

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VIANT TECHNOLOGY LLC,
Petitioner,

v.

INTENT IQ, LLC,
Patent Owner.

IPR2024-00421¹
IPR2024-00422²
Patent 7,861,260 B2³

Before NABEEL U. KHAN, SCOTT B. HOWARD, and DAVID COTTA,
Administrative Patent Judges.

HOWARD, *Administrative Patent Judge.*

JUDGEMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
Sua Sponte Striking Section II of Petitioner's
Reply Claim Construction Brief
35 U.S.C. § 318(a); 37 C.F.R. § 42.12

¹ Viant Technology LLC was joined as a party to this proceeding via a Motion for Joinder in IPR2025-00128.

² Viant Technology LLC was joined as a party to this proceeding via a Motion for Joinder in IPR2025-00129.

³ The parties are not authorized to use this style caption.

I. INTRODUCTION

A. *Background and Summary*

In these *inter partes* reviews, instituted pursuant to 35 U.S.C. § 314, Viant Technology, Inc. (“Petitioner”)⁴ challenges claims 1–152 (“the challenged claims”) of U.S. Patent No 7,861,260 B2 (Ex. 1001,⁵ “the ’260 patent”), owned by Intent IQ, LLC (“Patent Owner”).

There is considerable overlap between the prior art applied against the challenged claims in each of the cases. A joint hearing was held for these cases. The parties rely on the same declarants submitting identical declarations in each proceeding for testimonial evidence. Under these circumstances, we determine that a combined Final Written Decision will promote a just, speedy, and inexpensive resolution of these proceedings.

The Board has jurisdiction under 35 U.S.C. § 6(b). This Final Written Decision issues pursuant to 35 U.S.C. § 318(a). For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that the challenged claims are unpatentable.

⁴ The Petitions were originally filed by FreeWheel Media, Inc. IPR2024-00421, Paper 2; IPR2024-00422, Paper 2. Petitioner was added to the proceedings via joinder (IPR2024-00421 Paper 19; IPR2024-00422, Paper 20) and, thereafter, the proceedings were terminated with respect to FreeWheel Media, Inc. due to settlement (IPR2024-00421, Paper 31; IPR2024-00422, Paper 32).

⁵ As a general matter, all citations to papers are to IPR2024-00421 unless indicated otherwise. The exhibits submitted in each proceeding are identical. Where the same arguments are made in both proceedings, we cite to papers in IPR2024-00421. However, our findings of fact and conclusions of law are applicable to both proceedings.

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

1. *IPR2024-00421 Procedural History*

Petitioner filed a Petition requesting *inter partes* review of claims 1–5, 7, 11–20, 22, 26–28, 35–38, 41, 44, 54, 56–58, 61, 62, 71–75, 77–80, 83, 84, 86, 90–99, 101, 105, 106, 116, 118, 119, 125, 127, 128, 137–141, 143, 144, 148, 151, and 152 of the '260 patent. Paper 2 (“Petition” or “Pet.”); Paper 19. Patent Owner filed a Preliminary Response. Paper 8. We instituted an *inter partes* review of claims 1–5, 7, 11–20, 22, 26–28, 35–38, 41, 44, 54, 56–58, 61, 62, 71–75, 77–80, 83, 84, 86, 90–99, 101, 105, 106, 116, 118, 119, 125, 127, 128, 137–141, 143, 144, 148, 151, and 152 on all grounds of unpatentability alleged in the Petition. Paper 9; Paper 19.

After institution of trial, Patent Owner filed a Response (Paper 13, “PO Resp.”), Petitioner filed a Reply (Paper 22, “Pet. Reply”), and Patent Owner filed a Corrected Sur-reply (Paper 35, “PO Sur-reply”).

A joint hearing for IPR2024-00241 and IPR2024-00422 was held on August 28, 2025. Paper 39 (“Tr.”).

2. *IPR2024-00422 Procedural History*

Petitioner filed a Petition requesting *inter partes* review of claims 1, 6, 8–10, 21, 23–26, 29–34, 38–40, 42, 43, 45–53, 55, 59–61, 63–70, 76, 81, 82, 85, 87–89, 100, 102–104, 107–115, 117, 120–124, 126, 129–136, 142, 145–147, and 149–150 of the '260 patent. IPR2024-00422, Paper 2 (“422Pet.”); IPR2024-00422, Paper 20. Patent Owner filed a Preliminary Response. Paper 8. We instituted an *inter partes* review of claims 1, 6, 8–10, 21, 23–26, 29–34, 38–40, 42, 43, 45–53, 55, 59–61, 63–70, 76, 81, 82, 85, 87–89, 100, 102–104, 107–115, 117, 120–124, 126, 129–136, 142, 145–147, and 149–150 on all grounds of unpatentability alleged in the

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

Petition. IPR2024-00422, Paper 9 (“422Inst. Dec.”); IPR2024-00422, Paper 20.

After institution of trial, Patent Owner filed a Response (IPR2024-0422, Paper 14, “422PO Resp.”), Petitioner filed a Reply (IPR2024-00422Paper 24, “422Pet. Reply”), and Patent Owner filed a Corrected Sur-reply (IPR2024-00422, Paper 36, “422PO Sur-reply”).

A joint hearing for IPR2024-00241 and IPR2024-00422 was held on August 28, 2025. Tr. 1.

During the joint hearing, it became apparent that there was a dispute as to the meaning of “contracted to display a TV ad” as recited in dependent claims 121 and 146, which neither party expressly construed. *See* Tr. 51:20–25. Accordingly, we authorized (*id.*; IPR2024-00422, Paper 38) the parties to submit simultaneous claim construction briefs (IPR2024-00422, Paper 39 (Petitioner’s Claim Construction Brief) (“Pet. Post-hearing Br.”); IPR2024-00422, Paper 40 (Patent Owner’s Claim Construction Brief) (“PO Post-hearing Br.) and simultaneous reply briefs (IPR2024-00422, Paper 43 (Petitioner’s Reply Claim Construction Brief) (“Pet. Reply Post-hearing Br.”); IPR2024-00422, Paper 44 (Patent Owner’s Reply Claim Construction Brief) (PO Reply Post-hearing Br.”)).

B. Real Parties in Interest

Petitioner identifies Viant Technology LLC, Adelphic LLC, and Viant US LLC as real parties in interest. IPR2025-00128, Paper 4, 74 (“Petition”).

Patent Owner identifies Intent IQ, LLC as the real party in interest. Paper 5, 1 (Patent Owner’s Mandatory Notices).

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

C. Related Matters

The parties indicate the '260 patent or its related patents are or were the subject of the following proceedings:

- *AlmondNet, Inc v. Freewheel Media, Inc.*, No. 1:23-cv-00220-MN (D. Del.);
- *AlmondNet, Inc. v. Viant Technology Inc.*, 1-23-cv-00174 (D. Del.);
- *AlmondNet, Inc. v. Samsung Electronics Co.*, 4-22-cv-07515 (N.D. Cal.);
- *AlmondNet, Inc. v. Samsung Electronics Co.*, 6-21-cv-00891 (W.D. Tex.);
- *AlmondNet, Inc. v. Meta Platforms, Inc.*, 4-22-cv-08911 (N.D. Cal.);
- *AlmondNet, Inc. v. Meta Platforms, Inc.*, 6-22-cv-01205 (W.D. Tex.);
- *AlmondNet, Inc. v. Amazon.com, Inc.*, 6-22-cv-01204 (W.D. Tex.);
- *AlmondNet, Inc. v. Microsoft Corp.*, 6-22-cv-01206 (W.D. Tex.);
- *AlmondNet, Inc. v. Oath Holdings Inc.*, 1-19-cv-00247 (D. Del.);
- *AlmondNet, Inc. v. Yahoo! Inc.*, 1-16-cv-01557 (E.D. N.Y.);
- *Roku, Inc. v. AlmondNet, Inc.*, 1-21-cv-01035 (D. Del.);
- *Meta Platforms, Inc. v. Intent IQ, LLC*, IPR2022-00773;
- *Amazon.com, Inc. v. Intent IQ, LLC*, IPR2023-00227;
- *Microsoft Corporation v. Intent IQ, LLC*, IPR2022-01420;
- *Roku, Inc. v. Intent IQ, LLC*, IPR2022-01236;
- *Yahoo! Inc. v. Intent IQ, LLC*, IPR2017-01299;
- *Roku, Inc. v. Intent IQ, LLC*, IPR2022-01315;
- *Meta Platforms, Inc. v. Intent IQ, LLC*, IPR2023-01281;
- *Samsung Electronics Co. v. AlmondNet, Inc.*, IPR2022-01505;
- *Samsung Electronics Co., v. Intent IQ, LLC*, IPR2022-01506;
- *Roku, Inc. v. Intent IQ, LLC*, IPR2022-00953;
- *Roku, Inc. v. Intent IQ, LLC*, IPR2022-00959;
- *Roku, Inc. v. Intent IQ, LLC*, IPR2022-00960; and
- *Samsung Electronics Co. v. Intent IQ, LLC*, IPR2022-01507.

Pet. viii, x–xiii; Paper 5, 1–2. Petitioner also identify additional *inter partes* review proceedings involving the '260 patent and a related patent. Pet. ix.

D. The '260 Patent

The '260 patent is titled “Targeted Television Advertisements Based on Online Behavior,” and “relates to online access and targeted delivery of advertisements.” Ex. 1001, code (54), 1:7–8. The '260 patent describes delivering targeted television advertisements “based on observed online (i.e., Internet) behavior of a television viewer without employing personally identifiable information.” *Id.* at 1:8–11.

Figure 7 is reproduced below.

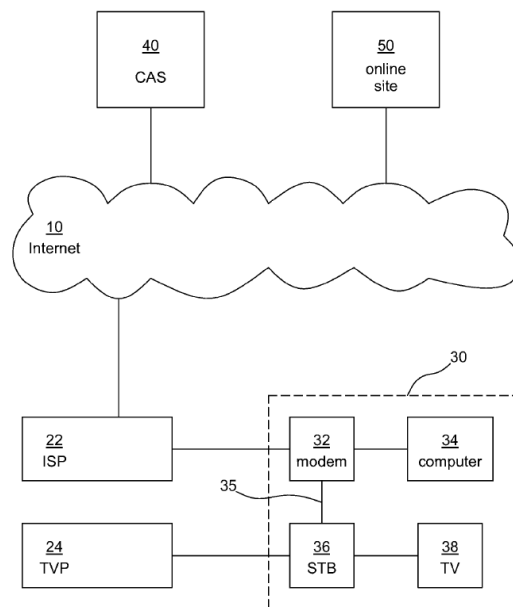


FIG. 7

Figure 7 “illustrates schematically a system for targeting television advertisements based on online behavior in which online access and television service are provided by different providers.” Ex. 1001, 8:17–20. Specifically, Figure 7 illustrates modem 32, computer 34, set-top box (STB) 36, and television 38 associated with user 30. *Id.* at 9:16–17,

9:28–32. Internet service provider (ISP) 22 assigns a dynamic IP address to modem 32. *Id.* at 9:35–39, 13:19–21. In Figure 7, STB 36 is connected to modem 32 via connection 35 to obtain online access via the same IP address as modem 32. *Id.* at 12:54–61. “STB 36 can be connected to a local area network (LAN) that shares [modem] 32 for online access. In such an arrangement, network traffic is routed to a common IP address (i.e., the IP address of modem 32) for STB 36 and other devices connected to the LAN.” *Id.* at 12:61–65. “The term ‘common IP address’ denotes the IP address of a modem or other online access device to which remote network traffic is routed for each of multiple devices sharing a common connection.” *Id.* at 13:3–6. “The common IP address is dynamically assigned by ISP 22 to the user’s modem 32 or other online access equipment.” *Id.* at 13:19–21. That common IP address comprises an electronic association between online access and STB IP addresses, which enables delivery of targeted television advertising to STB 36 based on online activity observed as originating from the common IP address of modem 32. *Id.* at 12:8–40, 12:54–58, 13:36–43.

E. Illustrative Claim

Claims 1, 26, 38, and 61 are independent claims and claim 1, reproduced below, is illustrative of the subject matter of the challenged claims.

1. [1pre] A method implemented using a programmed hardware computer system, the method comprising:

[1A] (a) for each of a multitude of users, with the computer system, electronically associating an online access IP address of the user and a set-top box IP address of that user based on a common IP address, wherein network traffic is routed via the

common IP address to both an online user interface device and a set-top box of that user; and

[1B] (b) using user profile information derived from online activity from a first online user interface device via a first one of the online access IP addresses of the multitude of users, with the computer system automatically causing a first television advertisement to be directed to a set-top box for presentation via that set-top box, selectively, wherein the set-top box is indicated by the set-top box IP address associated with the first online access IP address.

Ex. 1001, 23:43–60 (bracketed material reflects limitations as argued by Petitioner).

F. Prior Art and Asserted Grounds

Petitioner asserts that the challenged claims are unpatentable on the following grounds:⁶

Claim(s) Challenged	35 U.S.C. §⁷	Reference(s)/Basis
1–5, 7–9, 12, 15, 17, 21, 22, 24, 26–28, 31, 32, 34, 37–39, 42, 44,	103(a)	Baig, ⁸ Costa, ⁹ Zwicky ¹⁰

⁶ Where appropriate, we have combined grounds from the two proceedings.

⁷ The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. §§ 102 and 103 that became effective on March 16, 2013. Because the ’260 patent has an application filing date of April 17, 2007 (Ex. 1001, code (22)), we apply the pre-AIA version of the statutory basis for unpatentability.

⁸ US 2008/0113674 A1, published May 15, 2008, claiming priority to a provisional application filed Nov. 10, 2006 (Ex. 1007).

⁹ US 2006/0128364 A1, published June 15, 2006 (Ex. 1011).

¹⁰ Zwicky, E. D., Cooper, S., & Chapman, D. B. (2000). *Building Internet Firewalls, 2nd edition*. O’Reilly & Associates (Ex. 1012). All citations use the native pagination.

Claim(s) Challenged	35 U.S.C. §⁷	Reference(s)/Basis
53, 54, 56–58, 61, 62, 69, 71–80, 83, 84, 86–88, 91, 94, 96, 100, 101, 103, 106, 116–119, 121, 122, 125, 128, 135, 137–148, 151, 152		
1–5, 7–9, 12, 15, 17, 18, 21, 22, 24, 26–28, 31, 32, 34–40, 42, 44–48, 52–58, 61–65, 68, 69, 71–80, 83, 84, 86–88, 91, 94, 96, 97, 100, 101, 103, 106–110, 114–119, 121, 122, 125, 128–131, 134, 135, 137–148, 151, 152	103(a)	Baig, Costa, Banga '690 ¹¹
11, 90	103(a)	Baig, Costa, Zwicky, Cox ¹²
11, 90	103(a)	Baig, Costa, Banga '690, Cox
13, 14, 16, 92, 93, 95	103(a)	Baig, Costa, Zwicky, Cox, Han ¹³
13, 14, 16, 92, 93, 95	103(a)	Baig, Costa, Cox, Han, Banga '690
17, 19, 20, 96, 98, 99	103(a)	Baig, Costa, Zwicky, Leigh ¹⁴
17, 19, 20, 96, 98, 99	103(a)	Baig, Costa, Banga '690, Leigh

¹¹ US 2006/0271690 A1, published Nov. 30, 2006 (Ex. 1014).

¹² US 2007/0025306 A1, published Feb. 1, 2007 (Ex. 1017).

¹³ KR 2006-0065969, published June 15, 2006 (Ex. 1018). Petitioner states that Exhibit 1019 is a certified translation of Han.

¹⁴ US 2007/0180147 A1, published Aug. 2, 2007, filed Feb. 1, 2006 (Ex. 1020).

Claim(s) Challenged	35 U.S.C. §⁷	Reference(s)/Basis
54, 75, 116, 141	103(a)	Baig, Costa, Zwicky, Wing ¹⁵
54, 75, 116, 141	103(a)	Baig, Costa, Banga '690, Wing
41, 105, 127	103(a)	Baig, Costa, Banga '690, Jaye ¹⁶
6, 8-10, 21, 23, 32, 51, 55, 59, 60, 67, 76, 81, 82, 85, 87-89, 100, 102, 113, 117, 120, 123, 124, 126, 133, 142, 145, 149, 150	103(a)	Baig, Costa, Zwicky, Howcroft ¹⁷
6, 8-10, 21, 23, 32, 51, 55, 59, 60, 67, 76, 81, 82, 85, 87-89, 100, 102, 113, 117, 120, 123, 124, 126, 133, 142, 145, 149, 150	103(a)	Baig, Costa, Banga '690, Howcroft
49, 50, 66, 70, 111, 112, 132, 136	103(a)	Baig, Costa, Banga '690, Smith ¹⁸
33	103(a)	Baig, Costa, Zwicky, Middeljans ¹⁹
25, 29, 33, 104	103(a)	Baig, Costa, Banga '690, Middeljans
30, 43	103(a)	Baig, Costa, Banga '690, Middeljans, Koningstein ²⁰
50, 70, 112, 136	103(a)	Baig, Costa, Banga '690,

¹⁵ US 2006/0274741 A1, published Dec. 7, 2006 (Ex. 1022).

¹⁶ US 6,415,322 B1, issued July 2, 2002 (Ex. 1026).

¹⁷ US 2008/0201731 A1, published Aug. 21, 2008, filed Feb. 15, 2007 (Ex. 1016).

¹⁸ US 2003/0083938 A1, published May 1, 2003 (Ex. 1021).

¹⁹ US 2002/0124050 A1, published Sept. 5, 2002 (Ex. 1023).

²⁰ US 2005/0096980 A1, published May 5, 2005 (Ex. 1024).

Claim(s) Challenged	35 U.S.C. § ⁷	Reference(s)/Basis
		Banga '633 ²¹

Petitioner relies on the testimony of David B. Lett (Ex. 1002, Ex. 1063) and Sylvia Hall-Ellis, Ph.D. (Ex. 1059).

Patent Owner relies on the testimony of Erik de la Iglesia (Ex. 2001).

Both Mr. Lett (Ex. 2003, Ex. 2005) and Mr. de la Iglesia (Ex. 1062) were cross-examined.

II. ANALYSIS

A. Legal Standards

In *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), the Supreme Court set out a framework for assessing obviousness under 35 U.S.C. § 103 that requires consideration of four factors: (1) the “level of ordinary skill in the pertinent art,” (2) the “scope and content of the prior art,” (3) the “differences between the prior art and the claims at issue,” and (4) if in evidence, “secondary considerations” of non-obviousness such as “commercial success, long-felt but unsolved needs, failure of others, etc.” *Id.* at 17–18. “While the sequence of these questions might be reordered in any particular case,” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007), the U.S. Court of Appeals for the Federal Circuit has repeatedly emphasized that “it is error to reach a conclusion of obviousness until all those factors are considered,” *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1328 (Fed. Cir. 2016). Because Patent Owner does not address objective

²¹ US 2008/0263633 A1, issued Oct. 23, 2008, PCT filed Sept. 28, 2006 (Ex. 1025).

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

evidence of non-obviousness, we focus solely on the first three *Graham* factors.

B. Level of Ordinary Skill in the Art

The level of ordinary skill in the pertinent art at the time of the invention is a factor in how we construe patent claims. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). It is also one of the factors we consider when determining whether a patent claim is obvious over the prior art. *See Graham*, 383 U.S. at 17–18.

Factors pertinent to a determination of the level of ordinary skill in the art include “(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.” *Envtl. Designs, Ltd. v. Union Oil Co. of Cal.*, 713 F.2d 693, 696–97 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1381–82 (Fed. Cir. 1983)). “Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case.” *Id.*

Petitioner argues that a person having ordinary skill in the art would have had “a degree in computer or electrical engineering, computer science, or a similar discipline, and two years of experience with the design and/or implementation of network-based content delivery systems and Internet advertising.” Pet. 6 (citing Ex. 1002 ¶¶ 144–49).

Patent Owner does not address the level of ordinary skill in the art. *See PO Resp.*

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

Because Petitioner’s proposed level of ordinary skill in the art is consistent with the field of the invention of the ’260 patent and not disputed by Patent Owner, we adopt Petitioner’s formulation of the person having ordinary skill in the art.

C. Claim Construction

We apply the same claim construction standard used in the federal courts, in other words, the claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b), which is articulated in *Phillips*, 415 F.3d 1303. *See* 37 C.F.R. § 42.100(b). Under the *Phillips* standard, the “words of a claim ‘are generally given their ordinary and customary meaning,’” which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1312–13.

Petitioner argues that it “applies the plain meaning for all claim terms” and that “[n]o express construction is necessary at this time.” Pet. 6 (citing Ex. 1002 ¶ 150).

Patent Owner agrees that no express construction of the claims is required. *See* PO Resp. 2.

After the oral hearing, with our authorization, the parties briefed the meaning of the term “contracted to display a TV ad.” Pet. Post-hearing Br.; PO Post-hearing Br.; Pet. Post-hearing Reply Br.; PO Post-hearing Reply Br.

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

1. “*Contracted to Display a TV Ad*”

Petitioner argues that the term means “contracted to display any form of advertisement suitable for delivery to and visual or audible presentation by a television set.” Pet. Post-hearing Br. 1.

Patent Owner argues that the term means “whatever revenue be received is received as a result of direction of a TV ad from an advertiser that specifically contracted to display a TV ad to a specific target audience.” PO Post-hearing Br. 1.

We begin by focusing on the “TV ad” portion of the limitation. For the reasons discussed below, the applicant acted as a lexicographer and provided an explicit definition of that term.

“While we read claims in view of the specification, of which they are a part, we do not read limitations from the embodiments in the specification into the claims.” *Hill-Rom Services, Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014). “We depart from the plain and ordinary meaning of claim terms based on the specification in only two instances: lexicography and disavowal.” *Id.*

The standards for finding lexicography and disavowal are exacting. “To act as its own lexicographer, a patentee must clearly set forth a definition of the disputed claim term other than its plain and ordinary meaning” and must “‘clearly express an intent’ to redefine the term.” *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (citing *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1381 (Fed. Cir. 2008)). If an inventor acts as his or her own lexicographer, the definition must be set forth in the specification with reasonable clarity,

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

deliberateness, and precision. *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998). Disavowal requires that “the specification makes clear that the invention does not include a particular feature,” *SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc.*, 242 F.3d 1337, 1341 (Fed. Cir. 2001), or is clearly limited to a particular form of the invention, *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1330 (Fed. Cir. 2009).

In this proceeding, the inventor clearly set forth a special definition of the term “TV ad” with a clear intent to define the term. Beginning with the second paragraph of the specification, the inventor sets out a series of terms that are defined: “Some of the terms used in the present disclosure or appended claims are defined as follows.” Ex. 2001, 1:12–13. One of those defined terms is “Television advertisement” or “TV ad”: “Television advertisement (TV ad)—a full screen video ad, a partial screen video ad, a banner ad, a text ad, an audio ad, or any other form of advertisement suitable for delivery to and visual or audible presentation by a television set.” *Id.* at 6:36–40. Petitioner agrees that this definition controls. Tr. 11:1–4 (Petitioner); Pet. Post-hearing Br. 1–3. And although Patent Owner challenges Petitioner’s understanding that the definition does not require a TV advertisement to be played on a television set and that Petitioner waived its arguments about the definition, Patent Owner does not dispute that this is an example of the applicant acting as a lexicographer. Tr. 23:1–24:5; PO Post-hearing Br. (not addressing definition in the specification); PO Post-hearing Reply Br. 3, n.2 (arguing that Petitioner never addressed that definition prior to the oral hearing). Because the applicant acted as a

lexicographer by supplying an explicit definition and Patent Owner has not presented sufficient reasoning as to why it should not apply, we adopt the applicant's definition as our construction of a "TV ad."

However, that does not resolve the dispute between the parties. Instead, the parties have two remaining disputes regarding the scope of the claims. First, the parties dispute whether the contract for a TV ad requires the parties to intentionally enter into a contract that requires a TV ad to be displayed (Patent Owner's position) or whether the term is broad enough to encompass an incidental display of a TV ad (Petitioner's position). Tr. 12:17–18:3, 25:12–25; PO Post-hearing Br. 1–5 (arguing the claims require intentionally causing ads to play on a TV).

Second, Petitioner argues that there is no need for the TV ads to be displayed. Pet. Post-hearing Br. 1–5. That is, Petitioner argues that all that is required is a contract, not the performance of the contract. *See id.* at 5. Patent Owner argues that Petitioner's construction is inconsistent with the arguments presented in the Petition. PO Reply Post-hearing Br. 1–2; Tr. 23:1–24:5.

Based on the claim language, we are persuaded by Patent Owner's arguments. In determining the scope of the limitation, we look at the totality of the claim, including the claims from which it depends. Claim 121 depends from claim 34, which in turn depends from claim 26. Claim 26 recites a method which requires that "a first television advertisement can be directed to a set-top box for presentation via the set top box." Ex. 1001, 25:59–63. Claim 26 further requires "receiving a revenue amount as a result of the direction of the first television advertisement" and that "the revenue

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

amount is received from an advertiser that has contracted to display a TV ad.” Ex. 1001, 26:42–44 (claim 34), 32:18–20 (claim 121). Based on its language, claim 26 requires the television advertisement to be directed to a set-top box, which is used to display images on a television set. *See* Ex. 1001, Figs. 3, 11A (showing a STB providing a signal to a TV), 1:29–30 (defining a STB as “device that connects a television and a signal source”).²² Stated differently, the claim requires that the TV ad must actually be delivered to the STB for presentation on a television.

We adopt Patent Owner’s claim construction as set forth in its opening post-hearing claim construction brief. PO Post-hearing Br. 1. We note that although Patent Owner argues in the Patent Owner’s Reply Post-hearing brief that the advertisement be shown on a TV, that is not part of its claim construction and we do not adopt this additional requirement in our construction. *Compare* PO Reply Post-hearing Br. 1–2; Tr. 23:1–24:5, *with* PO Post-hearing Br. Although the contract requires a meeting of the minds about displaying the TV ad, nothing in the construction requires the contract to be performed and the TV ad displayed on a television set. *See* PO Post-hearing Br. 1 (“As explained below, Petitioner’s interpretation is inconsistent with the plain claim language (further supported by the specification), which requires a meeting of the minds between the contracting parties that a TV ad would be displayed.”).

Additionally, the language of claims 121 and 146 refers to an “advertiser that has contracted to display a TV ad.” Ex. 1001, 32:18–20,

²² Claim 146, which depends from claim 42, which depends from claim 38, recites similar limitations. *See id.* at 27:10–15, 27:41–33, 33:37–39.

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

33:37–39. The use of the language “contracted to display a TV ad” implies that the contract must require the display of a TV advertisement. That is, that there was a meeting of the minds between the contracting parties that a TV ad would be displayed. This interpretation is consistent with the language of the independent claims from which they depend, which requires the TV advertisement to be directed to a STB for presentation. (But again, there is no requirement in the claim that the contract is actually performed and the advertisement is shown on a television.).

We are not persuaded by Petitioner’s contrary arguments. Specifically, Petitioner argues that the ’260 patent’s definition of “TV ad” controls. Pet. Post-hearing Br. at 1–3. As we stated above, we agree that the definition in the Specification of the ’260 patent controls what is a “TV ad” as recited in claims 121 and 146. But that definition says nothing about the contract or the requirements of the independent claims that the TV advertisement be directed to a STB for presentation, which are also required by the claims. Thus, we must look beyond that definition to interpret the entire limitation.

Petitioner also argues that the ’260 patent “does not provide any explanation of the scope of any contracts underpinning the collection of revenue from the display of advertisements.” Pet. Post-hearing Br. at 3; *see also id.* at 3–5. We agree with Petitioner that the Specification of the ’260 patent is silent on those details. But, the language in the claims is clear and Petitioner does not address it.

Petitioner also argues that it did not forfeit this argument in the Petition or the Reply. Pet. Reply Post-hearing Br. 1–2. We agree. Due to a

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

clear dispute between the parties that remained unbriefed despite an order that the parties must brief disputed claim terms (422Inst. Dec. 12 n. 13), we provided the parties an opportunity to expressly construe the term, limited to a manner consistent with the arguments in their papers before the hearing. *See* IPR2024-00422, Paper 38. Because the claim construction presented in the post-hearing briefs were explicitly authorized, they were not forfeited. *See* 37 C.F.R. § 42.5(a), (b), (c)(3) (providing the Board broad discretion in managing proceedings). However, as discussed above, we do not find Petitioner’s claim construction arguments persuasive.

Accordingly, as argued by Patent Owner, the disputed limitation of claims 121 and 146 means “whatever revenue be received is received as a result of direction of a TV ad from an advertiser that specifically contracted to display a TV ad to a specific target audience” where “TV ad” is defined as it is in the ’260 patent at 6:36–40.

2. *Remaining Claim Terms*

Having considered the evidence presented, we conclude that no express claim construction of any other claim limitation is necessary. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we 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))).

D. *Obviousness over Baig, Costa, and Zwicky*

Petitioner argues that claims 1–5, 7–9, 12, 15, 17, 21, 22, 24, 26–28, 31, 32, 34, 37, 38, 39, 42, 44, 53, 54–58, 61, 62, 69, 71–80, 83, 84, 86–88,

91, 94, 96, 100, 101, 103, 106, 116–119, 121, 122, 125, 128, 135, 137–148, 151, and 152 are unpatentable as obvious in light of the combination of Baig, Costa, and Zwicky. Pet. 7–20, 22–46, 48–60; 422Pet. 7–20, 22–41, 48–51.

1. Overview of Baig

Baig is directed “to an apparatus and method for providing various services for mobile devices which are in communication with local area network wireless access points.” See Ex. 1040 ¶ 2.

Figure 1 of Baig is reproduced below.

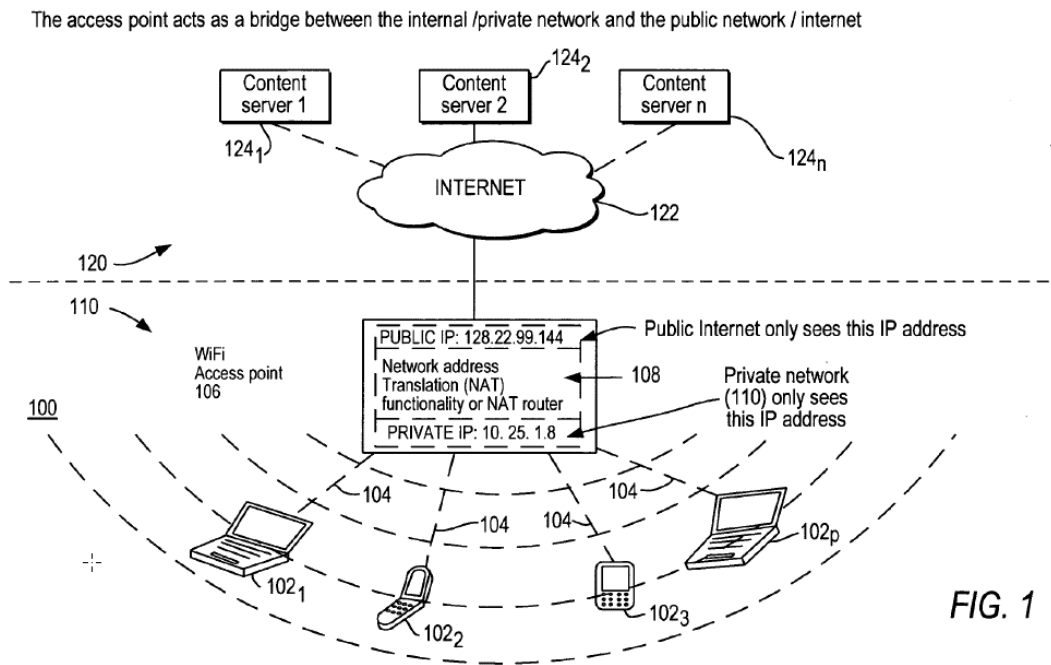


Figure 1 depicts a block diagram of communications network 100 including public wireless hotspot 110 communicatively coupled to public network 120 via access point (“AP”) 106. Ex. 1040 ¶¶ 13, 42. Public network 120 includes content servers 124₁, 124₂, 124_n that store and host information from websites. *Id.* ¶ 42. WiFi hotspot 110 enables at least one mobile device 102₁ through 102_p to communicate over local private network 104

and communicate with content servers 124₁, 124₂, 124_n over Internet 122.

Id. ¶ 43.

Access point 106 includes a network address translation (NAT) router 108 that provides network address translation. *See* Ex. 1040 ¶ 43. Access point 106 utilizes a unique public IP address which relays data between public network 120 and wireless mobile devices 102 connected to local private wireless network 104. *Id.* ¶¶ 44–45. When mobile device 102 requests information from public network 120, it sends data packets containing a local IP address to access point 106. *Id.* ¶ 45. All devices on local private network 104 use local IP addresses that are not visible to public networks. *Id.* Access point 106 interacts with public network 120 with a public IP address, which is visible to all devices on public internet 122. *Id.* Access point 106, which includes NAT router 108, replaces the local IP address with its own public IP address and forwards the packets to content server 124 on public network 120. *Id.* ¶¶ 46, 51. When public network 120 sends packetized information back to requesting mobile device 102, NAT router 108 replaces the public IP address with the local IP address for mobile device 102 and routes the packetized information to the requesting mobile device 102. *Id.* ¶ 51.

Baig also discloses a vicinity-based community service provider (VCSP) having at least one content server that discovers wireless users within the physical vicinity of each other at a WiFi hotspot. Ex. 1040 ¶¶ 38, 52. The VCSP content server includes programs and data for hosting a VCSP website. *Id.* ¶ 53. The VCSP server receives a login request from a user that is connected to a particular WiFi access point (hotspot), identifies

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

the unique IP address of each WiFi access point, and identifies all users who have logged in from a common hotspot as having the same access point IP address, and forms a vicinity-based user group at each hotspot. *Id.* ¶¶ 38, 52, 55–59, Fig. 3. When a user at a hotspot logs onto the VCSP website, the user automatically becomes part of the vicinity-based user group, and then can access VCSP webpages to participate in or receive an offered service and communicate with other VCSP users via a chat room. *Id.* ¶ 59. Once the user logs into the VCSP website, the server presents a webpage to the user on his or her mobile device. *Id.* ¶ 74.

2. *Overview of Costa*

Costa is titled “Providing Mobile-specific Services for Mobile Devices via Ad-hoc Networks,” and discloses “a system, apparatus and method for exchanging data between a local network and a wireless device.” Ex. 1011, code (54), ¶ 10.

Figure 1 of Costa is reproduced below.

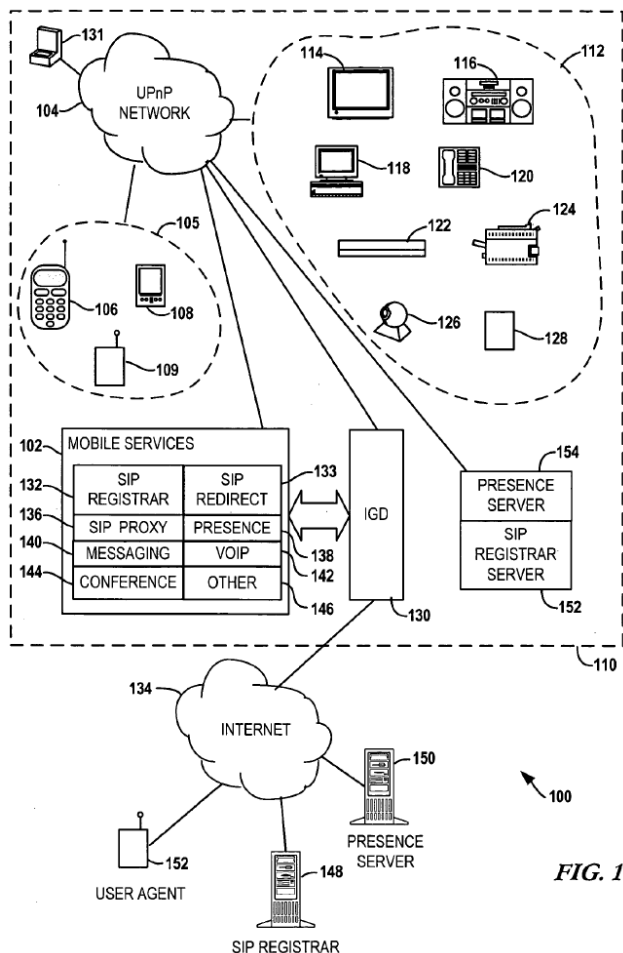


FIG. 1

Figure 1 depicts a block diagram of an environment for providing mobile-specific services over a home network. Ex. 1011 ¶ 35. The environment 100 includes a mobile services provider arrangement 102 that provides access to mobile-specific services for devices that are capable of being coupled to a Universal Plug and Play™ (“UPnP”) network 104, such as mobile devices 105 (e.g., cellular phones 106; Personal Digital Assistants (“PDA”) 108; and any other mobile devices 109). *Id.* UPnP network 104 allows devices to exchange data in a local environment 110, such as a home, office, automobile, airplane, boat, or public wireless hotspot. *Id.* ¶ 36. UPnP network 104 may couple consumer electronics devices 112 (e.g.,

televisions 114; audio systems 116; computers 118; telephones 120; digital media centers 122 such as set-top boxes (“STB”); printers 124; cameras 126; and other devices 128) using any manner known in the art and “any media or format known in the art or later developed.” *Id.* ¶¶ 36–37.

3. *Overview of Zwicky*

Zwicky is a textbook titled “Building Internet Firewalls,” which includes a section disclosing an NAT. Ex. 1012, 114. Zwicky discloses that the NAT allows a network to use one set of network addresses internally and a different set of addresses for dealing with external networks. *Id.* When an internal machine sends a packet to the outside, an NAT system modifies the internal source address of the packet to make the packet look like it is coming from a valid address. *Id.* at 115. When an external machine sends a packet to the inside, the NAT system modifies the destination address to turn the externally visible address into the correct internal address. *Id.* The NAT system also can modify the source and destination port numbers, known as Port and Address Translation. *Id.* at 115–16, Figs. 5-3, 5-4. The use of port mapping enables multiple internal machines to use the same external address. *Id.* at 116. The main purpose of NAT is to economize on address space. *Id.* NAT also has security advantages, such as helping to enforce the firewall’s control over outbound connections, restricting incoming traffic, and concealing the internal network’s configuration. *Id.* at 116–17.

4. *Analysis of Claim 1*

a) *The Preamble*

The preamble of claim 1 recites “[a] method implemented using a programmed hardware computer system.” Ex. 1001, 23:43–44. Petitioner

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

argues that Baig teaches the preamble. *See* Pet. 7–8. Patent Owner does not separately address the preamble. *See* PO Resp.

We agree with Petitioner.²³ Specifically, Baig Figure 1 illustrates a system with computing devices 102p that connect to content servers 124n over the Internet 122 via a shared AP (access point) 106. *See* Ex. 1007 ¶¶ 42–43, Fig. 1. WiFi hotspot 110 enables devices 102 to communicate with each other and content servers 124 over Internet 122 via AP 106. *Id.* ¶ 43. Each content server “includes at least one processor, memory and support circuitry for running programs.” *Id.* ¶ 52; *see also* Ex. 1002 ¶¶ 153–155, 188–190.

b) Limitation 1A: The Associating Step

Claim 1 further recites

(a) for each of a multitude of users, with the computer system, electronically associating an online access IP address of the user and a set-top box IP address of that user based on a common IP address, wherein network traffic is routed via the common IP address to both an online user interface device and a set-top box of that user.

Ex. 1001, 23:45–51. Petitioner argues that the combination of Baig, Costa, and Zwicky teaches limitation 1A. *See* Pet. 8–20, 22–23.

We agree with Petitioner. Specifically, Baig teaches “a vicinity-based community for wireless users at a hotspot.” Ex. 1007 ¶ 6. This is shown in Baig Figure 2, reproduced below.

²³ Because Petitioner has sufficiently shown that the prior art teaches the preamble, we need not determine whether the preamble is limiting. *See Nidec*, 868 F.3d at 1017.

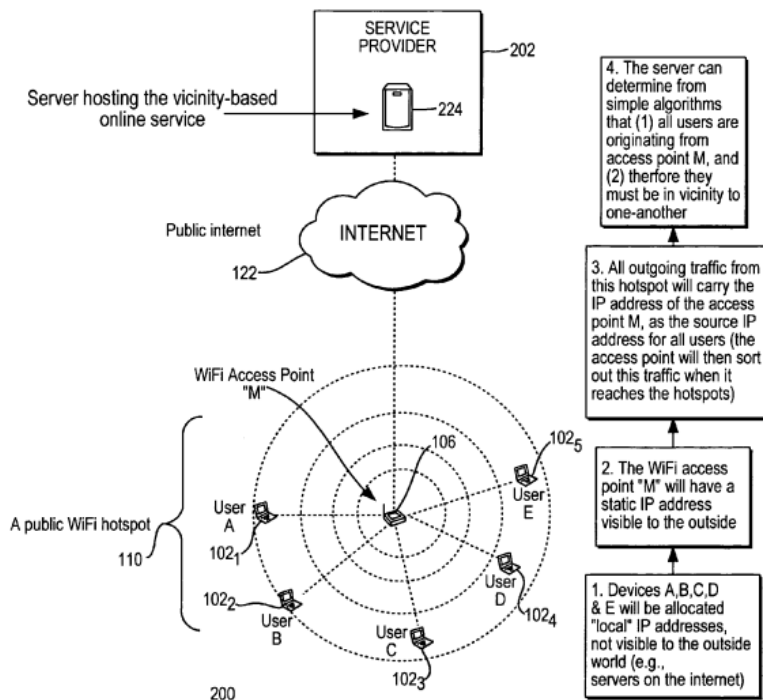


FIG. 2

Baig Figure 2 “is block diagram of a network including a wireless hotspot for enabling a plurality of mobile devices to access a public network via an access point.” Ex. 1007 ¶ 14. It illustrates “a communications network 200 [which] includes a public WiFi hotspot 110 coupled to the public Internet 122 in a conventional manner. . . . [M]obile devices 102₁ through 102₅ are connected via wireless communications to [the] Internet via the access point 106,” which is also referred to as “access point ‘M.’” *Id.* ¶ 49 (first quotation), Fig. 2 (second quotation). A person having ordinary skill in the art would have understood that each of Baig’s devices 102 is an “online user interface device” and that the content server is a “computer system.” Ex. 1002 ¶ 193.

Additionally, a person having ordinary skill in the art would have understood “that packets sent over the Internet (e.g., between mobile devices

102 and various destinations on the public Internet 122) include[] an IP address of the source devices as well as an IP address of the destination devices.” Ex. 1002 ¶ 194; *see also* Ex. 1007 ¶ 44 (“An IP address is necessary because all data communications take[] place in form of data packets. Each packet must contain the IP address of the source device and the IP address of the destination device.”). Baig teaches that “[t]he access point 106 utilizes a unique ‘public’ IP address (e.g., 126.22.99.144 illustratively shown in FIG. 1) which relays data between the wireless mobile devices 102 connected to the wireless network 104 and the external or public network, such as the Internet 122.” Ex. 1007 ¶ 44. As step 3 of Figure 2 explains, “[a]ll outgoing traffic from this hotspot will carry the IP address of the access point M, as the source IP address.” *Id.* at Fig. 2; *see also id.* ¶ 50 (“[A]ll outgoing traffic from the hotspot 110 carry the IP address of the access point 106 as the source IP address for all users.”).

Baig further describes how mobile devices 102 can be devices “such as a laptop computer, PDA, and the like, to communicate (e.g., exchange information) with each other over a local private network 104, as well as to communicate with the content servers 124 over the Internet 122 via the access point 106.” Ex. 1007 ¶ 54. Although an STB is not listed in Baig, for the reasons discussed below, it would have been obvious to a person having ordinary skill in the art to use an STB as one of Baig’s mobile devices. *See* Ex. 1002 ¶¶ 156, 157, 195–197.

Costa teaches various devices that can be connected to a public wireless hotspot, including laptop computers, PDAs and STBs. Ex. 1011, Fig. 1, ¶¶ 35–36. Applying Costa’s STB to Baig’s system results in a

common hotspot that is connected to an STB and at least another device via the common IP address of AP 106. Ex. 1002 ¶¶ 158, 198, 199.

A person having ordinary skill in the art would have incorporated Costa's STB into Baig's system. See Ex. 1002 ¶¶ 159–165, 198. “[T]he combination of Baig and Costa would have been obvious because the combination merely combines known prior art elements according to known methods to yield predictable results.” Ex. 1002 ¶ 162; see also *KSR*, 550 U.S. at 417 (“[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.”). That is, “both Baig’s computer system and Costa’s description of a system where its set-top box might be used are wireless hotspot systems that provide Internet access to a number of computing devices.” Ex. 1002 ¶ 162. It would have been obvious to a person having ordinary skill in the art to have combined the two references according to known method and to have expected the combination to yield predictable results. *Id.* This would have been done with a reasonable expectation of success. *Id.* ¶¶ 164–165.

Additionally, a person having ordinary skill in the art would have understood that Baig teaches “electronically associating” IP addresses as recited in claim 1. See Ex. 1002 ¶¶ 200–208. Specifically, Baig teaches that “the server 224 identifies all the users who have logged in from a common hot spot as having the same access point IP address.” Ex. 1007 ¶ 56; see also *id.* at Fig. 3; Ex. 1002 ¶ 200. In the combination of Baig and Costa, this would include Costa’s STB. See Ex. 1002 ¶ 201; Ex. 1007 at Fig. 2 (“All

outgoing traffic [will] carry the IP address of the access point,” and showing outgoing traffic routed to server 224 over Internet 122.).

As further support, Baig maintains a list of devices connected to the hotspot that share a common IP address. Specifically, Baig explains that “server 224 includes at least one processor, memory and support circuitry for running programs that, for example, identify users that are originating from a particular access point 106 and then groups those users having a common IP address to the same hotspot 110.” Ex. 1007 ¶ 52. Baig further teaches that content servers 124/224 generate and transmit a webpage to mobile devices 102 accessing the webpage 600. *Id.* ¶ 74; Ex. 1002 ¶ 203. A person having ordinary skill in the art would have understood that this means that devices are connected to the servers 124/224 using the common IP address of the same access point. Ex. 1002 ¶ 203. A person having ordinary skill in the art would have further understood that Baig’s content servers generate and store a list that indicates which devices, including Costa’s STB, are connected using the common IP address. *Id.* ¶ 204. Because Baig’s list associates (in a vicinity-based group) devices connected using the same IP address, a person having ordinary skill in the art would have understood that Baig’s list shows the claimed “electronically associating an online access IP address of the user and a set-top box IP address of that user based on a common IP address.” *Id.*

Limitation 1A further recites that the associated IP addresses and corresponding devices be “of [the same] user” and that the electronic association is performed “for each of a multitude of users.” Ex. 1001, 23:45–51. Because Baig teaches a user as an individual operating a mobile

device at a hotspot (*see* Ex. 1007 ¶¶ 3–6, 38, 39), a person having ordinary skill in the art would have understood that the multiple devices of various individuals teach the recited “user.” Ex. 1002 ¶ 205; *see also* Ex. 1001, 8:31–53 (describing a user as one or more persons). Moreover, because Baig teaches multiple vicinity-based communities corresponding to different hotspots (*see* Ex. 1007 ¶¶ 54, 59, 61, 121, 122, Fig. 3 (steps 314, 316)), a person having ordinary skill in the art would have understood that Baig teaches the same process of associating IP addresses described above being performed “for each of a multitude of users.” Ex. 1002 ¶ 205.

Baig further teaches that “access point 106 includes a network address translation device 108, and provides network address translations (NAT)” to individually identify and communicate with the devices connected through the access point 106. Ex. 1007 ¶ 43; *see also id.* ¶¶ 49–51; Ex. 1002 ¶¶ 207–208. A person having ordinary skill in the art would have understood that the NAT would allow the hotspot’s AP to identify individual devices. Ex. 1002 ¶ 207.

Although Baig teaches using an NAT, it does not explain how the NAT works. *See* Ex. 1007; Ex. 1002 ¶ 209. A person having ordinary skill in the art would have turned to a reference like Zwicky for such an understanding. *See* Ex. 1002 ¶ 209. The NAT “allows a network to use one set of network addresses internally and a different set when dealing with external networks.” Ex. 1012, 114. The NAT works by having a router modify a packet sent to the outside “to make the packet look as if it is coming from a valid address” and modify external packets it receives “to turn the externally visible address into the correct internal address.” *Id.* at

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

115; *see also id.* at Fig. 5-4. Using such a system, “network traffic is routed to the proper client based on the distinct TCP/IP port numbers (i.e., part of the device identifiers) for each client.” Ex. 1002 ¶ 214; *see also* Ex. 1012, 115–16.

Based on Zwicky, a person having ordinary skill in the art would have understood that in the Baig-Costa-Zwicky combination, each device is identifiable by the combination of (a) the common IP address of the AP to which a mobile device (“online user interface device”) and STB are connected, and (b) TCP/IP port numbers associated with the mobile device and STB respectively, using NAT techniques. Therefore, a person having ordinary skill in the art would have understood that the combination teaches “associating an online access IP address of the user and a set-top box IP address of that user based on a common IP address” as recited in claim 1.

Limitation 1A further recites “wherein network traffic is routed via the common IP address to both an online user interface device and a set-top box of that user.” Ex. 1001, 23:45–51. Baig’s Figure 1 shows a plurality of content servers (computer systems) that communicate through the internet via an NAT router at access point 106 to connect to local network 104 to communicate with devices 102. Ex. 1007, Fig. 1; Ex. 1002 ¶ 220. Access point 106 provides a common IP address for the various devices 102, which would include Costa’s STB. Ex. 1007, Fig. 2; Ex. 1002 ¶ 221.

Patent Owner does not argue that the references as combined by Petitioner do not teach the limitations recited in limitation 1A. *See* PO Resp.; PO Sur-reply; Tr. 14:16–15:3 (Patent Owner’s counsel agreeing that there was no technical impediment to combining the references in the

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

manner claimed in the '260 patent). Instead, Patent Owner's only argument is that a person having ordinary skill in the art would not have combined the relevant teachings of Baig and Costa. *See* PO Resp.; PO Sur-reply.

Specifically, Patent Owner focuses on the use of Baig in a coffee shop, because it is the only example given in the Petition. *See, e.g.*, PO Resp. 1. Patent Owner argues that Petitioner's argument supporting the combination of the references is premised on two assumptions both of which need to be true in order Petitioner to prove obviousness. PO Resp. 4–5. First, Patent Owner argues that Petitioner assumes

that that it would have been obvious to install a set-top box at a public Wi-Fi hotspot (to which Baig directs vicinity-based community services), such as a coffee shop's hotspot, such that it “would have allowed individuals operating other devices (e.g., phones, laptops, etc.) to view multimedia content, such as television content, via a television connected to the set-top box.”

Id. at 5 (quoting Ex. 2001 ¶¶ 30–33). Second, Patent Owner argues that Petitioner assumes “that after the STB is configured at the public Wi-Fi hotspot (coffee shop), the STB would be used to visit Baig's VCSP website using the coffee shop's hotspot, which does not provide television service.” *Id.* (citing Ex. 1002 ¶ 663; Ex. 1003; Ex. 2001 ¶ 34); *see also* PO Sur-reply 5–11. According to Patent Owner, the Petition fails to support both assumptions. *Id.* at 6. We address each assumption in turn.

With regard to the first assumption, Patent Owner argues that “Petitioner's expert Mr. Lett did not provide any opinion regarding *who* would have been responsible for making the proposed modification (i.e., the person who would have been motivated to make the proposed modification).” PO Resp. 6–7 (citing Ex. 2003, 15:19–16:1). According to

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

Patent Owner, this shows that Mr. Lett did not fully consider the obviousness of making the combination:

The fact that Petitioner’s expert was unable to provide an opinion on *who* would have been motivated to make the specific modification he is proposing (providing a set-top box at the public Wi-Fi access point) is evidence that he did not fully consider the obviousness of making this modification, because if the combination would have been obvious he would have had an opinion on who would have implemented it.

PO Resp. 7.

We do not agree with Patent Owner’s argument. An obviousness analysis is done from the perspective of a person having ordinary skill in the art. *See* 35 U.S.C. § 103(a) (“A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are *such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.*” (emphasis added)); *KSR*, 550 U.S. at 417 (“When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. *If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability.*” (emphasis added)). Mr. Lett’s testimony, along with the arguments in the Petition, show that a proper analysis focusing on the person having ordinary skill in the art was performed. *See* Pet. 10–12; Ex. 1002 ¶¶ 156–164 (basing opinion on the person having ordinary skill in the art).

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

Patent Owner reads too much into Mr. Lett's cross-examination testimony. *See* PO Resp. 6–7 (citing Ex. 2003 (15:19–16:1)). Looking at the testimony in context, Mr. Lett was asked who would physically be setting the system up, not focusing on whether such a combination would have been obvious. *See* Ex. 2003, 14:18–16:6. That is, in the answer before the one Patent Owner cites, Mr. Lett testifies about who might be installing the system. *Id.* at 14:18–15:8. Therefore, it is clear that Mr. Lett's later testimony, which Patent Owner gives, is still focused on installation, not design and development.

Additionally, Patent Owner clipped off the end of Mr. Lett's answer to the question, where he makes it clear that he was focusing on installation, not who would have designed such a system and whether the combination would have been obvious:

Q. (By Mr. Milkey) Okay. So who is responsible for making this modification to Baig's system?

Is it the vicinity -- or, sorry, is it the VCSP or is it the coffee shop owner in the example that you provided?

A. I don't think I provided an opinion on that. *I really haven't thought about who – who installed -- you are asking who installed the set-top box?*

Q. Correct.

A. I'm sorry, I -- I don't know.

I haven't really thought about that.

Ex. 2004 15:19–16:6 (emphasized language omitted from PO Resp. 6–7). That clipped off answer further confirms that Mr. Lett's cross-examination testimony as based on who installed the device, not who designed it.

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

Because the question and answer did not focus on the proper issue, the testimony is inapposite.

Patent Owner also argues that Mr. Lett was unable “to recall any public wireless hotspots that included a set-top box as of the priority date of the ’260 patent.” PO Resp. 7 (citing Ex. 2003, 25:15–18). Similarly, Patent Owner argues that Mr. de la Iglesia testifies that he is “not aware of any ‘indication or evidence of any coffee shops that displayed television content via a set-top box in the manner Mr. Lett suggests before the priority date of the ’260 patent.’” PO Resp. 7 (quoting Ex. 2001 ¶ 37); *see also* PO Sur-reply 5–6 (“Petitioner’s expert confirmed that he does not have the opinion that it would be obvious to display literally *any* website content (even content analogous to the Baig website) at a coffee shop. . . .”); *id.* at 9–10 (“Mr. Lett was unable to identify *any* public establishment that has *ever* used a TV to display a social media website, an auction website, or indeed *any* website.”).

We do not agree with Patent Owner’s argument. As Patent Owner concedes, the lack of “‘evidence of any coffee shops that displayed television content via a set-top box in the manner suggested by Mr. Lett suggests before the priority date of the ’260 patent’ . . . is not dispositive as to the question of obviousness.” PO Resp. 7–8 (quoting Ex. 2001 ¶ 37). In fact, Patent Owner has not cited any authority supporting its argument that the absence of a real-world combination has probative value in a determination that a claim is obvious. Tr. 34:22–35:6.

We note that Patent Owner cites two Federal Circuit cases in its Sur-reply that Patent Owner claims holds that the “failure to provide evidence of

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

a proposed modification, long after the relevant prior art was available to the public” is relevant. *See* POP Sur-reply 15–16. As discussed below, Patent Owner forfeited the argument relating to hindsight for which these cases are cited. *See* page 42–44, *infra*. Regardless, we have reviewed the cases and they do not support Patent Owner’s argument. With respect to *Insite Vision Inc. v. Sandoz, Inc.*, 783 F.3d 853 (Fed. Cir. 2015), Patent Owner quotes a parties’ argument and implies the Federal Circuit agreed with it. *See id.* at 15–16. That is not accurate; instead, the Federal Circuit simply held that it was appropriate for the district court to discount the testimony of a witness regarding using azithromycin when that witness identified 24 other antibiotics, but not azithromycin, in his own prior art patent. *Insite*, 783 F.3d at 861. The Federal Circuit made no findings or conclusions regarding the lack of anyone using the combination at any time. *See id.*

With respect to *Orexo AB v. Actavis Elizabeth LLC*, 903 F.3d 1265 (Fed. Cir. 2018), the claim in that proceeding recited that “particles of citric acid are presented and act as carrier particles.” *Id.* at 1268. The portion quoted by Patent Owner, along with other citations, simply support the Federal Circuit’s recognition that “Actavis conceded that no reference teaches using citric acid as a carrier particle, or that citric acid should be used as a carrier particle.” *Id.* at 1271. That is, the Federal Circuit focused solely on what teachings were in the prior art and never mentioned the lack of any evidence of using the combination. *See id.* at 1273.

Patent Owner also argues that Petitioner’s argument focuses exclusively on Baig’s coffee shop example, which Patent Owner contends is the only example in the Petition. PO Resp. 1, 4, 5; PO Sur-reply 6–8

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

(discussing why a Starbucks would not want advertisements from competitors to be displayed within the store). Patent Owner further argues, supported solely by the testimony of Mr. de la Iglesia, that there are several reasons why a coffee shop owner would not have wanted to have a STB in the coffee shop. PO Resp. 8–10 (citing Ex. 2001 ¶¶ 38–44).

As a preliminary matter, we disagree with the premise of Patent Owner’s argument that the Petition is limited to using the combined system in a coffee shop. Baig broadly discloses a public hot spot (Ex. 1007 ¶¶ 37) and the Petition relies on this broad disclosure. *See In re Applied Materials, Inc.*, 692 F.3d 1289, 1298 (Fed. Cir. 2012) (“A reference must be considered for everything that it teaches, not simply the described invention or a preferred embodiment.”). Although the Petitioner mentions a coffee shop as part of the reason to combine Costa’s STB with Baig (Pet. 10), we do not see that as limiting Baig’s teachings or how Petitioner uses Baig. Instead, consistent with the broad teaching of Baig, the Petition and Mr. Lett refers to public hotspots in general. *See, e.g.*, Pet. 12 (referring to the “public establishments”); Ex. 1002 ¶ 157 (“For example, both Baig and Costa give an example of utilizing their disclosures in wireless hotspot systems operating in a public environment.”).

Even if the Petition were limited to use in a coffee shop, we do not agree with Patent Owner’s arguments. First, we do not credit Mr. de la Iglesia’s testimony on this subject. Mr. de la Iglesia is not the owner of a coffee shop and there is no evidence in the record that he ever worked at one. *See* Ex. 2001; Ex. 2002 (Mr. de la Iglesia’s curriculum vitae). Nor is there any evidence that Mr. de la Iglesia talked to the owner of a coffee shop

to discuss the issues raised in his testimony. *See* Ex. 2001 ¶ 5 (identifying materials reviewed by Mr. de la Iglesia). Indeed, Patent Owner’s counsel conceded in oral argument that Mr. de la Iglesia was not qualified to opine about economic reasons why a coffee shop owner would or would not do something. Tr. 20:8–13.²⁴ Because Mr. de la Iglesia has no expertise in owning or managing a coffee shop, he is not qualified to opine on what the owner of a coffee shop would or would not do. *See* Fed. R. Evid. 702.

Second, by focusing on the economic reasons the owner of a coffee shop might (or might not) do something, Patent Owner misses the appropriate focus of an obviousness analysis. “That a given combination would not be made by businessmen for economic reasons does not mean that persons skilled in the art would not make the combination because of some technological incompatibility.” *In re Farrenkopf*, 713 F.2d 714, 718 (Fed. Cir. 1983); *see also Orthopedic Equip. Co., Inc. v. United States*, 702 F.2d 1005, 1013 (Fed. Cir. 1983) (“[T]he fact that the two disclosed apparatus would not be combined by businessmen for economic reasons is not the same as saying that it could not be done because skilled persons in the art felt that there was some technological incompatibility that prevented their combination. Only the latter fact is telling on the issue of nonobviousness.”).

²⁴ Patent Owner also argues that Mr. Letts was similarly unqualified. Tr. 20:8–13. We agree. But, because we do not rely on the testimony in Mr. Lett’s second declaration (Ex. 1063 ¶¶ 20–26) relating to the economics of a coffee shop, that argument is inapposite. Instead, as discussed previously, we focus on the reasons given in the Petition and Mr. Lett’s original testimony, which focus on reasons given in *KSR* and not the economics of a coffee shop. *See* Pet. 10–12; Ex. 1002 ¶¶ 156–165, 198.

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

Instead, the correct focus should be on what the person having ordinary skill in the art—the definition of which does not include owning or managing a coffee shop (*see* Section II.B)—would have done. For example, “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *KSR*, 550 U.S. at 417. Similarly, “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* at 416. Patent Owner has not made any argument that the addition of a STB to Baig’s system would have been “uniquely challenging or difficult for one of ordinary skill in the art.” *See Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007); Tr. 14:18–15:3 (Patent Owner “not arguing sort of technical incompatibility” and agreeing that the combination “might be technically possible to do”). Therefore, Patent Owner’s argument focusing on the economics of a coffee shop as opposed to technical problems that would have face a person having ordinary skill in the art is inapposite.

This is not to say that economic reasons are never relevant to whether an invention would have been obvious. Economic reasons such as efficiency or reduced costs may provide the person having ordinary skill in the art a reason to modify a prior art design or to combine the teachings of various references. *See KSR*, 550 U.S. at 418; *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1368. But we are aware of no case—and Patent Owner has not directed us to one—that holds

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

that economic reasons can be used as a basis for showing a claimed invention would not have been obvious if the combination is not uniquely challenging or difficult for one of ordinary skill in the art. *See* PO Resp.; PO Sur-reply.

It is similarly inapposite that Mr. Lett was unaware of any specific public establishment that used a TV to display a social media website. PO Sur-reply 8–10 (citing Ex. 2004, 62:15–65:14). Patent Owner’s argument focuses exclusively on economic or business considerations that the owner of a public establishment, such as a coffee shop, might make. But that argument ignores the person having ordinary skill in the art and whether the combination would have been “uniquely challenging or difficult for one of ordinary skill in the art.” *See Leapfrog Enters.*, 485 F.3d at 1162.

With regard to the second assumption—i.e., that that after the STB is configured at the public Wi-Fi hotspot (coffee shop), the STB would be used to visit Baig’s VCSP website using the coffee shop’s hotspot, which does not provide television service—Patent Owner argues “there is no reason why the controller of that STB (presumably, the coffee shop itself) would navigate to Baig’s VCSP website which does not provide television service or streaming service.” PO Resp. 11. Patent Owner further argues that

Having the television set displaying a website such as Baig’s would have been a very strange decision that the Petition provides no reasoning would have been obvious (other than the conclusory allegation that the content is “beneficial[],” without any analysis of whether it would have been beneficial *in the context of an STB at a coffee shop*).

PO Resp. 11–12.

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

Patent Owner again argues that there are some problems associated with how the combination would work *in a coffee shop*. See PO Resp. 11–12. For example, Patent Owner argues that only one person could use the product at a time and its use would raise privacy issues:

Moreover, if Baig’s services *were* displayed over a STB, those services would require that someone be controlling the use of the website to the exclusion of others. Ex. 2001, ¶46. As an example, if coffee shop patron “John” is controlling the set-top box via a remote control, then “Nancy” (and all other coffee shop patrons) would be unable to control it at that time. This scenario would not have been desirable, particularly in the context of a display at a public hotspot where the use of the website would be visible to those not actually using the website, causing privacy concerns. *Id.*

PO Resp. 12. Because of this, Patent Owner argues, if a STB was placed in coffee shop, it would be used to provide television service, not Baig’s VCSP. PO Resp. 12.

As a preliminary matter, for the same reasons discussed above (page 37, *supra*), we disagree with the premise of Patent Owner’s argument that the Petition is limited to using the combined system in a coffee shop. But even if we did limit to a coffee shop, we do not agree with Patent Owner’s arguments. As with the first assumption, Patent Owner does not focus on any technical reasons why a person having ordinary skill in the art would not have been able to combine the teachings from the two references. See PO Resp. 11–12. Instead, Patent Owner focuses on non-technical reasons—such as who can control the system, privacy issues, and whether the owner might want to use a STB to show television shows. See PO Resp. 11–12. For the same reasons discussed above, none of those non-technical

considerations rebut Petitioner’s showing that the claimed invention would have been obvious to a person having ordinary skill in the art.

In addition, Petitioner persuasively argues that including a STB in Baig’s system would beneficially allow one to use the STB to share music, video games, and advertisements with customers at a public establishment. Pet. 12 (citing Ex. 1007 ¶¶ 54, 62, 90, 94, 95, 103, 107, 108; Ex. 1002 ¶¶ 160, 163). Even if we were to credit Patent Owner’s identified disadvantages of the proposed combination, such disadvantages must be considered with the potential advantages. *See Medichem, S.A. v. Rolabo S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (“[A] given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine.”). Here, we find that the preponderance of the evidence supports that the POSA would have had good reason to use a STB in Baig’s system.

Patent Owner also argues that Petitioner’s reliance on *KSR* fails. PO Sur-reply 11–17. As part of the analysis, Patent Owner relies on two Federal Circuit cases that Patent Owner argues stands for the proposition that “factfinders should look with extreme skepticism as to assertions of obviousness that are not supported by real-world or documentary evidence, long after the date when obviousness is alleged.” *Id.* at 16.

Patent Owner’s raise this argument for the first time in the Sur-reply. This would be appropriate if the argument Patent Owner rebutted were raised for the first time in the Reply; but if the argument was raised in the Petition, then Patent Owner forfeited the argument by not addressing it in the Response. Paper 10, 9 (Scheduling Order). In this case, the argument was

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

forfeited because it is responding to arguments that were originally raised in the Petition (*see* Pet.10–12).

Although the section on the reason to combine in the Petition does not cite to *KSR*, the Petition relies on the examples given in *KSR*. For example, the Petition states that the combination “represents the mere combination of known elements (Baig’s VCSP and Costa’s STB) according to known methods (connecting the STB to an AP) to yield predictable results (an STB connected to VCSP hotspot AP 106 along with other devices 102 to participate in VCSP services).” Pet. 11 (citing Ex. 1002 ¶ 162). That is the same as Petitioner’s *KSR* argument in the Reply. *See* Pet. Reply 10 (“For example, Mr. Lett explained how ‘the combination merely combines known prior art elements according to known methods to yield predictable results,’ citing *KSR* rationale (A).” (citing Ex. 1002 ¶ 162; Ex. 1063 ¶¶ 17–18)). The other arguments in Petitioner’s Reply relating to its reliance on *KSR* cite to Mr. Lett’s testimony submitted with, and cited in, the Petition. *Compare* Pet. 11 (citing Ex. 1002 ¶¶ 159–165), *with* Pet. Reply 10 (citing Ex. 1002 ¶¶ 159–161, 163. Thus, Petitioner’s reliance on *KSR* to support its argument regarding the reason to combine was contained within the Petition.

We do not find any argument related to Patent Owner’s argument (PO Sur-reply 11–17) or the Federal Circuit cases discussing a lack of contemporary evidence of the combination in Patent Owner’s Response. *See* PO Resp. As we stated in the Scheduling Order, “[a]ny arguments not raised in the response may be deemed forfeited.” Paper 10, 9. Because Patent Owner did not make those arguments in its Response, this argument is forfeited. *See In re Nuvasive, Inc.*, 842 F.3d 1376, 1380–81 (Fed. Cir. 2016)

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

(holding that an argument not presented in Patent Owner’s response is waived); *Dell Inc. v. Accelaron, LLC*, 884 F.3d 1364, 1369 (Fed. Cir. 2018) (holding that the Board was not obligated to consider an “untimely argument . . . raised for the first time during oral argument”).

Petitioner’s partial reliance on paragraph 17 and 18 of Mr. Lett’s second declaration (Ex. 1063) does not change our analysis. *See* Pet. Reply 10. Those paragraphs of Mr. Lett’s testimony simply summarize and repeat the testimony he submitted along with the Petition. *See* Ex. 1063 ¶¶ 17–18 (discussing the testimony given in Ex. 1002 ¶¶ 159 through 162). In other words, Mr. Lett’s second declaration does no more than restate and repeat his prior testimony and does not represent a change in position that would represent good cause for a late response.

Patent Owner also argues that Mr. Lett’s opinions are conclusory and lack supporting evidence. PO Sur-reply 17–18. However, as with the previous argument, this is being raised for the first time in Patent Owner’s Sur-reply. *See* PO Resp. Accordingly, the argument was forfeited. *See* Paper 10, 9; *Nuvasive*, 842 F.3d at 1380–81; *see also Dell*, 884 F.3d at 1369.

Moreover, we do not agree with Patent Owner’s argument that Mr. Lett’s testimony was conclusory. To the contrary, Mr. Lett’s testimony regarding the reason to combine the teachings of Baig and Costa is replete with citations to the record and he fully explained his reasoning. *See* Ex. 1002 ¶¶ 155–164. That testimony fully complies with our rules (37 C.F.R. § 42.65(a) and we fully credit that testimony.

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

Finally, Patent Owner argues that the Petition should be rejected for failing to identify where each element is present in the prior art.²⁵ PO Sur-reply 18–19. In support of its argument, Patent Owner relies on a recent Memorandum by then Acting Director Stewart. *See id.* (citing Memorandum from Acting Director Stewart, ENFORCEMENT AND NON-WAIVER OF 37 C.F.R. § 42.104(B)(4) AND PERMISSIBLE USES OF GENERAL KNOWLEDGE IN INTER PARTES REVIEWS (July 31, 2025) (hereinafter “General Knowledge Memo”)).²⁶ The General Knowledge Memo states that “applicant admitted prior art (AAPA), expert testimony, common sense, and other evidence that is not ‘prior art consisting of patents or printed publications’ (collectively, ‘general knowledge’) may not be used to supply a missing claim limitation.” General Knowledge Memo 1. Patent Owner argues that Mr. Lett testified on cross-examination that he had “no opinions on whether Baig or Costa, individually, disclose a television advertisement.” PO Sur-reply 19 (citing Ex. 2005 19:19–23:1). “Accordingly,” Patent Owner argues, “Petitioner’s theory cannot support a finding of obviousness in an inter partes review proceeding, because contrary to the Board’s regulations, it fails to establish ‘where each element of the claim is found in the prior art.’” *Id.*

²⁵ This argument was raised for the first time in the Sur-reply. However, because the argument relies on a recently issued Memorandum by the Acting Director, Patent Owner has demonstrated good cause for us to consider it. *See* 37 C.F.R. § 42.5(b), (c)(3).

²⁶ Available at https://www.uspto.gov/sites/default/files/documents/aapa_memo_final__signed.pdf.

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

We do not agree with Patent Owner’s argument. First, the General Knowledge Memo does not apply to this proceeding. Specifically, the General Knowledge Memo states that it “will apply to any petition for IPR filed on or after September 1, 2025.” General Knowledge Memo 3. Because the Petitions in these proceedings were filed on March 1, 2024 (*see* Pet. 75), the General Knowledge Memo is inapplicable.

Second, even if the General Knowledge Memo was in force, because Petitioner is not using general knowledge to teach a missing claim limitation, the General Knowledge Memo is inapplicable. Although Mr. Lett may not have testified that either reference individually teaches the limitation of a “television advertisement,” he clearly testified that the combination of the two references teaches the limitation:

Q. Okay. And so my question is does Baig disclose a television advertisement under that definition?

A. So, *I used a combination of Baig and Costa* as well as other prior art references in the grounds, as you can see, and Baig does not preclude a set-top box but just to make sure that a set-top box which displays on a television is included, I opined that and *I used the combination of Baig and Costa* in all of the grounds.

....

Q. So does Baig disclose a television ad -- sorry, strike that.

Does Baig disclose an advertisement displayed on a television set?

A. *In the combination with Costa, yes.*

Ex. 2005, 20:14–23, 21:18–22 (emphases added). As the Federal Circuit has made clear, the issue we must decide is not whether the individual references

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

teach the limitation, but whether the combination does. *See Game & Tech Co. v. Wargaming Grp. Ltd.*, 942 F.3d 1343, 1352 (Fed. Cir. 2019) (“The question in an obviousness inquiry is whether it would have been obvious to a person of ordinary skill in the art to combine the relevant disclosures of the two references, not whether each individual reference discloses all of the necessary elements.”); *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (“Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references.”); *In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (“The test for obviousness is not whether . . . the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.” (citations omitted)). Because Mr. Lett and Petitioner is relying on the combination of prior art, this is not a situation where the party is relying on general knowledge.

c) Limitation 1B: The Directing Step

Claim 1 further recites

(b) using user profile information derived from online activity from a first online user interface device via a first one of the online access IP addresses of the multitude of users, with the computer system automatically causing a first television advertisement to be directed to a set-top box for presentation via that set-top box, selectively, wherein the set-top box is indicated by the set-top box IP address associated with the first online access IP address.

Ex. 1001, 23:52–60. Petitioner argues that the combination of Baig, Costa, and Zwicky teaches limitation 1B. *See* Pet. 24–28.

We agree with Petitioner. Specifically, with respect to the “user profile information derived from online activity from a first online user interface device via a first one of the online access IP addresses of the multitude of users,” as discussed above with regard to limitation 1A, Baig teaches creating a vicinity-based group of devices connected via the same AP. During the registration process for the group, “profile information about our users, such as age, gender, occupation, interests and the like are requested . . . and securely stored by the VCSP.” Ex. 1007 ¶ 93. That information corresponds to the claimed “user profile information derived from online activity” recited in claim 1. *See* Ex. 1002 ¶ 224–226; Ex. 1001, 5:46–67 (describing user profiles). And, as discussed in the previous section, each of the devices is connected to the same AP and has the same IP address.

With respect to “with the computer system automatically causing a first television advertisement to be directed to a set-top box for presentation via that set-top box, selectively,” Baig teaches “vicinity-based advertising in which ‘advertisers can target the audience of a particular hotspot’ based on user profile information derived from online activity.” Ex. 1002 ¶ 232 (citing Ex. 1007 ¶¶ 58, 59, 61, 93–95). Specifically, Baig teaches that “advertisers can target the audience of a particular hotspot according to the profile, e.g., age/gender etc. of the users and/or a particular time of the day.” Ex. 1007 ¶ 93. Because “Baig does not teach or suggest requiring a user to take a specific action to cause Baig’s process of providing advertisements to occur,” a person having ordinary skill in the art would have understood that the process is automatic. Ex. 1002 ¶ 233; *see also* Ex. 1007 ¶¶ 59 (“[W]hen

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

a user at a hotspot logs into the website of the VCSP 202, the user automatically becomes part of the vicinity-based user group.”), 74 (“As described above, once a user registers on the web page illustrated in FIG. 5, and then logs into the VCSP website on the home page as illustrated in FIG. 4, the server 224 presents the web page illustrated in FIG. 6 to the user on his/her mobile device 102.”), Fig. 22 (showing a process for receiving VCSP user profile information and, without any action by a user (automatically), selecting and providing advertisements “based on geographic location of the hotspot, *profiles of users at a hotspot*, and time of day” (emphasis added)). In the combination, the advertisements would be sent to Costa’s STB and would be television advertisements. Ex. 1002 ¶¶ 236–237.

Additionally, Baig teaches that the advertisement is based, *inter alia*, on the user’s profile. Ex. 1007 ¶ 93. A person having ordinary skill in the art would have understood that selecting an advertisement based on criteria such as a user profile is “selectively” as recited in claim 1.

Finally, for the same reasons as discussed in the previous section, Baig’s network traffic being routed using the NAT allows “Baig’s system to uniquely identify, differentiate, and properly route traffic between individual devices communicating over the Internet.” Ex. 1002 ¶ 239.

Patent Owner does not argue that the combined references do not teach the limitations recited in limitation 1B. *See* PO Resp.; PO Sur-reply. Instead, Patent Owner only argues that a person having ordinary skill in the art would not have combined the relevant teachings of Baig and Costa. PO Resp.; PO Sur-reply. For the reasons discussed above in Section II.D.4(b), we do not agree with Patent Owner’s argument.

d) Conclusion Regarding Claim 1

For the reasons set forth above, Petitioner has demonstrated by a preponderance of the evidence that the subject matter of claim 1 would have been obvious over Baig, Costa, and Zwicky.

5. *Analysis of Claims 2–5, 7–9, 12, 15, 17, 21, 22, 24, 26–28, 31, 32, 34, 37, 42, 44, 53, 54–58, 61, 62, 69, 71–80, 83, 84, 86–88, 91, 94, 96, 100, 101, 103, 106, 116–119, 122, 125, 128, 135, 137–145, 147, 148, 151, and 152*

Petitioner argues that the combination of Baig, Costa, and Zwicky teaches the limitations recited in claims 2–5, 7–9, 12, 15, 17, 21, 22, 24, 26–28, 31, 32, 34, 37, 42, 44, 53, 54–58, 61, 62, 69, 71–80, 83, 84, 86–88, 91, 94, 96, 100, 101, 103, 106, 116–119, 122, 125, 128, 135, 137–145, 147, 148, 151, and 152 and that a person having ordinary skill in the art would have combined the teachings with a reasonable expectation of success. Pet. 28–60; 422Pet. 29–51. Petitioner’s arguments are supported by citations to the prior art and the testimony of Mr. Lett. *See* Pet. 28–60; 422Pet. 29–51. We have reviewed Petitioner’s arguments and evidence, agree with them, and, therefore, adopt Petitioner’s arguments and evidence as our own.

Patent Owner does not separately address those claims. *See* PO Resp.; 422PO Resp. Instead, Patent Owner only relies on the arguments discussed above for claim 1. *See* PO Resp. 13–16; 422PO Resp. 13–16. For the same reason as discussed above in Section II.D.4(b), we do not agree with Patent Owner’s arguments regarding the reason to combine the references.

Accordingly, Petitioner has shown by a preponderance of the evidence that the subject matter of claims 2–5, 7–9, 12, 15, 17, 21, 22, 24, 26–28, 31, 32, 34, 37, 42, 44, 53, 54–58, 61, 62, 69, 71–80, 83, 84, 86–88, 91, 94, 96, 100, 101, 103, 106, 116–119, 122, 125, 128, 135, 137–145, 147, 148, 151, and 152 would have been obvious over Baig, Costa, and Zwicky.

6. Analysis of Claims 38 and 39

Claim 38 is an independent claim. Ex. 1001, 26:57–27:15. Petitioner argues that that limitations of claim 38 are taught by the combination of Baig, Costa, and Zwicky for the same reasons as discussed above for claims 26 and 61. 422Pet. 37.

Claim 39 depends from independent claim 38 and recites the following additional limitation: “with the computer equipment, automatically selecting the first television advertisement based on the user profile information.” Ex. 1001, 27:16–18. Petitioner argues that the additional limitation recited in that claim is taught by Baig. 422Pet. 40.

We are persuaded by Petitioner’s argument. With regard to claim 38, Petitioner’s arguments are supported by citations to the prior art and the testimony of Mr. Lett and citation to the prior art references. *See* 422Pet. 37. With regard to claim 39, Baig’s VCSP receives user profile information such as age, gender, or other information entered into their profiles at the time of registration which are then used by the VCSP (computer equipment), to “automatically provide advertisements based on this user profile information, e.g., by allowing advertisers to bid on advertising space/time using the user profile information.” Ex. 1002 ¶ 359; *see also* Ex. 1007 ¶¶ 61, 96 (describing profile information); *id.* ¶¶ 93, 99 (targeting

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

advertisements based on profile information), 99 (same); *Id.* ¶¶ 58, 59, 94, 95 (targeted advertisements). As an example, Baig describes using the VCSP to send targeted advertisements. Ex. 1007 ¶ 58; Ex. 1002 ¶ 359.

Therefore, Baig teaches the limitations recited in claims 38 and 39. *See* Ex. 1002 ¶¶ 261–263, 360–362.

Patent Owner states the following:

The Petition acknowledges that “Claim 38 is largely identical to claim 26, except that claim 38 recites identifier-based associations, whereas claim 26 recites IP address-based associations.” Pet. 37. Claim 38 is not obvious for the same reasons claim 26 is not obvious, as discussed above. Ex. 2001, ¶¶ 54-55. Similarly, claim 39’s requirement that the advertisement is selected “based on the user profile information” would not be obvious because without the STB being used to navigate to Baig’s website, there would be no association of STB and online user interface device as the Petition proposes, such that the [“]profile information . . . derived from online activity of the first user from the first user’s online user interface device” could be used to target an ad to a STB on the same network. *Id.*

422PO Resp. 16–17. Patent Owner does not separately address claims 38 and 39 in the Patent Owner’s Sur-reply. *See* 422PO Sur-reply.

Although claims 38 and 39 are listed separately in IPR2024-00422 Patent Owner’s Response, the argument is that same as the one raised with respect to claim 1, specifically what Patent Owner identifies as the Petition’s second assumption. For the reasons discussed above in Section II.D.4.(b), *supra*, we do not agree with Patent Owner’s argument.

Accordingly, Petitioner has shown by a preponderance of the evidence that the subject matter of claims 38 and 39 would have been obvious over Baig, Costa, and Zwicky.

7. *Analysis of Claims 121 and 146*

Claim 121 depends from claim 34 and further recites “wherein the revenue amount is received from an advertiser that has contracted to display a TV ad to persons who have characteristics contained in the user profile information.” Ex. 1001, 32:18–21. Claim 146 depends from claim 42 and further recites “wherein the revenue amount is received from an advertiser that has contracted to display a TV ad to an audience of an Internet site.” *Id.* at 23:37–39. Petitioner argues that the additional limitations recited in those claims are taught by the combination of Baig, Costa, and Zwicky. 422Pet. 50–51. As discussed in the claim construction section, we apply Patent Owner’s proposed construction, which requires a meeting of the minds between the contracting parties that a TV ad would be displayed. *See* Section II.C.(1) (holding that “contracted to display a TV ad” means “whatever revenue be received is received as a result of direction of a TV ad from an advertiser that specifically contracted to display a TV ad to a specific target audience”).

We are persuaded by Petitioner’s argument. Specifically, Baig teaches that “multiple advertisers can bid against each other to have their *advertisements displayed* at a particular location and time of day, or based on some other end-user profile.” Ex. 1007 ¶ 102 (emphasis added); *see also id.* ¶¶ 11, 12, 62, 103–106; Ex. 1002 ¶ 482, 488. A person having ordinary skill in the art would have understood that the multiple advertisers were bidding “*to display their advertisements* to the devices at Baig’s wireless hotspot access point” Ex. 1002 ¶¶ 482 (emphasis added) (citing Ex. 1007 ¶¶ 11, 12, 54, 62, 103–106), 488 (same). In the combination

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

described above with respect to claim 1 (which applies to all of the independent claims), Baig's system would send advertisements to all connected devices, including Costa's STB, where they would be displayed. Ex. 1002 ¶¶ 236, 482. Advertisements provided to a STB and displayed on a television constitute a TV ad. *Id.* ¶¶ 236, 482, 488; *see also* Ex. 1002, 6:37–40 (defining “Television advertisement (TV ad)”); Tr. 23:25–24:1 (Patent Owner agreeing that any advertisement played on a television is a “TV ad” as defined in the '210 patent). Additionally, a person having ordinary skill in the art “would further have understood that, by using Baig's end user profiles as the basis for the advertisements and then delivering advertisements to those corresponding users, Baig's advertisers are contracting to display the TV ads ‘to persons who have characteristics contained in the user profile information.’” Ex. 1002 ¶¶ 482, 488. Stated differently, there would have been a meeting of the minds between the contracting parties that a TV advertisement would be displayed on all devices, including via the STB, based on user profile information. Therefore, the combination of Baig, Costa, and Zwicky teaches the additional limitations recited in claims 121 and 146. *See id.* ¶¶ 482–483, 488–489.

Patent Owner argues that “Baig does not disclose the ability of advertisers to specifically contract to display TV ads, as opposed to just displaying ads on Baig's VCSP website (which a POSITA would understand would be overwhelmingly non-TV ads).” 422PO Resp. 17. According to Patent Owner, “[g]iven that Baig's VCSP server does not provide television service, it would not have been obvious in the context of Baig for an

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

advertiser to ‘contract[] to display a TV ad’ as the claims require.” *Id.* at 17–18; *see also* 422PO Sur-reply 19–20 (arguing that “TV ads are displayed *incidentally* to any contract to display an ad on Baig’s website” and that “[t]he contract is not for a ‘TV ad,’ it is for an ad on Baig’s website)

We do not agree with Patent Owner’s argument that such TV ads are incidental. A person having ordinary skill in the art would have understood that because that an advertiser will be able to display advertisements on all of the devices at Baig’s hotspot access point (which in the combination would include Costa’s STB), the contracts would, *inter alia*, be for displaying advertisements on television sets via the STB. *See* Ex. 1002 ¶¶ 482 (A person having ordinary skill in the art “would have understood Baig’s multiple advertisers to include an advertiser ‘contracted to display a TV ad’ because the advertisers bid to display their advertisements to the devices at Baig’s wireless hotspot access point (which . . . would include Costa’s set-top box).”), 488 (same); Ex. 1063 ¶ 36 (“Baig’s website and the advertisements displayed therein would be provided to Costa’s STB for presentation on a television, thus making these advertisements TV ads ‘as defined by the ’260 Patent’ that advertisers can contract to display.”). That is, because STB’s would be one of the devices that displays advertisements in the Baig-Costa combination, any contract with the service provider to display advertisements in the Baig-Costa combination would be a contract to display a TV ad presented by the STB. *See* Ex. 1002 ¶¶ 482, 488; Ex. 1063 ¶ 36 (“An advertiser that has contracted to display advertisements on Baig’s VSCP website, which can be displayed on Costa’s STB, has contracted to display a TV ad.”); *Pet. Reply* 17–18.

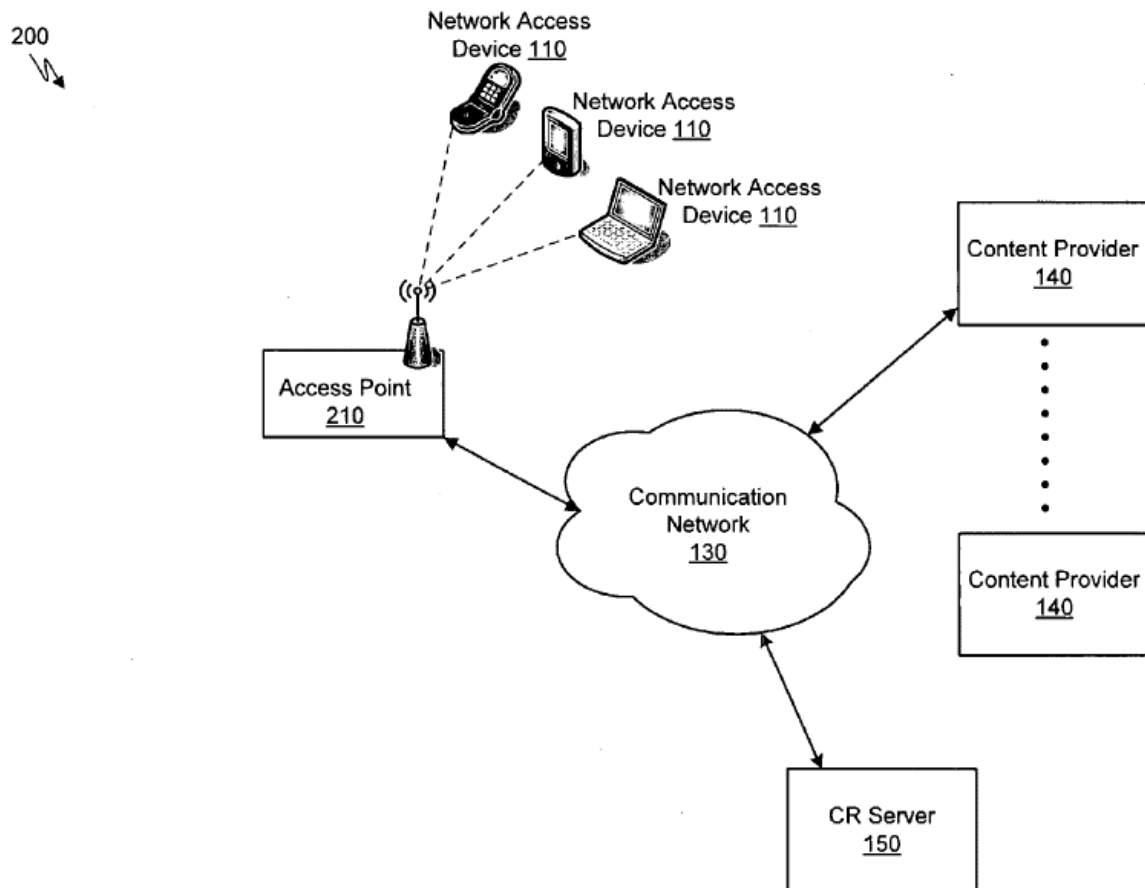
Accordingly, Petitioner has shown by a preponderance of the evidence that the subject matter of claims 121 and 146 would have been obvious over Baig, Costa, and Zwicky.

E. Additional Grounds

1. Overview of Banga '690

Banga '690 discloses systems and methods for developing customer relationships with a network access point. See Ex. 1014 ¶ 9, code (57).

Figure 2 of Banga is reproduced below.



Banga Figure 2 illustrates environment 200 which includes communication network 130 connected to client relationship (CR) server 150 and content providers 140, as well as multiple network access devices 110 connected to

communication network 130 through access point 210. Ex. 1014 ¶¶ 22–33. Network access device 110 can be any digital device capable of communicating over a network, such as a computer, laptop, personal digital assistant, or cellular phone. *Id.* ¶ 24.

Each network access device 110 may contain a device identifier such as a media access control (MAC) address, an international mobile station identity (IMSI), or an international mobile equipment identity (IMEI). Ex. 1014 ¶ 24. When network access device 110 seeks network access, it provides a device identifier such as a MAC address to access point 210. *Id.* ¶ 30. Access point 210 is configured to direct the device identifier and access information to CR server 150. *See id.* ¶ 33.

Access information can comprise any information associated with the network access device 110 sending the device identifier to the CR server 150. In one example, access information identifies the access point 210 (such as an IP address or other identifier). The access information may also comprise an access point identifier (e.g., information that identifies the sending access point 210, service provider 120, or device sending the device identifier)[, and] information identifying the date and time the network access device 110 seeks access.

Id. ¶ 34.

CR server 150 is configured to receive the device identifier and access information from access point 210 and store it in a device record. Ex. 1014 ¶¶ 37, 42. The device record tracks the device identifier and access information. *Id.* ¶ 37. Each different device identifier may have a different device record. *Id.* ¶ 38. CR server 150 generates user profiles based on the information contained within the device record (e.g., device identifier, access information). *Id.* ¶¶ 39, 42, 46. “A user profile may be an individual

profile of a user identifying one or more individual characteristics or one or more group characteristics of multiple users.” *Id.* ¶ 39; *see also id.* ¶ 46 (“The user profile may comprise one or more device identifiers.”), ¶ 47.

Figure 4 of Banga ’690 is reproduced below.

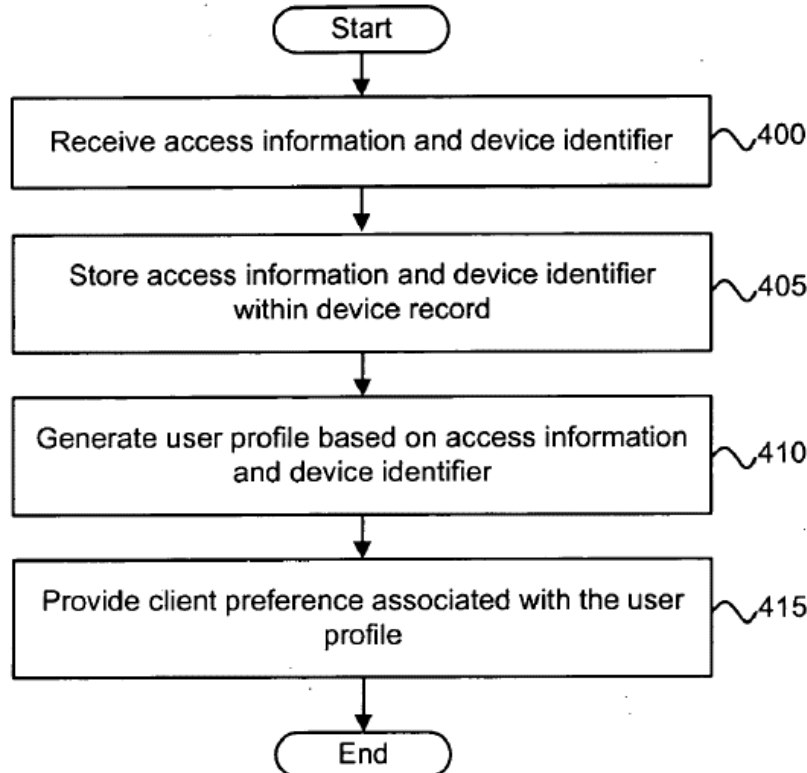


Figure 4 is a flow chart of a method for providing a user preference to develop customer relationships. Ex. 1014 ¶ 53. In step 400, CR server 150 receives access information and the device identifier. *Id.* In step 405, CR server 150 stores the access information and device identifier within a device record. In step 410, CR server 150 generates a user profile based on the access information and the device identifier, and may be based on the device history or other information associated with the device identifier. *Id.* ¶ 57. In step 415, CR server 150 provides the user preference associated with the user profile, such as an advertisement tag. *Id.* ¶¶ 59–60.

In an example, the CR server 150 may receive an index of advertisements and associated advertisement information (e.g., brands associated with the advertisements.) A device record may refer to a user currently accessing a content provider 140. Instead of placing a random advertisement on the content provider 140 for the user to see, the advertisement server may direct a request for an advertisement tag with the user's IP address to the CR server 150. The CR server 150 can then check the user profile for the user using the user's IP address. If the user is within a user profile or a user profile can be generated from a device record, then the CR server 150 will use the user profile to select an advertisement from the index of advertisements that satisfy the requirements of the advertisement server and fit the user profile. The advertisement tag (i.e., user preference) can then be sent to the advertisement server, which in turn, can provide the proper advertisement to the content provider 140.

Id. ¶ 60.

2. *Overview of Cox*

Cox is titled “Method and System for Dynamic Assignment of Wireless LAN Access Point Identity,” and describes “a method and system for dynamically assigning a configuration identity to a device being connected” to a wireless LAN (“WLAN”). Ex. 1017, codes (54), (57). Cox explains that dynamic assignment of AP identities reduces the effects of AP failure on network availability by allowing a new AP to be “configured with a desired set of operational parameters, such as the configuration parameters of the previous AP” with minimized configuration overhead and a quick turnaround time. *Id.* ¶ 2.

Cox's method of dynamically assigning AP identities may use “physical network connection information, such as the switch and/or switch port to which the AP is connected.” Ex. 1017 ¶ 12. In such a method, an

AP “sends out a discovery protocol message to discover physical network connection information, such as the identity of the switch, and port of the switch, to which the access point is connected” from a WLAN management module when the AP is deployed and installed into a network environment. *Id.* The AP may communicate with a dynamic host configuration protocol (“DHCP”) server to obtain an IP or other network address and the IP address for the WLAN management module. *Id.* ¶ 22.

In response to the message from the AP, a WLAN management module can generate a basic configuration for the AP, “such as information sufficient to establish SNMP access to the AP,” and transmit the information back to the AP. Ex. 1017 ¶ 12. The WLAN management module may first “perform a security check on the received request for configuration information, and if it determines that the request is not valid, the WLAN management module will drop the request and will not provide any configuration information.” *Id.* ¶ 13; *see also id.* ¶¶ 23, 27.

3. *Overview of Han*

Han describes “an apparatus and a method for processing a dynamic IP address change.” Ex. 1018, 5 (Summary). Han’s device is part of an embedded system with a designated IP address. *Id.* ¶¶ 11–12. The device applies a DHCP and is connected through an embedded terminal and the Internet of the embedded system. *Id.* ¶ 12. The DHCP provides dynamic IP address information to the embedded terminal, which registers and manages the information. *Id.*

If the dynamic IP address of the embedded terminal is changed, the IP address information for the corresponding terminal is also changed and

stored. Ex. 1018 ¶ 12. The IP address information is stored on a management server connected to the embedded terminal through the Internet. *Id.* ¶ 20. The management server “registers and manages dynamic IP address information assigned to the embedded terminal, and changes and stores the IP address information of the corresponding terminal when a change event for the dynamic IP address of the embedded terminal occurs.” *Id.*; *see also id.* ¶ 30.

4. *Overview of Leigh*

Leigh is titled “System for Insertion of Advertising Content in User-requested Internet Web Pages,” and describes a method “for insertion of advertising content in an Internet web page, located on a target web site and requested by a web client.” Ex. 1020, code (54), ¶ 4.

In one embodiment of Leigh’s method, “a request from the web client for the web page is intercepted and used to retrieve the web page from the target web site,” then HTML code on the web page is “re-written to generate a modified web page including an ad insertion code fragment.” Ex. 1020 ¶ 4. “The modified web page is sent to the web client, which executes the code fragment to cause the advertising content to be displayed.” *Id.* In another embodiment of Leigh’s method, an advertising content request is generated when the ad insertion code fragment is executed by the web client, and the advertising content is sent to the web client in response to the request. *Id.* ¶ 5. The advertising content is selected from a pool of available advertisements by an Ad Placement Module “by evaluating factors such as the venue (i.e., the geographical location of the web client), as well as other meta information such as the ‘type’ of venue {for example, a restaurant}.”

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

Id. ¶ 24. The advertisements are stored in a database, which may be locally or remotely located with respect to the rest of the system. *Id.*

5. *Overview of Wing*

Wing is titled “Managing Devices Across NAT Boundaries,” and describes an address management scheme that “allows a Network Management System (NMS) to manage devices in a private network operating behind a Network Address Translator (NAT) boundary.”

Ex. 1022, codes (54), (57).

In Wing’s address management scheme, “[a] device operating in the private network sends a communication to a Simple Traversal of User Datagram Protocol (UDP) Through Network Address Translators (NATs) (STUN) server” and “[t]he STUN server responds by communicating a public NAT IP address and an NAT port number back to the device.”

Ex. 1022 ¶ 9. According to Wing, the device “provides the NMS with the public NAT IP address, an NAT port number associated with the device, a unique device identifier, and the private device IP address.” *Id.* The NMS stores the information from the device in a table and then accesses it to manage the device in the private network. *Id.* “The device then uses the STUN server to identify any changes to the device address information and then sends the changes to the NMS.” *Id.*

Wing further describes its NMS in Figure 2A, which is reproduced below.

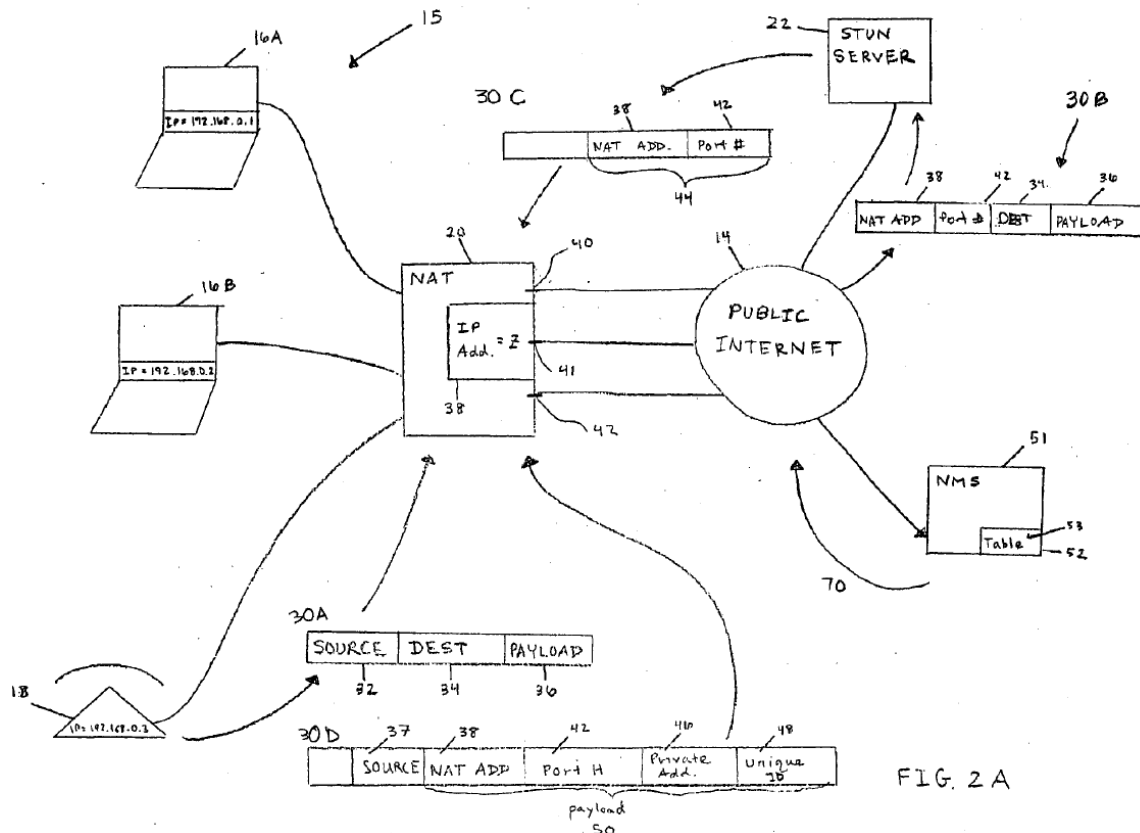


FIG. 2A

Figure 2A depicts NMS 51, which includes a table 52 and manages devices 16A, 16B, and 18 in a private network 15 behind NAT 20. Ex. 1022 ¶ 22. The devices 16A, 16B, and 18 utilize STUN to ensure that the information in table 52 is adequate for the NMS 51 to manage the devices 16A, 16B and 18, and automatically update table 52 with any local address changes. *Id.*

6. Overview of Jaye

Jaye is titled “Dual/blind Identification,” and describes “systems and methods for monitoring and measuring the interests of a user viewing content on a computer network, in particular on multiple servers in an

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

enterprise network, while protecting the privacy of the user.” Ex. 1026, code (54), 1:10–14.

Jaye describes a process for compiling anonymously a global user profile from local user profiles generated by local servers. Ex. 1026, 2:12–15. The process uses a computer network with at least one local server in communication with an enterprise server. *Id.* at 2:15–17. The local server is “in communication with the user via a communication channel wherein the local server assigns a local ID for the user during the first access by the user to the local server.” *Id.* at 2:65–3:1. The local server “communicates to the enterprise server the local ID of the user and a local user profile based on user interaction with the local server.” *Id.* at 2:18–21. The enterprise server assigns a global ID to the user, links the user’s local ID to the global ID, and records the information about the local user in a database. *Id.* at 2:21–24. The information about the local user may be used to form a global interest profile of the user, and the global interest profiles between different users may be compared. *Id.* at 2:50–52, 3:6–9.

7. *Overview of Howcroft*

Howcroft is titled “System and Method for Single Sign on Targeted Advertising,” and discloses a method for sending targeted advertising data and a system and computer program for performing the method. Ex. 1016, codes (54), (57).

Howcroft describes a method of Single Sign On (“SSO”) targeted advertising in which the SSO end user is a triple play network subscriber. Ex. 1016, ¶ 22. The triple play network may include an IPTV network, VoIP network, cellular phone network, and Internet service provider

network. *Id.* The subscriber is assigned an identifier that may be used with a targeted advertising management system (“TAMS”). *Id.* The TAMS may be used to select advertisements to be sent to the subscriber on the triple play network based on a shopping list the subscriber inputs, recent internet search information, other internet activity such as visited uniform resource indicators (URIs), anonymous reverse look-up of telephone numbers dialed in the VoIP or cellular telephone system, or chat message text from the devices using the triple play network. *Id.* ¶¶ 22, 26, 30.

Howcroft’s Figure 2 is reproduced below.

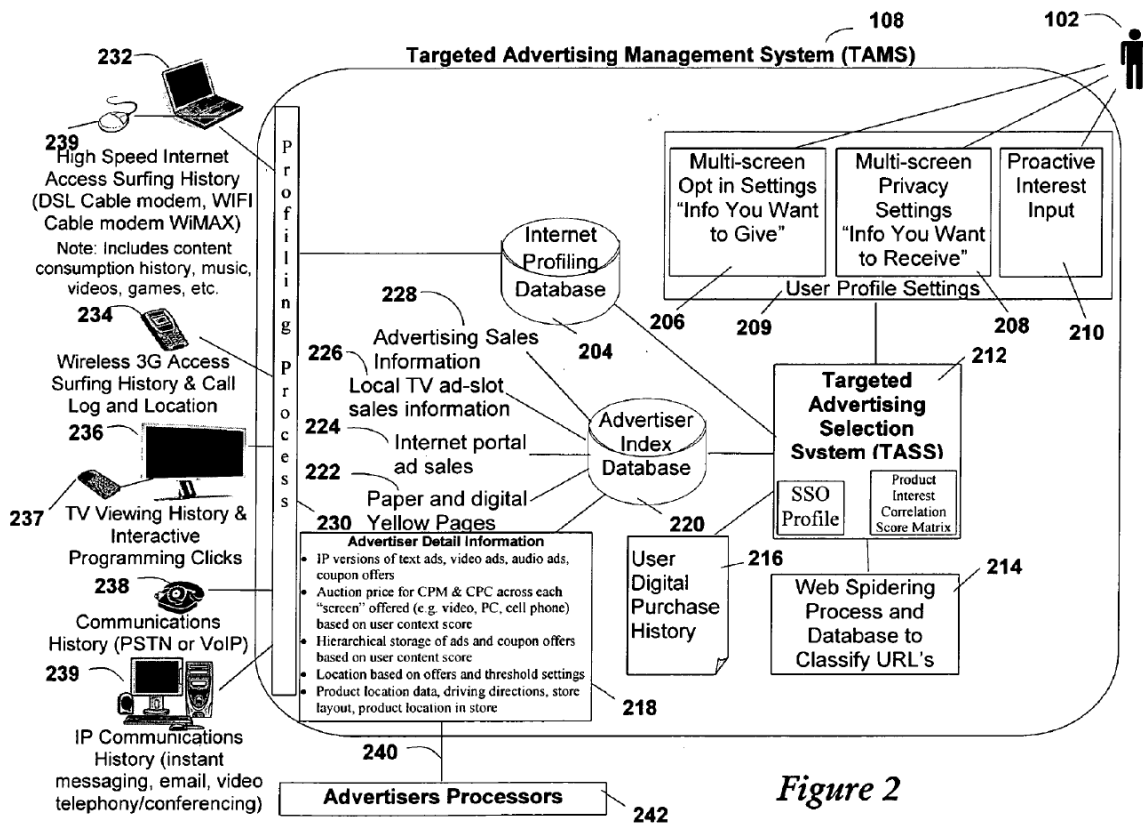


Figure 2

Howcroft’s Figure 2 is a block diagram of system components in a targeted advertising system. Ex. 1016 ¶ 5. The system components in the targeted advertising system in Figure 2 include the TAMS 108; various end user

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

devices such as telephones 238, remote controls for television viewing selections and interactive programming clicks or menu selections 236, cell phones 234 for accessing the Internet and calling, and personal computers/laptop computers and other IP devices 232; and an advertiser processor 242. *Id.* ¶¶ 35, 39, 45.

An internet profiling process 230 monitors the SSO subscriber's end user device data, such as outgoing calls, telephone numbers called, Internet access surfing history, content consumption, music, videos and games, IM, text messaging, chatting, and locations, and stores it in an internet profiling database. Ex. 1016, ¶ 39. The system accesses an advertisements database 220 in the TAMS 108 to select a targeted advertisement to send to the SSO subscriber based on a product interest correlation score ("PICS"). *Id.* ¶ 35. The TAMS 108 automatically calculates the PICS and "recommends and/or selects an advertisement, SSO end user device and advertisement modality to be used to send a selected advertisement to a selected SSO subscriber end user device based on the SSO subscriber's current usage scenario," such as the subscriber's current end user device, location, and activity. *Id.*; *see also id.* ¶¶ 48–49.

8. *Overview of Smith*

Smith is titled "System and Method for Profiling Different Users Having a Common Computer Identifier," and discloses methods and systems for "tracking user activity at a terminal on a communication network" and for "generating user profiles based on user activity" at a communication terminal. Ex. 1021, code (54), ¶ 1.

Smith describes methods of tracking and differentiating user activity by analyzing cookies, user activity during a browse period, timing of browse periods, and channel views to create individual user profiles. Ex. 1021, ¶¶ 6, 15–16, 34. According to Smith, “[i]n previously known systems, systems for generating user profiles used the cookie data to recognize a client device that has subsequent communication sessions with the content communication site.” *Id.* ¶ 35. However, such systems are limited because “they do not evaluate the user activity data to determine whether the user activity comports with a user profile associated with the client device” such that “the analysis done on the user activity is used to alter the user profile history and that affects its accuracy.” *Id.*

Smith’s system analyzes user terminal activity data to extract profile data (e.g., identifiers for requested resources), personal data from returned forms (e.g., campaign responses), terminal identifiers (e.g., cookie data and IP addresses), site identifiers (e.g., web site addresses, metadata, identifiers for pages and other resources browsed by the user), identifiers for data objects clicked by the user, items purchased by the user, and other data that may be used to identify preferences of a user. Ex. 1021, ¶ 38. Smith’s system provides these data to a user identifier and the user identifier searches the data to locate keys or indices. *Id.* Keys are data that identify the terminal or account from or through which the user accesses the communication network to which Smith’s system is coupled. *Id.* The user identifier uses the keys to find existing user profiles. *Id.* Smith’s system uses the user profile data to select content for inclusion in responses and other documents sent to a client. *Id.* ¶39.

9. *Overview of Middeljans*

Middeljans is titled “Arrangement for Distributing Content, Profiling Center, Receiving Device and Method,” and discloses “an arrangement for distributing content, and to a profiling center and a receiving device for use in such an arrangement.” Ex. 1023, code (54), ¶ 1.

Middeljans describes an arrangement comprising an aggregator, a receiving device, a profile transmitting means, and a profiling center. Ex. 1023, ¶ 8. The aggregator is arranged for bundling content according to a segment profile and distributing the content to the receiving device. *Id.* The receiving device comprises “user profile maintenance means for maintaining a user profile.” *Id.* The profile transmitting means transmits the user profile to a profiling center, which is “arranged for aggregating user profiles received from plural receiving devices into an aggregated profile, and for making the aggregated profile available to the aggregator for use as the segment profile.” *Id.* “The profiling center can correlate the user profiles for the consumers who listened, watched, and/or bought the content, and thereby can create enhanced profiles for these consumers” and create and maintain highly accurate consumer segment profiles. *Id.* ¶¶ 8–9. The user profiles may be used for targeting marketing campaigns, broadcasting decisions, content formatting, and other applications. *Id.* ¶¶ 47–51, 54.

10. *Overview of Koningstein*

Koningstein is titled “System and Method for Delivering Internet Advertisements that Change Between Textual and Graphical Ads on Demand by a User,” and discloses systems and methods of “providing unobtrusive, expandable advertisements over the Internet” and delivering “a

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

morphing advertisement that changes from one display format to another display format based on user request.” Ex. 1024, code (54), ¶ 2.

Koningstein describes morphing advertisements in response to selection of an expansion icon, selection in a frame box, a market on the side, below[,] or above the advertisement, selecting or roll over selected portions or highlights of the advertisement, simple “pass over” of the text related to the ad, [and] other forms of user-initiated and controlled actions or other conditions.

Ex. 1024, ¶ 22. Koningstein also describes monitoring user manipulations and timing of advertisements so that advertisement hosts can determine advertisement creative quality and to improve advertisement targeting quality. *Id.* ¶ 40. According to Koningstein, advertisement hosts can use information about user responses to advertisements “as a criterion for determining whether or not to show a particular advertiser’s advertisement.” *Id.* ¶ 39.

Koningstein also includes an embodiment of a system for receiving and delivering morphing and menu-driven advertisements. In Koningstein’s system, advertisement providers connect to an advertisement listings provider over a network to register and provide payment information, one or more price parameters (e.g., an amount an advertiser is willing to pay for each click, bid amount, price information, or other measure of price), and advertisements associated with the price parameters. Ex. 1024, ¶ 44. The advertisement listings provider distributes the listings to pages displayed to end users through various forums or feeds, including direct distribution in print media, providing the listings on one or more web sites affiliated with the advertisement listings provider, internet advertising distribution partners, content systems, and search engine systems. *Id.* The advertisement listings

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

provider generally generates revenue when end users complete performance parameters or some other monetization events relevant to an advertisement such that the advertising system can charge a price parameter selected by the participating advertisement providers. *Id.* ¶ 48.

11. Overview of Banga '633

Banga '633 is titled “Systems and Methods of Network Operation and Information Processing, Including Data Acquisition, Processing and Provision and/or Interoperability Features,” and discloses “systems and methods for network operation, information gathering and processing, and targeted content delivery including business models and/or advertising methodologies.” Ex. 1025, code (54), ¶ 12.

Banga '633 describes a system, apparatus, and method for targeted content delivery that comprises registering users logging-on to a computer network or any form of IP network and gathering user-related information from users, such as location information. Ex. 1025, ¶ 13. The “[l]ocation-centric information for each user logged-on to the network is relayed to a server, and user-profile information for each user is retrieved from a database” and “processed to get targeting information for each user.” *Id.* “[T]he targeting information is sent to a content-provider wherein the content-provider uses the targeting information to select content to be displayed to users.” *Id.*

12. Analysis of Claims 1–152

Petitioner argues that (1) the combination of Baig, Costa, and Banga '690 teaches the limitations recited in claims 1–5, 7–9, 12, 15, 17, 18, 21, 22, 24, 26–28, 31, 32, 34–40, 42, 44–48, 52–58, 61–65, 68, 69, 71–80, 83,

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

84, 86–88, 91, 94, 96, 97, 100, 101, 103, 106–110, 114–119, 121, 122, 125, 128–131, 134, 135, 137–148, 151, and 152; (2) the combination of Baig, Costa, Zwicky and Cox teaches the limitations recited in claims 11 and 90; (3) the combination of Baig, Costa, Banga '690 and Cox teaches the limitations recited in claims 11 and 90; (4) the combination of Baig, Costa, Zwicky, Cox, and Han teaches the limitations recited in claims 13, 14, 16, 92, 93, and 95; (5) the combination of Baig, Costa, Cox, Han, and Banga '690 teaches the limitations recited in claims 13, 14, 16, 92, 93, and 95; (6) the combination of Baig, Costa, Zwicky, and Leigh teaches the limitations recited in claims 17, 19, 20, 96, 98, and 99; (7) the combination of Baig, Costa, Banga '690, and Leigh teaches the limitations recited in claims 17, 19, 20, 96, 98, and 99; (8) the combination of Baig, Costa, Zwicky, and Wing teaches the limitations recited in claims 54, 75, 116, 141; (9) the combination of Baig, Costa, Banga '690, and Wing teaches the limitations recited in claims 54, 75, 116, 141; (10) the combination of Baig, Costa, Banga '690, and Jaye teaches the limitations recited in claims 41, 105, 127; (11) the combination of Baig, Costa, Zwicky, and Howcroft teaches the limitations recited in claims 6, 8–10, 21, 23, 32, 51, 55, 59, 60, 67, 76, 81, 82, 85, 87–89, 100, 102, 113, 117, 120, 123, 124, 126, 133, 142, 145, 149, and 150; (12) the combination of Baig, Costa, Banga '690, and Howcroft teaches the limitations recited in claims 6, 8–10, 21, 23, 32, 51, 55, 59, 60, 67, 76, 81, 82, 85, 87–89, 100, 102, 113, 117, 120, 123, 124, 126, 133, 142, 145, 149, and 150; (13) the combination of Baig, Costa, Banga '690, and Smith teaches the limitations recited in claims 49, 50, 66, 70, 111, 112, 132, and 136; (14) the combination of Baig, Costa, Zwicky, and Middeljan

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

teaches the limitations recited in claim 33; (15) the combination of Baig, Costa, Banga '690, and Middeljan teaches the limitations recited in claims 25, 29, 33, and 104; (17) the combination of Baig, Costa, Bangs '690, Middeljans, and Koningstein teaches the limitations recited in claims 30 and 43; and (18) the combination of Baig, Costa, Banga '690 and Banga '633 teaches the limitations recited in claims 50, 70, 112, and 136 and that a person having ordinary skill in the art would have combined the teachings with a reasonable expectation of success. Pet. 6–73; 422Pet. 6–72.

Petitioner's arguments are supported by citations to the prior art and the testimony of Mr. Lett. *See* Pet. 6–73; 422Pet. 6–72. We have reviewed Petitioner's arguments and evidence, agree with them, and, therefore, adopt Petitioner's arguments and evidence as our own.

Patent Owner does not separately address those claims. *See* PO Resp.; 422PO Resp. Instead, Patent Owner only relies on the arguments discussed above for claim 1. *See* PO Resp.; 422PO Resp. For the same reason as discussed above in Section II.D.4(b), we do not agree with Patent Owner's arguments regarding the reason to combine the references.

Accordingly, Petitioner has shown by a preponderance of the evidence that (1) the subject matter of claims 1–5, 7–9, 12, 15, 17, 18, 21, 22, 24, 26–28, 31, 32, 34–40, 42, 44–48, 52–58, 61–65, 68, 69, 71–80, 83, 84, 86–88, 91, 94, 96, 97, 100, 101, 103, 106–110, 114–119, 121, 122, 125, 128–131, 134, 135, 137–148, 151, and 152 would have been obvious over the combination of Baig, Costa, and Banga '690; (2) the subject matter of claims 11 and 90 would have been obvious over the combination of Baig, Costa, Zwicky and Cox; (3) the subject matter of claims 11 and 90 would

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

have been obvious over the combination of Baig, Costa, Banga '690 and Cox; (4) claims 13, 14, 16, 92, 93, and 95 would have been obvious over the combination of Baig, Costa, Zwicky, Cox, and Han; (5) claims 13, 14, 16, 92, 93, and 95 would have been obvious over the combination of Baig, Costa, Banga '690, Cox, and Han; (6) claims 17, 19, 20, 96, 98, and 99 would have been obvious over the combination of Baig, Costa, Zwicky, and Leigh; (7) claims 17, 19, 20, 96, 98, and 99 would have been obvious over the combination of Baig, Costa, Banga '690, and Leigh; (8) claims 54, 75, 116, 141 would have been obvious over the combination of Baig, Costa, Zwicky, and Wing; (9) claims 54, 75, 116, 141 would have been obvious over the combination of Baig, Costa, Banga '690, and Wing; (10) claims 41, 105, 127 would have been obvious over the combination of Baig, Costa, Banga '690, and Jaye; (11) claims 6, 8–10, 21, 23, 32, 51, 55, 59, 60, 67, 76, 81, 82, 85, 87–89, 100, 102, 113, 117, 120, 123, 124, 126, 133, 142, 145, 149, and 150 would have been obvious over the combination of Baig, Costa, Zwicky, and Howcroft; (12) claims 6, 8–10, 21, 23, 32, 51, 55, 59, 60, 67, 76, 81, 82, 85, 87–89, 100, 102, 113, 117, 120, 123, 124, 126, 133, 142, 145, 149, and 150 would have been obvious over the combination of Baig, Costa, Banga '690, and Howcroft; (13) claims 49, 50, 66, 70, 111, 112, 132, and 136 would have been obvious over the combination of Baig, Costa, Banga '690, and Smith; (14) claim 33 would have been obvious over the combination of Baig, Costa, Zwicky, and Middeljan; (15) claims 25, 29, 33, and 104 would have been obvious over the combination of Baig, Costa, Banga '690, and Middeljan; (16) claims 30 and 43 would have been obvious over the combination of the combination of Baig, Costa, Bangs '690,

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

Middeljans, and Koningstein; and (17) claims 50, 70, 112, and 136 would have been obvious over the combination of Baig, Costa, Banga '690 and Banga '633.

F. Sua Sponte Striking Section II of Petitioner's Reply Claim Construction Brief

Our order allowing post-hearing claim construction briefing stated that “[t]he parties may not address any issues besides claim construction.” Paper 38, 1. Despite that order, Section II of Petitioner’s Reply Claim Construction Brief addresses obviousness under Patent Owner’s proposed construction. *See* Pet. Reply Post-hearing Br. 2–3 (Titled: “The Petition’s Obviousness Theory Renders Claims 121 and 146 Obvious Even Under Patent Owner’s Improper Construction.”). Because the section is in violation of our order, we *sua sponte* strike that section. *See* 37 C.F.R. § 42.12.

III. CONCLUSION²⁷

For the foregoing reasons, we conclude that Petitioner has demonstrated by a preponderance of the evidence the unpatentability of claims 1–152 of the '260 patent.

²⁷ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

IPR2024-00421
 IPR2024-00422
 Patent 7,861,260 B2

Additionally, because Section II of Petitioner’s Reply Claim Construction Brief violated our order providing for post-hearing briefing, we *sua sponte* strike that section.

In summary:

IPR2024-00421

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1–5, 7, 12, 15, 17, 22, 26–28, 37, 38, 44, 54, 56–58, 61, 62, 71–75, 77–80, 83, 84, 86, 91, 94, 96, 101, 106, 116, 118, 119, 125, 128, 137–141, 143, 144, 148, 151, 152	103(a)	Baig, Costa, Zwicky	1–5, 7, 12, 15, 17, 22, 26–28, 37, 38, 44, 54, 56–58, 61, 62, 71–75, 77–80, 83, 84, 86, 91, 94, 96, 101, 106, 116, 118, 119, 125, 128, 137–141, 143, 144, 148, 151, 152	
1–5, 7, 12, 15, 17, 18, 22, 26–28,	103(a)	Baig, Costa, Banga ’690	1–5, 7, 12, 15, 17, 18, 22, 26–28, 35–38, 44, 54, 56–58, 61, 62, 71–75,	

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
35–38, 44, 54, 56–58, 61, 62, 71–75, 77–80, 83, 84, 86, 91, 94, 96, 97, 101, 106, 116, 118, 119, 125, 128, 137–141, 143, 144, 148, 151, 152			77–80, 83, 84, 86, 91, 94, 96, 97, 101, 106, 116, 118, 119, 125, 128, 137–141, 143, 144, 148, 151, 152	
11, 90	103(a)	Baig, Costa, Zwicky, Cox	11, 90	
11, 90	103(a)	Baig, Costa, Banga '690, Cox	11, 90	
13, 14, 16, 92, 93, 95	103(a)	Baig, Costa, Zwicky, Cox, Han	13, 14, 16, 92, 93, 95	
13, 14, 16, 92, 93, 95	103(a)	Baig, Costa, Cox, Han, Banga '690	13, 14, 16, 92, 93, 95	
17, 19, 20, 96, 98, 99	103(a)	Baig, Costa, Zwicky, Leigh	17, 19, 20, 96, 98, 99	
17, 19, 20, 96, 98, 99	103(a)	Baig, Costa, Banga '690, Leigh	17, 19, 20, 96, 98, 99	
54, 75, 116, 141	103(a)	Baig, Costa, Zwicky, Wing	54, 75, 116, 141	

IPR2024-00421
 IPR2024-00422
 Patent 7,861,260 B2

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
54, 75, 116, 141	103(a)	Baig, Costa, Banga '690, Wing	54, 75, 116, 141	
41, 105, 127	103(a)	Baig, Costa, Banga '690, Jaye	41, 105, 127	
Overall Outcome			1-5, 7, 11-20, 22, 26-28, 35-38, 41, 44, 54, 56-58, 61, 62, 71-75, 77-80, 83, 84, 86, 90-99, 101, 105, 106, 116, 118, 119, 125, 127, 128, 137-141, 143, 144, 148, 151, 152	

IPR2024-00422

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1, 8, 9, 21, 24, 26, 31, 32, 34, 38, 39, 42, 53, 55, 61, 69, 76, 87, 88, 100, 103, 117, 121, 122,	103(a)	Baig, Costa, Zwicky	1, 8, 9, 21, 24, 26, 31, 32, 34, 38, 39, 42, 53, 55, 61, 69, 76, 87, 88, 100, 103, 117, 121, 122, 135, 142, 145-147	

IPR2024-00421
 IPR2024-00422
 Patent 7,861,260 B2

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
135,142, 145-147				
1, 8, 9, 21, 24, 26, 31, 32, 34, 38-40, 42, 45-48, 52, 53, 55, 61, 63-65, 68, 69, 76, 87, 88, 100, 103, 107-110, 114, 115, 117, 121, 122, 129-131, 134, 135, 142, 145-147	103(a)	Baig, Costa, Banga '690	1, 8, 9, 21, 24, 26, 31, 32, 34, 38-40, 42, 45-48, 52, 53, 55, 61, 63-65, 68, 69, 76, 87, 88, 100, 103, 107-110, 114, 115, 117, 121, 122, 129-131, 134, 135, 142, 145-147	
6, 8-10, 21, 23, 32, 51, 55, 59, 60, 67, 76, 81, 82, 85, 87-89, 100, 102, 113, 117, 120, 123,	103(a)	Baig, Costa, Zwicky, Howcroft	6, 8-10, 21, 23, 32, 51, 55, 59, 60, 67, 76, 81, 82, 85, 87-89, 100, 102, 113, 117, 120, 123, 124, 126, 133, 142, 145, 149, 150	

IPR2024-00421
 IPR2024-00422
 Patent 7,861,260 B2

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
124,126, 133, 142, 145, 149, 150				
6, 8–10, 21, 23, 32, 51, 55, 59, 60, 67, 76, 81, 82, 85, 87–89, 100, 102, 113, 117, 120, 123, 124, 126, 133, 142, 145, 149, 150	103(a)	Baig, Costa, Banga '690, Howcroft	6, 8–10, 21, 23, 32, 51, 55, 59, 60, 67, 76, 81, 82, 85, 87–89, 100, 102, 113, 117, 120, 123, 124, 126, 133, 142, 145, 149, 150	
49, 50, 66, 70, 111, 112, 132, 136	103(a)	Baig, Costa, Banga '690, Smith	49, 50, 66, 70, 111, 112, 132, 136	
33	103(a)	Baig, Costa, Zwicky, Middeljans	33	
25, 29, 33, 104	103(a)	Baig, Costa, Banga '690, Middeljans	25, 29, 33, 104	
30, 43	103(a)	Baig, Costa, Banga '690, Middeljans, Koningstein	30, 43	
50, 70, 112, 136	103(a)	Baig, Costa, Banga '690, Banga '633	50, 70, 112, 136	
Overall Outcome			1, 6, 8–10, 21, 23–26, 29–34,	

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
			38–40, 42, 43, 45–53, 55, 59–61, 63–70, 76, 81, 82, 85, 87–89, 100, 102–104, 107–115, 117, 120–124, 126, 129–136, 142, 145–147, 149, 150	

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, Petitioner has shown by a preponderance of the evidence that claims 1–152 of the '260 patent are unpatentable;

FURTHER ORDERED that Section II of Petitioner's Reply Claim Construction Brief is stricken from the record; and

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.

IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

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IPR2024-00421
IPR2024-00422
Patent 7,861,260 B2

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