

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

FLYPSI, INC. (D/B/A FLYP),
Patent Owner.

Case No. IPR2023-00359
U.S. Patent No. 11,012,554

**PATENT OWNER FLYPSI, INC.'S
NOTICE OF APPEAL**

Pursuant to 35 U.S.C. §§ 141(c) and 319 and 37 C.F.R. § 90.2(a), Patent Owner Flypsi, Inc. hereby provides notice that it appeals to the United States Court of Appeals for the Federal Circuit from the Final Written Decision entered July 26, 2024, (Paper No. 33), and from all underlying orders, decisions, rulings, and opinions relating to U.S. Patent No. 11,012,554 set forth in Inter Partes Review IPR2023-00359.

In accordance with 37 C.F.R. § 90.2(a)(3)(ii), the issues on appeal include, but are not limited to:

- The Board’s determination that claims 1, 2, and 4 are unpatentable as obvious under 35 U.S.C. § 103 based on Backhaus and Taylor;
- The Board’s determination that claim 3 is unpatentable as obvious under 35 U.S.C. § 103 based on Backhaus, Saksena, and Taylor;
- The Board’s determinations underlying the above findings, including that Backhaus teaches “automatically transmitting information that indicates an access telephone number to the mobile device via a data channel” as claimed, the Board’s decision not to construe “data channel,” that a person of ordinary skill in the art would be motivated to combine Backhaus and Taylor, and that Taylor’s PSTN interface qualifies as the claimed “switch”;

- The Board's improper consideration of arguments and evidence outside the scope of the Petition and arguments not supported by evidence in the record;
- Any other issues decided adversely to Patent Owner in an order, decision, ruling, or opinion underlying or supporting the Board's final written decision.

A copy of the decision being appealed is attached to this Notice.

Pursuant to 35 U.S.C. § 142 and 37 C.F.R. § 90.2(a), this Notice is being filed with the Director of the United States Patent and Trademark Office, and a copy of this Notice is being concurrently filed with the Patent Trial and Appeal Board. In addition, a copy of this Notice and the required docketing fees are being filed with the Clerk's Office for the United States Court of Appeals for the Federal Circuit via CM/ECF.

Dated: September 27, 2024

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing PATENT OWNER FLYPSI, INC.'S NOTICE OF APPEAL was served electronically via email on September 27, 2024, in its entirety on the following counsel of record:

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
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FLYPSI, INC. (D/B/A FLYP),
Patent Owner.

IPR2023-00359
Patent 11,012,554 B2

Before ROBERT J. WEINSCHENK, JAMES J. MAYBERRY, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

MAYBERRY, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Google LLC (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–4 (the “Challenged Claims”) of U.S. Patent No. 11,012,554 B2 (Ex. 1001, the “’554 patent”). Paper 1 (“Pet.”), 1. Flypsi, Inc. (“Patent Owner”) owns the ’554 patent. Paper 12, 2.

For the reasons provided below, we conclude that Petitioner has proven, by a preponderance of the evidence, that all of the Challenged Claims are unpatentable.

A. *Procedural History*

Upon review of the Petition, Preliminary Patent Owner Response (Paper 6), Petitioner’s Preliminary Reply (Paper 7), and Patent Owner’s Preliminary Sur-reply (Paper 8), and evidence in the record, we instituted an *inter partes* review proceeding on all challenges in the Petition. Paper 9 (“Inst. Dec.”); *see* 37 C.F.R. § 42.108(a) (“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”).

Patent Owner filed a Response to the Petition. Paper 21 (“PO Resp.”). Petitioner filed a Reply to the Patent Owner Response. Paper 24 (“Pet. Reply”). Patent Owner filed a Sur-reply to the Reply. Paper 26 (“PO Sur-reply”).

An oral hearing was held on May 7, 2024, and a transcript is included in the record. Paper 32 (“Tr.”).

B. *Real Parties-in-Interest*

Petitioner identifies Google LLC as the real party-in-interest. Pet. 1. Patent Owner identifies itself as the real party-in-interest. Paper 12, 2.

C. Related Matters

The parties each identify the following litigations as matters related to the '554 patent: *Flypsi, Inc., (d/b/a Flyp) v. Google, LLC*, No. 6:22-cv-00031 (W.D. Tex.); *Flypsi, Inc. (d/b/a Flyp) v. Dialpad, Inc.*, No. 6:21-cv-00642 (W.D. Tex.). The parties also indicate that patents related to the '554 patent are the subject of petitions for *inter partes* review in IPR2022-01048, IPR2022-01049, IPR2022-01050, IPR2022-01051, IPR2023-00357, IPR2023-00358, IPR2023-00360, and IPR2023-00361. Pet. 2; Paper 12, 2–3.

D. The '554 Patent

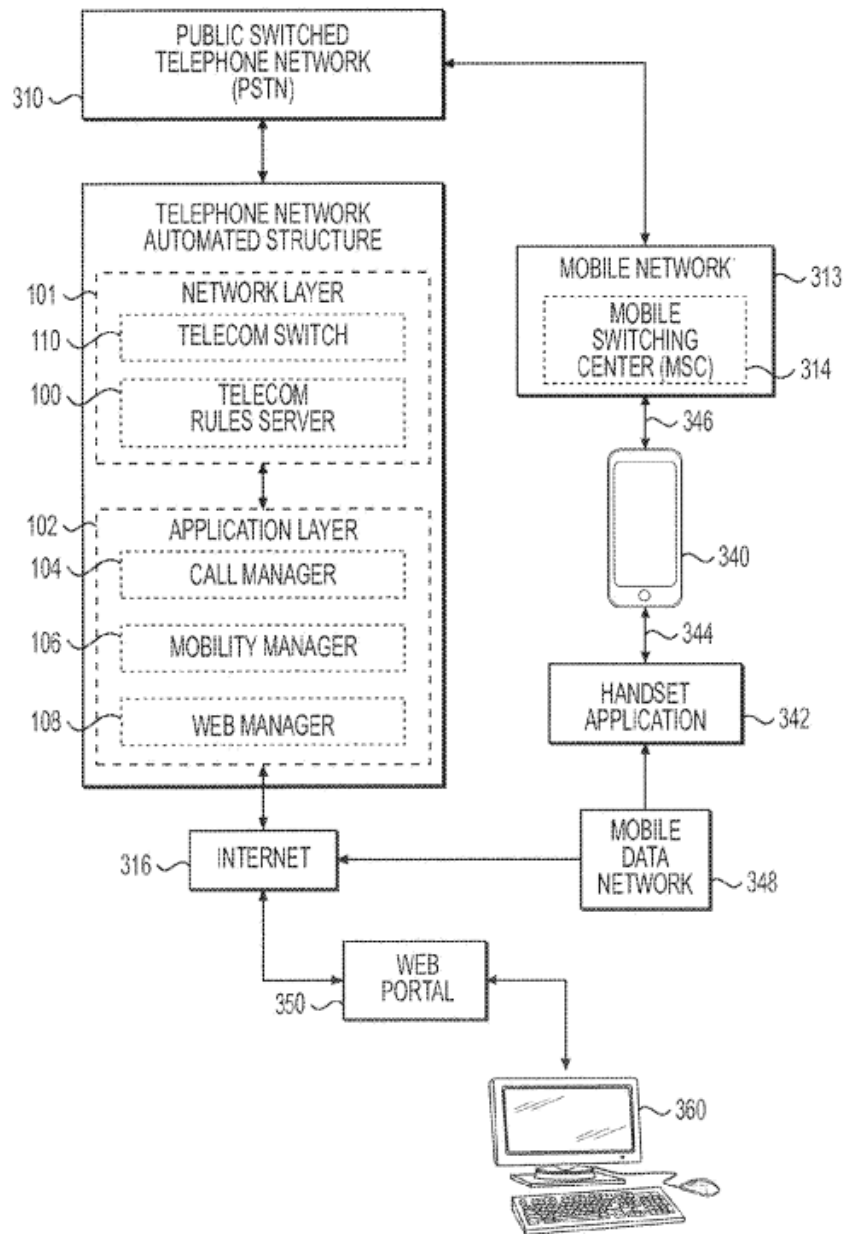
The '554 patent, titled “Telephone Network System and Method,” issued May 18, 2021, from application US 17/039,566. Ex. 1001, codes (54), (45), (21). The '554 patent ultimately claims priority to application, US 13/944,853, filed on July 17, 2013. *Id.* at code (60).

The '554 patent relates to “[s]ystems for and methods of delivering telephone calls using the combination of a data channel and a voice channel.” Ex. 1001, Abstract. “A data channel connection with the telephone handset may provide pre-call information used to set up incoming and outgoing calls which are ultimately connected using a voice channel,” and “[u]se of the pre-call information may permit the same handset to be associated with multiple secondary telephone numbers from which calls appear to have been made and to which calls appear to have been placed.” *Id.*

The '554 patent “permits the user to select one or more secondary telephone numbers to be referenced to a primary telephone number.” Ex. 1001, 5:8–13. A “bridge telephone number” may be “assign[ed] . . . to

be used to connect the call from the handset 340 to the switch 110 and send pre-call information including the bridge telephone number to the handset via the data channel.” *Id.* at 7:61–65. “The bridge telephone number may be associated with the switch 110, and calls to the bridge telephone number may be automatically routed to this switch.” *Id.* at 7:66–8:1. The bridge telephone number is associated “with the primary telephone number for the handset 340, the secondary telephone number selected for the call, and the contact telephone number to be called.” *Id.* at 8:4–7. The ’554 patent allows “the secondary telephone number to be displayed as the number from which the call appears to have been placed.” *Id.* at 8:35–43.

Figure 3, reproduced below, illustrates “data channel and voice channel connections used to provide telephone service.” Ex. 1001, 3:62–64.



As shown, an “incoming call is routed from the caller’s telephone to the PSTN 310,” and “over the PSTN 310 to the switch 110.” Ex. 1001, 6:1–3. Then, “call Manager 104 may assign or look up a bridge telephone number to be used for completion of the call,” and the “bridge telephone number may be associated with the switch 110, and calls to the bridge

telephone number may be automatically routed to this switch.” *Id.* at 6:10–15. Call information, including “the assigned/looked up bridge telephone number” is transmitted “via the data channel connection, i.e., over the Internet 316 and the Mobile Data Network 348.” *Id.* at 6:44–48. The ’554 patent differentiates between “IP governed communications . . . conducted over a ‘data channel,’” and “CDMA, GSM or like governed communications, when used to carry voice information . . . conducted over a ‘voice channel.’” *Id.* at 4:46–57.

E. Challenged Claims

The Petition challenges claims 1–4. Pet. 3–4. Claim 1 is the sole independent claim, which we reproduce below.

1. A method of providing telephone service, comprising:
 - automatically storing electronic information that indicates an association of a secondary telephone number and a primary telephone number with a mobile device in a computer memory associated with a server;
 - automatically transmitting information that indicates an access telephone number to the mobile device via a data channel;
 - automatically associating the telephone access number with a switch associated with the server;
 - receiving, at the switch associated with the server, an outgoing call from the mobile device to the access telephone number via a second channel;
 - receiving, at the server, information from the switch indicating the outgoing call is being made to the access telephone number from the primary telephone number; and
 - receiving, at the switch, information from the server directing the switch to:
 - (a) connect the outgoing call to a contact telephone number indicated by the mobile device, and
 - (b) identify a telephone number from which the outgoing call is being made as the secondary telephone number.

Ex. 1001, 10:10–33.

F. Prior Art and Asserted Grounds

Petitioner asserts that the Challenged Claims are unpatentable based on four grounds:

Claims Challenged	35 U.S.C. §	References/Basis
1, 2, 4	102 ¹	Backhaus ²
3	103	Backhaus, Saksena ³
1, 2, 4	103	Backhaus, Taylor ⁴
3	103	Backhaus, Saksena, Taylor

Pet. 3–4.

Petitioner also relies on the declaration testimony of Dr. Lin. Ex. 1002; *see also* Ex. 1003 (providing Dr. Lin’s Curriculum Vitae). Patent Owner’s relies on the declaration testimony of Dr. Akl to support its responsive arguments. Ex. 2010.

The following subsections provide brief descriptions of the asserted prior art references.

1. Backhaus (Ex. 1005)

Backhaus, titled “System and Method for Provision of a Second Line Service to a Telecommunications Device Using Mixed Protocols,” published November 7, 2013, from application US 13/920,056, filed June 17, 2013.

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 296–07 (2011), took effect on September 16, 2011. The changes to 35 U.S.C. §§ 102 and 103 in the AIA do not apply to any patent application filed before March 16, 2013. Because the earliest possible priority date for the ’554 patent is after March 16, 2013, we refer to the AIA version of the statute.

² US 2013/0295892; published Nov. 7, 2013 (Ex. 1005, “Backhaus”).

³ US 2006/0077956; published Apr. 13, 2006 (Ex. 1008, “Saksena”).

⁴ US 2009/0052437; published Feb. 26, 2009 (Ex. 1007, “Taylor”).

Ex. 1005, codes (54), (43), (21), (22). The application claims priority to a parent application, US 13/466,074, filed May 7, 2012, and to a provisional application, US 61/660,772, filed June 17, 2012. *Id.* at codes (63), (60).

Backhaus relates generally to “routing calls between a third party telecommunications device (‘TD) and a subscriber TD associated with a primary service and a second line service (“SLS”).” Ex. 1005, code (57) (Abstract). We reproduce Backhaus’s Figure 1, below, as annotated by Petitioner.

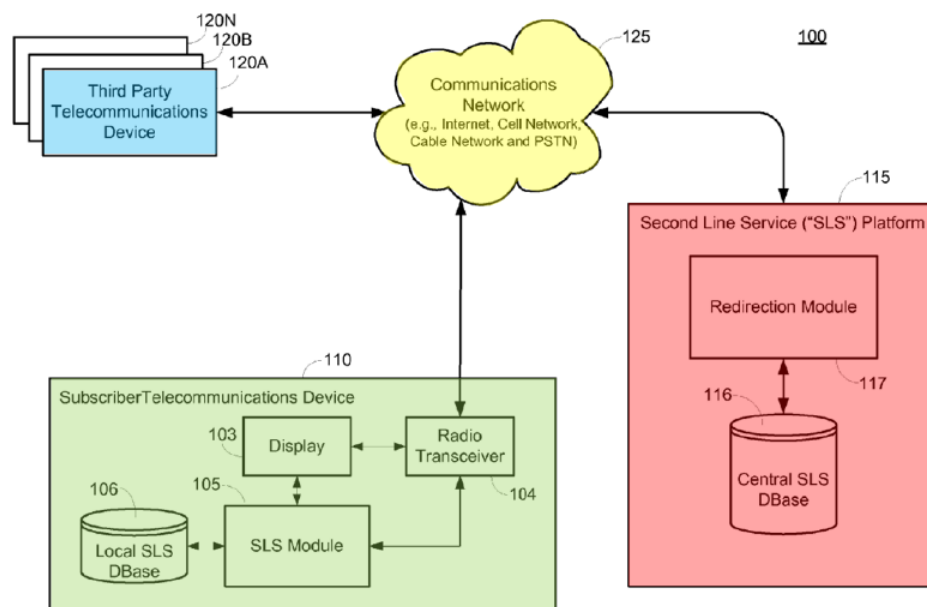


FIG. 1

Pet. 10. Backhaus’s Figure 1 depicts “a system for providing a second line service . . . to a user of telecommunications device,” with Petitioner annotating the figure by coloring sections of the system. *Id.*; Ex. 1005 ¶ 17. A subscriber TD 110 (in green in the figure above) is associated with a primary phone number provided by a telephone service provider and a secondary phone number provided by SLS platform 115. Ex. 1005 ¶ 32.

In operation, calls placed to the primary or secondary phone number from third party TD 120 (in blue in the figure above) to subscriber TD 110 are routed through communications network 125 (in yellow in the figure above), for example, a cellular network, PSTN, cable network, or the Internet. Ex. 1005 ¶ 32. A call made to the primary phone number is routed directly to subscriber TD 110. *Id.* ¶ 33. A call made to the secondary, or SLS, number is routed to SLS platform 115 (red in the figure above). At SLS platform 115, redirection module 117 queries central SLS database 116 to determine the subscriber TD associated with the secondary phone number called by the third party. Once this determination is made, redirection module 117 modifies the call data to reflect its identification as a call for the second line number and then makes the call available at the primary number associated with subscriber TD 110 associated with the called secondary phone number.

2. *Saksena (Ex. 1008)*

Saksena, titled “Common Telephony Services to Multiple Devices Associated with Multiple Networks,” published April 13, 2006, from application US 10/961,387, filed October 8, 2004. Ex. 1008, codes (54), (43), (21), (22). Saksena “relates to common telephony services to multiple devices associated with multiple networks.” *Id.* ¶ 1. Relevant to this proceeding, Saksena discloses CDMA and GSM as standard forms of cellular communication. *See, e.g.*, Ex. 1008 ¶ 80 (“The networks 110c and 110e are cellular phone networks that use cellular phone technology (e.g., based on a CDMA standard, based on a GSM standard) to manage and route calls.”).

3. *Taylor (Ex. 1007)*

Taylor, titled “System and Method for Dynamic Telephony Resource Allocation Between Premise and Hosted Facilities,” published February 26, 2009 from application US 12/195,298, filed August 20, 2008. Ex. 1007, codes (54), (43), (21), (22). The application claims priority to a provisional application, US 60/957,151, filed August 12, 2007. *Id.* at code (60).

Taylor “relates to telecommunication and a networked computer telephony system including the Internet and the Public Switched Telephone System, and more particularly to user-configurable allocation of telephony resources between a hosted facility and a subscriber’s premise.” Ex. 1007 ¶ 2. Relevant to this proceeding, Taylor discloses PSTN Interface 52, which allows Taylor’s Computer Telephony server 50 to interface with a public switched telephone network through switch 12. *Id.* ¶ 8.

II. ANALYSIS OF PETITIONER’S CHALLENGES

A. *Applicable Law*

In *inter partes* reviews, a petitioner bears the burden of proving unpatentability of the challenged claims, and the burden of persuasion never shifts to the patent owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail in this proceeding, Petitioner must support its challenge by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). Accordingly, all of our findings and conclusions are based on a preponderance of the evidence standard.

Petitioner’s asserted grounds of unpatentability are based on anticipation under 35 U.S.C. § 102 and on obviousness under 35 U.S.C. § 103. A “prior art reference—in order to anticipate under 35 U.S.C.

§ 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)).

With respect to obviousness under 35 U.S.C. § 103,

[a] patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

35 U.S.C. § 103 (2011); *see KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when available, objective evidence, such as commercial success, long felt but unsolved needs, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966); *see KSR Int’l Co.*, 550 U.S. at 407 (“While the sequence of these questions might be reordered in any particular case, the [Graham] factors continue to define the inquiry that controls.”). The Court in *Graham* explained that these factual inquiries promote “uniformity and definiteness,” for “[w]hat is obvious is not a question upon which there is likely to be uniformity of thought in every given factual context.” 383 U.S. at 18.

The Supreme Court made clear that we apply “an expansive and flexible approach” to the question of obviousness. *KSR Int’l Co.*, 550 U.S. at 415. Whether a patent claiming the combination of prior art elements would have been obvious is determined by “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.* at 417. To support this conclusion, however, it is not enough to show merely that the prior art includes separate references covering each separate limitation in a challenged claim. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness additionally requires that a person of ordinary skill at the time of the invention “would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention.” *Id.*

“[O]bviousness must be determined in light of *all the facts*, and . . . a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine” teachings from multiple references. *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (emphasis added); *see also PAR Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1196 (Fed. Cir. 2014) (“The presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact.”). As a factfinder, we also must be aware “of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.” *KSR Int’l Co.*, 550 U.S. at 421.

B. Level of Ordinary Skill in the Art

The level of skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). Petitioner contends that

A person of ordinary skill in the art . . . at the time of the alleged invention of the ’554 patent would have had an undergraduate degree in electrical engineering, computer engineering, computer science or a related field along with two years of work experience in the field of telecommunication . . . More education can supplement practical experience and vice versa.

Pet. 4–5 (referencing Ex. 1002 ¶¶ 17–18). Patent Owner does not dispute the level of ordinary skill in the art. PO Resp. 5.

For the purposes of this Decision, we apply Petitioner’s undisputed definition of the level of ordinary skill in the art. We find that this definition is consistent with the prior art of record and the skill reflected in the Specification of the ’554 patent.

C. Claim Construction

In *inter partes* reviews, we interpret a claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b). Under this standard, we construe the claim “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*

Petitioner states that “the Board need not construe any terms of the challenged claims to resolve the underlying controversy.” Pet. 8. Patent Owner proposes construing the term “channel” in all challenged claims to refer to “[a] channel [that] does not have to be fully connected on both ends or actually transmitting a particular type of information to qualify as a

channel.” PO Resp. 6. Petitioner asserts that Backhaus teaches transmitting an access telephone number via a data channel in two ways. Pet. 22–26. As will be evident from our analysis below, we rely only on the “second way” for purposes of this Decision. Patent Owner’s proposed construction of the term “channel” does not impact the parties’ dispute about the “second way” that Backhaus teaches transmitting an access telephone number via a data channel. PO Resp. 21–22; Pet. Reply 3 (“Flyp does not even allege that its construction is relevant to the ‘second way’ the Petition addresses limitation [1.b].”); PO Sur-reply 11; Tr. 10:2–11, 68:3–24.⁵ Therefore, we determine that the term “channel” does not require an express construction to resolve the parties’ disputes regarding the asserted grounds of unpatentability. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those 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)).

Also, we determine that we need not expressly construe any other claim terms to resolve the parties’ disputes. To the extent that the scope of any particular claim term requires discussion, however, we provide it in our assessment of the challenges, which we turn to next.

⁵ Patent Owner argues that we should still address its proposed construction of the term “channel” because it “significantly impacts the credibility” of Petitioner’s declarant, Dr. Bill Lin. Tr. 68:3–24; *see* PO Sur-reply 5, n.1. We disagree. We address the credibility of testimony at issue in our analyses in the individual analyses. We address Patent Owner’s argument about Dr. Lin’s declaration testimony in the subsection immediately below.

D. Dr. Lin's Testimony

Patent Owner argues that Dr. Lin's declaration testimony should be disregarded, because it "is virtually identical to the Petition, highly conclusory, internally contradictory, and the expert could not explain his opinions at deposition." PO Resp. 38–39 (citing *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 (PTAB Aug. 24, 2022) (precedential) ("*Xerox*")). Patent Owner argues that "[t]he declaration does not contain any statement of the legal standards the expert understood or was applying, such as standards relating to defining the person of ordinary skill in the art, anticipation, or obviousness." *Id.* at 39. Patent Owner adds that "[t]he expert could not identify a single standard that he applied in his analysis." *Id.* Patent Owner concludes that "[t]hus, the standards that formed the basis of Dr. Lin's opinion are a complete mystery, rendering his declaration conclusory and unreliable." *Id.* at 40.

Patent Owner also argues that "the declaration fails to explain critical points and contains contradictory positions." PO Resp. 40; *see id.* at 40–47 (providing examples).

Patent Owner's arguments are unavailing to the extent that they suggest that we categorially disregard Dr. Lin's declaration. As a general point, our precedential decision in *Xerox* does not provide a blank condemnation of declaration testimony that is identical or virtually identical to language in a paper. *Xerox* found that the "cited declaration testimony is conclusory and unsupported, adds little to the conclusory assertion for which it is offered to support, and is entitled to little weight." *Xerox* at 15; *see also* 37 C.F.R. § 42.65(a) ("Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or

no weight.”). Here, Dr. Lin cites to evidence to support certain testimony. *See, e.g.*, Ex. 1003 ¶ 73 (citing to Ex. 1007 and Ex. 1011).

Also, we do not rely on the Lin Declaration as evidence of any legal standard or for Dr. Lin’s legal conclusions. Rather, we rely on the Lin Declaration to support our factual determinations regarding the teachings of Backhaus, Saksena, and Taylor, as well as why and how a person of ordinary skill in the art would have combined those teachings.

Finally, Patent Owner’s arguments go to the weight of Dr. Lin’s testimony. We assess the appropriate weight to give the testimony in our analyses below.

E. Ground 3: Claims 1, 2, and 4 as Obvious over Backhaus and Taylor

Petitioner contends that the combined teachings of Backhaus and Taylor renders obvious each limitation of claims 1, 2, and 4. Pet. 9–42, 47–51. We turn our analysis to the scope and content of the prior art and any differences between the prior art and the subject matter of independent claim 1, and dependent claims 2 and 4, on a limitation-by-limitation basis. Our analysis of claim 1 includes Petitioner’s reasoning for combining the teachings of Backhaus and Taylor.

1. Independent claim 1

a) Preamble

The preamble of claim 1 recites “[a] method for providing telephone service.” Ex. 1001, 10:10. Petitioner contends that, “[t]o the extent that the preamble of claim 1 is limiting, Backhaus discloses” the subject matter.

Pet. 9 (referencing Ex. 1002 ¶¶ 58–63).⁶ Specifically, Petitioner contends that Backhaus discloses a second line service to a subscriber with a telecommunications device. *Id.*; *see also id.* at 10 (providing an annotated version of Backhaus’s Figure 1, which is an exemplary telephone service system); *id.* at 10–15 (describing the structure and operation of Backhaus’s system, and referencing Ex. 1005 ¶¶ 3–11, 31, 33–36, 52–57, 59–139; Ex. 1002 ¶¶ 51–57). Petitioner also contends that “Taylor is directed to providing telephone services through communication networks.” *Id.* at 47 (referencing Ex. 1007 ¶¶ 4, 8).

Upon review of the information in the Petition and corresponding evidence, we find, on the complete trial record, that Petitioner has proven, by a preponderance of the evidence, that the combination of Backhaus and Taylor teaches or suggests the subject matter of the preamble. In view of this finding, we need not resolve whether the preamble is limiting.

Patent Owner does not dispute Petitioner’s contentions with respect to the preamble.

b) Limitation 1.a

Claim 1 recites “automatically storing electronic information that indicates an association of a secondary telephone number and a primary telephone number with a mobile device in a computer memory associated

⁶ Petitioner relies on its contentions with respect to Ground 1 for how Backhaus teaches or suggests the subject matter of claim 1, except for the switch limitations. *See* Pet. 47. Similarly, Patent Owner’s arguments with respect to Ground 3 are limited to Taylor’s teachings. *See* PO Resp. 17–19. As such, we address Patent Owner’s arguments with respect to Backhaus and Ground 1 here.

with a server.” Ex. 1001, 10:11–14 (limitation 1.a⁷ of claim 1). Petitioner contends that Backhaus’s TD 110 corresponds to the recited mobile device. Pet. 15 (referencing Ex. 1005 ¶¶ 31, 33, 50, 81–83; Ex. 1002 ¶¶ 58–59).

Petitioner contends that Backhaus discloses that TD 110 receives calls directed to its primary number or a SLS number (the alleged “secondary telephone number”). Pet. 15–16 (referencing Ex. 1005 ¶¶ 31, 33, 34, 60, 75; Ex. 1002 ¶ 59). Petitioner contends that Backhaus discloses associating the primary and SLS numbers and storing the association in computer memory. *Id.* at 17–19 (referencing Ex. 1005 ¶¶ 39–40, 42–44, Fig. 3A; Ex. 1002 ¶¶ 60–62); *see, e.g., id.* at 17 (providing an annotated version of Backhaus’s Figure 3A, depicting the Second Line Service Master ID Table in Central SLS Database 116, which shows the association between a subscriber’s primary number and secondary number).

Upon review of the information in the Petition and corresponding evidence, we find, on the complete trial record, that Petitioner has proven, by a preponderance of the evidence, that Backhaus teaches or suggests the subject matter of limitation 1.a of claim 1.

Patent Owner does not dispute Petitioner’s contentions with respect to this limitation.

c) Limitation 1.b

Claim 1 also recites “automatically transmitting information that indicates an access telephone number to the mobile device via a data channel.” Ex. 1001, 10:15–17 (limitation 1.b of claim 1). Petitioner

⁷ We use the limitation labels for claim 1 used by Petitioner and Patent Owner. *See* Pet. 9–37 (labeling limitations 1.a–1.f); PO Resp. 2 (referencing limitations 1.c, 1.d, 1.e, and 1.f).

contends that Backhaus's SLS module 105 on TD 110 translates a number calling TD 110 or called by the subscriber using TD 100 into the relationship number associated with the calling number and uses the relationship number to access the SLS platform 115 over telephone network 125. Pet. 20 (referencing Ex. 1005 ¶¶ 43, 49, 57, code (57) (Abstract)). Petitioner contends that a person having ordinary skill in the art would understand that Backhaus's relationship number is the recited "access telephone number."

Petitioner contends that Backhaus discloses establishing and storing a relationship number. Pet. 21–22 (referencing Ex. 1005 ¶¶ 42, 52–54, Fig. 3A; Ex. 1002 ¶¶ 65–66). Petitioner contends that Backhaus discloses that the relationship number can be used for multiple subscribers, since the combination of the relationship number and subscriber SLS number or primary number would be unique. *Id.* (referencing Ex. 1005 ¶ 54; Ex. 1002 ¶ 65). Also, Petitioner contends that the relationship number is stored in SLS database 116. *Id.* at 21–22 (referencing Ex. 1005 ¶¶ 42, 53–54, Fig. 3A; Ex. 1002 ¶ 66); *see id.* at 22 (providing Figure 3A, which shows the association of a relationship number and third-party number for a subscriber's contacts).

With respect to the requirement that the access telephone number be transmitted to the mobile device "via a data channel," Petitioner contends that Backhaus discloses this aspect "in two ways." Pet. 22. As to the "second way,"⁸ Petitioner contends that "Backhaus discloses . . . processes for handling data communications between subscriber TD 100 and SLS

⁸ Because we find the information in the Petition proves that Backhouse discloses the subject matter of limitation 1.b under the "second way," we do not address the "first way" here.

platform 115 over network 125.” *Id.* at 25 (referencing Ex. 1005 ¶¶ 71–74, Fig. 4D). Petitioner explains that, for a situation where the subscriber wishes to call a third party that does not have a relationship number established in the system, SLS Module 105 on subscriber TD 110 requests a new relationship number from SLS platform 115. *Id.* (referencing Ex. 1005 ¶ 71). In response, SLS platform 115 assigns a relationship number and returns that number to TD 110. *Id.* (referencing Ex. 1005 ¶ 74). Petitioner adds that Backhaus discloses that communications between SLS platform 115 and TD 110 may be through protocols or mechanisms that include data channels. *Id.* at 25–26 (referencing Ex. 1005 ¶¶ 72–73; Ex. 1002 ¶ 70).

Patent Owner argues, with respect to the “second way,” that the Petition “does not identify any specific channel as being used for” returning the next available relationship number in Backhaus. PO Resp. 21 (referencing Ex. 1005 ¶ 74, cited at Pet. 25).

We have considered Patent Owner’s argument and determine, on the complete trial record, that Petitioner has proven, by a preponderance of the evidence, that Backhaus teaches or suggests the requirement that the access telephone number be automatically transmitted to the mobile device via a data channel. Backhaus expressly teaches transmitting a relationship number from the SLS platform to the subscriber TD via a data channel. Ex. 1005 ¶¶ 71–74, Figure 4D. And Petitioner relies on this teaching in support of its contentions with respect to the “second way” analysis. Pet. 25–26.

We find that Backhaus expressly states that the subscriber TD “provide[s] the request for the new relationship number, along with the third

party number it desires to call, to the SLS platform.” Ex. 1005 ¶ 71. Backhaus states that “SLS module 105 may communicate with an SLS platform 115 to designate and acquire a relationship number to a third party who has not been called by the subscriber before via the SLS service” using “an unstructured supplementary services data (‘USSD’) protocol.” Ex. 1005 ¶ 72; *see also* Pet. 25 (referencing Ex. 1005 ¶ 72). Backhaus explains that, alternatively, other data channel communications, such as short message service (“SMS”) protocol, multimedia messaging service (“MMS”) protocol, IP-based interaction, WiFi, Bluetooth technologies, and proprietary wireless or wired technologies, may be used. Ex. 1005 ¶ 73; *see also* Pet. 25–26 (referencing Ex. 1005 ¶ 73). As discussed below, these communication channels differ from the public switched telephone network upon which Petitioner relies for the “second channel.”

Upon review of the information in the Petition and corresponding evidence, including Patent Owner’s counter arguments, we find, on the complete trial record, that Petitioner proves, by a preponderance of the evidence, that Backhaus teaches or suggests the subject matter of limitation 1.b of claim 1.

d) Limitations 1.c, 1.d, 1.e, and 1.f—the switch limitations

Claim 1 recites “automatically associating the telephone access number with a switch associated with the server.” Ex. 1001, 10:18–19 (limitation 1.c of claim 1). Claim 1 also recites the steps of “receiving, at the switch associated with the server, an outgoing call from the mobile device to the access telephone number via a second channel;” “receiving, at the server, information from the switch indicating the outgoing call is being

made to the access telephone number from the primary telephone number;” and “receiving, at the switch, information from the server directing the switch to: (a) connect the outgoing call to a contact telephone number indicated by the mobile device, and (b) identify a telephone number from which the outgoing call is being made as the secondary telephone number.”

Id. at 10:20–33 (limitations 1.d, 1.e, and 1.f of claim 1, respectively (collectively, the “receiving limitations” of claim 1)). We refer to limitations 1.c, 1.d, 1.e, and 1.f of claim 1 collectively as the “switch” limitations, as the parties primary dispute centers on the recited switch.

(1) Petitioner’s contentions - Limitation 1.c, including reasons to combine Taylor and Backhaus

Petitioner contends that, in Backhaus, calls directed to a subscriber’s primary or SLS numbers are routed through communications network 125. Pet. 27 (referencing Ex. 1005 ¶ 32). Petitioner contends that Backhaus discloses that network 125 may be a public switched telephone network, using signaling system seven (“SS7”) protocol. *Id.* at 27–28 (referencing Ex. 1005 ¶ 32; Ex. 1011, 5–6, 103–105; Ex. 1002 ¶ 71).

Petitioner contends that Taylor’s disclosed system uses an interface to connect CT server 50 to other networks, such as a PSTN or the Internet. Pet. 48. Specifically, Petitioner contends that Taylor’s PSTN interface 52, which is associated with CT server 50, corresponds to the recited switch. *Id.*

Petitioner contends that a person having ordinary skill in the art would have had reason to incorporate Taylor’s PSTN interface into Backhaus’s system, such that the PSTN interface would be associated with Backhaus’s SLS platform server. As an initial point, Petitioner contends that “[l]ike Backhaus . . . , Taylor is directed to providing telephone services through

communication networks.” Pet. 47 (referencing Ex. 1007 ¶ 4); *see also id.* at 47–48 (providing exemplary disclosures in Taylor describing its system). That is, Taylor is in the same field of endeavor as the ’554 patent. *Cf.* Ex. 1001, 1:27–32 (“The present invention relates to systems and methods for setting up and connecting telephone calls, and delivering information related to such telephone calls using an Internet Protocol (IP) or other data channel while delivering the voice portion of the call in accordance with CDMA, GSM or like voice channel delivery standards.”).

Petitioner contends that a person having ordinary skill in the art “would have been motivated to include a PSTN interface similar to that discussed in Taylor when implementing Backhaus’s telephony service system.” Pet. 49 (referencing Ex. 1002 ¶ 95). Petitioner explains that a person having ordinary skill in the art “would have understood that the PSTN is well known for providing reliable communications to a large number of landline and wireless devices/users as well as providing sophisticated phone and data services.” *Id.* at 50 (referencing Ex. 1011, 81). Petitioner contends that a person having ordinary skill in the art would have been motivated to employ Taylor’s PSTN interface to connect SLS platform 115 to the PSTN “such that SLS platform 115 could provide the disclosed second line services to many device users connected to the PSTN that is known to provide reliable communications.” *Id.* (referencing Ex. 1002 ¶ 95).

Petitioner contends that a person having ordinary skill in the art would have had a reasonable expectation of success in combining Taylor’s teaching of a PSTN interface with Backhaus’s teachings of an SLS platform because the combination “would have involved applications of known technologies

(e.g., known PSTN and PSTN interface) according to known methods (e.g., known techniques for facilitating communication between a server and the PSTN) to yield the predictable result of a telephony service system/process that provided telecommunication services.” Pet. 50–51 (referencing Ex. 1002 ¶ 96).

(2) Petitioner’s Contention - Limitations 1.d, 1.e, and 1.f, the receiving steps

With respect to limitation 1.d, which requires the step of receiving, at the switch associated with the server, an outgoing call from the mobile device to the access telephone number via a second channel, Petitioner contends that Backhaus discloses that a mobile device (TD 110) calls a relationship number when calling a third party as part of Backhaus’s system’s operation. Pet. 32 (referencing Ex. 1002 ¶ 75). Petitioner contends that “[b]y calling the relationship number associated with [the third party contact], the network 125 routes the call to the SLS platform 115 instead of directly to third party TD 120A phone.” *Id.* (quoting Ex. 1005 ¶ 59). In that way, outgoing calls from the mobile device, TD110, are routed through network 125, which includes a PSTN, to SLS platform 115. Pet. 33 (referencing Ex. 1002 ¶ 76). Based on Petitioner’s proposed modification for Ground 3, a PSTN interface would be positioned between the PSTN and SLS platform 115 to receive this outgoing call to the relationship number from the mobile device that is directed through the PSTN to SLS platform 115. *See id.* at 47–50.

With respect to limitation 1(e), which requires the step of receiving, at the server, information from the switch indicating the outgoing call is being made to the access telephone number from the primary telephone number,

Petitioner contends that Backhaus discloses that SLS server 205 of SLS platform 115 receives information indicating that an outgoing call is made to a third party from a subscriber's primary number. Pet. 35 (referencing Ex. 1002 ¶ 78). Petitioner explains that, "when the subscriber dials the third party number, '[t]he SLS module 105 [on subscriber's TD 110] . . . translates the called third party number . . . to relationship number' and then 'calls the relationship number.'" *Id.* (referencing Ex. 1005 ¶ 59). Petitioner contends that the local switch receives the outgoing call and routes it to the server, where the server "**may recognize that the calling number is the subscriber's primary number.**" *Id.* at 35–36 (referencing Ex. 1005 ¶¶ 49, 59–60, 60–70). Based on Petitioner's proposed modification for Ground 3, a PSTN interface would function as the switch, receiving the call from the PSTN and sending it on to the server. *See id.* at 47–50.

With respect to limitation 1.f, which requires the step of receiving, at the switch, information from the server directing the switch to: (a) connect the outgoing call to a contact telephone number indicated by the mobile device, and (b) identify a telephone number from which the outgoing call is being made as the secondary telephone number, Petitioner contends that Backhaus's system directs the outgoing call to the third party associated with the called relationship number. Pet. 37–38 (referencing Ex. 1005 ¶ 60; Ex. 1002 ¶ 80). Petitioner contends that a person having ordinary skill in the art

would have understood that, when SLS platform 115 calls the third party's number, . . . network 125 receives the called number from SLS platform 115 . . . where the received number directs the local switch to route the call to the third party through network nodes formed between the calling party (SLS platform 115) and the called party (the third party).

Id. at 38–39 (referencing Ex. 1002 ¶ 82; Ex. 1011, 6–8). Petitioner continues that “[s]uch an understanding is consistent with Backhaus’s disclosure that calls by the SLS platform 115 are routed through network 125 based on the called number.” *Id.* at 39 (referencing Ex. 1005, Fig. 1, ¶ 34).

Petitioner explains that the subscriber’s mobile device indicates the contact number of the outgoing call by calling the relationship number. Pet. 40 (referencing Ex. 1005 ¶ 59; Ex. 1002 ¶ 83). Petitioner contends that Backhaus discloses that SLS platform 115 causes the calling number to reflect the subscriber’s SLS number, rather than its primary number. *Id.* at 40–41 (referencing Ex. 1005 ¶¶ 60, 70; Ex. 1002 ¶ 84). Petitioner adds that the ability of a public switched telephone network to provide the calling number was a known service. *Id.* at 41 (referencing Ex. 1011, 217; Ex. 1005 ¶ 33; Ex. 1002 ¶ 84).

Based on Petitioner’s proposed modification for Ground 3, a PSTN interface would function as the switch, receiving the information from the server regarding the outgoing call to the third party and interfacing with the PSTN to complete the call to the third party number. *See id.* at 47–50.

*(3) Patent Owner’s responsive arguments,
Petitioner’s reply arguments, Patent Owner’s sur-
reply arguments, and our analysis*

Patent Owner argues that Taylor’s interface is not a switch. PO Resp. 35. Patent Owner argues that Taylor identifies other elements as switches, directing us to reference numeral 12 in Taylor’s Figure 1A, which are switches in the PSTN. *Id.* at 35–36; *see also* Ex. 1007 Figure 1A (showing a cloud representing the PSTN with switches 12), ¶ 4 (“PSTN 10 includes a network of interconnected local exchanges or switches 12.”).

Patent Owner also argues that Petitioner does not demonstrate that the same one of the multiple switches 12 depicted in Taylor corresponds to the recited switch. *Id.* at 37.

Patent Owner also argues that Backhaus already discloses that its system connects to a PSTN, and the Petition fails to provide a reason for using Taylor's PSTN interface. PO Resp. 38.

Petitioner replies that Patent Owner "acknowledges that the claimed 'switch' 'may describe a broad category of well-known structures in the art' . . . , and may be 'an element in the communications networks that facilitates connections between transmitters and receivers.'" Pet. Reply 18 (referencing Ex. 1009, 20–23, cited at Pet. 49). Petitioner adds that "Dr. Akl likewise testified that an example of a switch may be broadly understood as 'a combination of hardware and software or hardware or software that's going to, you know, take an input and provide an output.'" *Id.* (quoting Ex. 1102, 89:13–19). Petitioner asserts that "Taylor's PSTN interface . . . is certainly an element in the communications networks that facilitates connections between transmitters and receivers (or takes an input and provides an output), i.e., a 'switch' as acknowledged by" Patent Owner. *Id.*

Petitioner also responds that Taylor showing multiple switches within the PSTN is irrelevant, as Petitioner's position for Ground 3 is that Taylor's single PSTN interface acts as the switch. Pet. Reply 18–19.

Finally, Petitioner replies that its obviousness position is not based on replacing Backhaus's interface, but instead, including an interface similar to Taylor's interface when implementing Backhaus's system. Pet. Reply 19.

In its Sur-reply, Patent Owner responds that Taylor's PSTN interface is not a switch. PO Sur-reply 14. Patent Owner argues that Petitioner

improperly provides a new construction of the term “switch,” which we should disregard. Patent Owner repeats its argument that Taylor identifies element 12 in Figure 1A as a “switch,” so the PSTN interface cannot be a switch. *Id.* at 14.

Patent Owner also argues that Petitioner’s Reply concedes that Grounds 3 and 4 are irrelevant, as they were included in the position only if Patent Owner argues that the switch must be separate from the PSTN—an argument Patent Owner did not make. PO Sur-reply 14–15. Finally, Patent Owner responds that “the Reply does not deny that a [person having ordinary skill in the art] would understand that Backhaus has its own PSTN interface.” *Id.* at 15.

We have considered Patent Owner’s arguments and find, on the complete trial record, that Petitioner has proven, by a preponderance of the evidence, that Taylor teaches or suggests the recited switch in the form of its PSTN interface. We also find that Petitioner has proven, by a preponderance of the evidence, that a person having ordinary skill in the art would have been motivated to combine Taylor’s teaching of a PSTN interface with Backhaus’s system, and would have had a reasonable expectation of success in doing so. We base our findings on the evidence of record cited by Petitioner, including testimony of Dr. Lin, which we adopt. *See, e.g.*, Ex. 1005 ¶¶ 32–35, 39, 40, 49, 51, 59, 60, 62, 69, 70, Fig. 1; Ex. 1007 ¶¶ 4, 8, Fig. 1A; Ex. 1011, 5–8, 43, 62, 63, 81, 82, 99, 103–105, 217; Ex. 1002 ¶¶ 70–84, 92–98 (all referenced in the Petition at 27–41, 47–50).

We credit Dr. Lin’s testimony directed to how Backhaus’s system works, what a person having ordinary skill would have understood from

Backhaus, the function of Taylor’s PSTN interface, and the motivation of a person having ordinary skill in the art to combine Taylor’s teaching of a PSTN interface with Backhaus’s system. We credit this testimony, in part, because it is consistent with Backhaus’s and Taylor’s disclosures, and other evidence, including Dr. Akl’s testimony. *See, e.g.*, Ex. 1002 ¶¶ 71 (describing how Backhaus discloses that network 125 may be a PSTN and functioning of a PSTN, supported by Exhibits 1005 and 1011), 75 and 78 (describing how Backhaus discloses an outgoing call from a mobile device to an access telephone number), 80 and 82 (describing how Backhaus discloses completing an outgoing call to a third party, and showing that the outgoing call is from the secondary telephone number), 93–95 (describing Taylor’s PSTN interface and the motivation for using the interface in Backhaus’s system); *cf.* Ex. 2010 ¶ 52 (“Backhaus teaches the use of a server—‘SLS platform 115’—for processing calls. . . . Backhaus . . . state[s] that calls can be routed via the PSTN.”); Ex. 1102, 66:4–69:3 (testifying about Ex. 1005 ¶¶ 71–72).

Taylor’s labeling of another element in Figure 1A as a “switch” does not preclude Taylor’s PSTN interface from teaching the switch recited in claim 1. *See Adasa Inc. v. Avery Dennison Corp.*, 55 F.4th 900, 910 (Fed. Cir. 2022) (“[A] reference need not disclose the [claimed] elements in the very same terms used by the patent.”); *In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990) (stating that the patentability analysis “is not an ‘ipsissimis verbis’ test” (in the context of an anticipation analysis)). As Petitioner contends, Backhaus’s system, as modified by Taylor’s teaching of a PSTN interface, would satisfy the subject matter of the switch limitations, with the PSTN interface functioning as the switch, to facilitate communications

between the SLS platform and the PSTN network. *See* Pet. 27–41 (describing how Backhaus satisfies the subject matter of the switch limitations), 47–50 (describing how an interface such as Taylor’s PSTN interface would function as a switch in Backhaus’s system). The interface sits between the PSTN and Backhaus’s server to facilitate communications between the PSTN and server. *See, e.g.*, Ex. 1007, ¶¶ 4 (describing PSTN 10), 8 (describing CT server 50 and PSTN interface 52), Fig. 1A (depicting PSTN interface 52 positioned at server 50 to interface with PSTN 10).

We do not credit Dr. Akl’s testimony that PSTN interface 52 is not a switch. Dr. Akl’s basis for his opinion that PSTN interface 52 is not a switch appears solely based on the fact that Taylor refers to other components within the PSTN as switches. *See* Ex. 2010 ¶¶ 98–99. Dr. Akl does not testify as to the functioning of PSTN interface 52 or how it does not operate as a switch as claimed in claim 1.

Patent Owner’s arguments that there are multiple switches, rather than a single switch, disclosed in Taylor is inapposite, as it ignores Petitioner’s obviousness position. Petitioner does not rely on switches 12 in Taylor, but, instead, on the teaching of PSTN interface 52. As seen in Taylor’s Figure 1A, there is a single interface associated with a single server to facilitate communications with PSTN 10. *Cf.* Tr. 49:1–3 (Patent Owner’s counsel testifying that, “As for the physical location of the switch, I don’t think either the claims or the specification require[s] any particular physical location. It could be, you know, sitting running on a computer right next to the server.”).

We do not agree with Patent Owner that Petitioner’s Reply introduces a new claim construction. Petitioner argues, in the Petition, that Patent

Owner “acknowledges that the claimed ‘switch’ has been well known ‘since virtually the dawn of telecommunications’ (Ex. 1009, 19), ‘may describe a broad category of well-known structures in the art’ (*id.*, 20-23), and may be ‘an element in the communications networks that facilitates connections between transmitters and receivers’ (*id.*, 22).” Pet. 49. This argument is consistent with what Petition argues in its Reply. *See* Pet. Reply 18; Ex. 1009 (providing Patent Owner’s claim construction brief in district court litigation); *see also* Ex. 1102, 89:13–19 (“I can give you an example of a switch. A switch would be maybe a combination of hardware and software or hardware or software that’s going to, you know, take an input and provide an output. But that would be an example. But I have not articulated a definition.”).

We also do not consider Petitioner’s Grounds 3 and 4 to be “irrelevant.” *See* PO Sur-reply 14–15; Tr. 60:1–12, 64:14–17. Specifically, Patent Owner contends that the Backhaus and Taylor combination is “relevant only if the switch must be ‘separate from the PSTN,’” which “Patent Owner has not argued.” PO Sur-reply 14–15; Tr. 60:1–12, 64:14–17. Patent Owner’s argument is unavailing. As discussed above, the evidence of record shows that the Backhaus and Taylor combination includes one PSTN interface that performs the three steps recited in the switch limitations. Pet. 52–54; Ex. 1002 ¶¶ 97–99; Ex. 1007 ¶¶ 4, 8, Fig. 1A. Even if Patent Owner is correct that Petitioner relies primarily on the Backhaus and Taylor combination to teach a switch separate from the PSTN, that does not detract from the evidence showing that the combination

includes one switch for performing the three receiving steps recited in the switch limitations of claim 1.⁹

Finally, we do not agree with Patent Owner that Petitioner has not provided a motivation to combine the teachings of a PSTN interface in Backhaus's system, even though Backhaus discloses interfacing with the PSTN. Backhaus is silent as to how its system interfaces with the PSTN. As such, we agree with Petition that a person having ordinary skill in the art

would have been motivated to connect SLS platform 115 with the PSTN and to also include a PSTN interface in order to facilitate such an connection when implementing Backhaus's system and processes—such that SLS platform 115 could provide the disclosed second line services to many device users connected to the PSTN that is known to provide reliable communications.

Pet. 50. Indeed, Patent Owner's argument that Backhaus discloses interacting with the PSTN strengthens Petitioner's position, demonstrating that a person having ordinary skill in the art, when considering Backhaus's and Taylor's teachings together, would have used a PSTN interface to ensure a connection with a PSTN. *Cf.* Pet. Reply 19 ("Rather, it shows that a [person having ordinary skill in the art] would have been motivated to 'include a PSTN interface similar to that discussed in Taylor when implementing Backhaus's telephony service system.'" (citing Pet., 49–51)).

⁹ Also, Patent Owner has not been prejudiced by how Petitioner presented Grounds 3 and 4. In both the Patent Owner Response and Patent Owner Sur-reply, Patent Owner substantively addressed the grounds. *See* PO Resp. 34–38; PO Sur-reply 13–15.

(4) *Conclusion as to switch limitations*

Upon review of the information in the Petition and corresponding evidence, including Petitioner's reasons for combining the teachings of Backhaus and Taylor and Patent Owner's counter arguments, we find, on the complete trial record, that Petitioner proves, by a preponderance of the evidence, that the combination of Backhaus and Taylor teaches or suggests the subject matter of the switch limitations of claim 1.

e) *Conclusion*

For the reasons discussed above, we determine, on the complete trial record, that Petitioner proves, by a preponderance of the evidence, that claim 1 is unpatentable under 35 U.S.C. § 103 over Backhaus and Taylor.

2. *Dependent claims 2 and 4*

Dependent claim 2 depends from claim 1 and recites "wherein the data channel is an Internet protocol (IP) channel." Ex. 1001, 10:34–35. Dependent claim 4 depends from claim 1 and recites "wherein the second channel is not an Internet protocol (IP) channel." *Id.* at 10:38–39. With respect to claim 2, Petitioner contends that Backhaus discloses that TD 110 may communicate with SLS platform 115 using different data protocols, including governing "IP-based interaction." Pet. 41–42 (referencing Ex. 1005 ¶ 73). Petitioner contends that a person having ordinary skill in the art "would have understood that such an IP-based data channel corresponds to the claimed 'Internet protocol (IP) channel.'" *Id.* at 42 (referencing Ex. 1002 ¶ 85).

With respect to claim 4, Petitioner contends that "Backhaus discloses using the SS7 protocol over PSTN of network 125 (the claimed 'second channel')." Pet. 42 (cross-referencing the Petition's contentions for

limitation 1.c). Petitioner contends that a person having ordinary skill in the art “would have understood that a channel established over the PSTN is not an IP channel as the PSTN operates using the SS7 protocol.” *Id.* (cross-referencing the Petition’s contentions for limitations 1.c and 1.d).

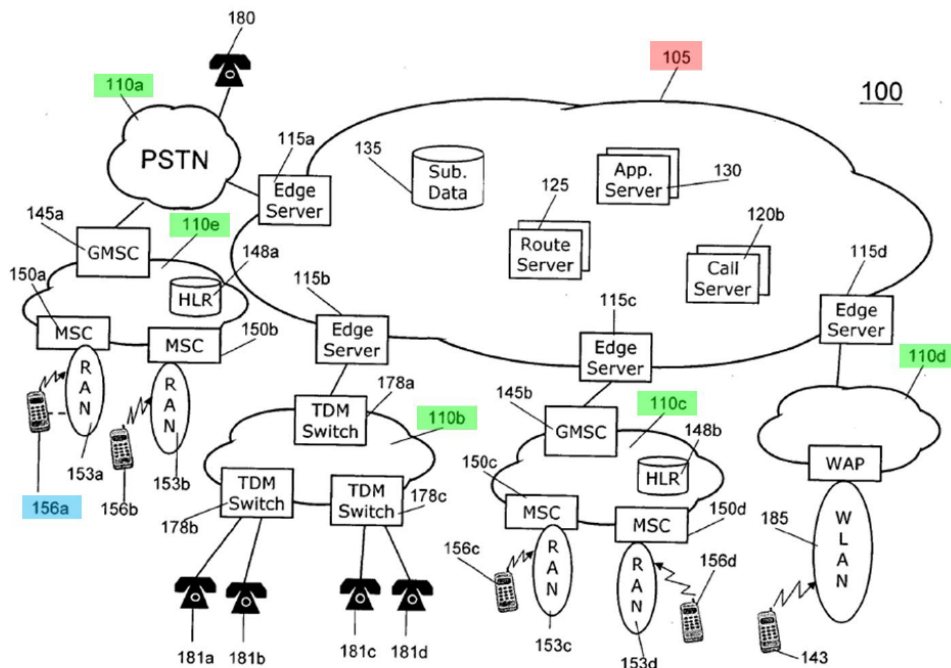
Upon review of the information in the Petition and corresponding evidence, we find, on the complete trial record, that Petitioner has proven, by a preponderance of the evidence, that Backhaus teaches or suggests the subject matter of dependent claims 2 and 4.

Patent Owner does not dispute Petitioner’s contentions with respect to these dependent claims, except for the arguments made for claim 1, which we address above in our analysis of claim 1. *See* PO Resp. 34.

For the reasons discussed above, we determine, on the complete trial record, that Petitioner proves, by a preponderance of the evidence, that claims 2 and 4 are unpatentable under 35 U.S.C. § 103 over Backhaus and Taylor.

F. Ground 4: Claim 3 as unpatentable over Backhaus, Taylor, and Saksena

Petitioner contends that the combined teachings of Backhaus, Taylor, and Saksena render obvious the subject matter of claim 3. Pet. 3, 43–51. Claim 3 depends from claim 2 and recites “wherein the second channel is established in accordance with a CDMA or GSM standard.” Ex. 1001, 10:36–37. Petitioner contends that Saksena discloses the subject matter of claim 3 and it would have been obvious to combine the teachings of Saksena with Backhaus’s system. Pet. 43–45. We reproduce Petitioner’s annotated version of Saksena’s Figure 1A, below.



Pet. 44. Figure 1A depicts centralized network 105 (reference numeral highlighted in red) that provides telephony services to multiple devices, including cellular device 156a (reference numeral highlighted in blue) and other devices, that are associated with different networks, such as networks 110a-110e (reference numeral highlighted in green). *Id.* at 43 (referencing Ex. 1008 ¶ 77). Petitioner contends that “Saksena . . . discloses that mobile device 156a on cellular network 110e may operate using either the Global System for Mobile Communications (GSM) or Code-division multiple access (CDMA) standards.” *Id.* at 45 (referencing Ex. 1008 ¶¶ 53, 82).

Petitioner contends that a person having ordinary skill in the art would have been motivated to apply Saksena’s teaching of GSM and CDMA standards to Backhaus’s system, with a reasonable expectation of success in doing so. Petitioner contends that GSM and CDMA standards were common standards used in cellular networks globally. *See* Pet. 45–47

(referencing Ex. 1008 ¶¶ 53, 82; Ex. 1002 ¶¶ 89–91); *see also* Ex. 1001, 4:46–48 (recognizing that GSM and CDMA are “standards”); Ex. 2010 ¶ 42 (“The exemplary voice channels (CDMA, GSM, LTE, 3G, and/or 4G) are all conventional voice channels that a [person having ordinary skill in the art] would be familiar with because they are used in conventional telephony.”).

Upon review of the information in the Petition and corresponding evidence, including Petitioner’s reasons for combining the teaching of Backhaus and Saksena, we find, on the complete trial record, that Petitioner has proven, by a preponderance of the evidence, that the combination of Backhaus and Saksena teaches or suggests the subject matter of dependent claim 3.

Patent Owner does not dispute Petitioner’s contentions with respect to dependent claim 3, except for the arguments made for claim 1, which we address above in our analysis of claim 1. *See* PO Resp. 34.

For the reasons discussed above, we determine, on the complete trial record, that Petitioner proves, by a preponderance of the evidence, that claim 3 is unpatentable under 35 U.S.C. § 103 over Backhaus, Taylor, and Saksena.

G. Grounds 1 and 2

Petitioner contends that Backhaus anticipates claims 1, 2, and 4, and that the combined teachings of Backhaus and Saksena renders obvious the subject matter of claim 3. Pet. 3. Because Petitioner has shown that claims 1–4 are unpatentable based on the asserted grounds discussed above, we do not reach these additional asserted grounds. *See Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984) (“The Commission . . . is at perfect liberty to reach a ‘no violation’ determination on a single

dispositive issue.”); *Boston Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App’x 984, 990 (Fed. Cir. 2020) (recognizing that “[t]he Board has the discretion to decline to decide additional instituted grounds once the petitioner has prevailed on all its challenged claims”).

III. CONCLUSION

Based on the information presented, we conclude that Petitioner has proven, by a preponderance of the evidence, that claims 1–4 are unpatentable.¹⁰

In summary:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 2, 4	102	Backhaus ¹¹		
3	103	Backhaus, Saksena ¹²		
1, 2, 4	103	Backhaus, Taylor	1, 2, 4	
3	103	Backhaus, Saksena, Taylor	3	
Overall Outcome			1–4	

¹⁰ 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).

¹¹ We do not reach this asserted ground. See Section II.G.

¹² We do not reach this asserted ground. See Section II.G.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, claims 1–4 of U.S. Patent No. 11,012,554 B2 are proven unpatentable;

FURTHER ORDERED that, pursuant to 35 U.S.C. § 318(b), upon expiration of the time for appeal of this decision, or the termination of any such appeal, a certificate shall issue canceling claims 1–4 of U.S. Patent No. 11,012,554 B2; 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.

IPR2023-00359
Patent 11,012,554 B2

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