

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AT&T SERVICES, INC.,
Petitioner,

v.

VOIP-PAL.COM, INC.,
Patent Owner.

Case IPR2017-01384
Patent 9,179,005 B2

Before JOSIAH C. COCKS, JENNIFER MEYER CHAGNON, and
JOHN A. HUDALLA, *Administrative Patent Judges*.

CHAGNON, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

AT&T Services, Inc. (“Petitioner”)¹ filed a Petition for *inter partes* review of claims 1, 24–26, 49, 50, and 73 (“the challenged claims”) of U.S. Patent No. 9,179,005 B2 (Ex. 1001, “the ’005 patent”). Paper 1 (“Pet.”). Petitioner relies on the Declaration of James Bress (Ex. 1003) to support its positions. Voip-Pal.com, Inc. (“Patent Owner”)² filed a Preliminary Response. Paper 5 (“Prelim. Resp.”).

We have authority to determine whether to institute *inter partes* review. *See* 35 U.S.C. § 314(b); 37 C.F.R. § 42.4(a). Upon consideration of the Petition and the Preliminary Response, and for the reasons explained below, we determine that the information presented does not show a reasonable likelihood that Petitioner would prevail with respect to any of the challenged claims. *See* 35 U.S.C. § 314(a). Accordingly, no trial is instituted.

A. *Related Proceedings*

The parties indicate that the ’005 patent is the subject of the following district court proceedings: *Voip-Pal.com, Inc. v. Verizon Wireless Services, LLC & AT&T Corp.*, Case No. 2:16-cv-00271 (D. Nev.); *Voip-Pal.com, Inc. v. Apple, Inc.*, 2-16-cv-00260 (D. Nev.); and *Voip-Pal.com, Inc. v. Twitter, Inc.*, 2-16-cv-02338 (D. Nev.). Pet. 2; Paper 4, 1.

Petitioner concurrently filed a petition for *inter partes* review of other claims of the ’005 patent. Pet. 2; Paper 4, 1; *AT&T Services, Inc. v.*

¹ Petitioner identifies several additional entities as real parties-in-interest. *See* Pet. 1–2.

² Patent Owner identifies Digifonica (International) Limited as an additional real party-in-interest. Paper 4, 1.

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Voip-Pal.com, Inc., Case IPR2017-01383. Petitioner also filed a petition for *inter partes* review of related U.S. Patent No. 8,542,815 B2 (“the ’815 patent”). Paper 4, 1; *AT&T Services, Inc. v. Voip-Pal.com, Inc.*, Case IPR2017-01382.

The parties also identify the following proceedings, filed by Apple, Inc., to which Petitioner is not a party:

IPR2016-01198, challenging the ’005 patent;
IPR2016-01201, challenging the ’815 patent;
IPR2017-01398, challenging the ’005 patent;
IPR2017-01399, challenging the ’815 patent.

Pet. 3; Paper 4, 1.

B. The ’005 Patent

The ’005 patent is titled “Producing Routing Messages for Voice Over IP Communications.” Ex. 1001, at [54]. In particular, the ’005 patent relates to producing a routing message for routing calls in a communication system, where the routing message is based on call classification criteria that are used to classify a particular call as a public network call or a private network call. Ex. 1001, at [57]. Figure 7 of the ’005 patent is reproduced below.

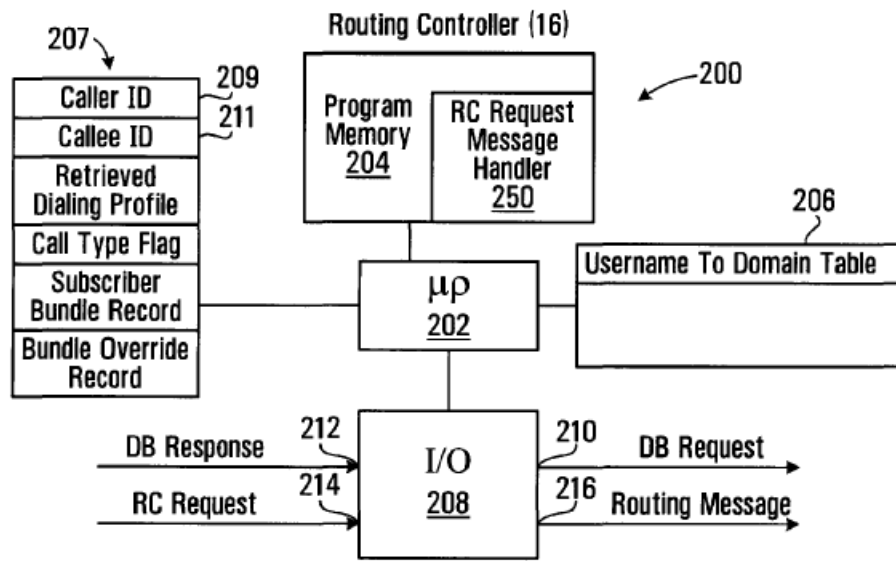


FIG. 7

Figure 7, reproduced above, illustrates routing controller (RC) 16, which facilitates communication between callers and callees. *Id.* at 14:32–33, 17:26–27. RC processor circuit 200 of routing controller (RC) 16 includes processor 202, program memory 204, table memory 206, buffer memory 207, and I/O port 208. *Id.* at 17:27–31. Routing controller 16 queries database 18 (shown in Figure 1) to produce a routing message to connect caller and callee. *Id.* at 14:18–25, 14:32–42. Program memory 204 includes blocks of code for directing processor 202 to carry out various functions of routing controller 16. *Id.* at 17:47–49. One such block of code is RC request message handler 250, which directs routing controller 16 to produce a routing message in response to an RC request message. *Id.* at 17:49–53.

According to the '005 patent, in response to a calling subscriber initiating a call, the routing controller:

receiv[es] a callee identifier from the calling subscriber, us[es] call classification criteria associated with the calling subscriber to classify the call as a public network call or a private network call[,] and produc[es] a routing message identifying an address on the private network, associated with the callee[,] when the call is classified as a private network call and produc[es] a routing message identifying a gateway to the public network when the call is classified as a public network call.

Id. at 14:32–42.

Figures 8A through 8D of the '005 patent illustrate a flowchart of an RC request message handler process, executed by the RC processor circuit.

Id. at 11:3–4. Figure 8B of the '005 patent is reproduced below.

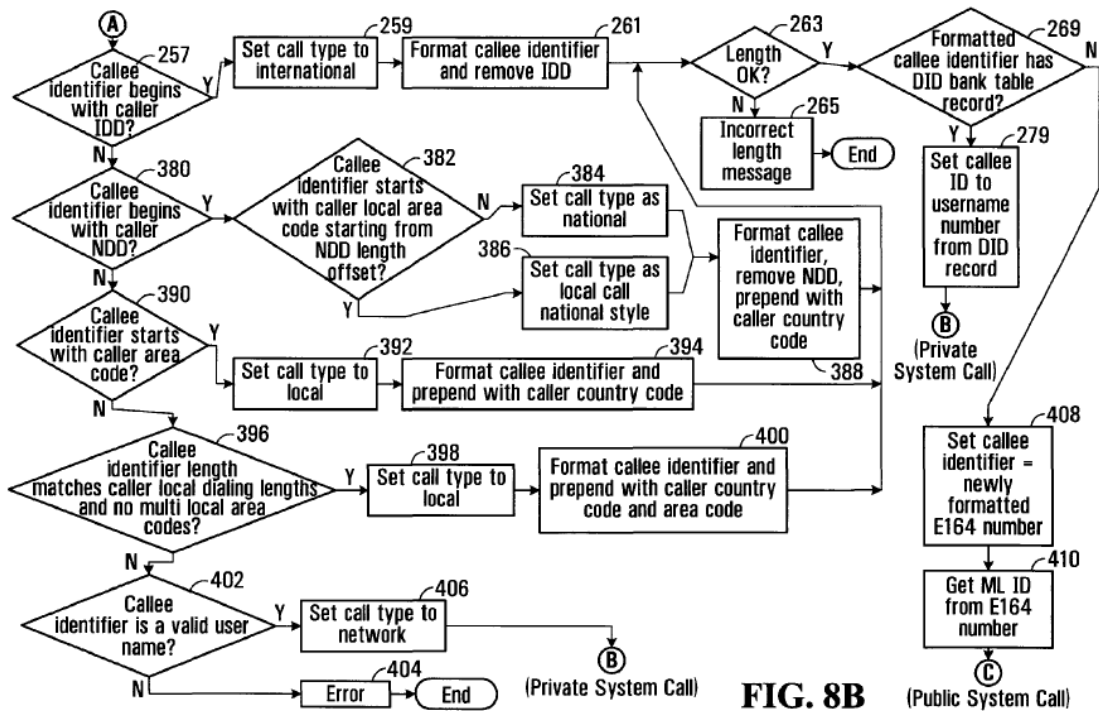


Figure 8B, reproduced above, illustrates a portion of the RC request message handler process, and in particular illustrates steps for performing checks on

the callee identifier. *Id.* at 19:53–57. Blocks 257, 380, 390, 396, 402 “establish call classification criteria for classifying the call as a public network call or a private network call” based on, for example, “whether the callee identifier has certain features such as an international dialing digit, a national dialing digit, an area code[,] and a length that meet certain criteria.” *Id.* at 22:46–48, 22:58–61. After blocks 257, 380, 390, 396, processor 202 “reformat[s] the callee identifier . . . into a predetermined target format,” which enables block 269 to classify the call as public or private, depending on whether the callee is a subscriber to the system. *Id.* at 22:49–54, 22:61–23:19, 20:23–35; *see also id.* at 18:63–19:30 (describing callee profiles). Similarly, block 402 “directs the processor 202 of FIG. 7 to classify the call as a private network call when the callee identifier complies with a predefined format, i.e. is a valid user name and identifies a subscriber to the private network.” *Id.* at 22:64–23:3.

C. Illustrative Claim

Of the challenged claims, claims 1, 26, and 50 are independent. Claims 24 and 25 depend from claim 1; claim 49 depends from claim 26; and claim 73 depends from claim 50. Independent claim 1 of the '005 patent is reproduced below, and is illustrative of the challenged claims.

1. A process for producing a routing message for routing communications between a caller and a callee in a communication system, the process comprising:

using a caller identifier associated with the caller to locate a caller profile comprising a plurality of calling attributes associated with the caller;

when at least one of said calling attributes and at least a portion of a callee identifier associated with the callee meet private network classification criteria, producing a private

network routing message for receipt by a call controller, said private network routing message identifying an address, on the private network, associated with the callee; and

when at least one of said calling attributes and at least a portion of said callee identifier meet a public network classification criterion, producing a public network routing message for receipt by the call controller, said public network routing message identifying a gateway to the public network.

Ex. 1001, 36:28–46.

D. The Applied References

Petitioner relies on the following references in the asserted grounds.

Pet. 4.

| Reference | Date | Exhibit |
|---|---------------|----------------|
| U.S. Patent No. 6,240,449 B1 (“Nadeau”) | May 29, 2001 | Ex. 1005 |
| U.S. Patent No. 6,594,254 B1 (“Kelly”) | July 15, 2003 | Ex. 1006 |
| U.S. Patent No. 7,715,413 B2 (“Vaziri”) | May 11, 2010 | Ex. 1007 |

E. The Asserted Grounds

Petitioner sets forth its challenges to claims 1, 24–26, 49, 50, and 73 as follows. Pet. 4.

| References | Basis | Claims Challenged |
|---------------------------|--------------|--------------------------|
| Nadeau and Kelly | § 103 | 1, 24–26, 49 |
| Nadeau, Kelly, and Vaziri | § 103 | 50, 73 |

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard). Under the broadest reasonable construction standard, claim terms generally are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). The claims, however, “should always be read in light of the specification and teachings in the underlying patent,” and “[e]ven under the broadest reasonable interpretation, the Board’s construction ‘cannot be divorced from the specification and the record evidence.’” *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015) (citations omitted) (*overruled on other grounds by Aqua Prods. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017)). Further, any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision. *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). In the absence of such a definition, however, limitations are not to be read from the specification into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

Petitioner proposes constructions for the means-plus-function claim terms in claims 50 and 73. *See* Pet. 11–14. Petitioner otherwise “interprets all . . . claim terms . . . in accordance with their plain and ordinary meaning under the [broadest reasonable interpretation] for purposes of this

proceeding.” *Id.* at 11. Patent Owner does not propose express construction of any claim term. *See generally* Prelim. Resp. Upon review of the parties’ contentions and supporting evidence, for purposes of this Decision, we need not provide express construction for any claim term. *See, e.g., Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011) (“[C]laim terms need only be construed ‘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)).

B. Principles of Law

A claim is unpatentable under 35 U.S.C. § 103(a) 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. *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) objective evidence of nonobviousness.³ *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We analyze the asserted grounds of unpatentability in accordance with these principles.

³ The parties have not directed our attention to any objective evidence of non-obviousness.

C. Level of Ordinary Skill in the Art

Petitioner asserts that a person of ordinary skill in the art would have at least a bachelor's degree in electrical engineering, or in a related field, with at least 2–4 years of industry experience in designing or developing packet-based and circuit-switched systems. Additional industry experience or technical training may offset less formal education, while advanced degrees or additional formal education may offset lesser levels of industry experience.

Pet. 10 (citing Ex. 1003 ¶¶ 52–56). Patent Owner does not propose an alternative level of ordinary skill in the art. *See generally* Prelim. Resp. For purposes of this Decision, we adopt Petitioner's proposal regarding the level of ordinary skill in the art. The level of ordinary skill in the art further is reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

D. The Asserted Prior Art

1. Nadeau (Ex. 1005)

Nadeau relates to telephony systems that “provide subscribers with communication sessions across a variety of network domains, such as the Public Switched Telephone Network (PSTN), the Mobile network and the Internet.” Ex. 1005, 1:7–12. Figure 1 of Nadeau is reproduced below.

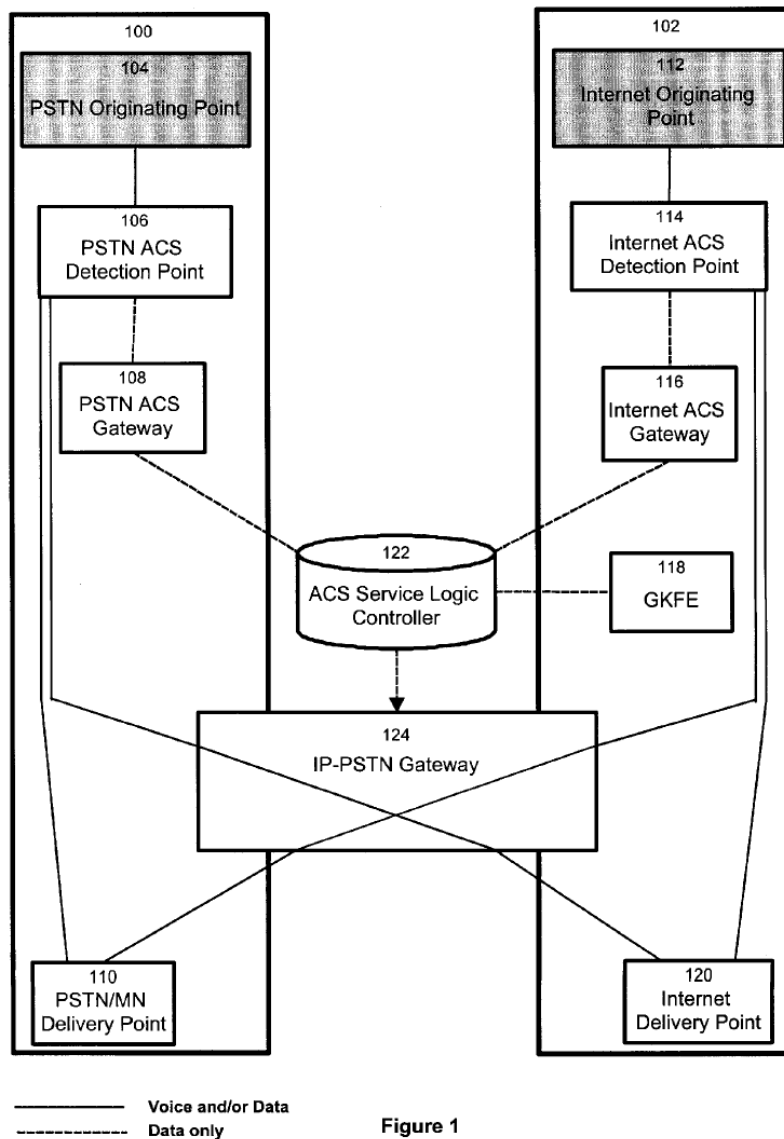


Figure 1

Figure 1, reproduced above, “is a block diagram of a multi-domain communication session disposition system incorporating an Automatic Call Setup [ACS] service.” *Id.* at 6:1–3. Each of PSTN network domain 100 and Internet domain 102 “issue[s] and receive[s] communications that can be telephone related messages or data.” *Id.* at 6:47–54. ACS subscribers may originate calls through either PSTN Originating Point Functional Element (OPFE) 104 (e.g., a phone in the PSTN network) or Internet OPFE 112 (e.g., a multimedia PC). *Id.* at 6:58–65. PSTN Detection Point Functional

Element (DPFE) 106 and Internet DPFE 114 are each responsible for identifying call requests that require ACS treatment. *Id.* at 6:59–7:1. Internet DPFE 114 is a voice over Internet Protocol (VoIP) client. *Id.* at 12:39. If ACS treatment is needed in the PSTN domain, PSTN DPFE 106 will suspend call processing and originate a request for instructions to Service Logic Controller (SLC) 122 via PSTN Gateway Functional Element (GWFE) 108, which is responsible for “mediat[ing] the instruction requests/responses from/to the DPFE to/from the SLC.” *Id.* at 7:1–5, 7:13–15. Internet GWFE 116 performs the same function in the Internet domain and likewise links Internet DPFE 114 with SLC 122. *Id.* at 7:15–19, Fig. 1.

SLC 122 is a server that “includes a memory for storage of program elements [for] implementing different functions necessary to the disposition of communication sessions.” *Id.* at 7:31–34. SLC 122 also includes a central processing unit and mass storage unit holding a Subscriber Database. *Id.* at 7:34–37. SLC 122 provides call processing instructions to DPFEs 106, 114. *Id.* at 7:22–23. Call processing instructions are determined by consulting the Subscriber Database for a particular caller’s service profile, which includes a list of conditions and events to be used to process that caller’s incoming calls. *Id.* at 7:22–27, 7:36–40. SLC 122 further is coupled to Gatekeeper Functional Element (GKFE) 118 in the Internet domain for mapping pseudo-addresses into IP addresses. *Id.* at 4:6–42, 7:41–8:6.

When a call originating from one domain terminates on the other domain, the ACS system forwards the call to PSTN/IP gateway 124 for proper bridging. *Id.* at 11:29–31. Information on how to complete the call also is sent to PSTN/IP gateway 124 by SLC 122. *Id.* at 11:31–33, 12:7–18, 13:34–41, Figs. 1, 3, 4.

2. *Kelly (Ex. 1006)*

Kelly relates to “a technique for enabling communication connections between circuit-switched communication networks and packet-switched data processing networks.” Ex. 1006, 1:59–63. The technique “enables traditional telephone numbers formatted as domain names to be resolved into network protocol addresses.” *Id.* at 3:45–47. Figure 6 of Kelly is reproduced below.

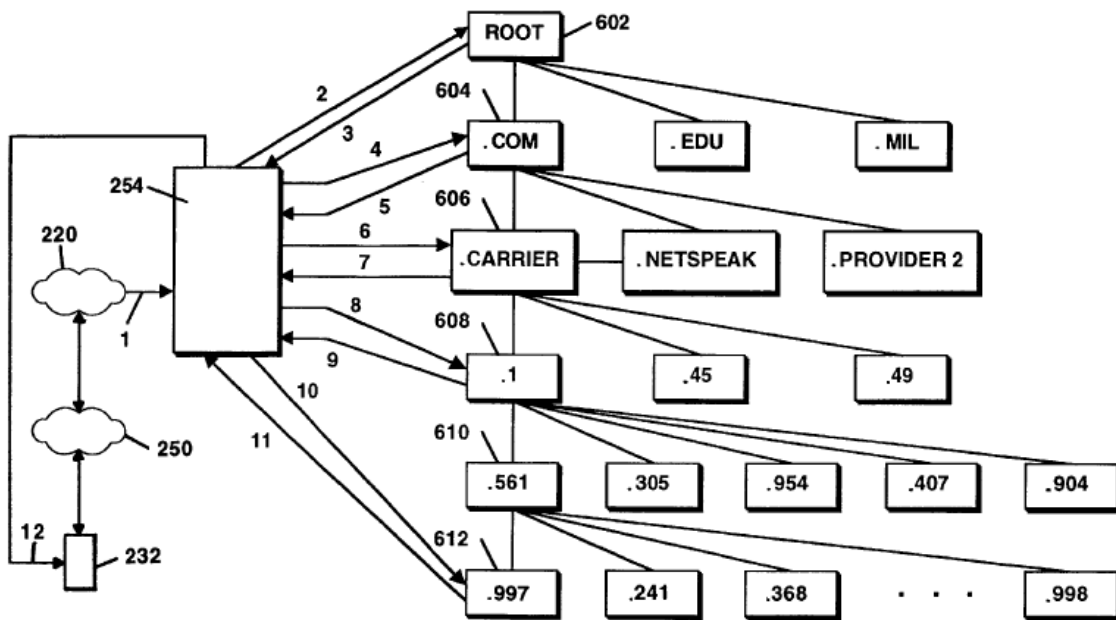


Figure 6

Figure 6, reproduced above, shows the steps used to resolve a telephone number to a network address of a gateway. *Id.* at 4:65–67. Upon receiving a traditional telephone number (e.g., “1-561-997-4001”) from a user, Internet telephone/WebPhone client 232 “reverses the number and appends the carrier’s domain name[,] resulting in a hybrid telephone/domain name having the form ‘4001-997-561-1.carrier.com.’” *Id.* at 6:58–67, 11:50–12:14. With reference to Figure 6, Kelly describes “a recursive process of

resolving the telephone number domain name previously entered into the WebPhone client to the appropriate IP address of a gateway on a PSTN”:

In step 1, the WebPhone client 232 forwards the telephone number domain name to primary name server 254 in packetized form via Internet 220 and ISP 250. Using a name packet, primary name server 254 queries the root name server of the domain name system (DNS) for the address of “4001.997.561.1.carrier.com” in step 2. The name server for the DNS root returns a reference to the name server for “.com” in step 3. Next, name server 254 queries the referenced name server “.com” for the address of “4001.997.561.1.carrier.com” in step 4. In response, a referral to “carrier.com” is returned in step 5. Name server 254 then queries the name server “carrier.com” for “4001.997.561.1.carrier.com” in step 6. In response, a referral to “1.carrier.com” is returned in step 7. Name server 254 then queries the name server to “1.carrier.com,” for “4001.997.561.1.carrier.com” in step 8. In response a reference of “561.1.carrier.com”, is returned in step 9. Name server 254 then queries name server for “561.1.carrier.com,” in step 10 for “4001.997.561.1.carrier.com.” In response, a reference to “997.561.1.carrier.com” is returned in step 11. This last reference contains the IP address of the desired gateway which is then forwarded via Internet 220 and ISP 250 to WebPhone client 232 by name server 254 in step 12.

Id. at 12:32–57.

After step 12 of the telephone number domain name resolution process of Figure 6, “the call packet containing the entire telephone number domain name entry ‘4001.997.561.1.carrier.com’ is then sent to initiate a call session to the IP address of the gateway . . . , and the call is offered.” *Id.* at 13:22–26.

3. Vaziri (Ex. 1007)

Vaziri relates to a “multi-network exchange system has a first type network (PSTN) and a second type network (Internet) and a multinetwork exchange bridge in communication with the first and second type networks for the transfer of electronic information signals (telephone calls) between the first and second type networks.” Ex. 1007, at [57]. Petitioner relies on Vaziri for its teaching of a specific telephone number reformatting process. *See* Pet. 33–34 (citing Ex. 1007, 29:25–36, Fig. 12).

E. Obviousness in View of Nadeau and Kelly

Petitioner asserts that claims 1, 24–26, and 49 are unpatentable under 35 U.S.C. § 103(a) as obvious in view of Nadeau and Kelly. Pet. 15–32. Patent Owner disagrees. Prelim. Resp. 12–30, 35–51. We have reviewed the parties’ contentions and supporting evidence. Given the evidence on this record, and for the reasons explained below, we determine that the information presented does not show a reasonable likelihood that Petitioner would prevail on this asserted ground.

1. Independent Claim 1

a. *Petitioner’s Contentions*

According to Petitioner, “[t]o the extent the preamble is limiting, *Nadeau-Kelly* teaches it.” Pet. 18; *see also id.* at 17–18 (claim chart regarding claim 1 preamble). In particular, Petitioner relies on the SLC of Nadeau, asserting that the “[SLC] (call routing controller) produces routing instructions (routing message) to route calls between callers and callees.” *Id.* at 18 (citing Ex. 1005, 2:49–51, 6:19–23, 7:5–9, 7:22–23, Figs. 1–4; Ex. 1003 ¶¶ 198–201).

Regarding the claim 1 step of “using a caller identifier associated with the caller to locate a caller dialing profile comprising a plurality of calling attributes associated with the caller,” Petitioner asserts that Nadeau’s “SLC ‘consults [the] particular caller’s service profile’ to process the call (locate a caller dialing profile). The profile includes a caller’s home telephone number (caller identifier associated with the caller.” *Id.* at 19 (citing Ex. 1005, 7:24–27, 9:55–64). Petitioner further contends that the “SLC locates the caller’s profile using the caller’s home telephone number, because the caller’s telephone number in the profile is used to ‘automatically associate calls made to the service from the subscriber’s main directory number.’” *Id.* at 19–20 (citing Ex. 1005, 9:62–64). Petitioner also relies on Nadeau’s teaching that the “profile includes a directory containing entries for each person that the caller might wish to call.” *Id.* at 20 (citing Ex. 1005, 9:18–23, 9:66–67). According to Petitioner, “[e]ach directory entry includes a name or telephone number for a party specified by a caller (calling attributes associated with the caller) and routing information specified by the caller that indicates how calls to that party should be routed (calling attributes associated with the caller).” *Id.* (citing Ex. 1005, 3:56–4:6, 9:66–10:20, 12:48–52; Ex. 1003 ¶¶ 202–207).

Claim 1 further recites:

when at least one of said calling attributes and at least a portion of a callee identifier associated with the callee meet private network classification criteria, producing a private network routing message for receipt by a call controller, said private network routing message identifying an address, on the private network, associated with the callee.

According to Petitioner, the “SLC uses a callee’s name . . . (callee identifier) to locate a directory entry for the callee in the caller’s profile by matching

the callee’s name against the name indicated in the corresponding directory entry for the callee (calling attributes).” Pet. 22 (citing Ex. 1005, 4:3–6, 10:1–2, 11:13–15, 12:42–52). Petitioner contends that the SLC determines whether to route the call over the PSTN or an IP network based on the routing information in the matched directory entry. *Id.* at 23 (citing Ex. 1005, 7:24–37, 10:8–20, 11:27–30).

For teaching the claimed “meet[ing] a private network classification criteria,” Petitioner relies on Nadeau’s teachings with respect to routing a call over an IP network based on an available IP address for the callee or when a Quality of Service bypass flag is set. *Id.* (citing Ex. 1005, 10:12, 10:19–20; Ex. 1003 ¶ 211). Supported by testimony from Mr. Bress, Petitioner contends a person of ordinary skill in the art would have known that “an IP network includes private networks like intranets and local area networks (LANs).” *Id.* (citing Ex. 1003 ¶ 212; Ex. 1009⁴, 6–44). Petitioner also relies on Kelly for teaching that an IP network includes private networks like intranets and LANs. *Id.* (citing Ex. 1006, 2:30–41). Petitioner contends a person of ordinary skill in the art would have modified Nadeau’s IP network to include intranets and LANs based on Kelly because it is a combination of known elements according to known methods that would yield predictable results. *Id.* (citing Ex. 1003 ¶ 213).

For the claimed “producing a private network routing message,” Petitioner contends Nadeau’s SLC “generates and sends ‘routing

⁴ LILLIAN GOLENIIEWSKI, TELECOMMUNICATIONS ESSENTIALS: THE COMPLETE GLOBAL SOURCE FOR COMMUNICATIONS FUNDAMENTALS, DATA NETWORKING AND THE INTERNET, AND NEXT-GENERATION NETWORKS (2002). Ex. 1009 is an excerpt of various portions of the textbook. Cited pages 6–44 of the exhibit correspond to pages 329–367 of the textbook.

instructions’ (private network routing message) to a detection point (‘DPFE’) and/or Internet ACS Gateway (collectively, a call controller).” *Id.* at 24 (citing Ex. 1005, 7:22–23, 12:55–61; Ex. 1003 ¶¶ 215–217). Petitioner explains “the ‘routing instructions’ instruct the DPFE to route the call to an IP address of the callee.” *Id.* (citing Ex. 1005, 12:55–61). Regarding the claim requirement that the routing message “identif[ies] an address, on the private network, associated with the callee,” Petitioner acknowledges that Nadeau “does not explicitly disclose that the routing instructions identify the callee’s IP address,” but contends this would have been obvious based on Nadeau’s teachings that the network is an IP network and that the “SLC returns ‘a message indicating to route the call to the IP address retrieved from the Internet domain’ . . . , which is the callee’s IP address.” *Id.* (quoting Ex. 1005, 12:55–61; citing Ex. 1005, 11:27; Ex. 1003 ¶¶ 219–221) (emphasis omitted). Petitioner explains that a person of ordinary skill in the art would have known that an IP address is used to route calls in an IP network. *Id.* (citing Ex. 1003 ¶¶ 219–221).

Petitioner further contends that, in light of Kelly, a person of ordinary skill in the art would have known to modify the programming of Nadeau’s SLC so that the callee’s IP address was included in the routing instructions. *Id.* at 24–25 (citing Ex. 1006, 7:56–8:1; Ex. 1003 ¶¶ 222–225). Petitioner characterizes this modification as being a known technique yielding predictable results that “allows a call to be routed to the callee’s IP address . . . which is the same result desired by *Nadeau*.” *Id.* at 25 (citing Ex. 1005, 10:3, 12:55–61; Ex. 1006, 7:59–67; Ex. 1003 ¶¶ 222–225). Petitioner further contends it would have been obvious for a person of ordinary skill in the art to try this technique based on similar reasons. *Id.*

(citing Ex. 1005, 7:5–9, 7:22–23, 11:27–28, 12:55–61; Ex. 1006, 7:64–67; Ex. 1003 ¶¶ 222–225).

Claim 1 further recites: “when at least one of said calling attributes and at least a portion of said callee identifier meet a public network classification criterion, producing a public network routing message for receipt by the call controller, said public network routing message identifying a gateway to the public network.” As discussed above, Petitioner contends that the SLC determines whether to route the call over the PSTN or an IP network based on the routing information in the matched directory entry. *See* Pet. 27 (referring back to the earlier discussion in the Petition). For teaching the claimed “meet[ing] a public network classification criterion,” Petitioner relies on Nadeau’s teachings with respect to routing a call to the public switched telephone network (PSTN) based on a least cost routing rule or a priority list in a subscriber record. *Id.* (citing Ex. 1005, 10:11, 10:15–18; Ex. 1003 ¶ 230).

For the claimed “producing a public network routing message,” Petitioner again relies on Nadeau’s SLC purportedly sending “routing instructions.” *Id.* at 27–28 (citing Ex. 1005, 7:5–9, 7:22–23, 12:55–61; Ex. 1003 ¶¶ 232–233). Petitioner contends that, to route an IP-originated call over the PSTN, “the ‘routing instructions’ direct the DPFE to route the call to a IP-PSTN Gateway (gateway to the public network), also known as a Gateway Functional Element (GWFE).” *Id.* at 28 (citing Ex. 1005, 7:5–9, 8:39–42, 11:29–33). Regarding the claim requirement that the routing message “identif[ies] a gateway to the public network,” Petitioner acknowledges that Nadeau “does not explicitly state that the routing instructions identify the IP-PSTN Gateway to which the call is routed,” but

contends a person of ordinary skill in the art would have known “that the routing instructions must include such an identification to complete the call.” *Id.* (citing Ex. 1003 ¶¶ 236–238). Petitioner further contends that, in light of Kelly, a person of ordinary skill in the art would have known to modify Nadeau’s SLC to perform the gateway selection process of Kelly by “produc[ing] routing instructions that identify the IP-PSTN Gateway by including its IP address.” *Id.* (citing Ex. 1006, 12:32–35, 12:55–57, 13:22–26; Ex. 1003 ¶¶ 195, 196, 227–240).

Regarding combining the asserted references, Petitioner contends Nadeau and Kelly are from the same field of endeavor and are both concerned with reducing the cost for making VoIP calls. Pet. 15 (citing Ex. 1005, 1:53–2:9, 6:30, 10:11–16; Ex. 1006, 2:42–3:19, 13:46–57). Petitioner further contends that a person of ordinary skill in the art “would have considered *Kelly* when implementing or improving *Nadeau*.” *Id.* (citing Ex. 1003 ¶ 192). Petitioner notes that Nadeau’s SLC may determine to route a call over the PSTN based on least cost routing, but that Nadeau “includes only one gateway to route the call to the PSTN, so the cost for PSTN routing is controlled by that gateway alone.” *Id.* (citing Ex. 1005, 7:5–9, 7:22–23, 8:39–40, 10:11–16, 11:27–28, Fig. 1). Petitioner contends that Kelly “recognizes that costs may be further reduced by selecting a gateway that provides lower cost routing compared to other gateways.” *Id.* (citing Ex. 1006, 13:39–57). In light of this, Petitioner contends a person of ordinary skill in the art “would have been motivated to modify the SLC of *Nadeau* to perform the gateway selection process taught in *Kelly* to further reduce the cost of routing over the PSTN as recognized by *Kelly*.” *Id.* at 16 (citing Ex. 1003 ¶¶ 192–195).

b. Patent Owner's Arguments

Patent Owner argues that the only “routing instructions” disclosed by Nadeau relative to the “public network” consist of “simply a directory number (DN).” Prelim. Resp. 16 (citing Ex. 1005, 9:20–23). Thus, according to Patent Owner, “Nadeau does not disclose that anything identifying the IP-PSTN Gateway is required for Internet-to-PSTN routing.” *Id.* Patent Owner further criticizes Petitioner’s assertion that Nadeau’s routing instructions “must include” an identification of a gateway to the public network. *See id.* at 16–21 (citing Pet. 28). Patent Owner characterizes this as an assertion of inherency and contends that Petitioner has not established Nadeau’s routing instructions necessarily identify a gateway. *See id.* Patent Owner contends Petitioner’s assertion is supported only by Mr. Bress’s testimony, which Patent Owner disputes. *See id.* at 19–21. For example, in response to Mr. Bress’s testimony that Nadeau’s DPFE and ACS Gateway would need an IP address to route a PSTN call (*see* Ex. 1003 ¶¶ 236–238), Patent Owner provides a counterexample in which Nadeau’s single IP-PSTN Gateway is preconfigured to receive all “public” calls. Prelim. Resp. 19–20.

Regarding Petitioner’s proposed modification of Nadeau with Kelly, Patent Owner contends Petitioner has failed to “consider[] or describ[e] various significant further modifications of the SLC that would be necessary in order for the combined references to actually perform” the public network routing message limitation. Prelim. Resp. 21. For example, Patent Owner contends “Petitioner has not provided guidance regarding how merely programming Nadeau’s SLC to produce the call packet of Kelly . . . would

result in the SLC ‘producing a public network routing message . . . identifying a gateway to [a] public network.’” *Id.* at 24.

In particular, Patent Owner highlights a potential inconsistency in Petitioner’s proposed combination. Patent Owner notes that Petitioner maps Nadeau’s Internet ACS Detection Point/DFPE 114 and Internet ACS gateway 116, collectively, to the recited “call controller.” *Id.* at 27 (citing Pet. 28). Patent Owner further notes Nadeau teaches that ACS Service Logic Controller 122 provides “routing instructions,” which Petitioner maps to the recited “network routing message,” to Internet ACS Detection Point/DFPE 114. *Id.* at 12 (citing Pet. 27–28), 24–25 (citing Ex. 1005, 7:1–12, 9:38–46, 11:27–32). Patent Owner notes Internet ACS Detection Point/DFPE 114—the place where Nadeau’s SLC 122 sends routing instructions—is a VoIP client. *Id.* at 7 (citing Ex. 1005, 12:34–39), 24. Patent Owner then turns to Petitioner’s cited teachings from Kelly and alleges inconsistencies between Kelly and Nadeau. Specifically, Patent Owner notes that Petitioner considers Kelly’s “call packet” to be analogous to the “routing instructions” of Nadeau. *Id.* at 24 (citing Pet. 16). Patent Owner contends “the call packet in Kelly is configured to be sent to a gateway, not a VoIP client device” as with Nadeau’s routing instructions. *Id.* at 27; *see* Ex. 1006, 13:22–26, 15:12–17. As such, Patent Owner contends that additional modifications of the references would be necessary to teach the claimed “public network routing message for receipt by the call controller.” Prelim. Resp. 28–30. Patent Owner further contends “Kelly does not disclose that the contents of the call packet include the IP address of the gateway,” as is also recited in claim 1. *Id.* at 28 (citing Ex. 1006, 13:22–26, 15:12–17).

c. Analysis

Petitioner’s Proposed Combination Does Not Teach a “public network routing message identifying a gateway to the public network”

We are persuaded by Patent Owner’s arguments that Petitioner has not established that the combination of Nadeau and Kelly teaches a “public network routing message identifying a gateway to the public network” that is “for receipt by the call controller.” At the outset, we note Petitioner acknowledges that Nadeau does not explicitly disclose routing instructions that identify a gateway to the public network. Pet. 28. Although Petitioner contends “routing instructions *must* include such an identification to complete the call” (*id.* (citing Ex. 1003 ¶¶ 236–238) (emphasis added)), Petitioner’s evidence does not establish this.

First, we agree with Patent Owner (Prelim. Resp. 20) that the only “routing information” expressly described in Nadeau as applicable to public calls is “the individual’s directory number (DN) for the PSTN.” Ex. 1005, 9:20–23. Second, Petitioner relies on a conclusory assertion from Mr. Bress, who testifies that, “[b]ecause *Nadeau* discloses that routing is occurring in an IP network, one of ordinary skill in the art would know that, an IP address is used to identify the IP-PSTN Gateway.” Ex. 1003 ¶ 238; *see also* Pet. 28 (citing same). Even if this is true, it does not substantiate Petitioner’s assertion that Nadeau’s routing instructions must include the IP address of the gateway. As pointed out by Patent Owner, Mr. Bress “has not established that the caller’s VoIP client can only receive the gateway identification information from the SLC 122 and that the caller’s VoIP client can only receive this information from the routing instructions.” Prelim. Resp. 19. Further, we also agree with Patent Owner’s assertion that

identification of Nadeau's lone gateway "could be preconfigured into the caller's VoIP client." *Id.* Accordingly, we are not persuaded that Nadeau's routing instructions necessarily must identify the gateway.

Because Nadeau does not teach a "public network routing message identifying a gateway to the public network," Petitioner relies on Kelly. *See* Pet. 28 (citing Ex. 1006, 12:32–35, 12:55–57, 13:22–26). Yet even if Nadeau's routing instructions are modified to include the contents of Kelly's call packet, the combination does not teach that the modified routing instructions identify a public network gateway. Specifically, Petitioner proposes programming Nadeau's SLC to "perform the gateway selection process taught by *Kelly*." *Id.* at 16–17. According to Petitioner, Kelly's gateway selection process:

(1) transforms a dialed telephone number (e.g., 1-561-997-4001) into a hybrid telephone number domain name (e.g., 4001-997561-1.carrier.com) . . . ; (2) uses successive portions of the hybrid telephone number domain name to retrieve references to name servers that contain an IP address of a carrier gateway . . . ; and (3) produces a call packet, analogous to routing instructions, containing the hybrid telephone number domain name and the IP address of the carrier gateway to effect the call.

Id. at 15–16 (citing Ex. 1006, 11:54–12:11, 12:32–57, 13:21–26). We do not agree with Petitioner's characterization of part (3), however, because Kelly's call packet actually contains the "entire telephone number domain name entry" (e.g., "4001.997.561.1.carrier.com"). Ex. 1006, 13:22–26. In contrast, the "IP address of the desired gateway" described in Kelly's

example is “997.561.1.carrier.com.”⁵ *Id.* at 12:53–57. Although a call packet with the “entire telephone number domain name entry” is *sent to* the IP address of the gateway (*id.* at 13:22–26), this does not mean that the gateway IP address itself necessarily is part of the call packet. As stated above with respect to Nadeau, we do not agree with Petitioner’s argument (*see, e.g.*, Pet. 28 (citing Ex. 1003 ¶¶ 236–238)) that the IP address of the gateway must be part of the call packet simply because the call packet is sent to that IP address. Nor does Petitioner provide any explanation as to why the “entire telephone number domain name entry” in Kelly’s call packet identifies a gateway to the public network commensurate with the language of claim 1.⁶ Therefore, we agree with Patent Owner (Prelim. Resp. 28–29), and determine that Petitioner has not established that Kelly’s call packet identifies a public network gateway.

For these reasons, Petitioner’s proffered evidence does not establish that the combination of Nadeau and Kelly teaches “producing a public network routing message for receipt by the call controller, said public

⁵ To the extent Petitioner and Mr. Bress cite column 12, lines 55–57 of Kelly for the proposition that “the IP address of the desired gateway . . . is then forwarded via Internet 220 and ISP 250 to WebPhone client 232 by name server 254 in step 12” (Pet. 28; Ex. 1003 ¶ 239 (emphasis omitted)), this teaching relates to “a recursive process” by name server 254 for “resolving the telephone number domain name previously entered into the WebPhone client to the appropriate IP address of a gateway on a PSTN.” Ex. 1006, 12:32–35. Once resolved, the IP address of the gateway is forwarded from name server 254 to WebPhone client 232. *Id.* at 12:55–57. As such, the forwarded gateway IP address is not part of Kelly’s call packet that is cited by Petitioner as teaching the claimed “public network routing message.”

⁶ To the extent Petitioner is relying on this argument, it has failed to “identif[y], in writing and with particularity . . . the grounds on which the challenge . . . is based.” 35 U.S.C. § 312(a)(3).

network routing message identifying a gateway to the public network,” as recited in claim 1.

Petitioner’s Rationale for Combining Kelly with Nadeau is Flawed

Even assuming, *arguendo*, that Petitioner’s evidence established that Nadeau’s routing instructions—as modified by Kelly’s call packet—identify a public network gateway, Petitioner’s proposed combination has further problems. We agree with Patent Owner that Petitioner’s stated rationale for combining the references is flawed. First, we agree with Patent Owner that the “*Nadeau-Kelly* combination is an artificial construct which extracts selected teachings of Kelly out of their original context in Kelly’s system (e.g., a VoIP *client* device) and transplants them into a completely different context in Nadeau’s system (e.g., an SLC *server*).” Prelim. Resp. 42. Although Petitioner contends that modifying Nadeau’s SLC “simply involves the known technique of programming the SLC to perform the gateway selection process taught by *Kelly*” (Pet. 16–17 (citing Ex. 1003 ¶ 196)), Petitioner’s asserted combination (*see* Pet. 15–17) results in methods from Kelly’s VoIP client (WebPhone client 232) being applied to a different type of element, namely, Nadeau’s Service Logic Controller 122, rather than Nadeau’s VoIP client 114. This inconsistency undercuts Mr. Bress’s testimony that the modification uses “a known technique . . . to *improve similar devices . . . in the same way.*” Ex. 1003 ¶ 196 (emphasis added). Furthermore, we agree with Patent Owner that Petitioner has failed to provide “any explanation for why a gateway selection process that Kelly discloses as operating as a *client application* with interactive user features on a VoIP *client* device, would be transplanted by [a person of ordinary skill in the art] to an SLC *server* in Nadeau.” Prelim. Resp. 44. In the absence of an

explanation, we are not persuaded by Petitioner’s assertion (Pet. 16) that the combination is “merely a combination of prior art elements according to known methods.”

Second, we agree with Patent Owner that Nadeau’s Internet ACS Detection Point/DFPE 114, which is a VoIP client, is not programmed to process the contents of Kelly’s call packet. *See* Prelim. Resp. 49–50. Petitioner’s combination relies on Nadeau’s SLC producing that call packet, and Petitioner contends the call packet includes “the hybrid telephone number domain name and the IP address of the carrier gateway to effect the call.”⁷ Pet. 16 (citing Ex. 1006, 13:21–26). Petitioner corresponds the call packet to the routing instructions that are sent to Nadeau’s “detection point (‘DPFE’) and/or Internet ACS Gateway,” i.e., Nadeau’s VoIP client 114. *Id.* at 27–28 (citing Ex. 1005, 7:5–9, 7:22–23, 12:55–61; Ex. 1003 ¶¶ 232–233). Yet the “routing instructions” expected by Nadeau’s VoIP client 114 relative to public network calls consist of only a directory number (DN). *See* Ex. 1005, 9:20–23. Petitioner does not provide any explanation about how Nadeau’s VoIP client could process a call packet containing a different type of routing instructions—namely, Kelly’s “entire telephone number domain name entry.” *See* Ex. 1006, 13:22–26. Nor does Petitioner propose any modification to Nadeau’s VoIP client to effect such processing. Thus, even if Nadeau’s VoIP client might be a familiar item with obvious uses beyond its primary purpose as set forth in Nadeau (*see KSR*, 550 U.S. at 420), Petitioner has not explained as much.

⁷ As stated above, the call packet actually includes the “entire telephone number domain name entry” (e.g., “4001.997.561.1.carrier.com”). Ex. 1006, 13:22–26.

Third, Petitioner does not address the “[i]nformation on how to complete the call” that Nadeau’s SLC 112 sends directly to the IP-PSTN Gateway 124 for cross-domain calls. *See* Ex. 1005, 11:31–33, 12:13–15, 13:34–41, Figs. 1, 3, 4 (arrow between elements 122 and 124). We agree with Patent Owner (Prelim. Resp. 49) that Petitioner has not stated how Nadeau’s SLC would be reprogrammed in a combination where “[i]nformation on how to complete the call” could be sent to any of multiple gateways, rather than the lone gateway 124 of Nadeau. Such details, lacking here, are necessary to support a conclusion that one of ordinary skill in the art would have had reasonable expectation of success in combining Nadeau and Kelly in the manner asserted by Petitioner.

In the context of this case, we find inadequate Petitioner’s reasoning that a person of ordinary skill in the art would have known to implement the Nadeau-Kelly combination via a simple reprogramming of Nadeau’s SLC. Thus, we determine that Petitioner’s stated rationale for combining Nadeau and Kelly is fatally flawed.

d. Conclusion Regarding Claim 1

For the reasons above, Petitioner has not established a reasonable likelihood that it would prevail in showing claim 1 would have been obvious over the combination of Nadeau and Kelly.

2. Claims 24–26 and 49

Like claim 1, independent claim 26 requires the production of a public network routing message that identifies a gateway to the public network. Petitioner relies on the same analysis from claim 1 for these limitations. *See* Pet. 30–31. Petitioner also relies on the same rationale for combining Kelly

with Nadeau. *See id.* at 15–17. Therefore, for the same reasons discussed with respect to claim 1, Petitioner has not established a reasonable likelihood that it would prevail in showing claim 26 would have been obvious over the combination of Nadeau and Kelly.

Claims 24 and 25 depend from claim 1; and claim 49 depends from claim 26. Petitioner’s analyses of these dependent claims do not cure the deficiencies noted above with respect to the independent claims. *See id.* at 29, 32. Therefore, for the same reasons discussed with respect to claim 1, Petitioner has not established a reasonable likelihood that it would prevail in showing claims 24, 25, and 49 would have been obvious over the combination of Nadeau and Kelly.

F. Obviousness in View of Nadeau, Kelly, and Vaziri

Petitioner asserts that claims 50 and 73 are unpatentable under 35 U.S.C. § 103(a) as obvious in view of Nadeau, Kelly, and Vaziri. Pet. 32–63. Patent Owner disagrees. Prelim. Resp. 12–51.

Similar to claim 1, independent claim 50 recites means for producing a public network routing message that identifies a gateway to the public network. Petitioner’s analysis for this limitation is similar to the corresponding limitation in claim 1. *See* Pet. 32, 51–57. Petitioner’s cited teachings from Vaziri do not cure the deficiencies noted above with respect to claim 1. In addition, Petitioner’s rationale for combining Vaziri with Nadeau and Kelly incorporates the same rationale for combining Kelly with Nadeau that we found deficient with respect to claim 1. *See id.* at 32. Therefore, for the same reasons discussed with respect to claim 1, Petitioner has not established a reasonable likelihood that it would prevail in showing claim 50 would have been obvious over the combination of Nadeau, Kelly,

and Vaziri. Claim 73 depends from claim 50. Petitioner's analysis of this dependent claim, including the citations to Vaziri, do not cure the deficiencies noted above with respect to the independent claims. *See id.* at 62–63. Therefore, for the same reasons discussed with respect to claim 1, Petitioner has not established a reasonable likelihood that it would prevail in showing claim 73 would have been obvious over the combination of Nadeau, Kelly, and Vaziri.

III. CONCLUSION

As discussed above, Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to at least one claim of the '005 patent challenged in the Petition. Therefore, we do not institute an *inter partes* review as to any of the challenged claims.

IV. ORDER

Accordingly, it is
ORDERED that the Petition is *denied* as to all challenged claims of U.S. Patent No. 9,179,005 B2 and no trial or *inter partes* review is instituted.

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