

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HULU, LLC,
Petitioner,

v.

SITO MOBILE R&D IP, LLC, and SITO MOBILE, LTD.,
Patent Owner.

IPR2021-00298
Patent 10,171,846 B2

Before THOMAS L. GIANNETTI, KEVIN W. CHERRY, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

CHERRY, *Administrative Patent Judge*.

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

I. INTRODUCTION

Hulu, LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting institution of *inter partes* review of claims 1–4 and 7–10 of U.S. Patent No. 10,171,846 B2 (Ex. 1001, “the ’846 patent”). SITO Mobile R&D IP, LLC and SITO Mobile, Ltd. (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). With our permission, Petitioner filed a Reply, to address arguments as to discretionary denial under § 314(a). Paper 7. Patent Owner filed a Sur-reply. Paper 8.

Pursuant to 35 U.S.C. § 314(a), an *inter partes* review may be instituted only if “the information presented in the petition . . . and any [preliminary] response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

For the reasons given below, on this record Petitioner has established a reasonable likelihood that it would prevail in showing the unpatentability of at least one of claims 1–4 and 7–10 of the ’846 patent. Accordingly, we institute an *inter partes* review of the ’846 patent.

II. BACKGROUND

A. *Real Parties-in-Interest*

Petitioner identifies itself, Hulu, LLC, as the sole real party-in-interest. Pet. 80. Petitioner also indicates The Walt Disney Company and Comcast Corporation each own “ten percent or more of the stock” of the Petitioner. *Id.*

Patent Owner indicates “SITO Mobile R&D IP, LLC and SITO Mobile, Ltd. are the real parties-in-interest.” Paper 5, 1.

B. Related Proceedings

The parties identify the following litigation that involves the patent at issue: *SITO Mobile R&D IP, LLC and SITO Mobile, Ltd. v. Hulu, LLC*, Case No. 6:20-cv-00472-ADA (W.D. Tex.). Pet. 81; Paper 5, 1.

C. The '846 Patent (Ex. 1001)

The '846 patent is titled “System and Method for Routing Media.” Ex. 1001, (54). The '846 patent issued from Application Serial No. 16/017,435, filed on June 25, 2018, and claims priority to Provisional application No. 60/263,044, filed on Jan. 19, 2001. *Id.* at (21), (22), (30), and (60).

The '846 patent relates to the management and administration of media streaming. *Id.* at 1:46–47. The patent describes increased demand for media streaming, and difficulties in implementing it on diverse networks, such as the Internet. *Id.* at 1:59–61, 2:9–15. To address this, the patent describes an “integrated and distributed media routing algorithm.” *Id.* at 5:4–11.

Figure 1, reproduced below, shows a block diagram of one system of the '846 patent.

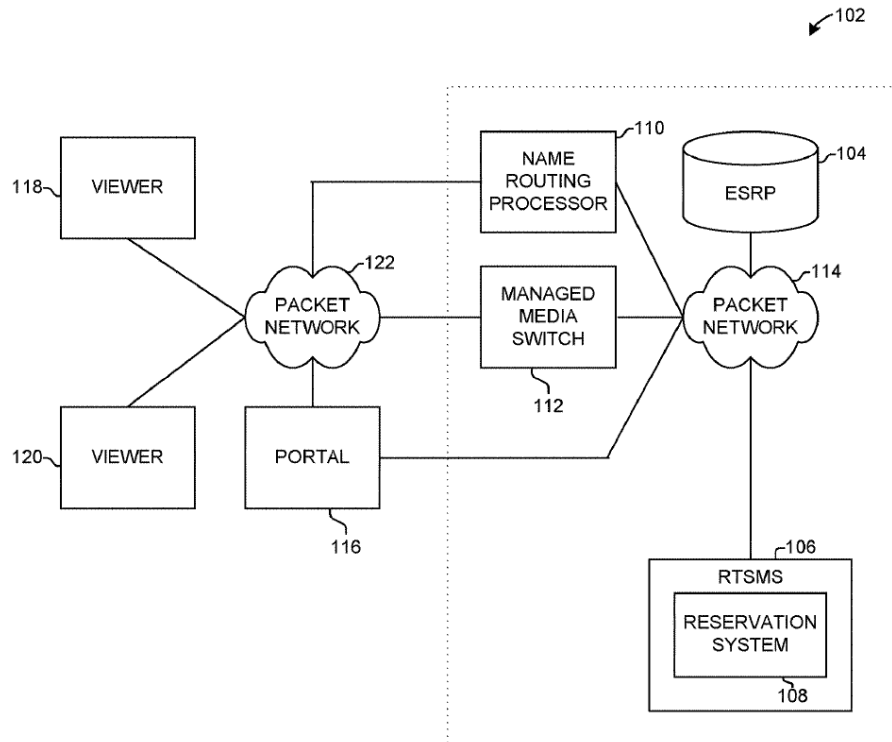


Figure 1 shows streaming system 102, and comprises an enhanced service routing processor (ESRP) 104, a real time switch management system (RTSMS) 106, a reservation system 108, a name routing processor (NRP) 110, and a managed media switch (MMS) 112, each communicating through a packet network 114, portal 116, and packet network 122 with viewers 118 and 120. *Id.* at 6:2–14.

The RTSMS 106 receives signaling from a viewer 118 or 120, which typically is a request for a program or programs. *Id.* at 11:16–20. The RTSMS 106 determines if the program is available, and “generates a customized play script for the requested program to the viewer.” The play script may include one or more media clips, and one or more advertisements. *Id.* at 11:23–34. The RTSMS 106 reserves resources called by the script, and sends the script to the viewer. *Id.* at 11:41–47. The play script instructs

the viewer to issue requests for each media element to view. *Id.* at 15:14–16.

D. Illustrative Claim

Claim 1, the only independent claim challenged, is reproduced below (with bracketing added):

1. [Preamble] A method for managing streaming of video content to a client device, the method comprising:
 - [1.a] providing the video content to a content distribution network for storage in a plurality of geographically separated resources of the content distribution network;
 - [1.b] dynamically selecting one or more advertisement media clips based on statistical information associated with a user of the client device;
 - [1.c] receiving, from the client device via a packet-based telecommunication network, signaling to have the stored video content streamed to the client device; and
 - [1.d] in response to the received signaling, transmitting to the client device, via the packet-based telecommunication network and in one or more files having a format compatible with a media player on the client device,
 - [1.d.1] (i) an identification of one or more of the resources of the content distribution network available to facilitate streaming of one or more segments of the stored video content to the client device, the identification being dependent at least in part on a relationship between a geographic location of the client device and geographic locations of the resources of the content distribution network, and
 - [1.d.2] (ii) an identification of an advertising server, the identification of the advertising server being dependent at least in part on a relationship between the geographic location of the client device and a geographic location of the advertising server,
 - [1.e] wherein the one or more files, when processed by the client device, cause the client device to communicate with the identified one or more resources of the content distribution network and the advertising server to cause the one or more segments of the stored video to be

streamed to the client device by the identified one or more resources of the content distribution network and cause the one or more selected advertisement media clips to be streamed from the advertising server to the client device.

Ex. 1001, 52:56–53:27.

E. The Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–4 and 7–10 would have been unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–4, 9	103(a)	McCanne ¹ , AAAF ²
7, 8	103(a)	McCanne, AAAF, Wolfe ³
10	103(a)	McCanne, AAAF, Goldszmidt ⁴
1, 2, 7, 8 ⁵	103(a)	Madison ⁶ , Wolfe

Pet. 10.

Petitioner supports its Petition with a Declaration by Dr. Henry Houh. Ex. 1003 (“Houh Decl.”).

F. Level of Ordinary Skill

Petitioner “contends that one of ordinary skill in the art would have had at least a bachelor’s degree in computer science, electrical or computer

¹ US 6,785,704 B1, issued Aug. 31, 2004 (Ex. 1053).

² “All About ASX Files,” retrieved from <https://web.archive.org/web/19990.508200218/http://msdn.microsoft.com/workshop/imedia/windowsmedia/crcontent/asx.asp> (Ex. 1017).

³ US 5,931,901, issued Aug. 3, 1999 (Ex. 1044).

⁴ US 6,195,680 B1, issued Feb. 27, 2001 (Ex. 1064).

⁵ The heading for this ground on page 55 of the Petition lists “claims 1–4 and 7–10” as being challenged, but on page 10 lists only claims 1, 2, 7, and 8. Given the Petition only provides analysis for claims 1, 2, 7, and 8, we interpret the ground as only challenging claims 1, 2, 7, and 8.

⁶ US 2004/0083273 A1, published Apr. 29, 2004 (Ex. 1051).

engineering, or equivalent, and at least two years of experience in distributed systems, multimedia streaming, and various HTTP-related technologies, or an equivalent amount of relevant work or research experience.” Pet. 16 (citing Houh Decl. ¶¶ 57–60).

Patent Owner does not address the level of skill off the ordinary artisan. *See generally* Prelim. Resp.

For purposes of this Decision, we adopt Petitioner’s proposed level of ordinary skill, as it appears to be consistent with the level of skill, and choice of language, reflected by the Specification and in the asserted prior art references. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the prior art itself can reflect the appropriate level of ordinary skill in the art).

G. Claim Construction

Petitioner proposes construction for two terms, “content distribution network,” and “settlement.” Pet. 19–21.

Patent Owner does not address claim construction.

1. “content distribution network”

Petitioner proposes that a “content distribution network” be construed as “a distributed network of servers.” Pet. 19. Petitioner asserts that the Specification and prosecution history are silent regarding the term, but that the provisional application explains that “type of service architecture . . . called a ‘Content Delivery Network’ (CDN)” is “a distributed network over the public Internet on a large commercial scale.” *Id.* (citing Ex. 1011, 9). Petitioner also contends that this construction is consistent with contemporaneous dictionary definitions. *Id.* at 19–20 (citing Exs. 1065, 1066, 1063, 1056, 1057; Houh Decl. ¶ 120).

At this stage of the proceeding, we agree that Petitioner’s construction appears to be reasonable and reasonably consistent with the intrinsic and extrinsic evidence provided and cited above. Accordingly, for purposes of this decision, we construe “content distribution network” as “a distributed network of servers.”

2. “*settlement*”

Petitioner proposes construing the term “settlement” as a “billable event record to be used for revenue settlement purposes.” Pet. 20. Petitioner notes that the language of claim 7 “indicates that the settlement is associated with streaming the ‘one or more selected advertisement media clips’ and is accordingly generated on a per-ad basis.” *Id.* (quoting Ex. 1001, 53:50–53). Petitioner further submits that “the specification equivalent is referred to as a ‘message sequence detail record (MSDR)’ which is created for each reservation.” *Id.* (citing Ex. 1001, 13:41–47). Petitioner argues that the Specification describes that “[i]n addition to logging information about what was streamed to the viewer, ‘the MSDR represents a billable event record that will be used for revenue settlement purposes.’” *Id.* (citing Ex. 1001, 13:49–50, 14:15–19, 13:51–53, 21:31–36, Houh Decl. ¶ 121).

At this stage of the proceeding, we agree that Petitioner’s construction appears to be reasonable and reasonably consistent with the claim language and other intrinsic evidence cited above. Accordingly, for purposes of this decision, we construe “settlement” as a “billable event record to be used for revenue settlement purposes.”

III. DISCUSSION

A. *Discretionary Denial under § 314(a)*

Institution of an *inter partes* review is discretionary. Section 314(a) of 35 U.S.C. provides that “[t]he Director may not authorize an *inter partes* review to be instituted unless the Director determines that 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.” The Supreme Court has explained that because § 314 includes no mandate to institute review, “the agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.” *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016); *see also Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (explaining that under § 314(a), “the PTO is permitted, but never compelled, to institute an IPR proceeding”). The Director has delegated this authority under § 314(a) to the Board. 37 C.F.R. § 42.4(a) (2020) (“The Board institutes the trial on behalf of the Director.”).

Patent Owner argues that we should exercise discretion to deny institution under § 314(a) in this proceeding, “because of the advanced state of parallel litigation pending in the Western District of Texas.” Prelim. Resp. 1. Patent Owner relies on the Board’s precedential order in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (“*Fintiv*”), and contends that “*all* of the factors” identified in *Fintiv* “weigh in favor of *denying* institution of an IPR.” Prelim. Resp. 2.

In *Fintiv*, the Board ordered supplemental briefing on a nonexclusive list of factors for consideration in analyzing whether the circumstances of a parallel district court action are a basis for discretionary denial of trial

institution under *NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential). *Fintiv*, Paper 11 at 5–16.

Those factors include:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Id. at 5–6. Here, we consider these factors to determine whether we should exercise discretion to deny institution. In evaluating the factors, we take a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review. *Id.* at 6.

a) *Factor 1: whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted*

Petitioner argues that this factor is “neutral given that courts commonly stay cases upon institution of IPRs.” Pet. 79; Reply 2–3.

Patent Owner responds that this factor favors discretionary denial because Petitioner “has not asked for a stay pending *inter partes* review, and there is no evidence that Judge Albright would grant a stay even if an IPR were instituted.” Prelim. Resp. 5–8. Petitioner replies that Patent Owner’s argument is based on speculation as to what Judge Albright might do.

Reply 2. In its Sur-reply, Patent Owner responds that “the record evidence

shows that the Board need not speculate” because “District Judge Alan D. Albright has denied *all* contested motions to stay pending IPR.” Sur-reply 2.

On the record before us, neither party has produced evidence that a stay has been requested or that the district court has considered a stay in the parallel litigation. Patent Owner’s reliance on other cases in which Judge Albright has denied requests for stay (Prelim. Resp. 6–7) is misplaced. As the Board has explained, “[a] judge determines whether to grant a stay based on the facts of each specific case as presented in the briefs by the parties.” *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15, 12 (PTAB May 13, 2020) (informative) (“*Fintiv II*”). “We decline to infer, based on actions taken in a different case with different facts, how the District Court would rule should a stay be requested by the parties in the parallel case here.” *Id.*

Accordingly, we find that this factor does not weigh for or against exercising our discretion to deny institution.

b) Factor 2: proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision

Patent Owner argues that this factor favors discretionary denial because the district court trial is scheduled to begin on March 7, 2022. Prelim. Resp. 8–9. Patent Owner maintains that “[a]s such, the District Court Litigation will have already been tried *more than three months before* the Board’s projected statutory deadline for a final written decision.” *Id.* at 8. In reply, Petitioner argues that “[t]he Board previously recognized that trial dates are uncertain,” and that “[t]he ongoing COVID-19 pandemic exacerbates that uncertainty.” Reply 3. Patent Owner responds that “[t]here is no indication whatsoever that the district court trial date will be delayed because of COVID-19.” Sur-reply 2–3.

According to the Amended Scheduling Order, the district court trial is scheduled to begin less than three months before a Final Written Decision would be due in this proceeding. Ex. 2002, 4. We generally take courts' trial schedules at face value, absent some strong evidence to the contrary. *See Fintiv II*, Paper 15 at 13. Because the currently scheduled district court trial is scheduled to begin less than three months before our deadline to reach a final decision, we find that factor 2 weighs marginally in favor of exercising our discretion to deny institution.

c) Factor 3: investment in the parallel proceeding by the court and the parties

Petitioner argues that this factor “weighs heavily in favor of institution because the court has invested very limited resources in this case.” Pet. 77.

Patent Owner counters that Petitioner waited five months to file its Petition after being served with the complaint in the district court action, and that because Petitioner “did not file its Petition expeditiously, the Court and the parties will have reached a verdict well before the time the Board issues its final written decision.” Prelim. Resp. 9–12.

In its Reply, Petitioner argues that “[t]he combination of the district court case being in its very early stages and Petitioner’s diligence in filing the petition weighs against denial of institution.” Reply 4–5. Petitioner argues: “By the institution deadline, no major orders will have been issued, fact discovery will have months remaining, and expert reports will not have been served.” *Id.* at 4. Petitioner also contends that it filed the Petition “less than three months after receiving Patent Owner’s preliminary infringement contentions.” *Id.* at 5 (citing Prelim. Resp. 9–10).

In its Sur-reply, Patent Owner asserts that a “Markman hearing was held on March 22, 2021 . . . and the Claim Construction Order issued March

25, 2021.” Sur-reply 4. Further, Patent Owner asserts “the parties are in fact discovery and will have already exchanged their final infringement and invalid contentions before any institution decision issues.” *Id.*

Based on the present record, we are persuaded by Petitioner’s showing that the district court and the parties have not invested substantially in the merits of the invalidity positions. There is no indication in the record that the parties have completed significant discovery on the merits. We agree with Petitioner that the district court proceeding remains at the early stages, and a significant portion of work still remains to be done in the district court proceeding—e.g., amending pleadings (May 28, 2021), meeting and conferring to discuss significantly narrowing the number of claims asserted and prior art references at issue (September 3, 2021, and December 3, 2021), the completion of fact discovery (October 1, 2021) and expert discovery (November 23, 2021); and meeting the dispositive motion and *Daubert* motion deadlines (December 10, 2021). Reply 5.

Moreover, the evidence shows that Petitioner acted diligently, filing its Petition approximately five months after the complaint was filed and around two months after receiving Patent Owner’s preliminary infringement contentions. Patent Owner asserts it served its preliminary infringement contentions on September 11, 2020. Prelim. Resp. 9. The Petition was filed around two months later, on December 7, 2020, prior to the deadline for the parties’ opening claim construction briefs (December 18, 2020). *Id.* at 10.

Therefore, weighing the facts in this particular case, including the time invested by the parties and the district court in the parallel litigation, the extent to which the investment in the district court proceeding relates to

issues of patent validity, and the timing of the filing of the Petition, we find that factor 3 weighs in favor of instituting a trial.

d) Factor 4: overlap between issues raised in the petition and in the parallel proceeding

Patent Owner argues: “The overlap between the issues raised in [Petitioner’s] IPR Petition and in the parallel District Court Litigation is substantial.” Prelim. Resp. 13. Patent Owner continues: “Every ground of this Petitioner relies on a reference already cited in the co-pending District Court Litigation.” *Id.* (citing Ex. 2005).

Anticipating Patent Owner’s assertion, the Petition offered the following stipulation: Petitioner “will not pursue invalidity against the asserted claims in the District Court . . . based on McCanne or Madison, the primary references in all grounds of this petition.” Pet. 78 (citing Ex. 1048 (Petitioner’s counsel’s email)). Petitioner argues that this factor “weighs heavily in favor of institution.” *Id.*

Patent Owner responds that Petitioner’s stipulation “fails to cure any potential overlap.” Prelim. Resp. 14. According to Patent Owner, Petitioner “is free to assert ‘*All About ASX Files*,’ *Wolfe*, and *Goldszmidt* as bases for invalidity before the District Court because it does not identify those references as ‘primary references.’” *Id.* at 15. Patent Owner argues also that Petitioner’s stipulation does not prevent Petitioner from challenging validity “based on other references cumulative to the primary references.” *Id.*; Sur-reply 5–6. Patent Owner also argues that Petitioner’s stipulation “does not apply to the other *six* patents at issue in the District Court.” Sur-reply 6.

We are persuaded by Petitioner’s arguments that the overlap is limited as a result of the stipulation. Notably, Petitioner’s stipulation that it will not pursue in district court “*any* grounds using the primary references from the

IPR” (Pet. 79; Reply 6) is similar to the stipulation provided in *Sand Revolution*. *Sand Revolution II, LLC v. Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24, 12 n.5 (PTAB June 16, 2020) (informative). In *Sand Revolution*, the Petitioner stipulated “only that it will not pursue, in district court, the ‘same grounds’ presented in the Petition.” *Id.* Consistent with *Sand Revolution*, we find that Petitioner’s stipulation mitigates to some degree the concerns of duplicative efforts between district court and the Board, as well as concerns of potentially conflicting decisions. *See id.* at 11–12. Therefore, we determine that this factor weighs marginally in favor of instituting a trial.

e) *Factor 5: whether the petitioner and the defendant in the parallel proceeding are the same party*

It is undisputed that Petitioner is a defendant in the parallel litigation. Petitioner argues that this factor should be neutral. Reply 7. Patent Owner counters that “this factor clearly favors denial because it covers the exact same parties litigating the exact same patents.” Sur-reply 7.

As the Board explained in *Fintiv*, “[i]f a petitioner is unrelated to a defendant in an earlier court proceeding, the Board has weighed this fact *against exercising discretion* to deny institution under *NHK*.” *Fintiv*, Paper 11 at 13–14 (emphasis added). The Board determined in *Sand Revolution* that “[a]lthough it is far from an unusual circumstance that a petitioner in *inter partes* review and a defendant in a parallel district court proceeding are the same, or where a district court is scheduled to go to trial before the Board’s final decision would be due in a related *inter partes* review, this factor weighs in favor of discretionary denial.” *Sand Revolution*, Paper 24 at 12–13. Here, it is undisputed that Petitioner is a defendant in the parallel litigation scheduled to go to trial before the final

written decision is due in this proceeding. Therefore, we find that factor 5 weighs in favor of denying institution.

f) Factor 6: other circumstances that impact the Board's exercise of discretion, including the merits.

The final *Fintiv* factor is a catch-all that takes into account any other relevant circumstances. The decision whether to exercise discretion to deny institution is based on “a balanced assessment of all relevant circumstances in the case, including the merits.” Consolidated Trial Practice Guide 58, *available at* <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

“For example, if the merits of a ground raised in the petition seem particularly strong on the preliminary record, . . . the institution of a trial may serve the interest of overall system efficiency and integrity because it allows the proceeding to continue in the event that the parallel proceeding settles or fails to resolve the patentability question presented in the PTAB proceeding.” *Fintiv*, Paper 11 at 14–15.

We have reviewed Petitioner’s unpatentability arguments and supporting evidence. As discussed below, on this record, we determine that Petitioner has demonstrated sufficiently for purposes of this Decision a reasonable likelihood that the challenged claims of the ’846 patent are unpatentable. Based on this preliminary record, however, we are unable to discern whether the merits are particularly strong here.

Patent Owner argues that “institution of the present proceeding[] will also give rise to substantial duplication of efforts.” Prelim. Resp. 17. Patent Owner’s arguments regarding duplication of efforts have been considered in connection with factor 4 above.

Patent Owner further contends that “with the United States Supreme Court taking up the issue of the Appointments Clause set forth in the *Arthrex*

cases, institution of further IPRs is ill advised at this time.” *Id.* But in its Sur-reply, Patent Owner “acknowledges that *Arthrex* does not serve as an independent basis for denial.” Sur-reply 7. We therefore do not agree that this fact favors denial of the Petition. Patent Owner’s argument based on *Arthrex* is further addressed below, in the “Constitutional Arguments” section.

In addition, we note that we have recently instituted four separate reviews involving Petitioner and Patent Owner of patents related to the ’846 patent, specifically CBM2020-00028 (instituted March 18, 2021), IPR2021-00158 (instituted April 20, 2021), IPR2021-00209 (instituted May 10, 2021), and IPR2021-00219 (instituted May 10, 2021).⁷ In IPR2021-00158, IPR2021-00209, and IPR2021-00219, we are considering similar references as here, and the Specification and claims of the challenged patent in that proceeding are similar to those before us here. This overlap in the proceedings is a further factor weighing in favor of institution.

g) Conclusion on Discretionary Denial Under § 314(a)

As noted in *Fintiv*, we consider the above factors when taking “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Fintiv*, Paper 11 at 6. As discussed above, factor 1 is neutral, factor 2 weighs marginally in favor of

⁷ See *Apple v. Seven Networks*, IPR2020-00235, Paper 10 at 17 (July 28, 2020) (taking “into account the Office already has instituted proceedings challenging other patents in dispute in the co-pending parallel litigation . . . [and] acknowledg[ing] that it would be inefficient to discretionarily deny institution of this Petition, which we find meets the statutory threshold for institution, after having instituted petitions challenging other patents in dispute in the parallel litigation.”).

denying institution, factor 4 weighs marginally in favor of instituting a trial, factor 3 weighs in favor of instituting a trial, and factor 5 weighs in favor of denying institution. Factor 6 also favors instituting trial.

On the present record, Petitioner was diligent in pursuing its Petition, which weighs against exercising our discretion to deny institution. Moreover, Petitioner's stipulation mitigates to some degree the concerns of duplicative efforts between district court and the Board, as well as concerns of potentially conflicting decisions. Furthermore, the existence of other proceedings before the Board involving related patents and some of the same and similar prior art is a further reason not to deny institution here.

Accordingly, under the particular circumstances of this case, we are not persuaded that the interests of efficiency and integrity of the system would be best served by invoking our authority under § 314(a) to deny institution of a potentially meritorious Petition.

B. Patent Owner's Constitutional Arguments

Patent Owner argues that the Petition should be denied because this proceeding "is carried out by a final order issued by Administrative Patent Judges who have not been nominated by the President and confirmed by the Senate." Prelim. Resp. 17–19. According to Patent Owner, the remedy by the Federal Circuit in *Arthrex* "was ineffective and, in any event, inapplicable to the present panel or proceeding." *Id.* at 18 (citing *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320, 1325 (Fed. Cir. 2019)).

Patent Owner's constitutional challenge has been addressed by the Federal Circuit's decision. *See Arthrex*, 941 F.3d at 1337 ("This as-applied

severance . . . cures the constitutional violation . . .”). Accordingly, we do not consider this issue any further in our Decision.

C. Overview of the Prior Art

1. McCanne (Ex. 1053)

McCanne is entitled “Content Distribution System for Operation over an Internetwork Including Content Peering Arrangements.” Ex. 1053, (54). McCanne “relates to moving live or stored ‘broadcast’ data streams from content producers to large numbers of recipients of those data streams.” *Id.* at 1:33–36. Broadcasting here refers to transmission of a data stream to a large number of devices. *Id.* at 1:37–38.

McCanne describes Content Distribution Service Providers (“CSP”), who “provides Internet ‘content distribution service’ to content providers,” such as contracting with Yahoo or CNN to replace and serve their web pages and streaming media through the Internet, efficiently. Ex. 1053, 11:57–63. Citing problems with CSP business models, McCanne describes a “content peering” embodiment, which eliminates, or reduces, the role of the CSP and allows Internet Service Providers (“ISP”) to become the content carriers themselves. *Id.* at 11:41–43. In this way, the ISP invests in its own edge server infrastructure to effectively provide high performance content delivery to recipients of the content of the content providers. *Id.* at 10:43–47. An edge server “captures the user’s request for content and serves the content locally, thereby improving response time, reducing wide-area bandwidth consumption, and relaxing load on the production server.” *Id.* at 9:61–64.

McCanne describes that it is important to have an efficient mechanism to attach a client to the most appropriate server. *Id.* at 13:4–6. Figure 6, reproduced below, provides an approach to this.

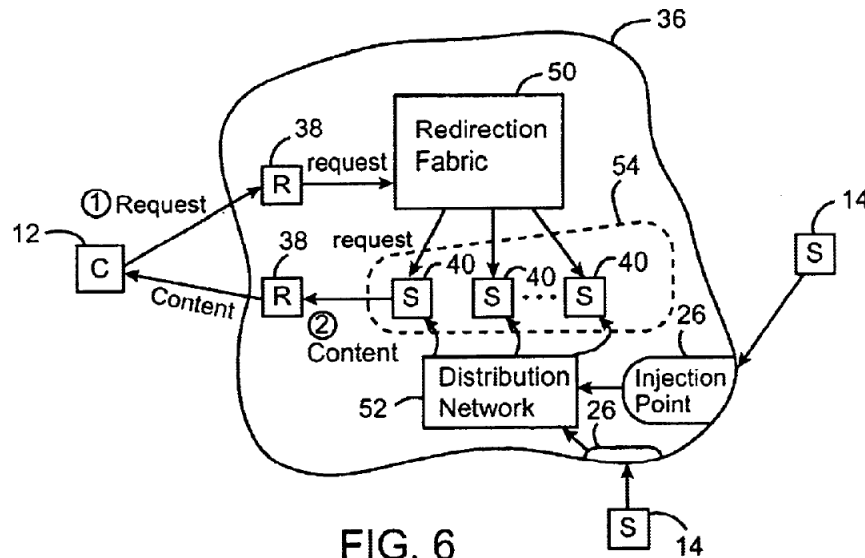


Figure 6 shows a redirection fabric which “glues” clients to edge servers to provide the best possible content distribution path. *Id.* at 13:6–8. “The redirection fabric accounts for client proximity, network path characteristics, server load and utilization, and perhaps most important, policies based on content-peering service level agreements to best decide how to attach the client to the service infrastructure.” *Id.* at 13:8–13.

2. AAAF (Ex. 1017)

AAAF is a web site providing information about ASX files, entitled “All About ASX Files.” Ex. 1017, 1. AAAF explains that “ASX files are simply text files that act as links from Web pages to ASF files on Windows Media Services or HTTP servers. They transfer control of the data from the HTTP browser to the Windows Media Player so that the data can stream.” *Id.* When a user computer “hits an ASX file it should launch the Windows Media Player. The Windows Media Player launches, looks in the ASX for

instructions on where to get the ASF file, and then starts the stream playing.”
Id.

Using this functionality, a user “can send script events down a live stream . . . that tell the ASX file to insert a specific clip into the stream,” such as to “insert an advertising clip . . . into the stream.” *Id.* at 4.

3. *Wolfe (Ex. 1044)*

Wolfe is titled “Programmed Music on Demand from the Internet.” Ex. 1044, (54). Wolfe “relates to a method and apparatus for transmitting and receiving programmed music to and from the Internet to subscribers of the programmed music, where the programmed music received by the subscribers includes targeted advertising according to predetermined criteria.” *Id.* at 1:14–19. Wolfe’s system also calculates “royalty fees payable to the owners of the music, and prepares billing data for advertisers.” *Id.* at 5:33–37.

4. *Goldszmidt (Ex. 1064)*

Goldszmidt is titled “Client-Based Dynamic Switching of Streaming Servers for Fault-tolerance and Load Balancing.” Ex. 1064, (54). Goldszmidt “relates generally to providing fault tolerance and load balancing for real-time data streaming,” and “to a client-based dynamic server switching method for use in a distributed system including multiple servers that are simultaneously transmitting one or more real-time multimedia streams.” *Id.* at 1:7–12. Goldszmidt “includes features for automatically and gracefully switching clients among multiple servers in the event that a server becomes overloaded or fails,” so that the client can “maintain uninterrupted playback of the multimedia streams,” by having “client agents detect the failure and automatically switch to alternate servers

that continue to provide the client agents with the real-time multimedia streams.” *Id.* at 3:12–21.

5. *Madison (Ex. 1051)*

Madison is titled “Method and System for Managing Digital Content, Including Streaming Media.” Ex. 1052, (54). Madison relates to providing digital content via the Internet, and allowing clients to up-load, manage, and deliver streaming media content via the Internet. *Id.* ¶ 3.

Madison describes that “content providers have turned to content management service providers to store and stream content on behalf of the content providers,” but this requires providing “a content management system that not only is capable of organizing large numbers of content files, but also is easy for the content providers to use.” *Id.* ¶¶ 6–7. Madison’s system will “allow clients 102 to up-load streaming media content to the system 100, manage such content, and make the content available to end-users 104 via a web site on the Internet.” *Id.* ¶ 20. Figure 1, reproduced below, illustrates Madison’s system.

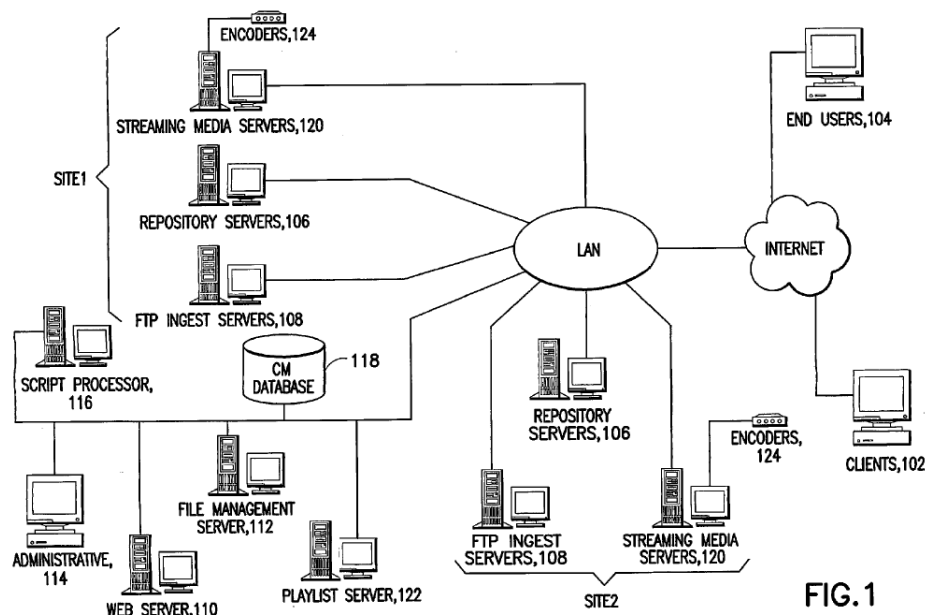


Figure 1 shows end-users 104 who view content, clients 102 who upload content, repository servers 106, and streaming media servers 120. *Id.* ¶¶ 20–24. Madison “utilizes a playlist server 122 for dynamically generating a playlist metafile (Such as ASX, RAM, SMIL, and RPM files, to name a few) to be provided to the end-users windows media player.” *Id.* ¶ 25. The playlist may include advertisements. *Id.* ¶ 32. Further, in Madison, “each client account is associated with a site located in the client’s geography or the geography where the endusers 104 likely to access the client’s content are located so to speed delivery of the streaming media content.” *Id.* ¶ 30.

D. Alleged Obviousness over McCanne and AAAF (Ground 1)

Petitioner asserts that claims 1–4 and 9 are unpatentable under § 103(a) as obvious over McCanne and AAAF. Pet. 21–41. At this juncture, Patent Owner does not present specific arguments regarding this asserted ground of unpatentability.

Upon consideration of Petitioner’s explanations and supporting evidence in this current record, we are persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing in showing that claims 1–4 and 9 would have been obvious over McCanne and AAAF.

1. Claim 1

Petitioner asserts that the combination of McCanne and AAAF discloses or suggests all of the limitations recited in claim 1. Pet. 27–39. Petitioner provides supporting testimony from Dr. Houh. Houh Decl. ¶¶ 155–183. Upon review of Petitioner’s argument and supporting evidence, we agree with Petitioner’s analysis for purposes of this Decision.

For example, McCanne teaches “managing streaming video,” as recited in the Preamble because its system handles “moving live or stored ‘broadcast’ data streams from content producers to large numbers of recipients of those data streams” across the Internet, where “[t]he data streams can be video.” Pet. 27–28 (citing Ex. 1053, 1:31–38; Houh Decl. ¶ 155).

For element 1.a (“providing the video content to a content distribution network for storage in a plurality of geographically separated resources of the content distribution network”), Petitioner argues that McCanne discloses “edge servers,” which are “server devices like Web caches . . . at or close to the ‘edge’ of the network,” as well as routers, and redirection nodes. Pet. 28 (citing Ex. 1053, 9:42–44; 13:30–38). McCanne teaches that “[t]he content starts at a content server 14 and is injected into network 36 at an injection point 26” and then is distributed across the network, and the content includes “text, graphics, video, audio, or any other digital data stream.” *Id.* at 28–29 (citing Ex. 1053, 1:37–40, 12:28–38, 12:41–47, Fig. 6; Houh Decl. ¶¶ 156–158).

With respect to element 1.b (“dynamically selecting one or more advertisement media clips based on statistical information associated with a user of the client device”), Petitioner contends that the combination of McCanne and AAAF meets this limitation. Pet. 29–31. In particular, Petitioner argues that McCanne teaches streaming advertising data, explaining that “[c]ontent providers find enormous value in having access to a serving device in the edge . . . [including when] the content provider is a free (e.g., *advertiser-supported*) service.” *Id.* at 29 (citing Ex. 1053, 10:37–39 (emphasis added)). Furthermore, in AAAF, the ASX file from AAAF

“instructs [the client] to insert an advertising clip called advert.asf into the stream” upon receiving an event called “Time-Out.” *Id.* at 29–30 (citing Ex. 1017, 4). Thus, Petitioner asserts that the combination of McCanne and AAAF teaches or suggests dynamically selecting advertisement media clips based on statistical information associated with a user. Houh Decl. ¶¶ 161–162.

For element 1.c (“receiving, from the client device via a packet-based telecommunication network, signaling to have the stored video content streamed to the client device”), McCanne teaches components of the content distribution network such as the redirection fabric 50, distribution network 52, and server array 54 in Figure 6 work together to “receive requests and get broadcast content delivered to individual clients.” Pet. 31–32 (citing Ex. 1053, 12:28–31, 12:21–26). In addition, “requests in McCanne are received via a packet-based telecommunication network—‘[a]t the network level, individual packets of data . . . route from router to router, from source to destination.’” *Id.* at 32 (citing Ex. 1053, 12:2–4; Houh Decl. ¶ 166).

Petitioner relies on the combined teachings of McCanne and AAAF for element 1.d (“in response to the received signaling, transmitting to the client device, . . . in one or more files having a format compatible with a media player on the client device”). Pet. 32–35. Petitioner states “McCanne teaches that in response to a request, ‘the content is ‘routed’ to the client as content.’” *Id.* at 32 (citing Ex. 1053, 12:40–41, 12:21–26). Moreover, AAAF describes a playlist that “can be used to access on-demand ASF files, ASF files that contain live audio or video streams.” *Id.* at 33–34 (citing Ex. 1017, 1). As with the broadcasts in McCanne, ASX files “allow [a system] to schedule content to play in succession, or to insert advertising or

special interest clips into a stream after a specific period of time or at a specific point.” *Id.* at 34 (citing Ex. 1017, 4). Petitioner asserts that “[a]pplying this teaching to McCanne would have involved simply having the redirector of McCanne return an ASX playlist of URLs instead of a file with a URL to a single endpoint.” *Id.* (citing Houh Decl. ¶ 172).

Petitioner relies on AAAF for element 1.d.1 (“an identification of one or more of the resources of the content distribution network available to facilitate streaming of one or more segments of the stored video content to the client device, the identification being dependent at least in part on a relationship between a geographic location of the client device and geographic locations of the resources of the content distribution network”). Pet. 35–36. Specifically, Petitioner identifies AAAF’s teaching that an ASX file includes a “Ref tag,” which “specifies a Uniform Resource Locator (URL) for a content stream” that can point to a file for on-demand video content. *Id.* at 35 (citing Ex. 1017, 10). AAAF explains that “you can have multiple Ref tags to specify alternative locations or protocols to get the content from.” *Id.* at 36 (citing Ex. 1017, 4). In the combination with McCanne, Petitioner submits that a person of ordinary skill would have used one of the Ref tags to identify an edge server of the content distribution network that has a segment of the requested media. *Id.* at 35. Furthermore, as taught in McCanne, the decision of which “edge server” to use would have been governed, in part, by geographic proximity of the requesting client to the edge server “to service nearby clients in an efficient manner.” *Id.* (citing Ex. 1053, 9:42–58, 10:37–43).

For element 1.d.2 (“an identification of an advertising server, the identification of the advertising server being dependent at least in part on a

relationship between the geographic location of the client device and a geographic location of the advertising server”), AAAF teaches that ASX playlists allow a system to “insert advertising or special interest clips into a stream after a specific period of time or at a specific point.” Pet. 37 (citing Ex. 1017, 4). Petitioner explains that these advertisements are inserted by including a URL (as discussed above) to the advertisement in the ASX. *Id.*

Finally, with respect to element 1.e (“wherein the one or more files, when processed by the client device, cause the client device to communicate with the identified one or more resources of the content distribution network and the advertising server to cause the one or more segments of the stored video to be streamed to the client device by the identified one or more resources of the content distribution network and cause the one or more selected advertisement media clips to be streamed from the advertising server to the client device”), Petitioner contends that both McCanne and AAAF teach that client devices use the URLs in the response files from the system to connect with media servers and obtain media. Pet. 38 (citing Ex. 1017, 1; Houh Decl. ¶ 181). AAAF teaches that when a user’s device receives an ASX file, Windows Media Player “looks in the ASX for instructions on where to get the ASF file, and then starts the stream playing.” *Id.* (citing Ex. 1017, 1). Windows Media Player processes the ASX file sequentially, and streams segments of the stored video from the path in each URL. *Id.* (citing Ex. 1017, 2). In the combination of McCanne and All About ASX Files, processing the ASX file would cause the client device to communicate with each edge server of the CDN identified in the ASX playlist URLs as having the stored video and advertising content, and to obtain that content from that server. *Id.* (citing Houh Decl. ¶¶ 180–183).

Petitioner provides reasoning to combine the teachings of McCanne and AAAF. Pet. 25–27. Petitioner contends that a person of ordinary skill “would have been motivated to combine McCanne with AAAF to utilize the benefits of ASX files). *Id.* at 25 (citing Houh Decl. ¶¶ 150–151). Petitioner argues that McCanne teaches the use of Microsoft Netshow, which was later incorporated into Microsoft Windows Media Player, and ASX files are the redirector file format for Microsoft Windows Media Player. *Id.* (citing Houh Decl. ¶¶ 129–132). ASX files are “playlists [that] allow you to schedule content to play in succession, or to insert advertising or special interest clips into a stream after a specific period of time or at a specific point.” *Id.* at 25 (citing Ex. 1017, 4). Petitioner explains that “[t]hese playlists are advantageous because ‘instead of playing an ASF, stopping, starting the next ASF, and then waiting for it to finish buffering, Microsoft Windows Media Services and the Windows Media Player work together to play the clips one after the other with minimal buffering time or interruption in between.’” *Id.* at 25–26. Dr. Houh testifies that “a POSITA would have been motivated to apply the teachings of [AAAF] to [McCanne] to play consecutive clips with minimal buffering and interruptions.” Houh Decl. ¶ 151. Dr. Houh testifies that a person of ordinary skill “would have had a reasonable expectation of success such a combination because the teachings of McCanne and [AAAF] are similar and technologically compatible.” *Id.* ¶ 152.

Petitioner further contends that a person of ordinary skill would have been motivated to combine McCanne’s teachings with AAAF to improve advertising features taught in McCanne. Pet. 26 (citing Ex. 1017, 4; Houh Decl. ¶ 153). AAAF explains how to insert an advertisement into a stream

and customize ads based on the user's location and preferences. *Id.* at 27 (citing Ex. 1017, 4; Ex. 1018, 3).

Dr. Houh testifies that “[s]uch a combination would have been desirable and obvious to a POSITA because utilizing ASX as taught in [AAAF] in combination with McCanne would have improved targeting advertisements to user interests,” and “[t]his would increase the effectiveness of advertisements, allow a system to generate revenue more effectively, and improve user experience by providing targeted content of interest while excluding irrelevant advertising content.” Houh Decl. ¶ 154.

In light of the foregoing, we determine that, for purposes of this Decision, Petitioner has shown sufficiently that the combination of McCanne and AAAF teaches or suggests all of the limitations recited in claim 1, and Petitioner has articulated an adequate reason to combine the prior art teachings of those references with a reasonable expectation of success. Therefore, Petitioner has established sufficiently that claim 1 would have been obvious over McCanne and AAAF for purposes of instituting a review.

2. Claims 2–4 and 7–10

Having reviewed Petitioner's arguments and supporting evidence in this present record, including the arguments summarized above for claim 1, from which these claims depend, we determine that Petitioner has established adequately for purposes of this Decision that the combination of McCanne and AAAF teaches or suggests the limitations of claims 2–4 and 7–10. *See* Pet. 39–41; Houh Decl. ¶¶ 184–191. Accordingly, we determine that Petitioner has demonstrated a reasonable likelihood that these claims also would have been obvious over the combination of McCanne and

AAAF. At this juncture, Patent Owner does not present specific arguments regarding these claims.

E. Alleged Obviousness over McCanne, AAAF, and Wolfe (Ground 2)

Petitioner asserts that claims 7 and 8 are unpatentable under § 103(a) as obvious over McCanne, AAAF, and Wolfe. Pet. 41–50. At this juncture, Patent Owner does not present specific arguments regarding this asserted ground of unpatentability.

Petitioner asserts that the combination of McCanne, AAAF, and Wolfe discloses or suggests all of the limitations recited in claim 7 and 8. Pet. 41–50. Petitioner provides supporting testimony from Dr. Houh. Houh Decl. ¶¶ 198–206. Upon review of Petitioner’s argument and supporting evidence, we agree with Petitioner’s analysis for purposes of this Decision.

Claim 7 depends from claim 1, and recites “generating a settlement for sharing between at least two parties a percentage of revenue associated with streaming the one or more selected advertisement media clips to the client device.” Ex. 1001, 53:50–53. Petitioner asserts that McCanne, AAAF, and Wolfe meet these limitations. Pet. 46–47; Houh Decl. ¶¶ 198–201. Petitioner states: “[A] POSITA would understand that Wolfe is teaching sharing revenues between the advertiser and the distributed network operator because a percentage of this advertising revenue is being shared between the owners of the music and the system operators.” Pet. 47; *see also* Ex. 1064, 4:30–32, Fig. 2, 5:27–44, 9:66–10:3, 10:7–9, 3:6–9; Houh Decl. ¶ 199.

Claim 8 depends from claim 1 and further recites “receiving from the content owner rules specifying at least one of an age restriction, a

geographic restriction, and a time restriction for the streaming of the stored video content to the client device” and “wherein the one or more files . . . in compliance with the one or more rules.” Ex. 1001, 53:54–67. Petitioner states that “Wolfe teaches using subscriber criteria such as ‘age, demographic data, education, sex, ethnic background, and others.’” Pet. 48 (citing Ex. 1044, 4:12–17). Moreover, Petitioner submits that the content owner, e.g., the advertiser, specifies rules governing the distribution of the content based on these characteristics. *Id.* (citing Ex. 1044, 4:1–6). Petitioner further states that Wolfe teaches that “musical material and advertisements” may “vary as a function of the information contained in the dossiers of the subscribers,” as well as “a function of the time of year or other conditions.” *Id.* at 49 (citing Ex. 1044, 3:40–47; Houh Decl. ¶¶ 202–204).

Petitioner contends a person of ordinary skill would have been motivated to modify McCanne and AAAF to incorporate Wolfe’s teachings of “bundling targeted advertisements based on subscriber information . . . as well as Wolfe’s tracking information for billing and sharing revenue between entities” with a reasonable expectation of success. Pet. 44–45; Houh Decl. ¶¶ 193–197. Dr. Houh testifies that “A POSITA would have been motivated to implement targeted advertising because, as Wolfe explains, ‘bundling of such programmed [media] with advertisement copy tailored to the individual . . . underwrite[s] the cost of supplying to members of the public valuable music and other data containing information.’” Houh Decl. ¶ 195. He further testifies that “[i]n other words, a POSITA would have recognized that tailored advertisements have more profit-generating

potential than advertisements that are not tailored to the consumer.” *Id.*
¶ 196.

In light of the foregoing, we determine that, for purposes of this Decision, Petitioner has shown sufficiently that the combination of McCanne, AAAF, and Wolfe teaches or suggests all of the limitations recited in claims 7 and 8, and that Petitioner has articulated an adequate reason to combine the prior art teachings with a reasonable expectation of success. Therefore, Petitioner has established sufficiently that claims 7 and 8 would have been obvious over McCanne, AAAF, and Wolfe for purposes of instituting a review.

F. Alleged Obviousness over McCanne, AAAF, and Goldszmidt (Ground 3)

Petitioner asserts that claim 10 is unpatentable under § 103(a) as obvious over McCanne, AAAF, and Goldszmidt. Pet. 50–55. At this juncture, Patent Owner does not present specific arguments regarding this asserted ground of unpatentability.

Petitioner asserts that the combination of McCanne, AAAF, and Goldszmidt discloses or suggests all of the limitations recited in claim 10. Pet. 52–55. Petitioner provides supporting testimony from Dr. Houh. Houh Decl. ¶¶ 207–215. Upon review of Petitioner’s argument and supporting evidence, we agree with Petitioner’s analysis for purposes of this Decision.

Claim 10 depends from claim 1 and further recites “monitoring a level of service for streaming the stored video to the client device by the identified one or more resources of the content distribution network.” Ex. 1001, 54:4–6. Petitioner relies on Goldszmidt’s teachings that client monitoring a streaming server providing a continuous multimedia stream to detect if “a

streaming server . . . becomes overloaded or fails” by monitoring the received bit or frame rate for video) . . . monitoring the delivery rate and/or for packets arriving out of order . . . ; [or] sequence numbering or time stamp capabilities.” to teach this limitation. *See* Pet. 53–54 (citing Ex. 1064, 9:66–10:3, 3:6–9, 10:7–18, 14:61–15:13; Houh Decl. ¶¶ 210–212). Claim 10 further recites that “upon detection of a degradation of the level of service, transmitting to the client device, via the packet-based telecommunication network, an identification of another of the one or more of the resources of the content distribution network available to facilitate streaming of one or more other segments of the stored video content to the client device to cause the client device to communicate with the identified other one or more of the resources of the content distribution network to cause the one or more other segments of the stored video to be streamed to the client device by the another one of the resources of the content distribution network.” Ex. 1001, 54:7–19. For this limitation, Petitioner relies on Goldszmidt’s teaching that upon detecting a failure or the rate measurement falling below some threshold (e.g., a degradation in the level of service), Goldszmidt’s system “communicates a request to the control server to automatically switch to the alternate server” and “the selected alternate streaming server...begins to provide the client with the realtime multimedia streams.” Pet. 54–55 (citing Ex. 1064, 10:28–48, 9:66–10:3; Houh Decl. ¶¶ 213–215).

Petitioner contends that a person of ordinary skill would have been motivated to combine Goldszmidt’s teachings regarding “fault tolerant delivery” with McCanne and AAAF “to improve McCanne’s operation by utilizing the enhanced streaming performance taught by AAAF and further improving upon McCanne’s multiple redirector servers by using

Goldszmidt’s monitoring and failover teachings.” Pet. 52 (citing Houh Decl. ¶ 208). Dr. Houh testifies that a person of ordinary skill would have had a reasonable expectation of success in making the combination. Houh Decl. ¶¶ 208–209.

In light of the foregoing, we determine that, for purposes of this Decision, Petitioner has shown sufficiently that the combination of McCanne, AAAF, and Goldszmidt teaches or suggests all of the limitations recited in claim 10, and that Petitioner has articulated an adequate reason to combine the prior art teachings with a reasonable expectation of success. Therefore, Petitioner has established sufficiently that claim 10 would have been obvious over McCanne, AAAF, and Goldszmidt for purposes of instituting a review.

G. Alleged Obviousness over Madison and Wolfe (Ground 4)

Petitioner asserts that claims 1, 2, 7, and 8 are unpatentable under § 103(a) as obvious over Madison and Wolfe. Pet. 55–77. At this juncture, Patent Owner does not present specific arguments regarding this asserted ground of unpatentability.

Upon consideration of Petitioner’s explanations and supporting evidence in this current record, we are persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing in showing that claims 1, 2, 7, and 8 would have been obvious over Madison and Wolfe.

1. Claim 1

Petitioner asserts that the combination of Madison and Wolfe discloses or suggests all of the limitations recited in claim 1. Pet. 63–76. Petitioner provides supporting testimony from Dr. Houh. Houh Decl.

¶¶ 221–253. Upon review of Petitioner’s argument and supporting evidence, we agree with Petitioner’s analysis for purposes of this Decision.

For example, Madison teaches “managing streaming video,” as recited in the Preamble because its system allows “clients to up-load, manage, and deliver streaming media content,” including “audio or video,” via the Internet. Pet. 63 (citing Ex. 1051 ¶¶ 3, 31; Houh Decl. ¶ 221).

For element 1.a (“providing the video content to a content distribution network for storage in a plurality of geographically separated resources of the content distribution network”), Petitioner argues that Madison teaches that “client 102 up-loads streaming media content to the repository or storage server (and associated storage 106),” and “the up-loaded content is eventually transferred from the repository server 106 to one or more streaming media server (and associated storage) 120, where it is available for streaming via the Internet.” Pet. 63–64 (citing Ex. 1051 ¶¶ 22, 25, 31, Fig. 1). Madison further teaches that the servers are geographically distributed, as “each client account is associated with a site located in the client’s geography or the geography where the [end user’s] 104 likely to access the client’s content are located so as to speed delivery of the streaming media content.” *Id.* at 64–65 (citing Ex. 1051 ¶¶ 30, 40, 130; Houh Decl. ¶¶ 222–226).

With respect to element 1.b (“dynamically selecting one or more advertisement media clips based on statistical information associated with a user of the client device”), Petitioner contends that the combination of Madison and Wolfe accounts for this limitation. Pet. 66–67. Petitioner submits that Madison teaches that a streams table “includes records identifying each item of content, as identified by the stream ID,” with fields

including an “ad tag (which specified where an advertisement is to be inserted).” *Id.* at 66 (citing Ex. 1051 ¶ 32). Wolfe teaches providing programmed media content bundled with advertisements “tailored to the individual,” and creating “advertiser dossiers” containing “specification[s] of the desired consumer profiles to be targeted.” *Id.* (citing Ex. 1044, 1:51–60, 2:12–17; 4:13–18, 4:50–55; Houh Decl. ¶¶ 227–231). Thus, Petitioner asserts that the combination of Madison and Wolfe renders obvious dynamically selecting advertisement media clips based on statistical information associated with a user. Houh Decl. ¶¶ 227–231.

For element 1.c (“receiving, from the client device via a packet-based telecommunication network, signaling to have the stored video content streamed to the client device”), Petitioner explains that end users in Madison request content by clicking a link: “An end user 104 desiring to listen to or view the web-cast on their computer or other device can click on the URL.” Pet. 68 (citing Ex. 1051 ¶¶ 106–111). In Madison, communication between the end user, web page, and servers of the content distribution network occurs “via the Internet,” which is a packet-based telecommunication network. *Id.* (citing Ex. 1051 ¶¶ 3, 20, 26, Fig. 1; Houh Decl. ¶¶ 232–233).

Petitioner relies on Madison for element 1.d (“in response to the received signaling, transmitting to the client device, . . . in one or more files having a format compatible with a media player on the client device”). Pet. 69–70. Petitioner states “Madison teaches that the URL of the user’s request for media ‘points to the playlist server 122 that will execute the ‘makeplaylist.asp’ program and dynamically generate a playlist redirector file.’” *Id.* at 69 (citing Ex. 1051 ¶ 108). Petitioner explains that “the redirector file comprises a list of URLs for each stream file, including the

proper prefix, hostname, and stream filename, as shown in the example below where “the URL prefix is ‘mms://’, the hostname is ‘mediaserver.company.com’ and the stream file name is ‘filename.asf.’” *Id.* (citing Ex. 1051 ¶ 109). Madison teaches generating the redirector file comprising multiple URL entries “to be passed to the media player stored on the end user’s computer 104” and provides the example below “of a redirector file for use with Windows Media Technologies.” *Id.* (citing Ex. 1051 ¶¶ 25, 70, 110, 111; Houh Decl. ¶¶ 234–236).

Petitioner relies on Madison for element 1.d.1 (“an identification of one or more of the resources of the content distribution network available to facilitate streaming of one or more segments of the stored video content to the client device, the identification being dependent at least in part on a relationship between a geographic location of the client device and geographic locations of the resources of the content distribution network”). Pet. 71–72. Specifically, Petitioner notes “[t]he redirector file in Madison is generated using the ‘Stream Servers Table 230 in the CM database 118,’ which ‘includes the location or (DNS) hostname of the particular media server 120 containing the stream file associated with a particular stream identifier.’” *Id.* at 71 (citing Ex. 1051 ¶ 109). Additionally, Petitioner explains that “[t]his identification of the media server is included in each URL” and “[u]sing the individual stream URLs, the ‘makeplaylist’ program then dynamically generates a redirector file to be passed to the media player.” *Id.* (citing Ex. 1051 ¶¶ 110, 111). Petitioner contends that “[t]he identified media server facilitates streaming of the identified segments because ‘the end user’s media player pulls each identified stream file from the media server 120 identified in the redirector file,’” and that Madison

further teaches that the media server identification is partially dependent on the geographic relationship between the end user and the media server because “each client account is associated with a site located in . . . the geography where the [end users] 104 likely to access the client’s content are located so to speed the delivery of the streaming media content.” *Id.* at 71–72 (citing Ex. 1051 ¶¶ 30, 111).

For element 1.d.2 (“an identification of an advertising server, the identification of the advertising server being dependent at least in part on a relationship between the geographic location of the client device and a geographic location of the advertising server”), relies on the combination of Madison and Wolfe to account for this element. *Id.* at 72–75. Petitioner explains that Madison teaches that a streams table “includes records identifying each item of content, as identified by the stream ID.” *Id.* at 72 (citing Ex. 1051 ¶ 32). One of the fields included in this record is an “ad tag (which specified where an advertisement is to be inserted).” *Id.* As discussed with relation to element [1.d.1], Petitioner submits that Madison teaches generating a redirector file containing URLs to all of the media in the playlist, identifying media servers based at least in part on the geographic relationship between the end user and the media server. *Id.* at 72–73.

Petitioner explains that Wolfe teaches a “central processing unit (CPU) . . . which interfaces via the Internet . . . with a plurality of subscriber operating PCs . . . (or other device capable of receiving individualized content for audio and/or video production),” which may include a server. *Id.* at 73 (citing Ex. 1044, 3:48–56; Houh Decl. ¶¶ 243–244). Moreover, Petitioner submits that it would have been obvious to incorporate the

advertising server of Wolfe into the geographically distributed system of Madison and a person of ordinary skill would have been motivated to do so as discussed below.

Finally, with respect to element 1.e (“wherein the one or more files, when processed by the client device, cause the client device to communicate with the identified one or more resources of the content distribution network and the advertising server to cause the one or more segments of the stored video to be streamed to the client device by the identified one or more resources of the content distribution network and cause the one or more selected advertisement media clips to be streamed from the advertising server to the client device”), Petitioner argues Madison teaches that by using the redirector file, “the end user’s media player pulls each identified stream file from the media server 120 identified in the redirector file in the order in which it appears in the file.” Pet. 75 (citing Ex. 1051 ¶ 111). Furthermore, “[b]ecause the redirector file would include URLs identifying both the stored video and the advertisement media clips, as discussed with reference to elements [1.d.1] and [1.d.2], the end user’s device would contact both the media server and the advertising server to cause the stored video and the advertisement media clips to be streamed.” *Id.*

Petitioner provides reasoning to combine the teachings of Madison and Wolfe. Pet. 61–63. Petitioner contends that a person of ordinary skill “to apply Wolfe’s teachings of bundling targeted advertisements based on subscriber information to Madison because they are in a common field and teach similar approaches.” *Id.* at 61 (citing Houh Decl. ¶¶ 216–217). Dr. Houh testifies that a person of ordinary skill “would have been motivated to implement targeted advertising because, as Wolfe teaches,

‘bundling of such programmed [media] with advertisement copy tailored to the individual . . . underwrite[s] the cost of supplying to members of the public valuable music and other data containing information.’” Houh Decl. ¶ 218. Dr. Houh testifies that a person of ordinary skill “would have had a reasonable expectation of success applying Wolfe’s teachings to the combination of Madison because Madison does not require one particular way of selecting advertisements, and applying Wolfe would not require alterations to the underlying system.” *Id.* ¶ 219.

In light of the foregoing, we determine that, for purposes of this Decision, Petitioner has shown sufficiently that the combination of Madison and Wolfe teaches or suggests all of the limitations recited in claim 1, and Petitioner has articulated an adequate reason to combine the prior art teachings of those references with a reasonable expectation of success. Therefore, Petitioner has established sufficiently that claim 1 would have been obvious over Madison and Wolfe for purposes of instituting a review.

2. Claims 2, 7, and 8

Having reviewed Petitioner’s arguments and supporting evidence in this present record, including the arguments summarized above for claim 1, from which these claims depend, we determine that Petitioner has established adequately for purposes of this Decision that the combination of Madison and Wolfe teaches or suggests the limitations of claims 2, 7, and 8. *See* Pet. 76–77; Houh Decl. ¶¶ 254–260. Accordingly, we determine that Petitioner has demonstrated a reasonable likelihood that these claims also would have been obvious over the combination of Madison and Wolfe. At this juncture, Patent Owner does not present specific arguments regarding these claims.

IV. CONCLUSION

For the reasons discussed above, we conclude that Petitioner has shown a reasonable likelihood of prevailing with respect to at least one claim. We have evaluated all of the parties' submissions and determine that the record supports institution. Accordingly, we institute an *inter partes* review of all challenged claims under all grounds set forth in the Petition.

Our determination at this stage of the proceeding is based on the evidentiary record currently before us. This decision to institute trial is not a final decision as to patentability of any claim for which *inter partes* review has been instituted. Our final decision will be based on the full record developed during trial.

V. ORDER

For the reasons given, it is:

ORDERED that an *inter partes* review is instituted on all challenged claims under all challenged grounds; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(a), *inter partes* review of the '846 patent is hereby instituted commencing on the entry date of this Decision, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

IPR2021-00298
Patent 10,171,846

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