00529 (C.D. Cal.). Pet. 67; Prelim. Resp. 2.

B. Real Parties in Interest

Petitioner identifies Netflix, Inc. and Netflix Streaming Services, Inc. as the real parties-in-interest. Pet. 67.

C. The '992 Patent

Titled "Automatic Quality of Service Based Resource Allocation," the '992 patent describes systems and methods for allocating and using network resources in a dynamic communication network based on quality of service.

Ex. 1001, codes (54), (57). As one example of the invention described in the '992 patent, the Specification describes a scenario in which a user receives audio or video content from first system, such as a personal digital assistant ("PDA"), while another system in same network environment, such as a desktop computer, is capable of providing the same content. Ex. 1001, 3:15–4:60. The Specification describes steps for determining whether the second system could provide the content at higher level of quality and switching from the first system to the second system when it will provide a higher level of quality. Ex. 1001, 6:40–49, 11:55–12:5, Figs. 1, 2, 5.

D. Illustrative Claim

Claims 1, 11, and 16 are independent claims. Claim 1, reproduced below with labels added in brackets, is illustrative of the subject matter of the challenged claims.

> 1[a]. In a portable system, a method for providing a digital media service to a user, the method comprising:
>
> [1b] delivering digital media content having a current quality level to a user;
>
> [1c] determining that a network connection with a second system is available and is characterized by a communication bandwidth that is high enough to provide the digital media content to the user at a quality level higher than the current quality level;
>
> [1d] using the network connection to obtain the digital media content at the higher quality level from the second system; and
>
> delivering the digital media content at the higher quality level to the user instead of the digital media content at the current quality level.

E. Alleged Ground of Unpatentability

Petitioner asserts that claims 1–14 and 16–19 would have been unpatentable on the following ground:

Claims Challenged	35 U.S.C. §[1]	References/Basis
1–14, 16–19	103	Barnes,[2] Shaw[3]

II. ANALYSIS

A. Legal Standards

The Supreme Court set out a framework for assessing obviousness under § 103 that requires consideration of four factors: (1) the "level of ordinary skill in the pertinent art," (2) the "scope and content of the prior art," (3) the "differences between the prior art and the claims at issue," and (4) "secondary considerations" of non-obviousness such as "commercial success, long felt but unsolved needs, failure of others, etc." *Graham v. John Deere Co*, 383 U.S. 1, 17–18 (1966).[4] When evaluating obviousness based on a combination of prior art, we also "determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *KSR Int'l Co. v. Teleflex Inc*., 550 U.S. 398, 418 (2007).

Patent Owner argues that Petitioner fails to identify "any applicable legal standards," which Patent Owner asserts renders the Petition

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[1] The Leahy-Smith America Invents Act ("AIA") included revisions to 35 U.S.C. § 103 that became effective on March 16, 2013. Because the '992 patent has a priority date before March 16, 2013, we apply the pre-AIA version of the statutory basis for unpatentability. *See* Ex. 1001, code (22).
[2] U.S. App. No. 2003/0065805 A1, published Apr. 3, 2003. Ex. 1004.
[3] U.S. Pat. No. 7,299,291 B1, filed May 17, 2001, issued Nov. 20, 2007. Ex. 1005.
[4] The current record does not include any evidence of secondary considerations.

"insufficient under 37 C.F.R. § 42.22(a)." Prelim. Resp. 2, 16–17. We disagree. Petitioner identifies 35 U.S.C. § 103(a) as the statutory basis for its challenge. *See* Pet. 9. This identification is sufficient to meet the requirements of 37 C.F.R. § 42.22(a).

B. Level of Ordinary Skill in the Art

In determining the level of skill in the art, we consider the type of problems encountered in the art, the prior art solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the educational level of active workers in the field. *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986); *Orthopedic Equip. Co. v. U.S.*, 702 F.2d 1005, 1011 (Fed. Cir. 1983).

Patent Owner's Preliminary Response does not address the level of ordinary skill, but Petitioner contends a person of ordinary skill in the art at the time of the invention would have been a person with "bachelor's degree in computer science, computer engineering, electrical engineering, or a similar field with at least two years of experience in multimedia communications and systems, or a person with a master's degree in computer science, computer engineering, electrical engineering or a similar field with a specialization in multimedia communications and systems." Pet. 19 (citing Ex. 1003 ¶¶ 31–33). Petitioner further states that a person of ordinary skill in 2003 would have had

> the knowledge and skills necessary to: (i) design/implement video streaming systems and applications using wired or wireless networks; (ii) understand how to perform client-based network selection and switching in a wireless communication system supporting multimedia streaming; (iii) understand how to perform client-based server selection and switching in a multimedia delivery network; (iv) understand dynamic techniques for overcoming bandwidth limitations in mobile

> video streaming; (v) understand how to implement mobile video bit rate adaption; and (vi) understand mobile video compression and techniques for improving the quality of streaming media in bandwidth limited connections.

Pet. 19 (citing Ex. 1003 ¶ 33).

For the purposes of this Decision, we apply the level of skill advocated by Petitioner, which is supported by the testimony in the Declaration of Harley R. Myler, Ph.D. (Ex. 1003) and is consistent with the prior art of record.

C. Claim Construction

We construe claims "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)." 37 C.F.R. § 42.100(b) (2020). Specifically, we apply the principles set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–17 (Fed. Cir. 2005) (en banc). Under that standard, the words of a claim are generally given their "ordinary and customary meaning," which is the meaning the term would have to a person of ordinary skill at the time of the invention, in the context of the entire patent including the specification. *Phillips*, 415 F.3d at 1312–13.

Petitioner identifies "a portable system" in the preambles of claims 1 and 6 as an essential structure necessary to give life and meaning to the claims. Pet. 20. Patent Owner does not oppose Petitioner's arguments regarding the preamble, and Patent Owner states that Petitioner's proposed constructions are not material to the arguments presented in the Preliminary Response. Prelim. Resp. 11. Patent Owner further states that the terms of the challenged claims should be given their plain and customary meanings. Prelim. Resp. 11.

We determine it is not necessary to decide at this stage whether "portable system" in the claims' preambles is limiting.

D. Summary of Prior Art References

1. Barnes

Barnes describes systems and methods that include mobile phones and personal digital assistants (PDAs) having web browsers and audio/video players, among other functions. Ex. 1004 ¶¶ 34, 39–40. Barnes describes that its device is compatible with a variety of known communications networks (Ex. 1004 ¶¶ 44, 47) and that its audio/video player is compatible with multiple file formats and standards (Ex. 1004 ¶ 40).

Barnes also describes programming for switching communications networks when certain conditions arise. Ex. 1004 ¶¶ 70–74. Barnes states that "network switching conditions" include a first network slowing down or a second network having more bandwidth, among other things. Ex. 1004 ¶ 74.

2. Shaw

Shaw describes a client-side method for identifying an optimum server for delivering streaming media to a user's media player. Ex. 1005, 1:17–36, 3:48–67, codes (54), (57). Among other things, Shaw describes streaming media clients or players that typically exist as plug-ins to web browsers. Ex. 1005, 2:2–4. Shaw describes known standards and formats used for streaming media. Ex. 1005, 2:4–26.

Shaw states it was known in the art to deliver streaming media using a geographically distributed content delivery network having different nodes. Ex. 1005, 2:37–43. Shaw states that a request for content from an end user is usually directed to the "best" source of the content, which usually means

that the item can be served to the client quickly compared to the time it would take to fetch the item from another server. Ex. 1005, 2:44–48. Shaw also explains that a "best" content server may not remain optimal and, "in many cases, the 'best' server for a given client player receiving a given stream is likely to change before the stream is finished." Ex. 1005, 3:25–39. Shaw states that its invention provides a method for enabling a client player to identify a best server dynamically and to selectively switch to that server to receive the stream or portions of a stream. Ex. 1005, 6:57–61. Shaw also states that streaming media quality varies widely according to the type of media being delivered, the speed of a user's Internet connection, network conditions, bit rate at which the content is encoded, and the format used. Ex. 1005, 1:37–40.

E. Independent Claims 1 and 6

Petitioner's analysis addresses independent claims 1 and 6 together. *See* Pet. 27. The Petition includes comparisons of Barnes and Shaw to each limitation of each claim with arguments for combining the references and with citations to the Declaration of Dr. Myers (Ex. 1003) as additional support. Pet. 25–42.

1. Reasons to Combine

Petitioner contends Barnes and Shaw would have been combined to include Barnes's portable device and media player with Shaw's teachings for identifying an optimum server source of streaming content. Pet. 21. Petitioner contends both Barnes and Shaw teach using a media player to deliver streaming media content to a user and, according to Petitioner, a person of ordinary skill in the art would have been motivated to make the combination for several reasons to improve Barnes's media player according

to Shaw's teachings of a client-side method for identifying an optimum server for obtaining streaming content. Pet. 21–23.

Patent Owner argues Petitioner fails to identify what Shaw adds to the combination of Shaw and Barnes. Prelim. Resp. 40. Patent Owner contends that Petitioner only cites Shaw for the Determining Limitation, but Patent Owner argues Petitioner confuses the issue by also arguing that Barnes discloses the same limitation. Prelim. Resp. 41–44. Further, Patent Owner argues Petitioner fails to explain why a person of ordinary skill would have been motivated to combine the teachings of Barnes and Shaw. Prelim. Resp. 42–45.

Based on the record at this stage, we determine Petitioner has satisfied its burden to articulate a rationale to combine. As argued by Petitioner, the references' similarities support the argument that a person of ordinary skill would have understood the combination to involve use of a known technique to improve a similar device (Pet. 22) with a reasonable expectation of success (Pet. 23). Contrary to Patent Owner's arguments, the obviousness inquiry does not require bodily incorporation of one reference into another nor does it turn on which references are cited as the primary or secondary references. *In re Bush*, 296 F.2d 491, 496 (CCPA 1961) ("where a rejection is predicated on two references each containing pertinent disclosure . . ., we deem it to be of no significance, but merely a matter of exposition, that the rejection is stated to be on A in view of B instead of on B in view of A, or to term one reference primary and the other secondary").

2. Preambles/Preliminary Elements

1[a]. In a portable system, a method for providing a digital media service to a user, the method comprising: 6[a]. A portable system for providing digital media service to a user, the portable system comprising: at least one component operable to, at least:

As noted above, Petitioner contends the preamble's "portable system" is limiting. Pet. 20. Petitioner cites Barnes as teaching a portable device having a processor, memory, and a communications module that is used to provide digital media service to a user. Pet. 25 (citing Ex. 1003 ¶ 47). Petitioner cites Barnes as teaching that its device is preferably handheld with a variety of known wireless connections for receiving and playing a variety of audio and video content. Pet. 26–27.

At this stage, Patent Owner does not address or rebut Petitioner's showing for the preambles and preliminary elements.

3. Delivering Limitations

[1b], [6b] deliver[ing] media content having a current quality level to a user;

Petitioner contends Shaw teaches using a client player to provide a digital media service to a user with the client player identifying an optimum server for obtaining a stream. Pet. 29–30 (citing Ex. 1003 ¶¶ 28–30, 56–57, 60; Ex. 1005, 3:49–58, 7:26–49, 7:63–8:5, 10:4–13, Figs. 3, 4). Among other things, Petitioner cites Shaw as teaching that its client player performs tests to determine which server is the best server for obtaining a stream and then using that server to retrieve the stream. Pet. 30–31 (citing Ex. 1005, 3:58–62, 8:6–25, 10:13–15; Ex. 1003 ¶ 61). Petitioner additionally cites Shaw as teaching factors that may affect the quality of streaming media,

including the type of media being delivered, the speed of the user's Internet connection, network conditions, and bit rate, among other factors. Pet. 32–33 (citing Ex. 1005, 1:37–40).

At this stage, Patent Owner does not directly address or rebut Petitioner's showing for the Delivering Limitations.

4. Determining Limitations

[1c], [6c] determin[ing] that a network connection with a second system is available and is characterized by a communication bandwidth that is high enough to provide the digital media content to the user at a quality level higher than the current quality level;

Petitioner contends "the combination of Barnes and Shaw renders the 'Determining Limitations' obvious based on Shaw's teachings." Pet. 34 (citing Ex. 1003 ¶ 66). According to Petitioner, Shaw teaches selecting a server for streaming media and periodically determining whether there is a better source for the stream. Pet. 34 (citing Ex. 1005, 3:62–66, 10:16–27, code (57)). Among other things, Petitioner cites Shaw's teaching that the client streaming media player sends periodically queries "to determine whether there is a better source for the stream. If so, the player is controlled to switch to the better stream source 'on the fly' if appropriate to maintain and/or enhance the quality of the service." Pet. 34 (quoting Ex. 1005, 3:62–66).

Patent Owner argues that Petitioner fails to address how Barnes or Shaw discloses bandwidth that is "high enough" to provide content at a quality level higher than the current level, as claimed. Prelim. Resp. 28–29. Patent Owner also makes similar arguments regarding Barnes, arguing that "[m]erely determining that a current bandwidth is not good enough, or that another connection might have more bandwidth, falls far short of any sort of

determination that the bandwidth on the new network connection might allow the delivery of media content at a higher quality level than the current level, especially without any other teaching relating quality level to bandwidth." Prelim. Resp. 35.

According to Patent Owner, Petitioner reads "high enough" out of the claims by citing "alternative language relating to 'better source[s],' 'best source[s], or 'higher communication bandwidth.'" Prelim. Resp. 28 (citing Pet. 34–39); *accord* Prelim. Resp. 30. Patent Owner argues that "[r]egardless of whether either reference discloses a better (or best) source, or even a higher bandwidth, such disclosure is insufficient without explanation from Petitioner to explain why these terms are equivalent to the actual language of these Challenged Claims." Prelim. Resp. 30. Citing the '992 patent's Specification, Patent Owner argues that the Determining Limitations address not only bandwidth, but also whether the user's device can utilize the higher quality. Prelim. Resp. 30–32 (citing Ex. 1001, 22:16–23, 24:4–11).

First, based on the record at this stage of the proceeding, we disagree with Patent Owner's proposed interpretations of claims 1 and 6. The plain language of the claims refers to the quality level of the digital media being "delivered," "provided," and "obtained," without reference to factors such as the user's hardware or the user's ability to appreciate the higher quality level. Specifically, in the Determining Limitation, the claim language requires determining that a second system is "characterized by a communication bandwidth that is high enough to provide the digital media content to the user at a quality level higher than the current quality level." At this stage, we do not agree with Patent Owner's arguments that the

Specification supports reading the claim language differently; the Specification provides a non-specific, open-ended description of considerations in determining whether a second system could provide a higher quality level than the first system without any specific language that narrows the claim language. *See* Ex. 1001, 22:16–23 ("the quality determination may involve any of a large variety of quality metrics"); 23:54–24:19 (listing multiple factors considered by quality control modules).

On the current record, we are persuaded by Petitioner's arguments that the combined teaching of Barnes and Shaw satisfies the Determining Limitations. As cited by Petitioner, both Barnes and Shaw describe bandwidth as one factor affecting streaming quality. Ex. 1004 ¶¶ 70–72; Ex. 1005, 1:36–54. Further, Shaw describes switching from a first stream source to a second stream source if appropriate "to maintain and/or enhance the quality of service." Ex. 1005, 3:62–66, 10:30–35, code (57). And Barnes similarly describes selecting and switching sources based on bandwidth among other factors. Ex. 1004 ¶¶ 71–74.

5. Using Limitations

> [1d], [6d] us[ing] the network connection to obtain the digital media content at the higher quality level from the second system; and deliver[ing] the digital media content at the higher quality level to the user instead of the digital media content at the current quality level.

Petitioner contends that Shaw teaches the Using Limitations with its teachings that the best server for a given stream to a client player can change and that Shaw teaches allowing a player to dynamically change servers when appropriate. Pet. 39–40 (citing Ex. 1005, 3:33–44, 9:14–19, 99:24–27, 9:37–40; Ex. 1003 ¶ 79). Petitioner also contends Barnes teaches obtaining the digital media content at the higher quality level from the second system

because Barnes teaches switching from a first network to a second network if the second network has higher bandwidth. Pet. 41–42 (citing Ex. 1004 ¶ 74; Ex. 1003 ¶ 83).

At this stage, Patent Owner does not specifically contest Petitioner's showings regarding the Using Limitations.

6. Conclusion Regarding Claims 1 and 6

Although we have not made any final determinations, we determine Petitioner has satisfied its burden to show a reasonable likelihood that it will prevail in its challenge of claims 1 and 6 as being unpatentable in view of Barnes and Shaw.

F. Independent Claims 11 and 16

Claims 11 and 16 are substantially similar to claims 1 and 6. Petitioner asserts substantially the same arguments for claims 11 and 16 as those addressed above for claims 1 and 6. Pet. 42–56. Likewise, Patent Owner asserts substantially the same arguments as those addressed above for claims 1 and 6. Prelim. Resp. 39–45.

For the same reasons discussed above, at this stage of the proceeding, we determine Petitioner has satisfied its burden to show a reasonable likelihood that it will prevail in its challenge of claims 11 and 16 as being unpatentable in view of Barnes and Shaw.

G. Dependent Claims 2–5, 7–10, 12–14, and 17–19

1. Dependent Claims 2, 3, 7, 8, 12, 13, 17, and 18

Dependent claims 2, 7, 12, and 17 depend from claims 1, 6, 11, and 16, respectively, and additionally recite "where the digital media content is video media." Dependent claims 3, 8, 13, and 18 depend from claims 1, 6, 11, and 16, respectively, and additionally recite "where the digital media

content is audio media." Petitioner contends both Barnes and Shaw teach audio and video media. Pet. 57–61 (citing Ex. 1004 ¶¶ 39–40, 45, 66; Ex. 1005, 1:44–47, 2:7–11, 6:57–65, 7:4–25; Ex. 1003 ¶¶ 38–42, 113–115, 117–121).

At this stage, Patent Owner does separately address Petitioner's showings for claims 2, 3, 7, 8, 12, 13, 17, and 18.

2. Dependent Claims 4 and 9

Claims 4 and 9 depend from claims 1 and 6, respectively, and additionally recite that the recited Determining Limitation requires "communicating information of the communication bandwidth with the second system." Petitioner contends a person of ordinary skill would have found these limitations obvious based on Shaw's teachings that its media player communicates bandwidth information in the header of a request sent to a second server. Pet. 61–63 (citing Ex. 1005, 2:14–19, 3:48–54, 7:39–41, 8:13–31; Ex. 1003 ¶¶ 122–126; Ex. 1006 pp. 44, 46 (describing header information); Ex. 1008 ¶¶ 2–3; Ex. 1009).

At this stage, Patent Owner does not separately address Petitioner's showings for claims 4 and 9.

3. Claims 5, 10, 14, and 19

Claims 5 and 10 depend from claims 1 and 6, respectively, and recite "where the portable system automatically performs, without user interaction, said determining, said using, and said delivering the digital media content at the higher quality level to the user." Claims 14 and 19 depend from claims 11 and 16, respectively, and additionally require the recited component to "automatically perform, without user interaction, said communicating, said determining and said utilizing." Petitioner contends

Shaw teaches the additional limitations of claims 5 and 10 with its disclosures of periodically looking for a better source of streaming content. Pet. 65–66 (citing Ex. 1005, 3:33–36, 3:40–44, 3:62–66, 3:62–64, 9:14–19; Ex. 1003 ¶¶ 130–133).

At this stage, Patent Owner does not separately address Petitioner's showings for claims 5 and 10.

Patent Owner notes, however, that Petitioner makes no showing for claims 14 and 19 and that the Board should not institute *inter partes* review against claims 14 and 19. Prelim. Resp. 45–46. We agree that Petitioner fails to address these claims in its analysis. *See generally* Pet.

H. Conclusion Regarding Dependent Claims

Although we have not made any final determinations, we determine Petitioner has satisfied its burden to show a reasonable likelihood that it will prevail in its challenge of dependent claims 2–5, 7–10, 12, 13, 17, and 18 as being unpatentable in view of Barnes and Shaw, but we determine Petitioner has not satisfied its burden with respect to claims 14 and 19. Contrary to Patent Owner's suggestion, however, the Board may not institute *inter partes* review on fewer than all challenged claims. 37 C.F.R. § 42.108(a); *see SAS Inst., Inc. v. Iancu*, 138 S.Ct. 1348, 1356 (2018).

III. CONCLUSION

Accordingly, for the reasons set forth above, we determine that Petitioner has demonstrated a reasonable likelihood that it will prevail with respect to at least one claim of the '992 patent. Accordingly, we institute an *inter partes* review.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted as to claims 1–14 and 16–19 of the '992 patent on the following ground of unpatentability:

Claims Challenged	35 U.S.C. §	References/Basis
1–14, 16–19	103	Barnes, Shaw

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is given of the institution of a trial, which commences on the entry date of this Decision.

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