

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RINGCENTRAL, INC.,
Petitioner,

v.

ESTECH SYSTEMS IP, LLC,
Patent Owner.

IPR2021-00573
Patent 6,067,349

Before THOMAS L. GIANNETTI, CHARLES J. BOUDREAU, and
JON M. JURGOVAN, *Administrative Patent Judges*.

BOUDREAU, *Administrative Patent Judge*.

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

I. INTRODUCTION

RingCentral, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–4, 6–15, and 17–31 (“the challenged claims”) of U.S. Patent No. 6,067,349 (Ex. 1001, “the ’349 patent”). Patent Owner¹ filed a Preliminary Response. Paper 8.

Pursuant to 35 U.S.C. § 314, we² instituted an *inter partes* review as to all of the challenged claims. Paper 13 (“Inst. Dec.”). Patent Owner then filed a Patent Owner Response (Paper 15, “PO Resp.”), Petitioner filed a Reply (Paper 18, “Pet. Reply”), and Patent Owner filed a Sur-reply (Paper 19, “PO Sur-reply”).

A consolidated oral hearing with IPR2021-00574, also involving Petitioner and Patent Owner, was held on July 12, 2022. A transcript of the consolidated hearing is included in the record. Paper 28 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that all challenged claims are unpatentable.

¹ Estech Systems, Inc. was initially identified as the owner of the ’349 patent. *See* Paper 3, 1. In Updated Mandatory Notices filed July 15, 2022, Estech Systems IP, LLC is identified as the owner of the ’349 patent pursuant to a November 18, 2021, assignment. *See* Paper 27, 1 & n.2. Estech Systems, Inc. is identified as the parent of Estech Systems IP, LLC. *Id.* at 1 n.1. The caption of this case has been revised to reflect this change.

² Due to unavailability, original panel member Administrative Patent Judge Jennifer Meyer Chagnon has been replaced by Administrative Patent Judge Jon M. Jurgovan. *See* Paper 29.

II. BACKGROUND

A. Real Parties in Interest

Petitioner identifies as real parties in interest itself (RingCentral, Inc.) and Howard Midstream Energy Partners (“HEP”). Pet. 2. Referring to pending infringement litigations involving the ’349 patent, discussed further below, Petitioner explains, “Petitioner is not a party to any of this litigation but agreed on February 1, 2021 to defend and indemnify its customer HEP in Case No. 6:20-cv-00777 [(W.D. Tex.)] (filed August 25, 2020) (‘HEP case’).” *Id.* Petitioner further represents that “[n]o party other than [Petitioner] exercised or could have exercised control over this petition; no other parties funded or directed this Petition.” *Id.*

Patent Owner identifies Estech Systems IP, LLC and Estech Systems, Inc. as real parties in interest. Paper 27, 1.

B. Related Proceedings

The parties have identified as related matters more than thirty infringement litigations currently or formerly pending in the United States District Courts for the Eastern and Western Districts of Texas. *See* Pet. 2–4; Paper 3, 1–3; Paper 6, 1–3; Paper 12, 1–3; Paper 16, 1–6; Paper 24, 1–6; Paper 27, 1–6. According to the parties, summary judgment of non-infringement was granted in the HEP case in favor of Petitioner’s real party in interest HEP on June 21, 2022. Tr. 6–7; Paper 27, 3. Additionally, Patent Owner represents that at least twelve of the remaining litigations have been dismissed and that an order with respect to an agreed motion to dismiss was pending in another litigation. Paper 27, 1–6.

The '349 patent also was the subject of a petition for *inter partes* review filed by Cisco Systems, Inc. in IPR2021-00332. That petition was denied on July 7, 2021. IPR2021-00332, Paper 11.

C. The '349 Patent

The '349 patent is titled “Dialing Using Caller ID.” Ex. 1001, code (54). According to the '349 patent, “[t]he . . . invention relates in general to telephone and voice processing systems, and in particular, to a telephone call/voice processing system that uses caller ID information for dialing out and creating calling lists.” *Id.* at 1:11–14. The described system “permits a user to call back a party using caller ID data stored with a voice mail message left by the party calling into the system,” which is “accomplished by storing caller ID information associated with an incoming call along with the message placed by the incoming caller and stored within the mailbox associated with the called party.” *Id.* at code (57).

D. Illustrative Claims

Of the challenged claims, claims 1, 9, 12, 19, 20, 23, and 27 are independent. Claims 1 and 23 are illustrative of the challenged claims and are reproduced below:

1. A method comprising the steps of:
 - [a] receiving an incoming call from a calling party over a switched telephone network, wherein the incoming call includes caller ID information, where the caller ID information includes a telephone number of the calling party;
 - [b] connecting the incoming call to a voice mailbox;
 - [c] storing the caller ID information in association with the voice mailbox, wherein the voice mailbox is associated with a called party, and wherein the caller ID information is

stored in association with a voice message left by the calling party for the called party in the voice mailbox; and

- [d] automatically dialing the telephone number at a request of the called party while the called party is listening to the voice message.

23. In a telephone call/voice processing system, a method comprising the steps of:

- [a] receiving an incoming call that includes caller ID information; and
- [b] transferring the caller ID information; and
- [c] transferring the caller ID information to a calling list accessible by a user at an extension of the system wherein the transferring step further comprises the step of indexing the caller ID information in the calling list in response to a signal activated by the user while the user is communicating with the incoming call.

Ex. 1001, 11:29–44, 14:5–15.

E. Asserted Grounds of Unpatentability

Petitioner asserted, and we instituted *inter partes* review on, the following grounds of unpatentability:

Claim(s) Challenged	35 U.S.C. § ³	Reference(s)/Basis ⁴
1, 2, 4, 6, 19	103(a)	Itoh ⁵

³ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103. Because the ’349 patent was filed before March 16, 2013 (the effective date of the relevant amendments), the pre-AIA version of § 103 applies.

⁴ Each of Petitioner’s challenges additionally refers to “the knowledge of a [person of ordinary skill in the art].” Pet. 7. We understand this to refer generally to a person of ordinary skill in the art’s understanding of the applied reference and not to a separate basis for the challenge.

⁵ Itoh et al., US 5,841,838, issued Nov. 24, 1998 (Ex. 1004).

Claim(s) Challenged	35 U.S.C. § ³	Reference(s)/Basis ⁴
7–11, 20–22	103(a)	Itoh, Turnbull ⁶
3, 12–15	103(a)	Itoh, Ladd ⁷
17, 18, 23–31	103(a)	Itoh, Turnbull, Ladd

Pet. 7. Petitioner also relies on a declaration of Dr. Henry H. Houh (Ex. 1003) in support of its contentions. Patent Owner submitted a declaration of Vijay K. Madisetti, Ph.D. (Ex. 2018) in support of its Patent Owner Response.

III. DISCUSSION

A. Legal Framework

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter 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.” *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 skill in the art;⁸ and (4) when in evidence, objective evidence

⁶ Turnbull et al., US 5,590,189, issued Dec. 31, 1996 (Ex. 1005).

⁷ Ladd et al., US 5,117,451, issued May 26, 1992 (Ex. 1006).

⁸ Citing the testimony of Dr. Houh, Petitioner proposes that a person of ordinary skill in the art with respect to the technology described in the ’349 patent in the 1997 timeframe “would have a working understanding of telephone devices, switched telephone networks, PBX telephone systems, and voicemail systems” and “would have had at least a four-year degree in electrical engineering, telecommunication engineering, or a related field and two years of relevant experience in developing or implementing switched telephone systems and/or PBX systems.” Pet. 14 (citing Ex. 1003 ¶¶ 16–

of obviousness or nonobviousness, i.e., secondary considerations.⁹ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). One seeking to establish obviousness based on more than one reference also must articulate sufficient reasoning with rational underpinnings to combine teachings. *See KSR*, 550 U.S. at 418.

We analyze the asserted grounds with the principles stated above in mind.

B. Claim Construction

1. General Principles

In interpreting the claims of the '349 patent, we “us[e] the same claim construction standard that would be used to construe the claim[s] in a civil action under 35 U.S.C. [§] 282(b).” *See* 37 C.F.R. § 42.100(b) (2020). That claim construction standard includes construing claims in accordance with the ordinary and customary meaning of such claims as would have been understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303,

19). Further, Petitioner contends, such “[a]n individual can substitute additional education in the relevant field for some of the experience.” *Id.* Patent Owner does not propose any alternative assessment. *See* PO Resp. 4 (“For purposes of this Response only, Patent Owner does not dispute the level of skill . . . identified in the Petition.”); *see also generally* PO Sur-reply. Our findings and conclusions do not turn on selecting a particular definition for the level of ordinary skill in the art. We determine, on this record, that the level of ordinary skill proposed by Petitioner is consistent with the '349 patent and the asserted prior art. As such, we adopt Petitioner’s proposal.

⁹ The record does not include allegations or evidence of objective indicia of obviousness or nonobviousness.

1312–14 (Fed. Cir. 2005) (en banc). Only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

2. “Means for the user to access the calling list” (claim 31);
“indexing” (claim 20)

In the Petition, Petitioner identifies for construction the phrase “means for the user to access the calling list,” as recited in claim 31, and the term “indexing,” as recited in claim 20. Pet. 14–17. Petitioner contends that the first phrase is a means-plus-function limitation subject to construction under 35 U.S.C. § 112 ¶ 6, where the function is “for the user to access the calling list,” and for which the only corresponding structure in the ’349 patent is a “key.” Pet. 15–16 (citing Ex. 1001, 9:49–51 (referring to a “calling list key”), Fig. 2A; Ex. 1003 ¶¶ 56–57). With regard to the term “indexing,” Petitioner contends that, whereas claim 20 recites “‘circuitry for indexing . . . caller ID information in [a] calling list,’ . . . the ’349 patent does not specify how the caller ID is indexed.” *Id.* at 16. According to Petitioner, “[t]he only disclosure in the ’349 patent that may relate to indexing is an example that the numbers can be stored in an alphabetic order of the calling party’s identity.” *Id.* (citing Ex. 1001, 9:40–42). Nonetheless, Petitioner contends, the term “indexing” has a well-understood meaning in the art, specifically, “to create and use a list that contains reference information (e.g., a number) pointing to each entry in the list.” *Id.* at 16–17 (citing Ex. 1003 ¶¶ 57–58).

In its Response, Patent Owner responds that for purposes of this proceeding, it accepts Petitioner’s proposed constructions. PO Resp. 5.

Based on the full record before us, we find Petitioner’s proposed constructions to be consistent with the ’349 patent specification. First, we agree that “means for the user to access the calling list” is a means-plus-function limitation subject to construction under 35 U.S.C. § 112 ¶ 6, the function of which is “for the user to access the calling list,” and that the structure corresponding to that function in the ’349 patent is a “key.” *See* Ex. 1001, 9:50–51 (providing, with reference to step 202 depicted in Figure 2, “the user presses the calling list key” to access a calling list), Fig. 2A. Second, we find that the ’349 patent discloses in relation to “indexing” of caller ID information only that “caller ID information associated with the incoming call or stored along with the voice mail message is indexed and stored within a data structure on hard disk 107” and that “[f]or example, the caller ID data that identifies the calling party will be stored along with the telephone number of the calling party in alphabetic order.” Ex. 1001, 9:36–42; Pet. 16 (citing Ex. 1001, 9:40–42). We find that such usage is consistent with Petitioner’s unopposed assertion, supported by Dr. Houh’s testimony, that “indexing” is well understood in the art to mean “to create and use a list that contains reference information (e.g., a number) pointing to each entry in the list.” Pet. 16–17 (citing Ex. 1003 ¶¶ 57–58). Accordingly, we adopt Petitioner’s proposed constructions for these terms to the extent necessary for purposes of this Decision.

3. *“Transferring the caller ID information to a calling list”
(claim 7); “calling list” (claims 7 and 8)*

Petitioner represents that HEP, in the related district court litigation, proposed to construe (1) “transferring the caller ID information to a calling list accessible by a user,” as recited in claim 7, as “copying the caller ID information from one storage location to a second storage location that stores a calling list accessible by a user,” and (2) “calling list,” as recited in claims 7 and 8, as “speed dial list.” Pet. 17. According to Petitioner, however, those terms “are construed for non-infringement purposes in the district court and the constructions are consistent with, and immaterial to, the invalidity analysis” in this proceeding. *Id.*

Patent Owner responds that for purposes of this proceeding, it accepts Petitioner’s proposed constructions. PO Resp. 5.

As stated above, we construe claim terms only to the extent necessary to resolve the issues in dispute (*see supra* § III.B.1 (citing *Nidec Motor*, 868 F.3d at 1017; *Vivid Techs.*, 200 F.3d at 803)), and we agree with Petitioner that these additional terms do not require construction to resolve the issues before us.

4. *“Telephone call/voice processing system”
(claims 6, 12, 19, 20, 23, and 27)*

Patent Owner contends that the phrase “telephone call/voice processing system,” recited in dependent claim 6 and the preambles of independent claims 12, 19, 20, 23, and 27, additionally requires construction and that the preambles of claims 12, 19, 20, 23, and 27 are limiting. PO Resp. 5–8. According to Patent Owner, “the proper construction of ‘telephone call/voice processing system’ in claims 6, 12, 19, 20, 23, and 27 is a system for telephone call/voice processing that is external to the

telephones that use the system.” *Id.* at 7. In particular, Patent Owner contends, the telephone call/voice processing (“TC/VP”) system “[i]n every disclosed embodiment of the ’349 patent . . . connects with but is external to multiple telephones.” *Id.* at 6 (citing Ex. 1001, 5:15–20, 6:9–17, 6:51–53). Further, Patent Owner contends, “the ’349 patent even discloses that the TC/VP system is ‘often referred to as a Key System Unit (KSU), . . . which is known in the art as being hardware connected with, but external to, multiple telephones.” *Id.* at 6–7 (citing Ex. 1001, 6:12–13; Ex. 2018 ¶¶ 62–63). Accordingly, Patent Owner contends, “upon reading the entire ’349 patent, a [person of ordinary skill in the art] would conclude the ‘telephone call/voice processing system’ is, at a minimum, a system connected to multiple telephones, but external to such telephones.” *Id.* at 7.

Moreover, Patent Owner argues, the preambles of claims 12, 19, 20, 23, and 27, which each recite “[a] telephone call/voice processing system,” recite essential structure for those claims and are “necessarily to give life meaning, and vitality” thereto. PO Resp. 7 (quoting *Acceleration Bay, LLC v. Activision Blizzard, Inc.*, 908 F.3d 765, 770 (Fed. Cir. 2018)). In support of that argument, Patent Owner contends, *inter alia*, that the specification of the ’349 patent “discloses [that] ‘[t]he “invention relates . . . in particular” to a telephone call/voice processing system’” and “references the TC/VP system over 30 times.” *Id.* at 7–8 (quoting Ex. 1001, 1:10–14 (emphases added); citing Ex. 1001, 1:31–34, 1:36–38, 2:3–5, 2:50–11:22, Fig. 1). According to Patent Owner, “the TC/VP system is structure that is both underscored as important by the specification and essential.” *Id.* at 8 (citing Ex. 2018 ¶¶ 64–65). Patent Owner further contends that the recited TC/VP system in the preambles of claims 12, 19, 20, 23, and 28 provides antecedent

basis for “the system” in the phrase “circuitry for coupling the system to a switched telephone network” in each of claims 12, 19, and 20 and the phrase “an extension of the system” in claims 23 and 28. *Id.*

In its Reply, Petitioner responds that “[w]hether or not the claims’ preamble is limiting is not outcome determinative here,” as “[t]he petition identified how the prior art teaches what the preambles require when properly interpreted.” Pet. Reply 3 (citing Pet. 31, 43, 50, 60, 63). Regardless, Petitioner contends, the preambles of claims 12, 19, 20, 23, and 28 are not limiting because the bodies of those claims “already set forth a complete system and specify that [sic] component parts that system must include.” *Id.* (citing *Shoes by Firebug v. Stride Rite Children’s Grp.*, 962 F.3d 1362, 1367 (Fed. Cir. 2020)). According to Petitioner, “[t]he ‘telephone call/voice processing’ language is simply a non-limiting label that does nothing more than specify the intended context in which [the] system is to be used.” *Id.*

Further, Petitioner argues, “[e]ven if the preambles are limiting, . . . there is nothing about the preamble, the rest of the claim language, or the ’349 specification as a whole that would require claims 12, 19, 20, 23, and 27 to be limited to only systems with ‘multiple’ ‘external’ telephones.” Pet. Reply 3–4.

First, according to Petitioner, “Patent Owner’s proposed limiting construction is contrary to the plain language of the claims.” Pet. Reply 4. For example, Petitioner argues, “[c]laim 12 requires a system with various ‘circuitry’” but “includes no limits requiring that this ‘circuitry’ be housed in any particular way,” such as any “requirement . . . that some parts of the circuitry be within a central ‘system’ while other parts . . . be within separate

‘external’ telephone.” *Id.* (citing Ex. 1001, claim 12). Instead, Petitioner contends “any ‘telephone call/voice processing system’ that includes circuitry that operates as the claim requires, regardless of whether it includes external telephones or not, falls within the claim scope,” and “[c]laims 19, 20, 23, and 27 are no different.” *Id.*

Similarly, Petitioner contends, “none of the claims requires the presence of ‘multiple’ telephones,” but “[i]nstead, they reference and call for only a single ‘voice mailbox’ and a single ‘telephone extension.’” Pet. Reply 4 (citing Ex. 1001, claim 12). Petitioner contends, “[t]here is also nothing in the specification that mandates the presence of ‘multiple,’ ‘external’ telephones.” *Id.* at 5. Notwithstanding Patent Owner’s focus on the specification’s discussion of “communication” and “connection” between system 100 in Figure 1 of the ’349 patent and the electronic key telephone (“EKT”) shown in Figure 8, Petitioner contends that Patent Owner does not argue—and Dr. Madisetti does not testify—that the claims are limited to systems that include EKTs exactly like those shown in the figures, and that the patent does not foreclose the possibility that the communication and connection can occur internally in a single, integrated unit. *Id.* (citing PO Resp. 6; Ex. 1026 (Madisetti deposition transcript), 21:3–22:4, 25:5–14). According to Petitioner, all of the specification passages Patent Owner cites relate only to examples, and there is no clear disavowal of claim scope in the ’349 patent. *Id.* at 5–6. To the contrary, Petitioner points out, the ’349 patent expressly states that the “present invention may be practiced without” the “specific hardware interfaces” disclosed. *Id.* at 6 (quoting Ex. 1001, 2:32–35).

Finally, Petitioner contends, the '349 patent's EKT "is not a stand-alone telephone as Patent Owner's construction requires" but rather "is little more than a user interface device." Pet. Reply 6. According to Petitioner, "[r]ather than combining [a] separate, stand-alone telephone with a voicemail system as Patent Owner argues, the '349 patent explains that its voicemail system and EKT are designed to and only work together," and "the specification repeatedly emphasizes that it is . . . system 100—and not the EKT—that includes the various different 'circuitry' that allows for telephone operation." *Id.* at 6–7 (citing Ex. 1001, 2:65–3:23, 3:34–43). Thus, Petitioner continues, "[b]y requiring the presence of 'external' 'telephones,' Patent Owner . . . would cause the claims to require a type of stand-alone telephone that is not disclosed anywhere in the '349 patent." *Id.* at 7.

In its Sur-reply, Patent Owner disagrees with Petitioner's contention that the preambles of claims 12, 19, 20, 23, and 27 only state a purpose or intended use for the invention and do not serve to limit the claims. PO Sur-reply 1. According to Patent Owner, the Reply contains no analysis to support the allegation that the bodies of those claims "already set forth a complete system," as Petitioner alleges, and the Reply also does not dispute that "claims 12, 19, and 20 each claim 'circuitry for coupling the system to a switched telephone network'" and "claims 23 and claim 27 each claim 'an extension of the system,'" necessitating reliance on the preambles for antecedent basis. *Id.* at 1–2 (citing Pet. Reply 3; Ex. 1001, claims 12, 23). In this regard, Patent Owner further contends that Petitioner's reliance on *Shoes by Firebug* is misguided. *Id.* at 2 (citing Pet. Reply 3). In particular, Patent Owner argues, the court in that case distinguished between a claim in

which the body of the claim reintroduced the preamble term “footwear” by using the indefinite article “an” and a different claim in which the body of the claim—like the claims at issue in the present case—used the definite article “the,” and the court accordingly determined that the preamble of the latter claim was limiting while that of the former was not. *Id.* at 2–3 (citing *Shoes by Firebug*, 962 F.3d at 1366–68).

Regarding the phrase “telephone call/voice processing system,” Patent Owner sums up the dispute between the parties as “whether a person of ordinary skill in the art would understand the term to mean a traditional phone or answering machine (Petitioner’s position) or a system separate from the telephones to which it provides service (Patent Owner’s position).” PO Sur-reply 3. According to Patent Owner, Petitioner is incorrect that Patent Owner’s construction is contrary to the plain language of the claims, insofar as “[t]he preambles of independent claims 12, 19, 20, 23, and 27 limit the scope of the claim to a TC/VP system,” and “[s]imilarly, dependent claim 6 requires that the recited steps are performed in a TC/VP system.” *Id.* Patent Owner contends that dependent claim 31, which recites, in part, “[t]he system as recited in claim 30, further comprising; a telephone coupled to the system as the extension, wherein the telephone includes a means for the user to access the calling list,” “demonstrates that the claimed TC/VP system cannot be implemented in a telephone as Petitioner argues.” *Id.* at 4. In particular, Patent Owner argues, the “telephone” in claim 31 is recited as being “‘coupled to the system’ (i.e., the TC/VP system), which means that it is a separate entity from the TC/VP system.” *Id.* Patent Owner further contends that “Petitioner’s argument is also belied by its own concession that ‘the specification repeatedly emphasizes that it is the system 100—and

not the EKT—that includes the various different “circuitry” that allows for telephone operation.”” *Id.* (quoting Pet. Reply 6) (citing *Phillips*, 415 F.3d at 1316).

Patent Owner further contends that the specification also shows that the TC/VP system is external to the associated telephones. In support, Patent Owner points to the specification’s description of Figures 1 and 3 as being illustrative of components of a TC/VP system and contends that the system as depicted in those figures is not contained within a telephone, whereas “Figure 8 ‘illustrates an EKT’ (i.e., a telephone), without any functionality or circuitry of the TC/VP system.” PO Sur-reply 4–6 (citing Ex. 1001, 2:3–4, 2:7–9, 2:18, 4:2–3, 4:13–15, 4:63–65, 6:5–7). According to Patent Owner, Petitioner mischaracterizes Patent Owner’s contentions as relying on a “preferred” embodiment. *Id.* at 6. To the contrary, Patent Owner asserts, the specification in its entirety consistently describes the TC/VP system as being separate from the telephones to which it is connected. *Id.* Patent Owner repeats from its Response that “the ’349 Patent discloses the TC/VP system is ‘often referred to as a Key System Unit (KSU),’” further arguing that “[i]t would be illogical to obtain and use a KSU for a single telephone.” *Id.* Still further, Patent Owner contends, “the ’349 Patent discloses the TC/VP system has multiple ports for connecting to multiple telephones.” *Id.* at 7 (citing Ex. 1001, 4:62–65, 5:17–19).

Patent Owner also contends that Petitioner’s argument that the ’349 patent does not foreclose the possibility that system 100 and telephone EKT could be part of a single, integrated unit mischaracterizes the patent, which, according to Patent Owner, discloses that the TC/VP system includes

“a peripheral-card (‘p-card’) 300 . . . responsible for all low-level communication with the EKTs 1400” in addition to “EKT interface 306 . . . [that] describes the connection between system 100 and electronic key telephone (EKT) 1400.” PO Sur-reply 7–8 (citing Pet. Reply 5; Ex. 1001, 5:7–19, 6:9–19, Fig. 3). According to Patent Owner, “the disclosures in the ’349 Patent of ‘physical pairs of wires running between system 100’ and the EKT, and the ‘high degree of isolation’ when ‘EKT 1400 is connected to the KSU,’ emphasize that the TC/VP system and the telephones would not be part of a single integrated unit.” *Id.* at 8 (citing Ex. 1001, 6:19–19). Finally, in response to Petitioner’s argument that Patent Owner’s claim construction would “cause the claims to require a type of stand-alone telephone that is not disclosed anywhere in the ’349 patent” (Pet. Reply 7), Patent Owner contends that the TC/VP system includes “analog ports 115 and 116, which provide an ability for system 100 to communicate to analog-type connections such as cordless telephones,” as well as analog ports on interface 310 of p-card 300 that support an analog phone 1300. *Id.* at 8–9 (citing Ex. 1001, 4:62–65, 10:32–35, Fig. 13). According to Patent Owner, those cited cordless and analog phones would be examples of stand-alone telephones. *Id.*

Further, we agree with Patent Owner that the preambles of claims 12, 19, 20, 23, and 27 are limiting. As Patent Owner argues, the phrase “telephone call/voice processing system” recited in the preambles of those claims provides antecedent basis for limitations that recite “the system” within the bodies of the claims. *See* PO Resp. 7–8; PO Sur-reply 1–3.

We disagree with Patent Owner’s contention that the term “telephone call/voice processing system” is limited to “a system for telephone call/voice

processing that is external to the telephones that use the system.” PO Resp. 6–7. Although claims 12, 19, 20, and 27 are directed to a TC/VP system that includes the circuitry recited in each of their claim limitations, and claims 6 and 23 require that their respective recited steps be performed in a TC/VP system, nothing in the claims indicates that the TC/VP system may not be housed within a telephone or that the TC/VP system may not include telephone functionality. Indeed, the claims’ use of the open-ended transition phrase “comprising” (*see, e.g.*, claim 12 (“A telephone call/voice processing system comprising . . .”)) specifically leaves open the possibility that the claimed systems may include additional circuitry beyond that expressly recited in claims 12, 19, 20, and 27 or that additional steps beyond those expressly recited in claims 6 and 23 may be performed by the recited systems. *See, e.g., Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1368 (Fed. Cir. 2003) (“The transition ‘comprising’ in a method claim indicates that the claim is open-ended and allows for additional steps.”); *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997) (explaining that “comprising” is a term of art used in claim language, which means that the named elements are essential but other elements may be added and still form a construct within the scope of the claim). Thus, we agree with Petitioner that “any ‘telephone call/voice processing system’ that includes circuitry that operates as [claim 12] requires, regardless of whether it includes external telephones or not, falls within the claim scope,” and “[c]laims 19, 20, 23, and 27 are no different.” Pet. Reply 4.

We also agree with Petitioner that neither the claims nor anything in the specification of the ’349 patent requires the presence of “multiple,” “external” telephones. Pet. Reply 4–5. Although the ’349 patent illustrates

TC/VP systems and telephones separately and depicts systems having ports or a cross-point matrix for coupling with a telephone (*see, e.g.*, Ex. 1001, Figs. 1 (elements 103, 115, 116, 123), 3, 8), we agree with Petitioner that the described architecture is merely exemplary and that claims 6, 12, 19, 20, 23, and 27 and claims dependent therefrom are not limited to those specific architectures. *See* Pet. Reply 3–6; *see also* Ex. 1001, 2:32–35 (stating that although “numerous technical details are set forth such as . . . specific hardware interfaces, etc. to provide a thorough understanding of the present invention,” “it will be obvious to those skilled in the art that the present invention may be practiced without such specific details”), 2:66 (referring to the system in Figure 1 as an “example”). Further, as Petitioner points out, even “[w]hen the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using ‘words or expressions of manifest exclusion or restriction.’” Pet. Reply 6 (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (quoting *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1327 (Fed. Cir. 2002))). We find no persuasive evidence of such “clear intention” in the claims, specification, or prosecution history of the ’349 patent. Patent Owner’s citation of claim 31, which recites that the claimed system “further compris[es] . . . a telephone coupled to the system as the extension,” does not persuade us otherwise. *See* PO Sur-reply 4. Although that claim requires an external telephone, we find nothing in the claim or in the specification of the ’349 patent that precludes the TC/VP system from itself having telephone functionality built in or precludes the TC/VP system from being integrated into another telephone apparatus.

5. *Other terms*

As stated above, we construe claim terms only as relevant to the parties' contentions, and only to the extent necessary to resolve the issues in dispute. *See supra* § III.B.1 (citing *Nidec Motor*, 868 F.3d at 1017; *Vivid Techs.*, 200 F.3d at 803). We do not see the need to construe any other terms for the purpose of this Decision.

C. The Prior Art

Before turning to Petitioner's asserted grounds of unpatentability, we provide a brief summary of the asserted references.

1. Itoh

Itoh, titled "Telephone Answering Unit with Caller Identification and Message Recording Function," describes a telephone having a "caller's telephone number displaying feature" that allows a user to know who telephoned while the user is absent or away from the telephone, as well as a "memory" that stores the telephone number "along with" an incoming message "[w]hen the telephone is in an automatic answering mode." Ex. 1004, codes (54), (57). Itoh discloses that when the user depresses a "play key," the telephone plays back the recorded messages one after the other and displays the caller's telephone number corresponding to the message currently being played. *Id.* at 7:40–48. If the user presses the "redial" key while a message is playing, playback is terminated, and the telephone dials the corresponding caller's telephone number. *Id.* at 8:5–35, 10:60–11:2, Fig. 6.

2. Turnbull

Turnbull, titled "Method of Operating a Microprocessor Controlled Telephone Set," is directed to a telephone device with a microprocessor.

Ex. 1005, codes (54), (57). Turnbull's telephone device contains a "directory list" that stores telephone numbers and associated names in alphabetical order (or numerical order, if a name is not present) in a non-volatile memory. *Id.* at 6:19–20, 40–43. Turnbull discloses that a user can press a "SAVE" key to add entries to the directory list "whenever there is caller ID information displayed," including during incoming or outgoing calls. *Id.* at 6:34–39. The user can use scroll keys to browse and navigate the list, and the "DIAL" key to select and dial a number on the list. *Id.* at 6:40–50.

3. *Ladd*

Ladd, titled "Interface to and Operation of a Voice Messaging System," is directed to a voice messaging system for use with a telephone system, in a preferred embodiment of which the voice messaging system is interfaced to a private branch exchange ("PBX") having multiple branches, or extensions, through a feature phone interface and emulates a feature phone (i.e., a telephone having multiple line capability, display capability, or other advanced features). Ex. 1006, codes (54), (57), 1:10–37. The PBX supplies information to the voice messaging system such as information on the origination and history of the call to improve call handling. *Id.* at code (57). Ladd discloses that the voice messaging system may prompt a caller to enter an extension number, in which case the system transfers the caller to the desired extension and directs the caller to leave a message if the extension is busy or is not answered after a predetermined number of rings. *Id.* at 14:27–51.

D. Obviousness over Itoh (Claims 1, 2, 4, 6, and 19)

Petitioner contends that independent claims 1 and 19 and dependent claims 2, 4, and 6 would have been obvious over Itoh in view of the knowledge of a person of ordinary skill in the art. Pet. 6, 21–35. Patent Owner opposes. PO Resp. 9–20; PO Sur-reply 9–15. Having considered the arguments and evidence before us, we find that the record establishes by a preponderance of the evidence that Petitioner prevails on this asserted ground of unpatentability.

1. Claim 1

Petitioner provides an element-by-element analysis of claim 1 in relation to Itoh. Pet. 21–26. Petitioner supports its analysis with testimony from Dr. Houh. Ex. 1003 ¶¶ 72–86. For the reasons that follow, we find that Petitioner demonstrates that each limitation of claim 1 is taught or suggested by Itoh.

a. Preamble: “A method comprising the steps of”

Petitioner contends that, to the extent that the preamble of claim 1 is limiting, a person of ordinary skill in the art would have understood that Itoh discloses a telephone unit performing certain functions and steps. Pet. 21 (citing Ex. 1004, Figs. 2–7). Patent Owner does not challenge this assertion. We find, based on the record presented, that Itoh teaches the preamble of claim 1.

- b. Element 1[a]: “receiving an incoming call from a calling party over a switched telephone network, wherein the incoming call includes caller ID information, where the caller ID information includes a telephone number of the calling party”*

Petitioner contends that Itoh “teaches, or at least renders obvious, a telephone unit that ***‘receiv[es] an incoming call from a calling party over a switched telephone network,’***” citing disclosure in Itoh of “telephone unit 1” connected via “telephone line 3” to “switchboard 5,” such that, “[w]hen a caller dials the telephone number of the telephone unit 1 via the switchboard 5, a call signal is intermittently inputted to the telephone unit 1 via the switchboard 5.” Pet. 21–22 (quoting Ex. 1004, 3:49–54) (citing Ex. 1004, Fig. 1; Ex. 1003 ¶ 73).

Petitioner argues that, “[a]lthough Itoh does not expressly teach that the telephone unit receives phone calls over a ‘switched telephone network,’” Itoh teaches the telephone being connected to a switchboard, and a person of ordinary skill in the art “would have understood that, in the context of Itoh, a ‘switchboard’ can be (and most often is) used as a component of a switched telephone network.” Pet. 22 (emphasis omitted) (citing Ex. 1003 ¶¶ 74–75; Ex. 1004, 3:59–60). Relying on the testimony of Dr. Houh, Petitioner further contends that “[t]his is especially true because switched telephone networks were conventional and ubiquitous at the time.” *Id.* at 22–23 (citing Ex. 1003 ¶ 75). Still further, Petitioner contends, “[b]ecause Itoh teaches features that improve a ‘conventional’ telephone device, a [person of ordinary skill in the art] would have found it obvious to use Itoh’s telephone device with a conventional switched telephone network

such as a Public Switched Telephone Network (PSTN).” *Id.* at 23 (citing Ex. 1004, 1:52–56; Ex. 1003 ¶¶ 76–77).

Finally, Petitioner argues, “Itoh also discloses that the ‘incoming call’ includes ‘caller ID information,’ and that the caller ID information includes a ‘telephone number of the calling party,’” based on disclosure in Itoh that “the caller’s telephone number is transmitted to telephone unit 1 via the switchboard 5 during the silent interval between the first and the second call signals” when the telephone unit receives a caller’s incoming call. Pet. 23 (emphases omitted) (quoting Ex. 1004, 3:54–59) (citing Ex. 1003 ¶ 78).

Patent Owner contends that Itoh does not teach or suggest the recited step. PO Resp. 9–11. First, according to Patent Owner, Itoh does not disclose an incoming telephone call to the switchboard including caller ID information but instead teaches that caller ID information including the caller’s telephone number is transmitted separately from the telephone call itself. *Id.* at 10. More particularly, Patent Owner argues, “Itoh discloses using a switchboard and a ‘caller’s telephone reception service’ (undefined in Itoh) to intersperse caller ID information between call signals,” and, accordingly, “[t]he transmission of the caller ID information [in Itoh] occurs during a specific interval between the first and second call signals,” “contrary to the claim language itself that requires the incoming call to include the caller ID information.” *Id.* Further, Patent Owner contends, “Itoh is focused on a switchboard adding and interspersing caller ID information between call signals being transmitted to the telephone unit,” whereas “[t]he claims at issue . . . are directed towards extracting caller ID information from a call itself.” *Id.* (citing Ex. 1004, 1:19–34; Ex. 2018 ¶ 72). According to Patent Owner, “it would not have been obvious that the

system of Itoh could be used to perform the claimed method because Itoh adds information rather than extracting it.” *Id.*

In its Reply, Petitioner responds that claim 1 requires that the “incoming call” “include[] caller ID information,” not that the caller ID information must be embedded in the call signals that announce an incoming call. Pet. Reply 8. According to Petitioner, “[a]n ‘incoming call’ is not coextensive with a single call signal,” but “[i]nstead, as repeatedly explained in the ’349 patent, an ‘incoming call’ includes more than and continues beyond the initial call signals.” *Id.* (citing Ex. 1001, code (57), 1:39–40, 8:10–25). In this regard, Petitioner argues, “[t]he ’349 patent is no different from Itoh.” *Id.* at 9. Like Itoh, Petitioner argues, “the ’349 patent does not embed caller ID information into an incoming call signal”; instead, caller ID information “is added to a call by the telephone company and transmitted to a called party in the time between two incoming call signals.” *Id.* at 9 (citing Ex. 1001, 3:24–29 (“Caller ID data is transmitted from the Central Office (‘CO’) using a Frequency Shift Keying (‘FSK’) modulation scheme. . . . The CO transmits the caller ID data between the first and second rings of the phone.”)). Indeed, Petitioner argues, Patent Owner’s expert, Dr. Madisetti, was unable to identify in the ’349 patent any other way of including caller ID information to an incoming call,” and he testified that it is “not [his] opinion” that the way of transmitting and receiving caller ID information discussed in column 3 of the ’349 patent would be outside of the scope of the claims. *Id.* at 9–10 (citing Ex. 1026, 41:9–43:23, 44:17–46:1, 52:21–53:15, 57:18–61:24).

In the Sur-reply, Patent Owner argues that Petitioner’s Reply concedes that the ’349 patent discusses caller ID information being added to

a call by the telephone company, “consistent with the claim language, which requires that the ‘incoming call’ be ‘from a calling party over a switched telephone network,’” whereas Itoh discloses that caller ID information is provided by a switchboard. PO Sur-reply 9–10 (citing Pet. Reply 9; Ex. 1001, claim 1; Ex. 1004, 2:62–65). According to Patent Owner, “[t]here is no disclosure in Itoh of the call from the calling party (i.e., the call from the public switched network) containing Caller ID information,” and “[t]he disclosure of Itoh indicates that Caller ID information is inserted later, at the switchboard.” *Id.* at 11 (citing Ex. 1002, 2:62–65, 3:1–3). Patent Owner also argues that Dr. Madisetti’s testimony cited by Petitioner pertains to the disclosure of the ’349 patent rather than to the disclosure of Itoh and, as such, is irrelevant to the alleged deficiencies of Itoh. *Id.* at 11–12 (citing Pet. Reply 9; Ex. 1026, 41:9–43:23).

We find, based on the record presented, that Itoh teaches or suggests the recited step. We agree with Petitioner that Itoh’s disclosure of caller ID information interspersed between call signals meets the claim language “wherein the incoming call includes caller ID information.” Pet. 23; Pet. Reply 7–10. Although claim 1 recites that “the caller ID information includes a telephone number of the calling party” and that the incoming call is “receiv[ed] . . . from a calling party over a switched telephone network,” the claim does not recite any limitation regarding when or by whom the caller ID information is included in the incoming call. And indeed, as Petitioner points out and Patent Owner does not dispute, the ’349 patent discloses only that caller ID information is added by the telephone company, not that the caller ID information is provided by the calling party. *See* Pet. Reply 9–10; PO Sur-reply 9–11. Although Patent Owner characterizes that

as a “conce[ssion]” by Petitioner (PO Sur-reply 9–11), we do not see it as such. Rather, it supports Petitioner’s argument that Itoh’s teachings in this regard are essentially the same as the ’349 patent. In particular, we see no meaningful difference between the ’349 patent’s disclosure of caller ID information being added to a call by a “central office” and transmitted between “the first and second rings” and Itoh’s disclosure of caller ID information being added to a call by a “switchboard” and transmitted between “call signals.” In both instances, the caller ID information has been included in the incoming call by the time the call is received, such that the “incoming call includes caller ID information” as recited in claim 1. Further, to the extent that Patent Owner is arguing that a call received via a switchboard is not “receiv[ed] . . . over a switched telephone network,” we find no support in the record for that proposition.

c. Element 1[b]: “connecting the incoming call to a voice mailbox”

Petitioner contends that Itoh discloses the recited step of “connecting the incoming call to a voice mailbox.” Pet. 23. In particular, Petitioner argues, “Itoh teaches that when the called party does not pick up the call, the telephone system connects the incoming call to a voice mailbox system within the telephone device.” *Id.* at 23–24 (citing Ex. 1004, 4:21–26, 5:45–54, 6:4–8, Fig. 3; Ex. 1003 ¶¶ 79–80). Petitioner further contends, “[t]o the extent that the ‘voice mailbox’ is a physical component, [a person of ordinary skill in the art] would have understood that in Itoh, the incoming caller is ‘connected’ to a DRAM to record and store a voice message in real time.” *Id.* at 24 (citing Ex. 1003 ¶ 81; Ex. 1004, 6:18–21). “A [person of ordinary skill in the art] would understand that the DRAM is a ‘voice

mailbox,” according to Petitioner, “because it performs the function of (among other things) storing incoming voice messages to be played to the user.” *Id.* (citing Ex. 1003 ¶ 81).

Patent Owner responds that Itoh does not teach or suggest the recited connecting step. PO Resp. 11–13. According to Patent Owner, “the method of claim 1 requires both receiving the incoming call and then a further connection step in order to access a particular user’s voice mailbox,” whereas “[i]n contrast, Itoh discloses single phone units, analogous to the EKTs of the ’349 patent, that themselves receive calls and then record voice messages on that same phone unit.” *Id.* at 12. Thus, Patent Owner contends, “once the call is received and connected to the phone units of Itoh, no further connection to a voice mailbox is required (and no such connection is disclosed), because the phone itself contains storage memory.” *Id.* While recognizing that the Petition cites step S310 of Figure 3 of Itoh, labeled “CONNECT LINE,” for this step, Patent Owner contends that “step S310 . . . is part of the ‘answering routine,’ and merely describes connecting a telephone circuit to the telephone unit 1, i.e., receiving the call,” and “[i]f the user does not pick up the handset 35, telephone unit 1 automatically plays an outgoing message requesting a voicemail and stores that voicemail.” *Id.* (citing Pet. 23–24; Ex. 1004, 2:1–8, 5:48–53, 6:4–14, Fig. 3).

In its Reply, Petitioner responds that there is no limitation in claim 1 that requires that the steps of “receiving an incoming call” and “connecting the incoming call to a voice mailbox” must be performed by separate, distinct structures, as Patent Owner’s arguments suggest. Pet. Reply 10. Rather, Petitioner contends, “[t]he claim simply requires the performance of

a series of steps,” and “Itoh teaches exactly what the claims require.” *Id.* at 10–11. In particular, Petitioner argues, Itoh’s “telephone unit 1 can be called by outside party,” which “corresponds to the claimed ‘receiving an incoming call’ step.” *Id.* at 11 (citing Ex. 1004, 3:49–54). Then, Petitioner continues, “if the called telephone unit is not answered, a greeting message is played and the incoming call is transferred to a voicemail box,” which “in turn leads to the performance of a number of additional steps shown in Figures 3 and 4, including the ‘connect line’ step S310 that effectuates a connection to the voicemail system,” “correspond[ing] to the claims ‘connecting . . . to a voice mailbox’ step.” *Id.* (citing Ex. 1004, 5:45–54, Fig. 3). Petitioner points out that these two separate steps are shown in Figure 2 of Itoh, which shows “[a] call is ‘received’ in Step S110” and “the call is then ‘connected’ to the voicemail system beginning in later, separate Step 200.” *Id.* at 11–12 (reproducing Ex. 1004, Fig. 2). Petitioner contends that this sequence is indistinguishable from the method of the ’349 patent, as depicted in Figure 9 thereof, in which a single structure, “system 100,” likewise performs both steps. *Id.* at 13 (citing Ex. 1001, 2:50–55, 8:11–12, 8:25–29, Fig. 9). According to Petitioner, Patent Owner’s contentions again would improperly read out the ’349 patent’s own embodiment. *Id.*

Moreover, Petitioner contends, there is no limitation in claim 1 that precludes automatic connection of an incoming call to a voice mailbox, as Patent Owner’s arguments suggest. Pet. Reply 13–14 (citing PO Resp. 13). In fact, Petitioner argues, the system of the ’349 patent itself automatically connects an incoming call to a voice mailbox if the call is not answered. *Id.* at 14 (citing Ex. 1001, 8:25–29). According to Petitioner, Patent Owner’s

contentions once again would improperly read out the '349 patent's only embodiment. *Id.*

In its Sur-reply, Patent Owner does not dispute that the '349 patent discloses that TC/VP system 100 performs both the “receiving” and “connecting” steps. PO Sur-reply 12–13. Nonetheless, Patent Owner contends that Itoh fails to teach or suggest the recited “connecting” step because Itoh discloses that that step is performed by Itoh's telephone unit, rather than by an external TC/VP system. *Id.* at 13 (citing Ex. 1004, 4:64–67).

We find, based on the record presented, that Itoh teaches or suggests the recited step. As an initial matter, we are persuaded by Petitioner's contention, supported by Itoh and Dr. Houh's testimony, that a person of ordinary skill in the art would understand that Itoh's DRAM 21 is a “voice mailbox,” as recited in claim 1, and that Itoh teaches an answering routine in which an incoming call is “connected” to DRAM 21 for recording and storage of a message if a called party does not answer in a predetermined number of rings. Pet. 23–25 (citing Ex. 1003 ¶¶ 79–81; Ex. 1004, 4:21–26, 5:45–54, Figs. 2–4). Notwithstanding Patent Owner's argument that “the method of claim 1 requires . . . a *further* connection step” (PO Resp. 12 (emphasis added)), claim 1 recites only a single “connection” step, namely, the step of “connecting the incoming call to a voice mailbox” (Ex. 1001, claim 1), and Petitioner sufficiently shows that Itoh discloses such a connection (Pet. 23–24). Further, we discern no reason that the connecting step must be performed by a system external to the telephone unit or that the voice mailbox itself must be external to the telephone, even if, as Patent Owner asserts, the '349 patent describes such a separate system. *See*

Philips, 415 F.3d at 1323 (“[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments.”); *see also supra* § III.B.4 (TC/VP system may have built-in telephone circuitry or may be integrated into a telephone).

d. Element 1[c]: “storing the caller ID information in association with the voice mailbox, wherein the voice mailbox is associated with a called party, and wherein the caller ID information is stored in association with a voice message left by the calling party for the called party in the voice mailbox”

Petitioner contends that “Itoh discloses that the telephone device stores the caller ID information (the caller’s telephone number) ‘in association with the voice mailbox’” and “in association with a voice message left by the calling party for the called party in the voice mailbox,” citing Itoh’s disclosure that the caller’s telephone number is “stored in the DRAM 21 in a one-to-one correspondence with any incoming message recorded from the caller.” Pet. 25 (emphasis omitted) (quoting Ex. 1004, 6:8–18) (citing Ex. 1003 ¶¶ 82, 84; Ex. 1004, 10:57–60, 13:13–17). Moreover, Petitioner contends, Itoh’s “voice mailbox is ‘associated with a called party’ because it is located in DRAM 21 of a telephone device, and the telephone device is associated with a particular user (the called party).” *Id.* at 26 (emphasis omitted) (citing Ex. 1004, Fig. 1; Ex. 1003 ¶ 83).

Patent Owner responds that Itoh does not teach or suggest the recited storing step, alleging that this step requires storing “two separate and distinct associations—(1) an association between the caller ID information and the voicemail box, and (2) an association between the caller ID information and a voice message,” whereas Itoh stores only the latter association. PO

Resp. 13–14. In particular, Patent Owner contends, the specification of the '349 patent “describes a system where the voicemail box is apart from the telephone device itself,” whereas “Itoh . . . describes only a single telephone unit with memory” that stores a single association—caller ID information to a voice message.” *Id.* at 14. Patent Owner further contends that “one cannot argue that storing an association between caller ID information and a voice message in voicemail box necessarily stores an association between the caller ID information and the voicemail box . . . because if the voice message is deleted the caller ID information is lost.” *Id.* According to Patent Owner, “[c]laim element 1[c] requires an additional association to prevent this very problem.” *Id.*

In its Reply, Petitioner responds that claim 1 requires neither a voicemail box that is “apart” from a telephone nor the storage of two separate “associations,” as Patent Owner argues. Pet. Reply 14–15. Rather, Petitioner argues, “[b]y its very words, claim 1 requires storage of only ‘the caller ID information,’ and “[w]hile this information must be stored in a particular mailbox (*i.e.*, that ‘associated’ with the called party), the claim does not separately require storage of a piece of data correlating the caller ID information to a mailbox.” *Id.* at 15. Consistent with the claims, Petitioner argues, the '349 patent specification repeatedly discusses the storage only of a “voicemail message” and “caller ID data” and never states that separate data identifying the associated mailbox is or must be stored. *Id.* (citing Ex. 1001, code (57), 1:38–42, 8:32–34, 8:46, Fig. 9). Thus, according to Petitioner, Itoh’s voicemail system stores the same information as the '349 patent, and along with the message, Itoh’s system stores “data

constituting caller's telephone numbers," "exactly what the claims require." *Id.* (citing Ex. 1004, 4:21–26).

In its Sur-reply, Patent Owner responds that Petitioner's arguments disregard the plain language of claim 1 that requires an association between the caller ID information and the voicemail box, as well as an association between the caller ID information and a voice message. PO Sur-reply 14–15. In particular, Patent Owner argues, the first association is required by the recitation in claim 1 of "storing the caller ID information in association with the voice mailbox," while the second association is required by the recitation that "the caller ID information is stored in association with a voice message." *Id.* Further, Patent Owner contends, "the Reply concedes that Itoh cannot meet those express requirements of limitation 1[c]" by "stat[ing] that in Itoh '[i]ncoming messages are stored in dedicated memory associated with [sic] particular phone.'" *Id.* at 15 (emphasis omitted) (quoting Pet. Reply 15). According to Patent Owner, "[t]he only thing that Itoh stores is 'data constituting caller's telephone numbers,'" which, Patent Owner contends, "does not satisfy the requirements of limitation 1[c]." *Id.*

Upon consideration of the full record, we agree with Petitioner that Itoh teaches this step. As stated in the discussion of element 1[b] above (*see supra* § III.D.1.c), we are persuaded that a person of ordinary skill in the art would understand Itoh's DRAM 21 to be a "voice mailbox." Further, as Petitioner points out, Itoh discloses that the caller's telephone number (i.e., the recited "caller ID information) is "stored in the DRAM 21 in a one-to-one correspondence with any incoming message recorded from the caller." Pet. 25 (quoting Ex. 1004, 6:8–18). Accordingly, we find that Itoh discloses that "caller ID information is stored in association with a voice message left

by the calling party for the called party in the voice mailbox,” as recited in claim 1. Moreover, we agree with Petitioner that the voice mailbox (i.e., DRAM 21) is “associated with a called party” because it is located within the called party’s telephone. *Id.* at 26 (citing Ex. 1003 ¶ 83; Ex. 1004, Fig. 1).

Contrary to Patent Owner’s contention, we are not persuaded that “two separate and distinct associations” are required by this step. *See* PO Resp. 13–14. In this regard, we also disagree with Patent Owner’s further contention that “one cannot argue that storing an association between caller ID information and a voice message in voicemail box necessarily stores an association between the caller ID information and the voicemail box . . . because if the voice message is deleted the caller ID information is lost.” *Id.* at 14. Notwithstanding Patent Owner’s argument that “[c]laim element 1[c] requires an additional association to prevent this very problem” (*id.*), we find nothing in claim 1 that requires that caller ID information be retained if an associated message is deleted. Rather, we understand the “wherein” clause reciting the association between the caller ID information and the voicemail message simply to qualify the association between the caller ID information and the voice mailbox, making it clear that the caller ID information must not only be stored in association with the voice mailbox associated with the called party but that it must further be associated with a particular voicemail message. In other words, the caller ID information must not only be stored in the mailbox, but it also must be associated with a particular message within the mailbox.

Because in Itoh the “caller ID information is stored in association with the voice message . . . in the voice mailbox,” and the voice mailbox is

“associated with [the] called party” (*see supra*), we find that Itoh meets each of the recitations of element 1[c].

e. Element 1[d]: “automatically dialing the telephone number at a request of the called party while the called party is listening to the voice message”

Petitioner contends that Itoh discloses the recited step of “automatically dialing the telephone number at a request of the called party while the called party is listening to the voice message,” citing Itoh’s disclosure that “[i]f, after the play key is depressed, the redial key is depressed while an incoming message is being reproduced (S720 or S920: Yes), then the caller’s telephone number that corresponds to the subject incoming message presently being reproduced is redialed in S760 or S960.” Pet. 26 (quoting Ex. 1004, 10:57–65) (citing Ex. 1003 ¶¶ 85–86; Ex. 1004, 4:36–39, 8:18–25).

Patent Owner does not challenge Petitioner’s assertions regarding this step. We find, based on the record presented, that Itoh teaches this limitation.

f. Summary with Respect to Claim 1

For the reasons given, we conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 1 would have been obvious over Itoh.

2. Claim 2

Claim 2 depends from claim 1 and further recites “wherein the caller ID information further includes an identity of the calling party.” Ex. 1001, 11:45–46. Pointing to disclosure in Itoh that the telephone unit “receives from the switchboard a telephone number” and “a caller’s name corresponding to the telephone number,” as well as disclosure that both the

caller's telephone number and the caller's name are "transmitted with a call signal from the switchboard over the telephone line" and "stor[ed] in the memory medium," Petitioner contends this further limitation is taught by Itoh. Pet. 27 (quoting Ex. 1004, 2:67–3:3, 3:8–11) (citing Ex. 1003 ¶ 87).

Patent Owner does not challenge Petitioner's assertions except to the extent that claim 2 depends from claim 1. PO Resp. 19–20; PO Sur-reply 15. We conclude, based on the record presented and for the reasons given above with respect to claim 1, that Petitioner has demonstrated by a preponderance of the evidence that claim 2 would have been obvious over Itoh.

3. Claim 4

Claim 4 depends from claim 1 and further recites "wherein the dialing step further comprises the steps of: [a] retrieving the telephone number in response to a signal activated by the called party while the called party is listening to the voice message," "[b] seizing an outside line coupled to the switched telephone network," and "[c] automatically dialing the telephone number over the outside line." Ex. 1001, 11:55–63. Petitioner contends that a person of ordinary skill in the art would have understood that pressing the "redial" key, as discussed in connection with element 1[d], constitutes a "signal activated by the called party." Further, according to Petitioner, Itoh teaches step 4[a] in light of its disclosure that "the caller's telephone number that corresponds to the subject incoming message presently being reproduced" is dialed by the "automatic dial means" when the redial key is pressed. Pet. 28–29 (citing Ex. 1004, 4:49–51, 8:17–25, Fig. 6; Ex. 1003 ¶¶ 88–91). Petitioner further contends that a person of ordinary skill in the art would have understood that the transmission of the caller's number to the

switchboard to call the caller's telephone "means (or at least renders obvious) that [Itoh's] automatic dialing means seizes an outside line coupled to the switched telephone network" and "automatically dial[s] the telephone number over the outside line," as recited in steps 4[b] and 4[c]. *Id.* at 29–30 (citing Ex. 1003 ¶ 92; Ex. 1004, 2:49–53, 8:20–25).

Patent Owner does not challenge Petitioner's assertions except to the extent that claim 4 depends from claim 1. PO Resp. 19–20; PO Sur-reply 15. We conclude, based on the record presented and for the reasons given above with respect to claim 1, that Petitioner has demonstrated by a preponderance of the evidence that claim 4 would have been obvious over Itoh.

4. Claim 6

Claim 6 depends from claim 1 and further recites "wherein the steps are performed in a telephone call/voice processing system." Ex. 1001, 12:3–4. Pointing to disclosure that the steps of Itoh are performed using a "telephone unit" connected to a switchboard to place and receive telephone calls and that the telephone unit has a voice mail system, Petitioner contends this further limitation is taught by Itoh. Pet. 30 (citing Ex. 1004, 1:61–2:27, 2:62–65, 3:49–60, 4:30–40; Ex. 1003 ¶¶ 94–95).

Referring back to its arguments regarding construction of the term "telephone call/voice processing system," Patent Owner repeats its contention that the TC/VP system must be separate and distinct from the telephones to which it is attached and argues that Itoh does not disclose or render obvious such a system. PO Resp. 14. More particularly, according to Patent Owner, the Petition cites for the steps of claim 1 only steps in Itoh that are performed by the telephone itself, which, Patent Owner contends, is

“the opposite of the configuration required by claim 6 that requires all of those steps be performed in a device—the TC/VP system—external to the telephone unit disclosed in Itoh.” *Id.* at 15 (citing Pet. 21–26; Ex. 2018 ¶ 81). Patent Owner argues, “Itoh simply does not disclose a TC/VP system that is external to a telephone and that performs all of the steps of claim 1,” and “[a]ccordingly, Itoh fails to render claim 6 unpatentable.” *Id.* (citing Ex. 2018 ¶ 82).

In its Reply, Petitioner responds that Patent Owner’s arguments are meritless because none of the ’349 patent’s claims require a TC/VP system that is “physically separate from and external to a telephone.” Pet. Reply 16. Petitioner contends, “Patent Owner’s argument to the contrary ignores the claim language and improperly seeks to limit the claims to just the preferred embodiment in the specification.” *Id.*

For the reasons given in our claim construction discussion above, we agree with Petitioner that the recited TC/VP system need not be physically separate and distinct from a telephone unit. *See supra* § III.B.4. In this regard, we conclude that Petitioner has demonstrated by a preponderance of the evidence that Itoh teaches a TC/VP system that performs each of the steps recited in claim 1 and that, accordingly, claim 6 would have been obvious over Itoh.

5. Claim 19

Independent claim 19 recites “[a] telephone call/voice processing system, comprising circuitry for coupling the system to a switched telephone network,” as well as circuitry for, essentially, carrying out the steps recited in claim 1. *Compare* Ex. 1001, 13:26–43 (claim 19), *with id.* at 11:29–44 (claim 1). Petitioner’s analysis of independent claim 19 in light of Itoh

largely tracks its analysis of claims 1 and 6, additionally asserting that Itoh’s system utilizes “circuitry” in the form of the system’s “network control unit” (“NCU”). Pet. 31–35 (citing, e.g., Ex. 1003 ¶¶ 96–106). Likewise, Patent Owner raises essentially the same arguments with respect to claim 19 as for claims 1 and 6, adding that “[a]ll of the claimed ‘circuitry’ in claim 19 is part of a TC/VP system” and that “Itoh does not teach or suggest such circuitry because Itoh does not teach an external system for telephone call/voice processing.” PO Resp. 15–19.

For the reasons given in our claim construction discussion above, we agree with Petitioner that the recited TC/VP system need not be physically separate and distinct from a telephone unit. *See supra* § III.B.4. Moreover, we find that Petitioner has demonstrated by a preponderance of the evidence that Itoh teaches circuitry that carries out the functionality recited in the limitations of claim 19 for the same reasons as stated for analogous limitations of claims 1 and 6 discussed above. *See supra* §§ III.D.1, III.D.4. Accordingly, we conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 19 would have been obvious over Itoh.

*E. Obviousness over Itoh and Turnbull
(Claims 7–11 and 20–22)*

Petitioner contends that independent claims 9 and 20 and dependent claims 7, 8, 10, 11, 21, and 22 would have been obvious over Itoh in view of Turnbull and the knowledge of a person of ordinary skill in the art. Pet. 7, 35–47. Petitioner contends it would have been obvious to combine Itoh and Turnbull and supports this contention with the testimony of Dr. Houh. Pet. 45–47; Ex. 1003 ¶¶ 144, 146–151. Petitioner contends, for example,

that both Itoh and Turnbull relate to a telephone device and involve compatible hardware and similar functions, making it easy to incorporate Turnbull's features in Itoh's device. *Id.* at 45 (citing Ex. 1003 ¶ 144; Ex. 1004, code (57), 3:61–4:12, Fig. 1; Ex. 1005, code (57), 2:39–51, Fig. 1). Petitioner further argues that a person of ordinary skill in the art would have been specifically motivated to implement Turnbull's browsable and alphabetically indexed directory list to improve Itoh's calling list functionality, that it would have been well within the skill level of such a person to do so, and that there would have been a reasonable expectation of success. *Id.* at 45–47 (citing Ex. 1003 ¶¶ 146–151; Ex. 1004, 3:8–11, 12:32–35; Ex. 1005, 6:40–50). We have considered Petitioner's arguments and are persuaded that Petitioner has articulated sufficient reasoning with rational underpinnings for the asserted combination. *See KSR*, 550 U.S. at 418.

1. Claim 7

Claim 7 depends from claim 1 and further recites the step of “transferring the caller ID information to a calling list accessible by a user.” Ex. 1001, 12:5–8. Petitioner contends, with supporting testimony from Dr. Houh, that this step is either disclosed by Itoh or rendered obvious by the combination of Itoh and Turnbull, depending on whether the recited “a calling list accessible by a user” requires that the user be able to browse the entire calling list (e.g., on the telephone display).” Pet. 35–38 (citing Ex. 1003 ¶¶ 107–116; Ex. 1004, 2:58–60, 4:21–26, 8:47–60, 9:8–15, 9:62–10:5, 10:29–56; Ex. 1005, 6:43–50).

Patent Owner does not challenge Petitioner's assertions except by contending that Turnbull does not remedy the alleged deficiencies of Itoh

with respect to claim 1, from which claim 7 depends. PO Resp. 20. We conclude, based on the record presented and for the reasons given above with respect to claim 1, that Petitioner has demonstrated by a preponderance of the evidence that claim 7 would have been obvious over Itoh and Turnbull.

2. Claim 8

Claim 8 depends from claim 7 and further recites the steps of “retrieving the caller ID information from the calling list at a request of the user” and “automatically dialing the calling party.” Ex. 1001, 12:9–13. Petitioner contends that this step is either disclosed by Itoh’s disclosure of dialing a telephone number using an abbreviation number associated with a caller ID or rendered obvious by the combination of Itoh and Turnbull based on Turnbull’s “directory list.” Pet. 38–39 (citing Ex. 1004, 2:58–60, 4:49–53, 9:13–15; Ex. 1005, 6:5–9, 6:34–50, Ex. 1003 ¶¶ 117–119).

Patent Owner does not challenge Petitioner’s assertions except by contending that Turnbull does not remedy the alleged deficiencies of Itoh with respect to claim 1, from which claim 8 ultimately depends. PO Resp. 20. We conclude, based on the record presented and for the reasons given above with respect to claims 1 and 7, that Petitioner has demonstrated by a preponderance of the evidence that claim 8 would have been obvious over Itoh and Turnbull.

3. Claim 9

Independent claim 9 recites steps similar to steps [a]–[c] of claim 1, together with the additional step of claim 7, and further recites “indexing the caller ID information in the calling list in response to a signal activated by the user while the user is listening to a voice message left by the calling

party in the voice mailbox.” *Compare* Ex. 1001, 12:14–27 (claim 9), *with id.* at 11:29–44 (claim 1), *and id.* at 12:5–8 (claim 7). Petitioner contends that the recited “indexing” step is either taught by Itoh’s disclosure of associating a caller’s telephone number with an unused abbreviation number when a user presses the “telephone book” key while listening to a voice message or, if “indexing” is understood to require that data be arranged in a certain order (e.g., alphabetically), by Itoh in combination with Turnbull. Pet. 40–41 (citing Ex. 1004, 8:43–60, 9:8–15, 9:44–48, 14:9–14; Ex. 1005, 6:40–43, Ex. 1003 ¶¶ 124–126).

Patent Owner contends that the combination of Itoh and Turnbull fails to render claim 9 obvious because Itoh fails to teach the limitations of claim 9 for the same reasons as for corresponding limitations of claim 1 and Turnbull does not remedy the alleged deficiencies of Itoh. PO Resp. 20–21. For the reasons stated in our discussion of claim 1 above, we disagree that Itoh is deficient with respect to the challenged limitations. We conclude, based on the record presented and for the reasons given above with respect to claims 1 and 7, that Petitioner has demonstrated by a preponderance of the evidence that claim 9 would have been obvious over Itoh and Turnbull.

4. Claims 10 and 11

Claim 10 depends from claim 9 and further recites that “the caller ID information includes a telephone number of the calling party and data identifying the calling party” and that “the telephone number is indexed in the calling list as a function of the identifying data.” Ex. 1001, 12:28–32. Claim 11 depends from claim 10 and includes limitations similar to claim 8, discussed above, with the exception of reciting that the “retrieving” step is performed “in response to the user selecting the calling party from the

calling list,” rather than “at the request of the user.” *Compare id.* at 12:33–38 (claim 11), *with id.* at 12:9–13 (claim 8). Relying on Itoh’s disclosure of caller ID information of an incoming call including both the telephone number of the caller and the caller’s name (i.e., “data identifying the calling party”), along with Turnbull’s disclosure that telephone numbers in the directory list can be indexed alphabetically, as cited in connection with claim 9, Petitioner contends that Itoh and Turnbull teach the limitations recited in claim 10. Pet. 41–42 (citing Ex. 1004, 2:65–3:3, 3:8–11, 12:48–50, 12:63–13:65; Ex. 1003 ¶¶ 127–128). With respect to claim 11, Petitioner contends that “[b]oth Itoh and Turnbull teach that the ‘retrieving’ is in response to the user pressing a key to select the calling party from the calling list,” again citing, as for claim 8, Itoh’s teaching that the user selects the telephone number from the calling list by pressing the corresponding abbreviation number and Turnbull’s disclosure that the user scrolls through the telephone numbers in the directory list and presses the DIAL key to select the calling party from the calling list. *Id.* at 42 (citing Ex. 1003 ¶¶ 129–132; Ex. 1004, 2:49–53); *see also id.* at 38–39 (citing Ex. 1004, 2:58–60, 4:49–53, 9:13–15; Ex. 1005, 6:5–9, 6:34–50, Ex. 1003 ¶¶ 117–119).

Patent Owner does not challenge Petitioner’s assertions except to the extent that claims 10 and 11 depend from claim 9. PO Resp. 22. We conclude, based on the record presented and for the reasons given above with respect to claims 8 and 9, that Petitioner has demonstrated by a preponderance of the evidence that claims 10 and 11 would have been obvious over Itoh and Turnbull.

5. Claim 20

Independent claim 20 includes limitations similar to claims 7, 10, and 19, discussed above. *See* Ex. 1001, 13:44–61. Petitioner contends that claim 20 would have been obvious over Itoh and Turnbull for the reasons presented with respect to claims 7, 10, and 19. Pet. 43–44 (citing Ex. 1003 ¶¶ 133–140; Ex. 1004, 4:6–7; Ex. 1005, 1:61–2:4). Patent Owner contends that the combination of Itoh and Turnbull fails to render claim 20 obvious because Itoh fails to teach the limitations of claim 20 for the same reasons as for corresponding limitations of claim 19 and Turnbull does not remedy the alleged deficiencies of Itoh. PO Resp. 22–25. For the reasons stated in our discussion of claim 19 above, we disagree that Itoh is deficient with respect to the challenged limitations. We conclude, based on the record presented and for the reasons given above with respect to claims 7, 10, and 19, that Petitioner has demonstrated by a preponderance of the evidence that claim 20 would have been obvious over Itoh and Turnbull.

6. Claims 21 and 22

Claim 21 depends from claim 20 and recites additional elements corresponding to claim 10. *See* Ex. 1001, 13:62–66. Claim 22 depends from claim 21 and recites additional elements similar to claim 11. *Id.* at 13:67–14:4. Petitioner contends that claims 21 and 22 would have been obvious over Itoh and Turnbull for the reasons presented with respect to claims 10 and 11. Pet. 44–45 (citing Ex. 1003 ¶¶ 141–143; Ex. 1005, 1:61–2:4, 2:39–43, 6:7–9). Patent Owner does not challenge Petitioner’s assertions except to the extent that claims 21 and 22 depend from claim 20. PO Resp. 22. We conclude, based on the record presented and for the reasons given above with respect to claims 10, 11, and 20, that Petitioner has

demonstrated by a preponderance of the evidence that claims 21 and 22 would have been obvious over Itoh and Turnbull.

F. Obviousness over Itoh and Ladd (Claims 3 and 12–15)

Claim 3 depends from claim 1 and further recites “wherein the connecting step further includes the steps of: receiving and decoding digits dialed by the calling party, wherein the digits are an extension number of the called party; and connecting the incoming call to the voice mailbox when the called party does not answer the incoming call.” Ex. 1001, 11:47–53.

Claim 12 is an independent claim that includes limitations similar to independent claims 1 and 19 but additionally specifies that the voice mailbox in association with which the recited caller ID information is stored is further associated with “a telephone extension of a called party.” *Id.* at 12:39–59. Claims 13–15 depend from claim 12 and recite additional limitations corresponding to claims 2–4, respectively. *See id.* at 12:60–13:12.

Petitioner contends that independent claim 12 and dependent claims 3 and 13–15 would have been obvious over Itoh in view of Ladd’s teaching that the user’s telephone can be connected to an extension within a PBX. Pet. 7, 47–58. Petitioner argues that the limitations of these claims are similar to those discussed above with respect to claims 1, 2, 4, 6, and 19, with the added requirement that the called party be at an extension of a telephone network. *Id.* at 47. Petitioner contends it would have been obvious to combine Itoh and Ladd, and Petitioner supports this contention with the testimony of Dr. Houh. Pet. 56–58 (citing Ex. 1003 ¶¶ 178–183).

Patent Owner contends that a person of ordinary skill in the art would not have been motivated to add Ladd’s teaching of decoding an extension

number dialed by a calling party, as required by claims 3 and 14, because, Patent Owner alleges, “Itoh’s telephone would be one of the extensions and thus any extension decoding needs to be executed before the call reaches Itoh’s telephone.” PO Resp. 27, 30. Further, according to Patent Owner, “[t]he Petition even concedes that Ladd describes a PBX system connected to multiple extension telephones, and it is the PBX system that performs the extension decoding, not the extension telephones (e.g., Itoh’s telephone) themselves.” *Id.* at 27 (citing Pet. 48–49). Additionally, Patent Owner contends, “Itoh does not disclose having any such signals to decode,” but “[r]ather, Itoh’s ‘system’ requires a switchboard to intersperse caller ID information between call signals—the antithesis of Ladd.” *Id.* (citing Ex. 2018 ¶ 123). With respect to claim 12, Patent Owner contends, first, that Itoh fails to teach “circuitry for connecting the incoming call to a voice mailbox,” “circuitry for storing the caller ID in association with the voice mailbox . . . ,” and “circuitry for automatically dialing the telephone number at a request of the called party while the called party is listening to the voice message,” as recited in claim 12, for the same reasons as set forth for corresponding limitations of claims 1 and 19. *Id.* at 27–29 (citing Ex. 2018 ¶¶ 125, 126, 128, 129). Moreover, Patent Owner contends, Ladd does not cure the alleged deficiencies of Itoh. *Id.* According to Patent Owner, Itoh and Ladd also fail to render claims 13 and 15 unpatentable, based on those claims’ dependency from claim 12. *Id.* at 29 (citing Ex. 2018 ¶ 131).

Patent Owner also argues more generally that a person of ordinary skill in the art would not have sought to combine the standalone telephone teachings of Itoh with the system teachings of Ladd. PO Resp. 30. In particular, Patent Owner contends, “Itoh discloses that a user can listen to a

voicemail by simply pressing a button,” whereas Ladd’s PBX telephone system stores messages in a mailbox in a central location and requires a user to log in and listen to voicemails. PO Resp. 30 (citing Ex. 1004, 7:40–47; Ex. 1006, 13:36–42, 15:35–52). According to Patent Owner, “[r]emoving the[se] security features of Ladd would render it unsatisfactory for its intended purposes.” *Id.* Additionally, Patent Owner argues, Ladd requires a call signal that has information embedded in it, while Itoh instead discloses separately interspersing such information between call signals. *Id.* at 30–31. Thus, according to Patent Owner, “the teachings of Itoh and Ladd are simply not compatible as one is extracting existing information from a call signal and the other is interspersing information between call signals.” *Id.* at 31.

In the Reply, Petitioner responds that Patent Owner’s arguments again read limitations into the claims, that Patent Owner’s arguments regarding incompatibility of Ladd and Itoh are unsupported, and that neither Patent Owner nor Dr. Madisetti provides any explanation in support of Patent Owner’s argument that Itoh’s telephone cannot be used as an extension. Pet. Reply 17–18. More particularly, Petitioner contends, although Itoh shows a standalone telephone in certain of its figures, that does not mean that its teachings cannot be used in a system with extensions, as would result from the combination of Itoh and Ladd. *Id.* at 19. According to Petitioner, “[t]he Petition explains at length how the features of Ladd and Itoh would have been combined, and why a [person of ordinary skill in the art] would have considered it obvious to do so.” *Id.* (citing Pet. 48–49, 56–58). In particular, Petitioner contends, “Itoh’s phone would be callable as an extension through a PBX like that taught by Ladd that would engage in the required extension ‘decoding,’” and Itoh’s phone in such a combination

“would still locally store voicemail messages and caller ID information to allow the extension user to perform [the] same call-back function Itoh already teaches.” *Id.* (citing Pet. 48–49).

Further, Petitioner argues, Ladd explains that use of a security code to protect a remotely stored voicemail box is an optional feature that is required only “if a security code has been specified for the mailbox” and that “it was known that voicemail systems can ‘expedite[] the log in process’ by ‘not requiring a mailbox user to enter his/her own extension’ or other security information.” Pet. Reply 20 (quoting Ex. 1006, 13:38–41) (citing Ex. 1006, 4:34–45). Accordingly, Petitioner contends, Ladd would not be rendered “unsatisfactory for its intended purposes” by eliminating the need for a user to log in and listen to voicemails in the asserted combination, as Patent Owner suggests. *Id.* (citing PO Resp. 30). Even if Ladd did require security codes in all circumstances, Petitioner further contends, “there is no reason why Itoh’s locally stored mailbox could also not be similarly protected.” *Id.* at 21 (citing Ex. 1006, 4:34–45). Finally, in response to Patent Owner’s argument that “Ladd requires a call signal that has information embedded,” while “Itoh discloses . . . information . . . separately interspersed between call signals,” Petitioner argues that Patent Owner points to nothing in either Ladd or Itoh that imposes any particular signal type requirement. *Id.* (citing PO Resp. 31). In fact, Petitioner points out, “both Itoh and Ladd explain that their systems employ ‘conventional,’ ‘well-known and commercially available’ telephone equipment and are designed to work with existing telephone networks.” *Id.* (citing Ex. 1004, 1:12–14; Ex. 1006, 1:15–24).

In the Sur-reply, Patent Owner contends that Petitioner’s Reply misrepresents the arguments in the Patent Owner Response and that Patent

Owner does not dispute—and indeed argued in the Response—that “‘Itoh’s telephone would be one of the extensions’ in Petitioner’s asserted ground.” PO Sur-reply 16 (citing PO Resp. 27; Pet. Reply 18). Nonetheless, Patent Owner contends, it demonstrated in the Response “the differences between the PBX system and Ladd and the standalone telephone in Itoh, which renders the two references incompatible.” *Id.* at 16–17 (citing PO Resp. 27). Patent Owner further suggests that Petitioner’s Reply arguments with respect to claim 3 are inconsistent with Petitioner’s arguments regarding claim 1, insofar as Petitioner argues that “‘Itoh’s phone would be callable as an extension through a PBX like that taught by Ladd that would engage in the required extension ‘decoding’” limitation recited in claim 3 but that it is Itoh’s phone that performs processes performed by Itoh’s phone corresponding to the “connecting . . . to a voice mailbox” step recited in claim 1. *Id.* at 17 (citing Pet. Reply 12, 19).

We are persuaded by Petitioner’s arguments and supporting evidence presented with the Petition, including Dr. Houh’s testimony, that claims 3 and 12–15 would have been obvious over Itoh and Ladd to a person of ordinary skill in the art, for largely the same reasons as set forth above for the corresponding limitations of claims 1, 2, 4, 6, and 19. *See* Pet. 47–58 (citing Ex. 1003 ¶¶ 152–183; Ex. 1004, 1:7–11, 1:51–56, 4:49–53, 4:61–67, 7:36–47, Fig. 6; Ex. 1006, 1:15–23, 1:41–46, 4:53–68, 7:10–19, 8:25–27, 10:32–34, 10:59–68, 14:31–43, 15:35–52, Figs. 3C, 4A); *see also supra* §§ III.D.1–5. With respect specifically to claim 3, we disagree with Patent Owner’s contention that Petitioner’s arguments are inconsistent with its arguments regarding claim 1. *See* PO Sur-reply 17. In the proposed combination of Itoh and Ladd, we understand that Ladd’s PBX would

perform the “decoding” step of claim 3 and then route the call to Itoh’s phone, which would then in turn connect the call to the voice mailbox if the user does not answer. *See* Pet. 48–50 (citing Ex. 1003 ¶¶ 152–156; Ex. 1004, 1:51–56, 5:45–54; Ex. 1006, 7:10–19, 14:31–43, Fig. 4A); *see also* Pet. Reply 19 (contending that “Itoh’s phone would be callable as an extension through a PBX like that taught by Ladd that would engage in the required extension ‘decoding’” and that “Itoh’s phone would still locally store voicemail messages and caller ID information to allow the extension user to perform [the] same call-back function Itoh already teaches”).

Further, we are persuaded that Petitioner has articulated sufficient reasoning with rational underpinnings for the asserted combination, supported by the testimony of Dr. Houh. *See* Pet. 56–58 (citing Ex. 1003 ¶¶ 178–183); *KSR*, 550 U.S. at 418. In this regard, we disagree with Patent Owner’s contention that a person of ordinary skill in the art would not have sought to combine the teachings of Itoh and Ladd. PO Resp. 30–31. We understand Petitioner’s proposed combination of Itoh with Ladd to provide a dedicated voice mailbox at the user’s extension, rather than in a central location, to obviate the need for Ladd’s security features. *See, e.g.*, Pet. 57–58; *see also* Pet. Reply 20 (pointing out that Ladd explains that use of a security code is required only “if a security code has been specified for the mailbox” (quoting Ex. 1006, 13:38–41)). Even if Ladd did teach that security codes were required, we also agree with Petitioner that there is no apparent reason that Itoh’s locally stored mailbox could not also be similarly protected. Pet. Reply 21. Further still, notwithstanding Patent Owner’s contention that Ladd requires a call signal that includes embedded information whereas Itoh intersperses information between call signals (PO

Resp. 31), we agree with Petitioner that neither Ladd nor Itoh imposes any particular signal-type requirement and that they both refer to conventional phone systems (Pet. Reply 21 (citing Ex. 1004, 1:12–14; Ex. 1006, 1:15–24)). In conclusion, we are persuaded that Petitioner sufficiently shows, with supporting testimony from Dr. Houh, that a person of ordinary skill in the art would have been motivated to combine the references as proposed. Pet. 56–58 (citing Ex. 1003 ¶¶ 178–183).

*G. Obviousness over Itoh, Turnbull, and Ladd
(Claims 17, 18, and 23–31)*

Petitioner contends that independent claims 23 and 27 and dependent claims 17, 18, 24–26, and 28–31 would have been obvious over Itoh in view of Turnbull, Ladd, and the knowledge of a person of ordinary skill in the art. Pet. 7, 58–69. Petitioner argues that the elements of these claims are similar to those discussed above with respect to claims 1 and 6–12, with the exception that claim 23 additionally requires that the user be “at an extension of the system” and that the caller ID be indexed in response to a signal “while the user is communicating with the incoming call,” in contrast with the requirement in claim 9 that the caller ID be indexed while the user is listening to a voice message. *Id.* at 61. Petitioner argues that Ladd teaches the “at an extension” limitation, as discussed in Section III.F above, and that Turnbull’s disclosure that a user can press a key to index caller ID information “while the user is communicating with the incoming call” teaches the second additional limitation. *Id.* at 62 (citing Ex. 1003 ¶¶ 190–191; Ex. 1005, 6:19–20, 6:34–39).

In response, Patent Owner again contends that a person of ordinary skill in the art would not have been motivated to combine Itoh with Ladd,

and, by extension, also would not have combined the teachings of Itoh, Turnbull, and Ladd. PO Resp. 37. Patent Owner further contends that Itoh and Ladd fail to render claims 17 and 18 unpatentable based on those claims' dependency from claim 12 and that Turnbull does not remedy the alleged deficiencies of those references' combined teachings. *Id.* at 31–32 (citing Ex. 2018 ¶¶ 136, 137). With respect to claim 23, Patent Owner contends that the proffered combination fails to teach or suggest a TC/VP system that is connected to, but external to, multiple telephones. *Id.* at 32–33. Patent Owner further contends that the asserted combination does not teach or suggest the “transferring” and “indexing” limitations recited in claim 23 (*see supra* § II.D), contending that Petitioner concedes that the cited evidence with respect to those limitations indicates such transferring and indexing steps are performed by Itoh's or Turnbull's telephone and not by a separate system that is external to the telephone. PO Resp. 33–35. Further, Patent Owner contends, Ladd does not remedy that alleged deficiency. *Id.* at 35.

We are persuaded by Petitioner's arguments and supporting evidence presented with the Petition, including Dr. Houh's testimony, that claims 17, 18, and 23–31 would have been obvious over Itoh, Turnbull, and Ladd to a person of ordinary skill in the art, for largely the same reasons as set forth above for the corresponding limitations of claims 3, 6, 12, 19, and 20. *See* Pet. 58–69 (citing Ex. 1003 ¶¶ 184–210; Ex. 1004, 4:6–7, 4:46–53, 5:16–18, 6:8–13, 8:43–60; Ex. 1005, 1:64–2:4, 2:39–43, 5:36–40, 6:19–20, 6:31–39, 6:43–50, Fig. 2; Ex. 1006, 8:31–35); *see also supra* §§ III.D.4, III.D.5, III.E.5, III.F. Further with respect to claim 23 and its dependent claims, notwithstanding Patent Owner's arguments (*see* PO Resp. 33–35), the

“transferring” steps of claim 23 do not recite that caller ID information must be transferred outside of the physical telephone unit or by a system that is necessarily external to the telephone. As we explain above, the recited TC/VP system need not be physically separate and distinct from a telephone unit. *See supra* § III.B.4. Accordingly, we are persuaded by Petitioner’s arguments mapping Itoh’s transfers of caller ID information from RAM to DRAM 21 and then to DRAM 23 to the “transferring” steps of claim 23. *See, e.g.*, Pet. 36 (citing Ex. 1004, 4:21–26; Ex. 1003 ¶ 111), 61 (citing Ex. 1004, 6:8–13; Ex. 1003 ¶ 189).

We also are persuaded that Petitioner has articulated sufficient reasoning with rational underpinnings for the asserted combination, supported by the testimony of Dr. Houh. *See* Pet. 68–69 (citing Ex. 1003 ¶¶ 206–210); *KSR*, 550 U.S. at 418. In this regard, we again disagree with Patent Owner’s contention that a person of ordinary skill in the art would not have sought to combine the teachings of Itoh and Ladd, for the reasons previously stated. *See supra* § III.F; PO Resp. 37.

IV. CONCLUSION

For the foregoing reasons, we conclude that Petitioner has demonstrated by a preponderance of the evidence that all challenged claims of the ’349 patent would have been obvious and are, therefore, unpatentable.

V. ORDER

It is hereby:

ORDERED that claims 1–4, 6–15, and 17–31 of the '349 patent are determined to be unpatentable; 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. § 90.2.¹⁰

In summary:

Claims	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 2, 4, 6, 19	103(a)	Itoh	1, 2, 4, 6, 19	
7–11, 20–22	103(a)	Itoh, Turnbull	7–11, 20–22	
3, 12–15	103(a)	Itoh, Ladd	3, 12–15	
17, 18, 23–31	103(a)	Itoh, Turnbull, Ladd	17, 18, 23–31	
Overall Outcome			1–4, 6–15, 17–31	

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).

IPR2021-00573
Patent 6,067,349

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