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Paper 50
Entered: September 9, 2019

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS INC.
Petitioner

v.

SOUND VIEW INNOVATIONS, LLC
Patent Owner

Case IPR2018-00599
Patent 9,462,074 B2

Before DEBRA K. STEPHENS, DANIEL J. GALLIGAN, and JOHN A. HUDALLA *Administrative Patent Judges.*

STEPHENS, *Administrative Patent Judge.*

FINAL WRITTEN DECISION
Inter Partes Review
35 U.S.C. § 318(a)

I. INTRODUCTION

We have authority to hear this *inter partes* review under 35 U.S.C. § 6(c), and to issue this Final Written Decision pursuant to 35 U.S.C. § 318(a). For the reasons that follow, we determine that Unified Patents Inc. ("Petitioner") has shown by a preponderance of the evidence that claims 3 and 9 of U.S. Patent No. 9,462,074 (Ex. 1001, "the '074 Patent") are unpatentable.

A. Procedural History

Petitioner filed a Petition (Paper 2 ("Pet.")) for *inter partes* review challenging claims 3 and 9 of the '074 Patent (35 U.S.C. § 311).

Petitioner relies upon the following references in asserting its grounds (Pet. 3–5):

Reference	Patent Number	Exhibit
Soamdev Acharya, "Techniques for Improving Multimedia Communication over Wide Area Networks" (January 1999) (Ph.D. dissertation, Cornell University) ("Acharya")		1006
Rejaie et al., "Proxy Caching Mechanism for Multimedia Playback Streams in the Internet" ("Rejaie")		1007
Brubeck et al., "Hierarchical Storage Management in a Distributed VOD System" ("Brubeck")		1008
Wolf et al. ("Wolf")	US 6,463,508 B1	1009

Petitioner further relies on the Declarations of Dr. A.L. Narasimha Reddy (Ex. 1005) and Dr. Ingrid Hsieh-Yee (Ex. 1004) to support its challenges.

Sound View Innovations, LLC ("Patent Owner") filed a Preliminary Response (Paper 6 ("Prelim. Resp.")) to the Petition. Pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.4(a), we instituted an *inter partes* review based on our decision that Petitioner had demonstrated a reasonable likelihood of prevailing as to at least one of the challenged claims of the '074 Patent (Paper 11 ("Dec. to Inst.")). Accordingly, we instituted an *inter partes* review on all the grounds asserted in the Petition:

Ground	Claim	Basis	References
1	9	§ 103(a)	Acharya and Rejaie
2	9	§ 103(a)	Acharya and Brubeck
3	9	§ 103(a)	Acharya and Wolf
4	3	§ 103(a)	Acharya, Rejaie, and Wolf

Patent Owner filed a Patent Owner Response (Paper 22), which was then revised in a Revised Patent Owner Response (Paper 28) in accordance with our Order (Paper 24). In this Decision, we refer to Patent Owner's Revised Patent Owner Response ("PO Resp."). Patent Owner relies on the Declaration of Dr. Mark T. Jones (Ex. 2002) to support its Response.

Petitioner filed a Reply to Patent Owner's Response (Paper 30 ("Pet. Reply")), and Patent Owner filed a Patent Owner's Sur-Reply (Paper 37 ("PO Sur-Reply")).

Petitioner additionally filed a Motion to Exclude (Paper 39) as did Patent Owner (Paper 40). Patent Owner additionally filed an Opposition to Petitioner's Motion to Exclude (Paper 43), and Petitioner, likewise, filed an Opposition to Patent Owner's Motion to Exclude (Paper 44). Petitioner filed a Reply in Support of its Motion to Exclude (Paper 47), and Patent Owner

filed a Reply in Support of its Motion to Exclude (Paper 48).

At the parties' request (Papers 38, 41), an Oral Hearing was held on June 13, 2019, a transcript of which is included in the record (Paper 49 ("Tr.")).

II. BACKGROUND

A. Related Proceedings

Petitioner and Patent Owner indicate that the '074 Patent was or is at issue in the following patent infringement actions: *Sound View Innovations, LLC v. Facebook, Inc.*, No. 2:17-cv-04275, which was filed in the U.S. District Court for the Central District of California (terminated Jan. 10, 2018); and *Sound View Innovations, LLC v. Hulu, LLC*, No. 2:17-cv-04146, which was filed in the U.S. District Court for the Central District of California (Pet. 1; Paper 4, 1; Paper 36). Furthermore, the '074 Patent was or is at issue in the following additional patent infringement actions: *Sound View Innovations, LLC v. AMC Networks, Inc.*, No. 1-19-cv-00145 which was filed in the U.S. District Court for the District of Delaware; *Sound View Innovations, LLC v. HSN, Inc.*, No. 1-19-cv-00193 which was filed in the U.S. District Court for the District of Delaware; and *Sound View Innovations, LLC v. QVC, Inc.*, No. 1-19-cv-00194 which was filed in the U.S. District Court for the District of Delaware (Paper 36; Paper 31). The '074 Patent is also at issue in *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-00864 (Paper 36).

B. Real Parties in Interest

The Petition identifies "Unified Patents Inc." as the sole real party in interest (Pet. 1). Patent Owner states that the real parties in interest are

"Sound View Innovations, LLC and Sound View Innovation Holdings, LLC" (Paper 4, 1).

C. The '074 Patent

The '074 Patent, titled "Method and System for Caching Streaming Multimedia on the Internet," issued Oct. 4, 2016 (Ex. 1001, [45], [54]). The '074 Patent describes a technique for enhancing existing caches in a network by employing helper machines to segment streaming media into smaller units according to placement and replacement policies (*id.* at Abstract).

Figure 2 of the '074 Patent illustrates an exemplary network system to perform the streaming media caching (*id.* at 3:31–32) and is reproduced below.

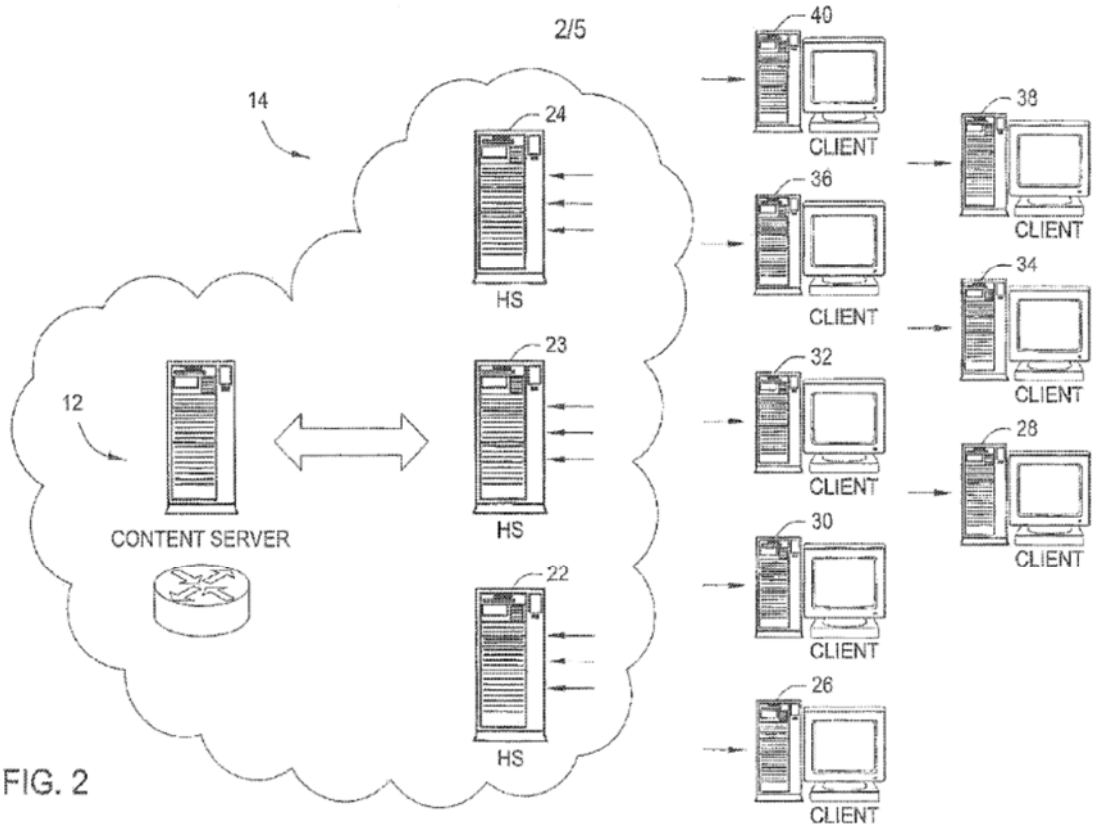

FIG. 2

Figure 2 illustrates an exemplary arrangement of a public network system (Ex. 1001, 4:62–63). Content server 12 of Figure 2 stores and serves content through network 14 (*id.* at 4:64–66). Content server 12 serves various forms of multimedia content to client computers 26–40 (*id.* at 5:1–7). Helper Servers ("HS") are configured as conventional database servers that cache resources requested by client computers 26–40 (*id.* at 4:11–13, 5:7–14). HSs 22–24 generally segment streaming multimedia objects ("SM objects") to better utilize their cache storages (*id.* at 3:6–12, 6:32–34). HSs divide the SM objects into a plurality of chunks, which can be cached and replaced independently in the cache storage of each HS (*id.* at 6:37–43).

According to the '074 Patent, an advantage of dividing the cached SM objects into chunks is to significantly increase the utilization of the cache storage (*id.* at 6:40–43). This caching technique reduces a content provider's memory and processing requirements, server loads, network congestion, and high start-up latency for video requests (*id.* at 3:13–20).

D. Challenged Claims

Claims 3 and 9 are independent claims and are reproduced below:

> 3. A method for storing a streaming media (SM) object in a network having a content server which hosts SM objects for distribution over said network through a plurality of helper servers (HSs) to a plurality of clients, said SM object being comprised of a plurality of successive time-ordered chunks, wherein a chunk is further comprised of a discrete number of segments, each segment allocated to a respective disk block of said plurality of HSs, said method comprising:
>
> i) receiving said SM object;
>
> ii) determining whether there is a disk space available on said one of said plurality of HSs;

iii) storing said SM object at said at least one HS if it is determined that there is sufficient disk space available; and

iv) performing the following steps, if it is determined that there is insufficient disk space available:

a) composing a set of SM objects from among a plurality of SM objects stored on said disk space whose access time is determined to be least recent, where said access time corresponds to a time when said SM object was last requested; and

b) replacing a portion of each of said SM objects belonging to said composed set with chunks of said received SM object.

(Ex. 1001, claim 3).

9. A method for managing storage of a streaming media (SM) object in a network having a content server which hosts SM objects for distribution over said network through a plurality of servers to a plurality of clients, said method comprising:

i) receiving said SM object;

ii) determining whether there is a disk space available on one of said plurality of servers;

iii) storing said SM object at said one of said plurality of servers if it is determined that there is sufficient disk space available; and

iv) if it is determined that there is insufficient disk space available to store the received SM object, for each of a plurality of SM objects stored in said disk space, deleting only a portion of said SM object, whereby the deletion of said portions of said SM objects results in sufficient disk space being available for storage of the received SM object.

(Ex. 1001, claim 9).[1]

[1] Note that claim 9 has been edited in accordance with the Certificate of Correction (Ex. 1001).

III. ANALYSIS

A. Level of Ordinary Skill in the Art

In determining whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention (*Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966)). "The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry" (*Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991)). The person of ordinary skill in the art is a hypothetical person who is presumed to have known the relevant art at the time of the invention (*In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995)). The level of ordinary skill in the art may be reflected by the prior art of record (*Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001)). Factors that may be considered in determining the level of ordinary skill in the art include, but are not limited to, the types of problems encountered in the art, the sophistication of the technology, and educational level of active workers in the field (*GPAC*, 57 F.3d at 1579). In a given case, one or more factors may predominate (*id.*). Generally, it is easier to establish obviousness under a higher level of ordinary skill in the art (*Innovention Toys, LLC v. MGA Entm't, Inc.*, 637 F.3d 1314, 1323 (Fed. Cir. 2011) ("A less sophisticated level of skill generally favors a determination of nonobviousness . . . while a higher level of skill favors the reverse.")).

The level of skill in the art is a factual determination that provides a primary guarantee of objectivity in an obviousness analysis (*Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999) (citing *Graham v. John*

Deere Co., 383 U.S. 1, 17–18 (1966); *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991))).

Petitioner asserts that a person of ordinary skill in the art at the time of the invention would have had

> a bachelor's degree in computer science, computer engineering, electrical engineering, or a related subject, and two or three years of work experience with network-based applications and/or multimedia applications. A lack of experience can be remedied with additional education (e.g., a Master's degree), and likewise, a lack of education can be remedied with additional work experience (e.g., 6-7 years)

(Pet. 7–8 (citing Ex. 1005 ¶ 38)). Patent Owner does not dispute the educational level or experiential aspects of Petitioner's definition in its Response (*see generally* PO Resp.; Ex. 2002 ¶¶ 19–20).

We note that the assessment appears consistent with the level of ordinary skill in the art at the time of the invention as reflected in the prior art in the instant proceeding (*see Okajima*, 261 F.3d at 1355). Based on our review of the '074 Patent, the types of problems and solutions described in the '074 Patent and cited prior art, and the testimony of Drs. Reddy and Jones (Ex. 1005 ¶ 38; Ex. 2002 ¶¶ 19–20), we determine a skilled artisan would have possessed a Bachelor of Science degree in Computer Science, Computer Engineering, Electrical Engineering, or an equivalent field, and two or three years of work experience with content delivery networks or applications or comparable education or work experience in the field.

B. Claim Construction

In an *inter partes* review where the Petition was filed before November 13, 2018, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear (*see* Office Patent Trial Practice Guide, 77 Fed. Reg.

48,756, 48,766 (Aug. 14, 2012); 37 C.F.R. § 42.100(b)). Here, the Petition was filed February 8, 2018 and the '074 Patent is an unexpired patent; it is set to expire March 29, 2020. Therefore, we apply the broadest reasonable construction of terms in light of the specification of the patent in which they appear.

1. Claim Terms

Claim terms are given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the entire disclosure (*In re Translogic Tech., Inc.*, 504 F.3d 149, 1257 (Fed. Cir. 2007)). An inventor may rebut that presumption by providing a definition of the term in the specification with reasonable clarity, deliberateness, and precision (*In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994)). In the absence of such a definition, limitations are not to be read from the specification into the claims (*In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993)).

a. "helper server"

The '074 patent describes "helper server" in the following terms: "Helper Server (HS): a HS, also referred to as a helper, is one of a plurality of servers in the network that provide certain value-added services" (Ex. 1001, 4:11–13). Accordingly, we adopt this interpretation.

b. "receiving said SM object"

Patent Owner argues the plain meaning of "receiving said SM object" would have been understood to mean "receiving said SM object at a helper server" (PO Resp. 17–18). Patent Owner contends an ordinarily skilled artisan would have understood that "helper server(s), ***not*** the clients, receive

the SM object to be cached and perform the recited steps on that SM object" (*id.* at 18 (citing Ex. 2002 ¶¶ 49–50)).

We agree with Petitioner that neither claim 3 nor claim 9 recites where the "receiving" step takes place and, in particular, neither claim recites "receiving said SM object" *at the plurality of* or *one of the helper servers*.

> [C]laim terms cannot be narrowed by reference to the written description or prosecution history unless the language of the claims invites reference to those sources. *See, e.g., McCarty v. Lehigh Val. R.R.*, 160 U.S. 110, 116, 16 S. Ct. 240, (1895) ("[I]f we once begin to include elements not mentioned in the claim in order to limit such claim ..., we should never know where to stop."); *Renishaw* [*PLC v. Marposs Societa per Azioni*], 158 F.3d 1243, 1249 [(Fed. Cir. 1998)]. In other words, there must be a textual reference in the actual language of the claim with which to associate a proffered claim construction

(*Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 989–90 (Fed. Cir. 1999)). Here, we do not find a textual reference in "receiving said SM object." We determine that the inventors did not introduce their own lexicographic definition, i.e., defining the term "receiving said SM object" or "receiving." Furthermore, we are not persuaded "the term or terms chosen by the patentee[s] so deprive the claim of clarity that there is no means by which the scope of the claim may be ascertained from the language used" (*see id.* at 990 (citations omitted)). Nor do the preambles of claim 3 and 9, respectively, provide any textual reference that "receiving said SM object" should be interpreted as "receiving said SM object at a helper server." Thus, "[i]n this case, the [disputed term] has a clear and well-defined meaning. This term is not so amorphous that one of skill in the art can only reconcile the claim language with the inventor's disclosure by

recourse to the specification" (*Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998)).

We further note claim 9 does not recite "helper servers"; rather, claim 9 recites "servers" alone (Ex. 1001, claim 9). Thus, arguments regarding claim 9 directed at the servers being helper servers are not commensurate with the claims as recited. Indeed, we note the '074 Patent describes several servers (e.g., content servers, server computer) (*see generally* Ex. 1001). "Varied use of a disputed term in the written description demonstrates the breadth of the term rather than providing a limited definition" (*Johnson Worldwide*, 175 F.3d at 991).

c. "determining whether there is a disk space available on one of said plurality of servers"

Patent Owner contends the "determining" step must be performed within the helper servers "upon 'receiving said SM object'" (PO Resp. 21, 31). Patent Owner again points to the Specification, contending the disclosure supports this interpretation (*id.* at 21). Specifically, Patent Owner contends "the specification explains unambiguously that the inventive method is performed by and through the helper servers" (*id.*).

In response, Petitioner asserts the claim recitation of "'[d]etermining whether there is a disk space available' does not state that performance is by helper servers" (Pet. Reply 16). According to Petitioner, "the specification is **ambiguous** as to where *determining* is performed" (*id.*). Petitioner argues,

> [Patent Owner's] contention that the '074 Patent "does not disclose that any other element . . . would even be able to determine whether the particular helper server has sufficient space" is immaterial [because] the '074 Patent does not explicitly disclose that ***any***

> particular element (even the helper server) is capable of performing the determination

(Pet. Reply 16–17 (citing PO Resp. 23)). Petitioner further argues that "[c]laims are not limited to disclosure of the sole embodiments" and that "[n]o disclaimer exists"; rather, the '074 Patent "explicitly leaves open alternative implementations, as it seeks to 'cover all modifications, equivalents and alternatives'" (*id.* at 17 (quoting Ex. 1001, 15:62–16:3)).

We agree with Petitioner's contention. The claims recite "determining whether there is a disk space available"—neither claim recites "determining, *at a helper server*, whether there is a disk space available" (or even "determining, at a server") (*see* Ex. 1001, claims 3 and 9). As discussed above, "limitations are not to be read into the claims from the specification" (*In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993) (citing *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989))).

Also, as previously noted, claim 9 does *not* recite "helper servers" but rather recites "servers" (Ex. 1001, claim 9). The '074 Patent describes several different servers (*see generally* '074 Patent). Therefore, Patent Owner's argument that claim 9 requires the "determining" step to be performed in helper servers (PO Resp. 21–26) is not commensurate with the claim as recited.

Accordingly, Patent Owner's arguments are not persuasive. More specifically, with respect to both claim 3 and claim 9, we are not persuaded the limitation must be performed by the "helper server." Neither claim 3 nor claim 9 recites "determining *at the helper server*" or even specify what element is performing the "determining" step.

Patent Owner points to the Specification for support, but, for reasons discussed above with respect to "receiving said SM object," this does not change that the claim was recited broadly, not requiring performing the steps at a helper server. Nonetheless, even looking to the Specification does not support Patent Owner's assertion. Specifically, the first cite to the Specification of the '074 Patent, of column 3, lines 2 to 12, refers generally to methods performed by helper servers and particularly, segmentation and caching of SM objects by the helper server (PO Resp. 21–22). The remaining cites are directed to discussion about segmentation and caching of SM objects by the helper server and to different approaches taken when *insufficient* disk space is available (Ex. 1001, 11:49–51) (PO Resp. 22 (citing Ex. 1001, 3:6–12, 11:13–16, 11:49–51, 12:5–6, 13:51–14:26)). Although these disclosures describe helper servers performing certain tasks, such as using algorithms to divide data, none of these disclosures describes the helper servers performing the "determining step" or *limits* the performance of this determining to helper servers. Thus, the '074 Patent does not require that the *helper server* determines "whether there is a disk space available on one of said plurality of servers," as recited in claim 9 or "on one of said plurality of HSs," as recited in claim 3.

d. Other terms

Based on the current record, we determine that no additional terms require explicit construction (*see, e.g.*, *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) ("[W]e need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy' . . . ." (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)))).

2. Conditional Language

Petitioner contends the final two claim limitations of independent claim 9 are mutually exclusive conditional limitations (Pet. 21 n.4). More specifically, Petitioner asserts method claim 9 requires either (1) if "*it is determined that there is sufficient disk space available*," storing the SM object, or (2) "*if it is determined that there is insufficient disk space available*," deleting a portion of the SM object (Pet. 21 n. 4 (citing Ex. 1005 ¶ 99)). Thus, Petitioner argues, a showing of either limitation "would be sufficient to present a *prima facie* case of obviousness of claim 9" (*id.* (citing *Ex parte Schulhauser*, Appeal No. 2013-007847 (PTAB Apr. 28, 2016) (precedential), at 8–10)). In our Decision to Institute, we agreed with Petitioner and stated that, "with respect to claims 3 and 9, *only one of the conditional limitations* needs to be satisfied in the prior art to render the claim anticipated or obvious" (Dec. to Inst. 8–9).

Patent Owner contends *Schulhauser* does not support reading step (*iv*) out of the claims (PO Resp. 3–4), but according to Patent Owner, the Decision to Institute's application of *Schulhauser* reads step (*iv*) out and "strips the heart out of the claims" (*id.* at 3–4). Moreover, according to Patent Owner, *Schulhauser* has never been applied in an *inter partes* review in a precedential decision (*id.* at 4).

In *Schulhauser*, a precedential decision from an *ex parte* appeal of an examiner's rejection, the Board considered a method claim in which certain steps were recited as contingent on different, mutually exclusive prerequisite conditions (*Schulhauser*, at 6–7). Explaining that the prerequisite conditions made the related steps mutually exclusive, the Board determined performing the claimed method required different steps, depending on which conditions

were present (*id.* at 8). The Board further determined the broadest reasonable interpretation of the claim included at least two different sets of method steps, one requiring those steps triggered by a first condition and another requiring those steps triggered by a second condition. Further, the Board held that under the broadest reasonable interpretation, conditional steps in method claims do not need to be performed when conditions precedent to those steps are not satisfied (*id.*). Once one of the mutually-exclusive conditional method steps was shown to be obvious (including both the condition and the triggered step), evidence of the obviousness of the remaining mutually-exclusive conditional method steps did not need to be presented (*id.* at 9–10 (citing *Applera Corp. v. Illumina, Inc.*, 375 F. App'x 12, 21 (Fed. Cir. 2010) (unpublished) (affirming a district court's interpretation of a method claim as including a step that need not be practiced if the condition for practicing the step is not met); *Cybersettle, Inc. v. Nat'l Arbitration Forum, Inc.*, 243 F. App'x 603, 607 (Fed. Cir. 2007) (unpublished) ("It is of course true that method steps may be contingent. If the condition for performing a contingent step is not satisfied, the performance recited by the step need not be carried out in order for the claimed method to be performed"))).

a. Argument – Petitioner did not sufficiently allege Schulhauser applies

Patent Owner contends Petitioner "based its unpatentability argument on the premise that step (iv) is material, and mentioned *Schulhauser* only once in the margin, and only as to claim 9 — and did not even rely on it then" (PO Resp. 4 (citing Pet. 21 n.4)). Thus, Patent Owner contends Petitioner did not preserve its argument that *Schulhauser* requires that step (*iv*) of both claims be disregarded (*id.*).

We do not agree. Petitioner argued that the limitations of step (*iii*) and step (*iv*) of claim 9 are mutually exclusive conditional limitations and a showing that either limitation was met "would be sufficient to present a *prima facie* case of obviousness of claim 9" (Pet. 21 n.4). As noted above, in our Decision to Institute, we agreed with Petitioner and also stated that the same claim interpretation applies to the corresponding conditional limitations of claim 3 (Dec. to Inst. 8–9).

Patent Owner further argues that "it's the Petitioner's statutory burden to tell [the Board] how the claim should be construed" and that "the Board should not have *sua sponte* tak[en] this position" for claim 3 in the Decision to Institute (Tr. 39, 41, 43; *see also* PO Sur-Reply 7–8 ("The Board *sua sponte* applied *Schulhauser* to both claims in the institution decision. It should not have done so. The Board may not relieve Petitioner of its burden to make its case by injecting a *Schulhauser*-based construction, different from those raised in the Petition, on Petitioner's behalf.")).

Claim construction presents a question of law (*Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1455 (Fed. Circ. 1998); *see also Exxon Chem. Patents, Inc. v. Lubrizol Corp.*, 64 F.3d 1553, 1556 (Fed. Cir. 1995) ("[T]he judge's task is not to decide which of the adversaries[' constructions] is correct. Instead the judge must independently assess the claims, the specification, . . . and declare the meaning of the claims.")). In this case, we previously set forth the preliminary claim construction in our Decision to Institute (Dec. to Inst. 8–9), thus putting both parties on notice of our initial conclusion of claim interpretation. Patent Owner was able to brief the issue in both its Response and in its Sur-Reply, proffer evidence, and argue the issue in the Oral Hearing (PO Resp. 3–16; PO Sur-Reply 6–11; *see generally*

Tr.; *see also* Tr. 38:21–24 (Patent Owner's counsel stating that, "[i]f it were appropriate for the Board to impose a new preliminary construction in both [IPR2018-00599 and IPR2018-00864], then, yes, we would say that we were put on notice from a due process prospective.")). Therefore, we disagree with Patent Owner that our approach to claim construction in this case is impermissible.

b. Argument – Schulhauser should not apply to issued claims

Patent Owner contends the Board has not applied *Schulhauser* to issued claims in a precedential decision and should not apply it here (PO Resp. 5). Patent Owner asserts that unlike in *Schulhauser* "in which the applicant could freely . . . amend[] its claims," "[l]ess than 5 percent of motions to amend in IPR[s] have been granted, and only narrowing amendments are permitted," thus barring Patent Owner from removing one of the conditional statements (*id.*).

We do not agree. The precedential holding of *Schulhauser* governs the construction of conditional limitations such as those in the instant case, and we do not agree that the circumstances of this case warrant deviation from Board precedent. In addition, the Board has a procedure to amend claims in an *inter partes* review, so the distinction Patent Owner attempts to make is not apt. We also note that although unpublished, the Federal Circuit's decisions in *Applera* and *Cybersettle* involved issued patents under the *Phillips* claim construction standard, yet the panels reached the same result that we do here (*see Applera*, 375 F. App'x, at 21; *Cybersettle,* 243 F. App'x at 607).

c. Argument – the Board should not apply Schulhauser based on broadest reasonable interpretation

Patent Owner next argues that *Schulhauser* relied on "broadest reasonable interpretation" ("BRI") and "[t]he Board should not resolve these cases on that basis" because "these cases will not ultimately be decided under BRI" (PO Resp. 6; Tr. 53–55). Patent Owner contends we should instead apply the construction articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Circ. 2005) (PO Resp. 6–7; Tr. 53–55). Specifically, Patent Owner contends that "[u]nder current rules, BRI no longer applies in [*inter partes* review]," and that the Board is only applying that standard in this case because the Petition was filed before the rules changed (PO Resp. 6). However, Patent Owner asserts because the '074 Patent will expire during any forthcoming appeal to the U.S. Court of Appeals for the Federal Circuit, the Federal Circuit would apply the *Phillips* claim construction standard (PO Resp. 6–7; Tr. 53–55). More specifically, Patent Owner argues that, "[w]hen the Federal Circuit decides an IPR appeal after the patent expires, *Phillips*, not BRI, applies" (PO Resp. 6). Thus, according to Patent Owner, because the '074 Patent will have expired and BRI will cease to apply before this case might be decided on appeal, the Board should not apply BRI but, rather, should apply *Phillips* (*id.*). Therefore, because "*Schulhauser* does not apply under *Phillips*, the Board should not decide this case under *Schulhauser*" (*id.* at 7). We do not agree with Patent Owner's assertions. Patent Owner has cited no authority that allows us to ignore the standard under which this case is to be decided according to our Rules. Nor are we inclined to abandon our Rules based on the mere possibility of an appeal.

d. Argument – Ignoring step (iv) contradicts claim language, written description, and prosecution history

According to Patent Owner, the preambles of claims 3 and 9 require that step (*iv*) must occur (PO Resp. 7–8). Patent Owner contrasts the preamble claim language of claims 3 and 9 with the claim language in *Schulhauser*, in which the preamble of claim 1 recites a "method for ***monitoring of*** cardiac conditions incorporating an implantable medical device in a subject" but does not mention the comparing, determining, or triggering steps recited in the claim (*id.* at 9).

We disagree with Patent Owner's assessment of the preambles of claims 3 and 9. The preamble of claim 3 recites:

> A method for storing a streaming media (SM) object in a network having a content server which hosts SM objects for distribution over said network through a plurality of helper servers (HSs) to a plurality of clients, said SM object being comprised of a plurality of successive time-ordered chunks, wherein a chunk is further comprised of a discrete number of segments, each segment allocated to a respective disk block of said plurality of HSs,

and the preamble of claim 9 recites:

> A method for managing storage of a streaming media (SM) object in a network having a content server which hosts SM objects for distribution over said network through a plurality of servers to a plurality of clients

(Ex. 1001, Claims). Neither of the preambles recites that storage depends on the availability of disk space.

Patent Owner additionally points to *Reactive Surfaces Ltd., LLP v. Toyota Motor Corp.*, IPR2016-01914, Paper 64 at 11–14 (PTAB Mar. 1, 2018) (PO Resp. 10). Claim 1 of *Reactive Surfaces* recites:

> 1. A method of facilitating the removal of a fingerprint on a

substrate or a coating comprising:

a. providing a substrate or a coating;

b. associating a lipase with said substrate or said coating such that said lipase is capable of enzymatically degrading a component of a fingerprint, and

c. facilitating the removal of a fingerprint by vaporization from the lipase associated substrate or coating when contacted by a fingerprint

(*Reactive Surfaces*, at 5). In *Reactive Surfaces*, the preamble is directed to *removal* of a fingerprint and because the claim is directed to removal of a fingerprint, a fingerprint must exist. In contrast, the preambles in claims 3 and 9 of the '074 Patent are directed to storing a streaming media object. Neither of the preambles requires different types of storage based on whether there is sufficient disk space available. Therefore, performing step (*iii*) in claims 3 and 9 satisfies the preamble in each of those claims. Moreover, unlike steps (*iii*) and (*iv*) of claims 3 and 9 of the '074 Patent, the limitation at issue in *Reactive Surfaces* is not mutually exclusive of another step.

Patent Owner further contends that ignoring step (*iv*) would render the recited "storing a streaming media (SM) object in a network" in the preamble of claim 3 and "managing storage of a streaming media (SM) object in a network" in the preamble of claim 9 meaningless (PO Resp. 11). Step (*iii*) in claims 3 and 9 of the '074 Patent specifically recites storing the SM object. The combination of steps (*i*), (*ii*), and (*iii*) satisfies "managing storage of a streaming media." Thus, we are not persuaded the recitations of the preambles require performance of step (*iv*).

Patent Owner argues the Specification requires step (*iv*) and "makes it clear the inventors regarded the 'insufficient disk space' step as their contribution to the art" (PO Resp. 11). This does not change the fact that each of claims 3 and 9 contains mutually exclusive conditions that cannot both be met in one iteration of the method. Indeed, Patent Owner admits that, under its claim interpretation, practicing the invention would require *two* iterations of the method (Tr. 55–56). Patent Owner has not directed us to any authority stating that more than one iteration of a method may be required to meet a method claim, and we are aware of none (*see id.* at 56).

Patent Owner additionally contends "[t]he written description confirms the inventors regarded their invention as a 'cache placement ***and replacement*** policy'" (PO Resp. 12 (quoting Ex. 1001, 10:5)). Claims 3 and 9, however, do not recite "a method for cache placement and replacement policy."

Patent Owner next contends "[t]he prosecution history confirms step iv may not be ignored. This step was emphasized during prosecution and was a basis for allowance" (PO Resp. 13). In addition, Patent Owner asserts step (*iv*) is "integral to the claims" and an ordinarily skilled artisan who read the description of the '074 Patent "would have understood the second conditional limitation is the heart of the invention" (*id.* at 14). These arguments do not change that *Schulhauser* applies.

e. Argument – Schulhauser is incorrectly decided

Patent Owner further contends *Schulhauser* was incorrectly decided (PO Resp. 15–16). We need not address Patent Owner's contention because "[a] precedential decision is binding Board authority in subsequent matters

involving similar facts or issues" (Patent Trial and Appeals Board, Standard Operating Procedure 2, 11).

C. Principles of Law

"A petitioner in an inter partes review may request to cancel as unpatentable 1 or more claims of a patent only on a ground that could be raised under section 102 or 103 and *only on the basis of prior art consisting of patents or printed publications*" (35 U.S.C. § 311(b) (emphasis added); *see also* 37 C.F.R. § 42.104(b)(2)); *In re Wyer*, 655 F.2d 221, 227 (CCPA 1981) ("[W]hether information is printed, handwritten, or on microfilm or a magnetic disc or tape, etc., *the one who wishes to characterize the information, in whatever form it may be, as a 'printed publication' . . .* should produce sufficient proof of its dissemination or that it has otherwise been available and accessible to persons concerned with the art to which the document relates and thus most likely to avail themselves of its contents." (emphasis added)).

"A reference will be considered publicly accessible if it was 'disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it" (*Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1348 (Fed. Cir. 2016) (quoting *Kyocera Wireless Corp. v. Int'l Trade Comm'n*, 545 F.3d 1340, 1350 (Fed. Cir. 2008))). The status of a reference as a printed publication is a legal conclusion "based on underlying factual determinations" (*id.* (citing *In re Lister*, 583 F.3d 1307, 1311 (Fed. Cir. 2009))).

The ultimate determination of obviousness under 35 U.S.C. § 103 is a question of law based on underlying factual findings (*In re Baxter Int'l, Inc.*,

678 F.3d 1357, 1362 (Fed. Cir. 2012) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1996))). These underlying factual considerations include: (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."[2] (*KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting *Graham*, 338 U.S. at 17–18)).

"To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness" (*Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380–81 (Fed. Cir. 2016) (citing *KSR*, 550 U.S. at 418)). The "factual inquiry" into the reasons for "combin[ing] references must be thorough and searching, and the need for specificity pervades" (*In re NuVasive, Inc.*, 842 F.3d 1376, 1381–82 (Fed. Cir. 2016) (internal quotations and citations omitted)). A determination of obviousness cannot be reached where the record lacks "explanation as to how or why the references would be combined to produce the claimed invention" (*TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1066 (Fed. Cir. 2016); *see NuVasive*, 842 F.3d at 1382–85; *Magnum Oil*, 829 F.3d at 1380–81). We analyze the asserted grounds based on obviousness with the principles identified above in mind.

[2] Patent Owner does not put forth any arguments or evidence related to secondary considerations of nonobviousness.

D. Art Relied Upon

1. Acharya

a. Overview

Acharya is a paper titled "Techniques for Improving Multimedia Communication over Wide Area Networks" (Ex. 1006, 3). Acharya discloses a technique of streaming video playback over the Internet that overcomes various network problems (*id.* at 3–4).

Figure 4.3 of Acharya, reproduced below, illustrates a typical network contemplated by the paper:

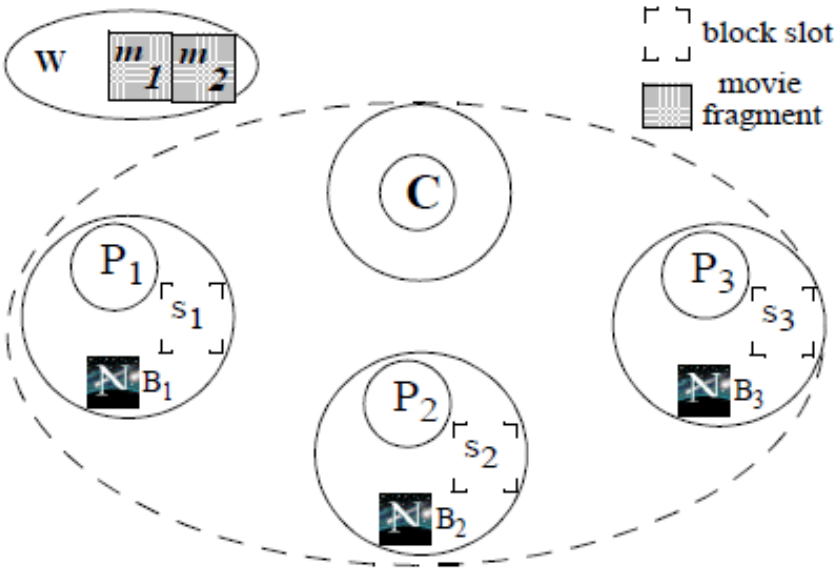

Figure 4.3: Initial state of example system

(*id.* at 86[3]). As shown in Figure 4.3 of Acharya, web server W hosts a movie that is divided into two file blocks M_1 and M_2 (*id.* at 84). Coordinator C and proxies P_1, P_2, and P_3 form a proxy cluster called MiddleMan, which

[3] In this Decision, citations to Acharya are to the exhibit pages assigned by Petitioner rather than to the page numbers of the reference itself.

is a collection of proxy servers running on user machines within a local area network (*id.* at 79, 84). The proxy cluster serves client browsers B1, B2, and B3, and each of the proxy servers P_1, P_2, and P_3 are shown having one empty block slot s_1, s_2, and s_3, respectively (*id.* at 84). According to Acharya, MiddleMan offers a plurality of advantages over conventional streaming techniques, including network latency reduction, server load reduction, and increased system capacity and scalability (*id.* at 79–80).

b. Status of Acharya as a Printed Publication

The Federal Circuit has held that "public accessibility" is the touchstone in determining whether a reference is a "printed publication" under § 102 (*In re Hall*, 781 F.2d 897, 898–99 (Fed. Cir. 1986)). "A reference is publicly accessible 'upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it . . . .'" (*Kyocera*, 545 F.3d at 1350 (quoting *SRI Int'l, Inc. v. Internet Sec. Sys. Inc.*, 511 F.3d 1186, 1194 (Fed. Cir. 2008)); *In re Lister*, 583 F.3d 1307, 1315 (Fed. Cir. 2009)).

A party seeking to introduce a reference "should produce sufficient proof of its dissemination or that it has otherwise been available and accessible to persons concerned with the art to which the document relates and thus most likely to avail themselves of its contents" (*In re Wyer*, 655 F.2d 221, 227 (CCPA 1981) (quoting *Philips Elec. & Pharm. Indus. Corp. v. Thermal & Elecs. Indus., Inc.*, 450 F.2d 1164, 1171 (3d Cir. 1971))). As explained by the Federal Circuit, a "determination of whether a reference is a 'printed publication' under 35 U.S.C. § 102(b) involves a case-by-case inquiry into the facts and circumstances surrounding the reference's

disclosure to members of the public" (*In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004)).

Petitioner contends that Acharya qualifies as prior art under 35 U.S.C. § 102(a) because it "is a printed publication in the form of a dissertation submitted by the author in January 1999" (Pet. 3 (citing Ex. 1006, 1)). Relying on the testimony of Ingrid Hsieh-Yee, Ph.D., Petitioner asserts that "*Acharya* was made publicly accessible and disseminated at least as of July 9, 1999, based upon its cataloging record and availability in the Cornell University Library" (*id.* (citing Ex. 1004 ¶ 22)).

Petitioner provides documentation and testimonial evidence in support of its claim that Acharya was publicly available in July 1999 (*see, e.g.*, Pet. 3; Ex. 1004; Ex. 1012; Ex. 1013). In particular, Petitioner offers the bibliographic record and MARC record as documentation for Acharya (Exs. 1012, 1013). In addition, Petitioner presents testimonial evidence from Dr. Hsieh-Yee describing the availability of Acharya (Pet. 3 (citing Ex. 1004)). Based on documents with testimonial support, Petitioner argues that Acharya qualifies as prior art (*id.*).

Patent Owner, however, advances several arguments as to why Acharya should not qualify as prior art (PO Resp. 49–58). We address each.

i. *Argument – Petitioner Cannot Rely on Matters Omitted from the Petition*

Patent Owner contends the "Petition sets forth ***no*** argument or authority that Acharya was publicly available" (PO Resp. 50). Patent Owner further argues Petitioner relies on "large portions of another document," i.e., Dr. Hsieh-Yee's Declaration, "without sufficient explanation of those portions" to evade length constraints on the Petition (*id.* at 51 (citing Pet. 8)).

> Petitioner, in its Petition, set forth the following:
>
> *Acharya* is a printed publication in the form of a dissertation submitted by the author in January 1999 (*Acharya* at 1 (EX1006)). As Dr. Ingrid Hsieh-Yee, an expert in library cataloging and classification, testifies, *Acharya* was made publicly accessible and disseminated at least as of July 9, 1999, based upon its cataloging record and availability in the Cornell University Library. (*See* Hsieh-Yee Declaration, ¶ 22 (EX1004))

(Pet. 3). In her declaration, Dr. Hsieh-Lee stated she searched the WorldCat (http://www.worldcat.org) for Acharya's title, and the search results indicated Cornell University holds Acharya, which she confirmed by searching the online catalog of Cornell University (Ex. 1004 ¶ 17). According to Dr. Hsieh-Lee, the Cornell Library bibliographic record provides the title, author, publication date, description, and thesis fields (Ex. 1012), and the "Librarian View" provides the date when the bibliographic record was created (Ex. 1013) (Ex. 1004 ¶¶ 18–19).

We do not find that Petitioner relied on large portions of Dr. Hsieh-Yee's Declaration without sufficient explanation. The Petition set forth that Acharya was publicly available as evidenced by Cornell University Library's cataloging record and availability (Pet. 3). The Petition references Dr. Hsieh-Lee's Declaration to support this assertion (*id.* (citing Ex. 1004)). Thus, we find Petitioner articulated why Acharya qualifies as prior art under 35 U.S.C. § 102, provided supporting evidence identified the relevance of the evidence to the challenge raised, and identified the declaration as being relevant to supporting that Acharya qualifies as prior art.

ii. Argument – The OCLC System Did Not Make Acharya Publicly Available

Patent Owner further argues "Dr. Hsieh-Yee's declaration offered no opinion when OCLC's 'Connexion' catalog system first existed or connected to the Cornell library. Her testimony on this point under cross-examination was contradictory and vague" (PO Resp. 53). Patent Owner notes that Dr. Hsieh-Yee testified she was not "familiar with the operation of the Cornell University Library" (*id.* (quoting Ex. 2012, 123:3–5)).

In addition, Patent Owner asserts "OCLC was introduced no earlier than ***2001***, after the patent's 2000 priority date" (PO Resp. 54 (citing Ex. 2014; Ex. 2015)). According to Patent Owner, although Dr. Hsieh-Yee "testifies OCLC's system predated Connexion, its pre-Connexion capabilities have not been established" (*id.*). In particular, Patent Owner asserts "[t]he record contains no evidence of the number of libraries that had . . . access [to the Acharya record over Connexion] as of the priority date, as Dr. Hsieh-Yee does 'not have that information'" (*id.* (quoting Ex. 2012, 107:7–15)).

In *In re Hall*, our reviewing court found "a single cataloged thesis in one university library . . . constitute[s] sufficient accessibility to those interested in the art exercising reasonable diligence" (*In re Hall*, 781 F.2d 898, 899–900 (Fed. Cir. 1986)). Thus, the *number* of libraries that had access as of the priority date is not the issue. Dr. Hsieh-Yee's testimony of online indexing and availability is supported by the corresponding MARC records (Ex. 1004 ¶¶ 16–22). According to Dr. Hsieh-Yee, MARC standards were developed "in the 1960s for libraries to create and share bibliographic records" (Ex. 1004 ¶ 8). The Cornell University Library Catalog shows the thesis was "Published: 1999" (Ex. 1012), the MARC

record shows field 008 as "990702" (Ex. 1013), and the MARC 21 Reference Materials shows field 008 corresponds to the "[d]ate entered on file (YYMMDD)" (Ex. 1004, 60 (Appendix B)). These all bolster Dr. Hsieh-Yee's testimony that Acharya was indexed and publicly accessible by the invention date of the '074 Patent (Ex. 1004, Appendix B, at 60).

Petitioner asserts that "*Acharya* was made publicly accessible and disseminated at least as of July 9, 1999, based upon its cataloging record and availability in the Cornell University Library" and particularly, the MARC record indicating its creation in 1999 (Pet. 3). Both these Exhibits indicate the creation of an index in the database in 1999.

Patent Owner further argues "[e]ven to the extent Acharya could be searched for through WorldCat, it was ***at best*** only by 'the author' and 'the words of the title'" (PO Resp. 55 (citing Ex. 2012, 52:5–55:21)). Although "Dr. Hsieh-Yee asserts Acharya could also have been searched by visiting Cornell library and browsing" the relevant call number category, according to Patent Owner, the subject category of the call number, is "a very broad subject category" (*id.* at 55 n.6 (quoting Ex. 2012, 50:41–53:1, 53:16–57:14)).

In *Activision Blizzard*, the Court stated "[a] reference is considered publicly accessible if it was 'disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it'" (*Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d 765, 772 (Fed. Circ. 2018)). In that case, the determination regarding public accessibility turned on (a) a lack of indexing by a commercial internet search engine, and (b) whether an interested person of ordinary skill would have been able to find the reference

on the website (*id.* at 773 (citing *Voter Verified, Inc. v. Premier Election Solutions, Inc.*, 698 F.3d 1374, 1380–81 (Fed. Cir. 2012))). The Court distinguished *In re Lister* in which, "[a] reasonably diligent researcher with access to a database that permits the searching of titles by keyword would be able to attempt several searches using a variety of keyword combinations" (*id.* at 774 (quoting *In re Lister* 583 F.3d 1307, 1315–16 (Fed. Cir. 2009))). The Court stated that "the ultimate question is whether the reference was available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it" (*id.* (internal quotations and citations omitted)).

Unlike the library indexing at issue in *Activision Blizzard*, there is evidence in the record that shows Acharya was indexed by a search engine – – the Cornell University Library Catalog (*see* Ex. 1013). As noted *supra*, the MARC record provided by Petitioner, specifically field 008, shows Acharya was indexed in the Cornell University Library online search databases in 1999 (Ex. 1013, *see also* Ex. 1004, 60 (Appendix B)).

Furthermore, based on the trial record, we find that a reasonably diligent researcher would have had access to a database (as evidenced by both the MARC record and the Cornell University Library's online catalog) and, exercising reasonable diligence, could have located the thesis. Specifically, Dr. Hsieh-Yee testifies the MARC (Machine-Readable Cataloging) record of the Cornell University Library's online catalog shows the Acharya thesis was searchable by author and title (Ex. 1004 ¶ 20 (citing Ex. 1013)). The MARC record, in Field 245, identifies the title of the publication as "*Techniques for improving multimedia communication over wide area networks*" (Ex. 1013; Ex. 1004 ¶ 20). The '074 Patent is titled

"Method and System for Caching Streaming Multimedia on the Internet" (Ex. 1001, [54]). Petitioner asserts Patent Owner's expert, Dr. Jones, "acknowledges that 'steaming multimedia' includes 'communicating multimedia' and that the Internet is a 'wide area network'" (Pet. Reply 23 (citing Ex. 1031, 34:6–35:13)). We determine an ordinarily skilled artisan skilled in the subject matter of art, exercising reasonable diligence, could have located the thesis based on a search of multimedia communications and/or wide area networks—keywords directly describing the subject matter of the '074 Patent.

Patent Owner further argues that "Dr. Hsieh-Yee admitted that dissertations . . . can be embargoed or otherwise restricted from dissemination for years after they are submitted" and that "Cornell University . . . will sometimes permit embargo without placing 'a note' on the MARC record and even at times withholding the MARC record altogether" (PO Resp. 56 (citing Ex. 2012, 41:4–42:10, 83:19–86:2, 92:21–93:5, 97:1–100:3, 102:11–21; Ex. 2010, 3–4; Ex. 2011, 2)). Patent Owner asserts "Dr. Hsieh-Yee argued that she doubted Acharya was ever embargoed or restricted because she saw no note to that effect in its current MARC record," but "she admitted the record had been amended" and "admitted that although currently, notes indicating embargo often remain on MARC records after the embargo ends, before digital versions of dissertations became common the practice was less clear" (*id.* at 56–57 (citing Ex. 2012, 20:4–22:18, 28:19–29:7, 34:1–13, 35:19–38:20, 43:4–45:21)). Patent Owner, however, proffers no evidence Acharya was embargoed. As such, this is speculation.

We additionally find that Exhibit 1021 ("Hofmann article") introduced by Petitioner[4] provides support of public availability of the Acharya reference. Specifically, the Hofmann article, which was written by the inventors of the '074 Patent (Markus Hofmann, T.S. Eugene Ng, Katherine Guo, Sanjoy Paul, and Hui Zhang), references Acharya (Ex. 1021, 11 n.20).[5] Petitioner also provides evidence from websites of two of the '074 Patent's inventors (Tze Sing Eugene Ng and Markus A. Hofmann) listing the Hofmann article under their publications (Exs. 1026, 1033). Both websites show a 1999 date for the Hofmann article and each inventor lists it was as one of his authored articles (Exs. 1026, 1033). Patent Owner takes no position about creation date of the Hofmann article (PO Sur-Reply 14 n.3). This evidence tends to show that Acharya was cited in an article authored by the inventors in 1999. As such, the inventors' citation of Acharya in a paper authored around the time of the patent is further evidence of Acharya's public accessibility. We further credit Dr. Jones testimony that Acharya was "prior art" (Ex. 2002 ¶ 63).[6]

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[4] Patent Owner initially introduced the Hofmann article as Exhibit 2003, but this exhibit was expunged at Petitioner's request in response to Patent Owner's opposition to additional discovery on the Hofmann article (*see* Paper 27; Ex. 1018). Petitioner subsequently reintroduced the Hofmann article with its Reply as Exhibit 1021.

[5] Patent Owner argues that the Hofmann article is "inadmissible on the basis of lack of authentication and hearsay" (PO Sur-Reply 23 n.4), but Patent Owner did not move to exclude the Hofmann article. The Hofmann article is not being offered for the truth of the matter therein, but only to show reference to Acharya by inventors of the '074 Patent.

[6] Patent Owner objected (Tr. 124) to Petitioner's "raising at the last minute" during the Oral Hearing, that a transcript from one of the inventors of the '074 Patent testifying to creation of the Hofmann article in 1999 (Tr. 119). Because we do not rely on this testimony, we dismiss the objection as *moot*.

Based on the trial record, we determine Acharya qualifies as prior art under 35 U.S.C. § 102(a) because Petitioner has satisfied its burden of demonstrating that Acharya was accessible, catalogued, indexed and searchable prior to March 29, 2000, the earliest possible priority date for the '074 patent.

2. Overview of Rejaie

Rejaie is a paper titled "Proxy Caching Mechanism for Multimedia Playback Streams in the Internet" (Ex. 1007, 2). Rejaie discloses a technique of streaming multimedia in the Internet that employs Internet proxy servers and a pre-fetching scheme to avoid congestion caused by limited bandwidth when retrieving popular streaming content (*id.* at Abstract).

Figure 2 of Rejaie, reproduced below, illustrates the end-to-end network architecture contemplated by the paper:

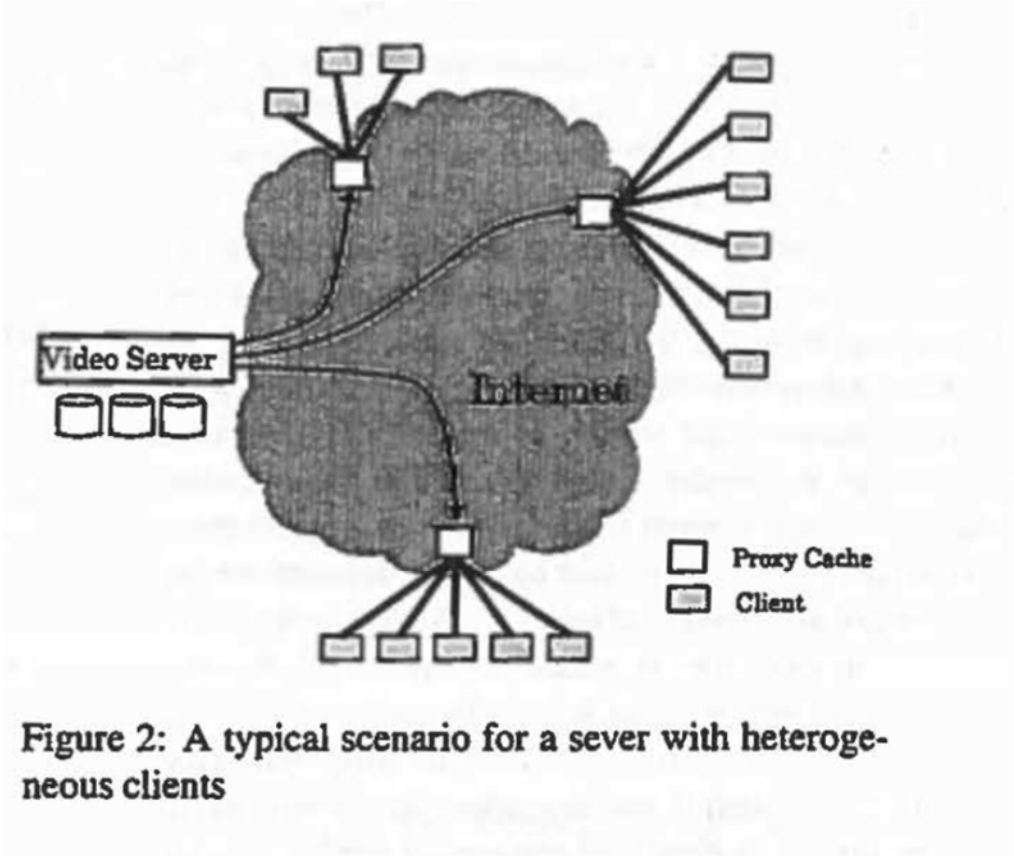

Figure 2: A typical scenario for a sever with heterogeneous clients

(*id.* at 4). As shown in Figure 2 of Rejaie, a video server provides continuous streaming media to a large number of clients (*id.* at 4–5). The video server routes streaming traffic through corresponding proxy servers before delivery to a group of associated clients (*id.* at 5). Proxy servers have available storage space proportional to the number of clients served, and each proxy server caches segments of on demand streams (*id.*). Additionally, the video server and each proxy server support congestion control and quality adaptation (*id.*). According to Rejaie, this network architecture allows for the maximization of quality when streaming, while minimizing server load, startup latency, and latency for VCR-functionality (*id.*).

3. Overview of Brubeck

Brubeck is an article titled "Hierarchical Storage Management in a Distributed VOD System" (Ex. 1008, 5). Brubeck discloses a technique of Video-On-Demand ("VOD") storage management that employs an algorithm to manipulate the cache storage and retrieval of continuous media objects ("CMOs") stored on video file servers ("VFS") (*id.* at 5–6).

Figure 1 of Brubeck, reproduced below, illustrates the distributed VOD system contemplated by the article:

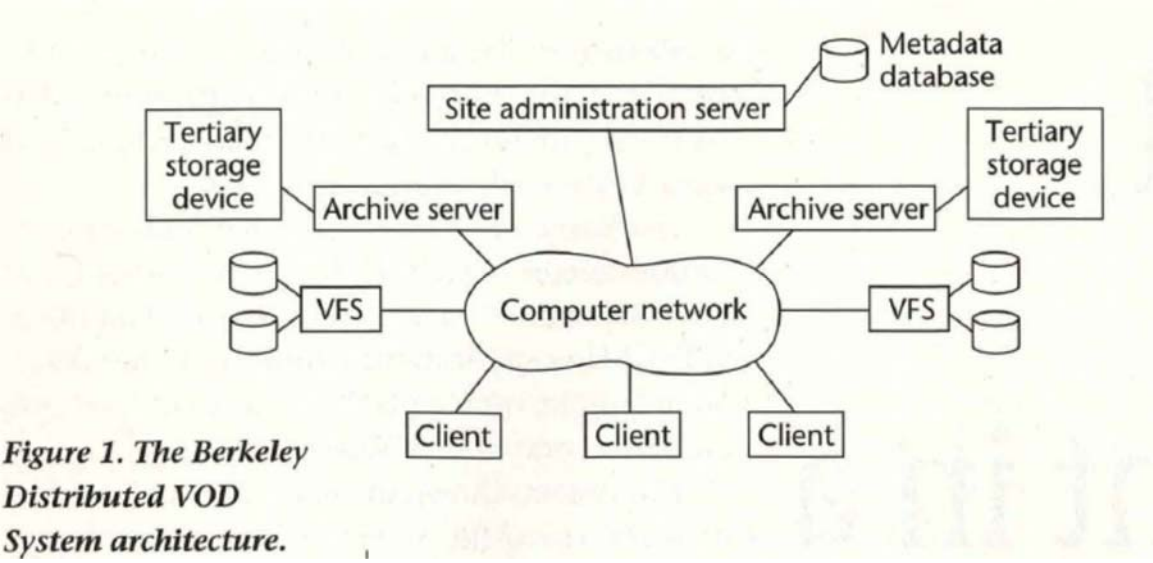

Figure 1. The Berkeley Distributed VOD System architecture.

(*id.* at 6). As shown in Figure 1 of Brubeck, one or more VFSs provide CMOs to a plurality of clients (*id.* at 5). An algorithm allocates cache storage of VFSs according to popularity, requests CMOs according to VFS or archive server ("AS") loads, and manages tertiary storage device queues according to scarcity of resources, while employing a plethora of data protection services (*id.* at 5–6). According to Brubeck, this network architecture allows for improved cache management when the aggregate size or bandwidth requirements for all available content exceeds network capacity (*id.* at 6).

4. Overview of Wolf

Wolf, a U.S. Patent titled "Method and Apparatus for Caching a Media Stream," discloses a system for caching at proxy servers, where cache admission and replacement policies give preferential treatment for certain segments, and prefetching certain segments (Ex. 1009, [54], [57]).

Figure 1 of Wolf, reproduced below, illustrates an Internet environment for implementing the invention:

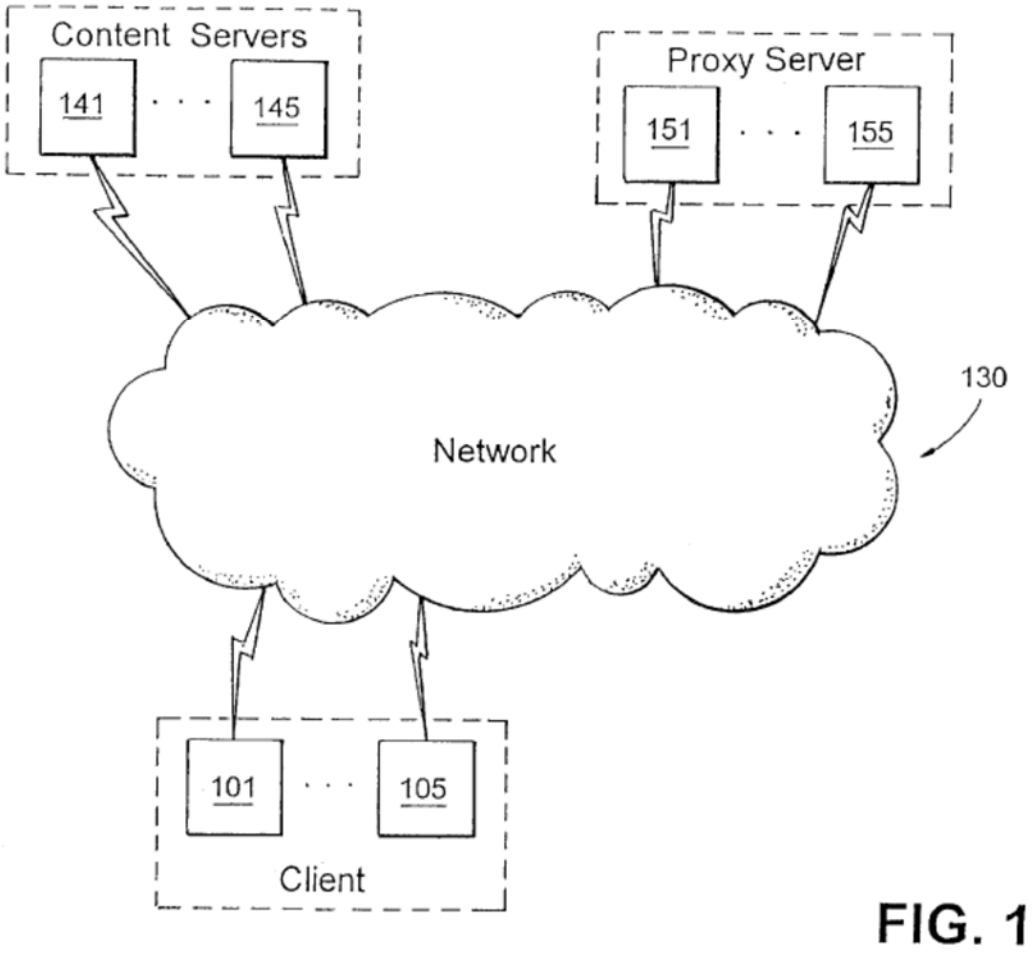

FIG. 1

(*id.* at 2:63–64). As shown in Figure 1, Internet content servers 141 . . . 145 provide requested media objects or files to clients 101, . . . , 105 through network 130 (*id.* at 3:18–25). Proxy servers 151. . . 155 facilitate delivery of requested content through caching (*id.*). According to Wolf, the caching

policies employed by the proxy servers improve the caching efficiency of the segmented media through admission and replacement policies (*id.* at 2:25–56).

E. Alleged Obviousness over Acharya and Rejaie (Claim 9); Acharya and Brubeck (claim 9); Acharya and Wolf (claim 9); and Acharya, Rejaie, and Wolf (claim 3)

Petitioner contends the subject matter of claim 9 would have been obvious over Acharya in view of Rejaie (Pet. 14–31); the subject matter of claim 9 would have been obvious over Acharya in view of Brubeck (Pet. 31–38); the subject matter of claim 9 would have been obvious over Acharya in view of Wolf (Pet. 39–50); and the subject matter of claim 3 would have been obvious over Acharya in view of Rejaie and Wolf (Pet. 50–59). Patent Owner asserts Petitioner has failed to show the prior art discloses all of the features of the claimed invention (PO Resp. 16–49).

As discussed above, we need not determine whether the combination of Acharya and Rejaie teaches both conditional limitations, step (*iii*) and step (*iv*), of independent claims 3 and 9. Of the mutually-exclusive conditional limitations, Petitioner only needs to show sufficiently that the combination teaches either step (*iii*) *or* that step (*iv*) (*see supra* §§ III B).

1. Preambles

The preamble of claim 3 recites, in part, "[a] method for storing a streaming media (SM) object in a network having a content server which hosts SM objects for distribution over said network through a plurality of helper servers (HSs) to a plurality of clients," and the preamble of claim 9 recites "[a] method for managing storage of a streaming media (SM) object

in a network having a content server which hosts SM objects for distribution over said network through a plurality of servers to a plurality of clients" (Ex. 1001, claims 3, 9). To the extent the preambles of claims 3 and 9 are limiting, Petitioner contends Acharya's collection of proxy servers called MiddleMan performs the storage management functions described in claim 9 and claim 3 (Pet. 15–22, 51). To the extent the preamble of claim 9 or claim 3 is limiting, Petitioner asserts "[t]he videos in *Acharya* are *streaming media (SM) object[s]*" and "*Acharya* describes a proxy server downloading a movie 'which it streams' to a requesting browser client" (Pet. 15 (citing Ex. 1006, 86; Ex. 1005 ¶ 73[7])). Petitioner contends the plurality of servers distributing SM objects to a plurality of clients is disclosed by the plurality of proxy servers P_1, P_2, and P_3 providing movie M downloads to client browsers B_1, B_2, and B_3 (Pet. 15–17 (citing Ex. 1006, 3, 70, 74, 79, 84, 86; Ex. 1005 ¶¶ 73–81)).

Petitioner asserts Acharya's proxy servers teach the recited "servers" or "helper servers" (Pet. 16). Acharya uses proxy servers as part of its structure (Ex. 1006, 76). Acharya describes proxy servers (or proxies) as follows:

> Proxies can run on LAN servers or user machines. Each proxy is responsible for a) responding to client browser requests for video and b) managing a certain amount of local disk space where the video data is cached. Ideally, a proxy would run on every user machine in a domain, but this might be hard to deploy. Hence, . . . proxies run on selected machines in the network. Each proxy services a small collection of browser clients that have been configured to forward their requests for video data to that particular proxy.

[7] Petitioner cites "¶ X" (Pet. 15); however, the attributed quote corresponds to paragraph 73 of the declaration by Dr. Reddy (Ex. 1005 ¶ 73).

(Ex. 1006, 77). Acharya's proxy server is thus one of a plurality of servers in the network that provide certain value-added services, e.g., "a) responding to client browser requests for video and b) managing a certain amount of local disk space where the video data is cached" (*id.*). Accordingly, we are persuaded by Petitioner, that Acharya teaches this subject matter.

Further, with respect to the preamble of claim 3, Petitioner asserts Wolf teaches "said SM object being comprised of a plurality of successive time-ordered chunks, wherein a chunk is further comprised of a discrete number of segments, each segment allocated to a respective disk block of said plurality of HSs" (Pet. 52). In particular, Petitioner contends "the concepts and divisions are referred to as '074-chunks (1st level of division), '074-segments (2nd level of division), *Wolf*-segments (1st level of division), and *Wolf*-blocks (2nd level of division)" (*id.* (citing Ex. 1005 ¶¶ 183–184)). Petitioner asserts Wolf teaches "media objects are comprised of multiple *Wolf*-segments in order, from the beginning of a media object to the end of a media object" and thus, teaches "a chunk is comprised of a discrete number of segments," as recited (*id.* at 52–53 (citing Ex. 1009, Fig. 3)). Petitioner then asserts an ordinarily skilled artisan "would have understood *Wolf*-segments are 'time-ordered'" (*id.* at 52 (citing Ex. 1009, 4:20–22)).

We agree Wolf's segments teach the recited chunks and Wolf's blocks teach the recited segments (Ex. 1009, 4:20–22, Fig. 3), and, thus, the combination of Wolf and Acharya teaches "said SM object being comprised of a plurality of successive time-ordered chunks, wherein a chunk is further comprised of a discrete number of segments, each segment allocated to a respective disk block of said plurality of HSs" (Pet. 52 (citing Ex. 1009, 4:12–14, Fig. 3)).

Accordingly, based on the trial record, Petitioner has established Acharya teaches the preamble of claim 9 and the combination of Acharya and Wolf teaches the preamble of claim 3.

2. "receiving said SM object"

Next, Petitioner contends Acharya discloses "receiving said SM object" when either (a) the "client browser . . . . 'starts receiving the video'" (Pet. 17–18 (citing Ex. 1006, 19–20)) or (b) "P_1 begins downloading M from W . . . and passes it on [to] B_1" (Pet. 18 (quoting Ex. 1006, 86–87; citing Ex. 1005 ¶¶ 83–84[8])). Thus, Petitioner contends, the proxy server starting to receive a video in Acharya "teaches *receiving said SM object* as recited" in claim 9 (*id.* at 19 (citing Ex. 1005 ¶¶ 83–84)).

In light of our interpretation discussed above in Section II.B.1.b., we find Acharya teaches "receiving said SM objects." Specifically, Petitioner asserts Acharya teaches "[w]hen a client browser 'contacts a proxy server . . . [t]he proxy server P_1 checks to see if has stored this title locally. If it does not, it contacts the server directly (step 2) and ***starts receiving the video***" (Pet. 17–18 (citing Ex. 1006, 19–20, 86–87)). Thus, Petitioner asserts Acharya's proxy server discloses a helper server (*id.* at 17–18). Acharya further describes that if a user on machine 2 requests a video, proxy server P_2 can check to see if a copy of the video is available locally (step 4) and because proxy server P_1 has a copy, proxy server P_2 contacts proxy server P_1 (step 5) which accesses and forwards it to the browser allowing a user on machine 2 to access the video (Ex. 1006, 20).

[8] Petitioner cites "Reddy, ¶¶ 83-84 (EX1006)" (Pet. 18); however, the Reddy declaration corresponds to Ex. 1005.

Patent Owner argues Acharya's proxy server is at the client and thus, does not teach "receiving said SM object" because the '074 Patent "describes the helper servers, not clients, as receiving and storing the SM object in accordance with the claimed method" (PO Resp. 18). As noted above, neither claim 3 nor claim 9 requires the "receiving" step to be performed at the helper server. Moreover, in looking at the structure of MiddleMan, and specifically, to the description of "proxy" in Acharya, we find Acharya discloses "[p]roxies can run on LAN servers *or* user machines" (Ex. 1006, 77 (emphasis added)). Thus, we are not persuaded Acharya teaches a proxy server *must* be at a client.

In light of the definition of "helper server," we find Acharya's proxy server teaches the recited "server" or "helper server"; therefore, regardless of whether the claims require the server or helper server to perform the "receiving" step, Acharya discloses the recited limitation. Accordingly, based on the entire trial record, Petitioner has established Acharya teaches the proxy server "receiving said SM object," as recited in claims 3 and 9.

3. "determining whether there is a disk space available on one of said plurality of servers"

Petitioner contends Acharya teaches the step reciting "determining whether there is a disk space available on one of said plurality of servers," as recited in claim 9 and "determining whether there is a disk space available on one of said HSs," as recited in claim 3 (Pet. 19–20, 55–56).

In light of our determination discussed above in Section II.B.1.c., we agree with Petitioner that Acharya teaches "determining whether there is a disk space available on one of said plurality of servers," as recited in claim 9 and "determining whether there is a disk space available on one of said

HSs," as recited in claim 3. Petitioner notes that Acharya discloses "P_1 determines the size of M" and argues that, "[b]ased on the determined size, . . . 'P_1 [the proxy] sends a reqSpace message to C_1 [the coordinator] to request space where it can cache M'" (Pet. 19 (quoting Ex. 1006, 86)). Petitioner asserts the coordinator disclosed in Acharya "determines whether there is sufficient space within the caching system to store the requested movie" (*id.* at 19–20 (citing Ex. 1006, 86; Ex. 1005 ¶¶ 88–89)). Specifically, Petitioner relies on Acharya's description of the reply to a reqSpace message: "***If sufficient free space is available*** C replies with a list of blocks (s_2, s_3)" (*id.* at 19–20 (quoting Ex. 1006, 86–87[9])). Petitioner also notes the proxy servers disclosed in Acharya employ "cheap disks" to provide the cache storage (*id.* at 20 (citing Ex. 1006, 21)). Thus, Petitioner contends, the determination by the coordinator in Acharya whether free cache space is available "teaches *determining whether there is a disk space available on one of said plurality of servers* as recited" in claim 9 (*id.* (citing Ex. 1005 ¶¶ 88–91)).

Petitioner additionally argues Patent Owner "acknowledges *Acharya* describes *determining whether there is a disk space available*, as its coordinator determines whether there is sufficient space within the caching system to store the requested movie" (Pet. Reply 18 (citing PO Resp. 31–32)). Patent Owner admits "'determining' in Acharya is performed by a central coordinator" and further argues "Acharya's central decision-making system is fundamentally different from the '074 Patent's localized, distributed approach" (PO Resp. 31–32). According to Patent Owner,

[9] Petitioner attributes the quotation to Ex. 1006, 86 (Pet. 20 ("*Id.*")); however, the quotation corresponds to Ex. 1006, 86–87.

Acharya describes a central coordinator that keeps track of storage on numerous local servers, performing the "determining" step on behalf of the local servers whereas "the '074 Patent relies on localized decision making and performs the 'determining' step within the helper server" (PO Resp. 32).

We disagree with Patent Owner's arguments that Acharya's disclosure of determining is not within the claimed "determining" step because, as discussed above, neither claim 3 nor claim 9 recites the "determining" step must be performed by a helper server. Moreover, in claim 9, no helper servers are recited. The '074 Patent does not limit where the "determining" step occurs. As discussed *supra*, the Specification of the '074 Patent does not support Patent Owner's interpretation. Accordingly, based on the trial record, Petitioner has established Acharya teaches "determining whether there is a disk space available on one of said plurality of servers," as recited in claim 9 and "determining whether there is a disk space available on one of said HSs," as recited in claim 3.

4. "storing said SM object at said one of said plurality of servers if it is determined that there is sufficient disk space available"

Petitioner contends Acharya discloses "storing said SM object at said one of said plurality of servers if it is determined that there is sufficient disk space available," as recited in claim 9 and "storing said SM object at said at least one HS if it is determine that there is sufficient disk space available," as recited in claim 3 (Pet. 21, 56). Specifically, Petitioner contends Acharya discloses storing a requested movie (SM object) on one or more proxy servers when the coordinator replies that disk space is available (*id.* at 21–22). Thus, Petitioner contends, the proxy server's storage of the movie in Acharya "teaches this limitation as recited" in claim 9 (*id.* at 22 (citing

Ex. 1005 ¶¶ 93–95)). We agree because Acharya discloses a proxy requesting space to store a movie M and, if space is available, downloading the movie to the designated storage blocks and "notif[ying] [coordinator] C that M has been stored" (Ex. 1006, 86).

Based on the trial record, Petitioner has established Acharya teaches the "storing" limitation.

5. Additional Arguments

Patent Owner's additional arguments are directed to the limitations of step (*iv*) (PO. Resp. 33–36, 38–46). In light of the claim construction adopted *supra* and Petitioner's establishing Acharya teaches step (*iii*) as discussed above, we need not determine whether the asserted prior art teaches the subject matter recited in step (*iv*) of claims 3 and 9.

6. Combination of Teachings:

a. Acharya and Rejaie: Claim 9

Petitioner contends an ordinarily artisan would have found it obvious to combine Acharya and Rejaie to teach claim 9 (Pet. 28–31). Specifically, Petitioner asserts "[an ordinarily skilled artisan] would have found it obvious to combine *Acharya* with the teachings of *Rejaie*" because the references "are analogous art and in the same field of endeavor"—"delivering multimedia content over wide-area networks, such as the Internet" (*id.* at 28 (citing Ex. 1006, 3; Ex. 1007, 2)). Petitioner further asserts "a [person of ordinary skill in the art] reading *Acharya* would have been motivated to consider the advantages of the teachings of the cache replacement algorithm of *Rejaie*, a both references share the same goals of reducing startup delays and server load" (Pet. 29).

Petitioner relies on Acharya to teach the preamble and steps (*i*)–(*iii*) (Pet. 15–21). For the reasons discussed above, we are persuaded Acharya alone teaches these limitations. As a matter of claim construction (and as a matter of law), step (*iv*) is non-limiting. Accordingly, we need not make any finding regarding a motivation to combine given the reliance on Acharya alone (*cf. Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1373 (Fed. Cir. 2019) ("[T]he Board [is] not required to make any finding regarding a motivation to combine" references when a challenge does not rely on one of the references "for the disclosure of a particular element or teaching")). . Nevertheless, based on the entire trial record, we are persuaded by the rationale set forth by Petitioner to the extent the rationale would have been necessary to reach step (*iv*). Therefore, Petitioner has established that the combination of Acharya and Rejaie teaches or suggests claim 9.

b. Acharya and Brubeck: Claim 9

Petitioner contends an ordinarily skilled artisan would have found it obvious to combine Acharya and Brubeck to teach claim 9 (Pet. 33–38). Specifically, Petitioner asserts an ordinarily skilled artisan would have found it obvious to combine Acharya with Brubeck because "*Acharya* and *Brubeck* are analogous art and in the same field of endeavor. Both *Acharya* and *Brubeck* are directed to delivering multimedia content over wide area computer networks" (*id.* at 37 (citing Ex. 1006, 3; Ex. 1007, 5)). Petitioner further asserts an ordinarily skilled artisan "would have been motivated to consider the teachings of *Brubeck*, as *Acharya* specifically mentions *Brubeck* in its description of 'Related Work'" and "would have been motivated to incorporate the teachings of *Brubeck*, as *Brubeck* describes how to make cache replacement decisions based on an object's priority" (Pet. 37).

Petitioner relies on its analysis in the Acharya–Rejaie ground, to teach the preamble and steps (*i*)–(*iii*) (Pet. 32). For the reasons discussed above, we are persuaded Acharya teaches these limitations. As a matter of claim construction (and as a matter of law), step (*iv*) is non-limiting. Accordingly, we need not make any finding regarding a motivation to combine given the reliance on Acharya alone (*cf. Realtime Data*, 912 F.3d at 1373). Nevertheless, based on the entire trial record, we are persuaded by the rationale set forth by Petitioner to the extent the rationale would have been necessary to reach step (*iv*). Therefore, Petitioner has established that the combination of Acharya and Brubeck teaches or suggests the preamble and steps (*i*)–(*iii*) of claim 9.

c. Acharya and Wolf: Claim 9

Petitioner contends an ordinarily skilled artisan would have found it obvious to combine Acharya and Wolf to teach claim 9 (Pet. 48–51). Specifically, Petitioner asserts an ordinarily skilled artisan would have found it obvious to combine Acharya with Wolf because "*Acharya* and *Wolf* are analogous art and in the same field of endeavor. Both *Acharya* and *Wolf* are directed to delivering multimedia content over wide area computer networks" (*id.* at 37 (citing Ex. 1006, 3; Ex. 1008, 1:7–11)). Petitioner further asserts an ordinarily skilled artisan "would have been motivated to consider the advantages of the teachings of the cache replacement algorithm of *Wolf*, as both references share the same goals of reducing startup delays"(*id.* at 48).

Petitioner relies on its analysis in the Acharya–Rejaie ground, to teach the preamble and steps (*i*)–(*iii*) (*id.* at 40). For the reasons discussed above, we are persuaded Acharya teaches these limitations. As a matter of claim

construction (and as a matter of law), step (*iv*) is non-limiting. Accordingly, we need not make any finding regarding a motivation to combine given the reliance on Acharya alone (*cf. Realtime Data*, 912 F.3d at 1373). Nevertheless, based on the entire trial record, we are persuaded by the rationale set forth by Petitioner to the extent the rationale would have been necessary to reach step (*iv*). Therefore, Petitioner has established that the combination of Acharya and Wolf teaches or suggests claim 9.

d. Acharya, Rejaie, and Wolf: Claim 3

Petitioner contends an ordinarily skilled artisan would have found it obvious to combine Acharya, Rejaie, and Wolf to teach claim 9 (Pet. 54–55, 59). Specifically, Petitioner contends an ordinarily skilled artisan

> would have found it obvious to incorporate *Wolf's* division of streaming media objects into *Wolf*-segments and *Wolf*-blocks into the system of *Acharya*, as *Wolf* describes that the segmentation process is "introduced by the proxy server to make cache management more effective." (*Wolf* at 4:15-18 (EX1009)). Thus, a POSITA would have been motivated to incorporate the teachings of *Wolf* into *Acharya* to make cache management more effective, and to achieve the goals described in *Wolf* of reducing latency to users. (Reddy, ¶ 187 (EX1005))

(*id.* at 54). Petitioner further contends an ordinarily skilled artisan would have found it obvious to combine Acharya, Rejaie, and Wolf as set forth in its grounds for claim 9 (*id.* at 56, 59).

Petitioner argues the features of the preamble are taught by a combination of Acharya and Wolf (Pet. 51–55) and steps (*i*)–(*iii*) are taught by Acharya for at least the same reasons set forth with respect to independent claim 9 (*id.* at 55–56). As discussed above, Petitioner has established the combination of Acharya and Wolf teaches the preamble and

steps (*i*)–(*iii*). Based on the entire trial record, we are persuaded by Petitioner's articulation as to why an ordinarily skilled artisan would have been motivated to combine the teachings of Acharya and Wolf to teach the preamble and steps (*i*)–(*iii*).

As a matter of claim construction (and as a matter of law), step (*iv*) is non-limiting. Accordingly, we need not make any finding regarding a motivation to combine the teachings of Acharya, Rejaie, and Wolf given the reliance on the combination of Acharya and Wolf ((*cf. Realtime Data*, 912 F.3d at 1373). Nevertheless, based on the entire trial record, we are persuaded by the rationale set forth by Petitioner to the extent the rationale would have been necessary to reach step (*iv*). Therefore, Petitioner has established that the combination of Acharya, Rejaie and Wolf teaches or suggests claim 3.

7. Conclusion

For the reasons set forth above, Petitioner has established that the combinations of Acharya and Rejaie; Acharya and Brubeck; and Acharya and Wolf teach or suggest the preamble and steps (*i*)–(*iii*) of claim 9; and the combination of Acharya, Rejaie, and Wolf teaches or suggests the preamble and steps (*i*)–(*iii*) of claim 3. Based on the entire trial record, we determine Petitioner has established by a preponderance of the evidence that the subject matter of claim 9 would have been obvious under 35 U.S.C. § 103 over Acharya and Rejaie, Acharya and Brubeck, and Acharya and Wolf and that the subject matter of claim 3 would have been obvious under 35 U.S.C. § 103 over Acharya, Rejaie, and Wolf.

IV. MOTION TO EXCLUDE

A. Patent Owner's Motion to Exclude Exhibit 1030

Patent Owner filed a Motion to Exclude Petitioner's Exhibit 1030 as hearsay (Paper 40). Petitioner filed an Opposition to Patent Owner's Motion to Exclude (Paper 44).

Federal Rule of Evidence 801(c) provides the following: "'Hearsay' means a statement that: (1) the declarant does not make while testifying at the current trial or hearing; and (2) a party offers in evidence to prove the truth of the matter asserted in the statement." Federal Rule of Evidence 802 states that "[h]earsay is not admissible unless" allowed by "a federal statute," the Federal Rules of Evidence, or "other rules prescribed by the Supreme Court." The Federal Rules of Evidence apply to this proceeding (*see* 37 C.F.R. § 42.62).

Exhibit 1030, a declaration by Dr. Gretchen Hoffman from a different IPR proceeding (IPR2015-00971), is introduced by Petitioner to support its assertion that Acharya was publicly accessible at the time of the invention (Pet. Reply 22). The testimony of Dr. Gretchen Hoffman in Exhibit 1030 was not made for this trial, and Petitioner is offering that testimony to prove the truth of the matter asserted in certain statements in Dr. Gretchen's testimony (*see* Pet. Reply 22 ("Additionally, another librarian in a separate IPR analyzed *Acharya*, and just like Dr. Hsieh-Yee, provided an opinion that *Acharya* was publicly accessible in July 1999. *See* EX1030, ¶19-20.")). Dr. Hoffman's testimony at paragraph 19 of her declaration states, in part, "it is my opinion that the Acharya Dissertation was accessible to the public no later than July 2, 1999" (Ex. 1030 ¶ 19). At oral argument, Petitioner acknowledged that the testimony in Exhibit 1030 was not made for this trial

but argued that the testimony was not being used to prove the truth of the matter asserted—the date of Acharya's public accessibility—but rather "to corroborate it" (Tr. 16:6–16).

We disagree with Petitioner's attempted semantic distinction. Petitioner's reliance on Dr. Hoffman's testimony in its Reply is to prove the date of public accessibility (*see* Pet. Reply 22). Thus, we are persuaded by Patent Owner's arguments, and specifically, we determine the testimony of Dr. Hoffman in Exhibit 1030 is hearsay. Petitioner does not direct us to any hearsay exception. Patent Owner filed a Motion to Exclude this Exhibit, which is an appropriate manner in which to address such evidence.

> [I]f the petitioner submits a new expert declaration with its Reply, the patent owner can respond in multiple ways. It can cross-examine the expert and move to file observations on the cross-examination. It can move to exclude the declaration. It can dispute the substance of the declaration at oral hearing before the Board. It can move for permission to submit a surreply responding to the declaration's contents. And it can request that the Board waive or suspend a regulation that the patent owner believes impairs its opportunity to respond to the declaration. The options are not mutually exclusive.

(*Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1081 (Fed. Cir. 2015). We determine that, as set forth by Patent Owner (Paper 40, 1–2), this Exhibit is hearsay under the Federal Rule of Evidence 801. Indeed, the Exhibit is a declaration containing testimony from a different IPR, offered to prove the truth of the matter, i.e., Acharya was publicly accessible in July 1999 (Ex. 1030). Accordingly, we *grant* the Motion to Exclude.

B. Petitioner's Motion to Exclude Certain Lines of Exhibit 2018

Petitioner filed a Motion to Exclude Evidence, and specifically, to exclude specific lines of Exhibit 2018, a deposition, as "beyond the scope of

permissible cross-examination under" Federal Rule of Evidence 611 and 37 C.F.R. § 42.53(d)(5)(ii) (Paper 39). Patent Owner opposes that Motion (Paper 44).

Because we do not rely on these specific sections of Exhibit 2018 in a manner adverse to Petitioner, we dismiss as *moot* the Motion to Exclude page 19, lines 4 through 15; page 27, lines 6 through 12; and page 38, line 17 through page 39, line 2, of Exhibit 2018.

V. CONCLUSION

For the foregoing reasons, we determine that the trial record establishes by a preponderance of the evidence that claims 3 and 9 are unpatentable.

VI. ORDER

Based on the foregoing, it is hereby:

ORDERED that Petitioner has shown by a preponderance of the evidence that claims 3 and 9 of the '074 Patent are unpatentable under 35 U.S.C. § 103;

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2;

FURTHER ORDERED that Patent Owner's Motion to Exclude is *granted* for Exhibit 1030; and

FURTHER ORDERED that Petitioner's Motion to Exclude page 19, lines 4 through 15; page 27, lines 6 through 12; and page 38, line 17 through page 39, line 2 of Exhibit 2018, is dismissed as *moot*.

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