

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TRUSTID, INC.,
Petitioner,

v.

NEXT CALLER, INC.,
Patent Owner.

Case IPR2018-01066
Patent 9,143,612 B2

Before JEAN R. HOMERE, MEREDITH C. PETRAVICK, and
BRYAN F. MOORE, *Administrative Patent Judges*.

HOMERE, *Administrative Patent Judge*.

JUDGMENT
FINAL WRITTEN DECISION
Determining All Challenged Claims Unpatentable 35 U.S.C. § 318(a)

I. INTRODUCTION

In this *inter partes* review, instituted pursuant to 35 U.S.C. § 314, TrustID, Inc. (“Petitioner”) challenges claims 1–20 (“the challenged claims”) of U.S. Patent No. 9,143,612 B2 (Ex. 1001, “the ’612 patent”) owned by Next Caller, Inc. (“Patent Owner”). We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons discussed below, Petitioner has shown by a preponderance of the evidence that the challenged claims are unpatentable.

A. Procedural History

Petitioner filed a Petition requesting an *inter partes* review of claims 1–20 of the ’612 patent. Paper 2 (“Pet.”).

Petitioner challenges the patentability of claims 1–20 of the ’066 Patent on the following ground (Pet. 5):

Claims Challenged	35 U.S.C. §	Basis
1–20	§ 103(a)	Bushnell, ¹ Bala, ² and Pickering. ³

Patent Owner did not file a preliminary response. On November 9, 2018, we instituted *inter partes* review of claims 1–20 of the ’612 patent

¹ Bushnell (US 2004/0196966 A1, filed Apr. 14, 2004, pub. Oct. 2, 2004) (“Bushnell”) (Ex. 1006).

² Bala (US 6,798,876 B1, filed Dec. 29, 1999, iss. Sept. 28, 2004) (“Bala”) (Ex. 1007).

³ Pickering et al. (US 2011/0125498 A1, filed June 19, 2009, Pub. May 26, 2011) (“Pickering”) (Ex. 1008).

under 35 U.S.C. § 103(a) as obvious the over the combination of Bushnell, Bala, and Pickering. Paper 9 (“Inst. Dec.”), 19.

Thereafter, Patent Owner filed a Patent Owner’s Response (Paper 15, “PO Resp.”), to which Petitioner filed a Reply (Paper 18, “Pet. Reply”), to which Patent Owner filed a Sur-Reply (Paper 19, “Sur-Reply”).⁴

We held a hearing on August 6, 2019 for this case, and a transcript of the hearing is included in the record. Paper 34 (“Tr.”).

B. Related Proceedings

The ’612 patent is not involved in any other judicial or administrative matter that would affect, or be affected by, a decision in this proceeding. P.O. Mandatory Notice 1, Paper 4.

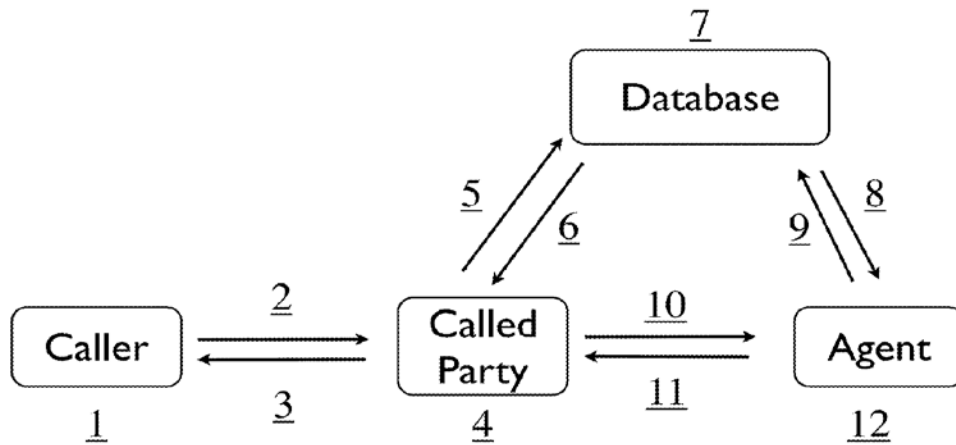
C. The ’612 Patent

According to the ’612 patent, the claimed subject matter relates to a centralized caller profile system and method for maintaining and identifying caller profile information. Ex. 1001, 2:32–33. Specifically, as depicted in Figure 3 below, the centralized caller profile system includes centralized cloud database (7) accessible by caller (1), called party (4) and agent (12) via internet connection for storing and updating caller profile information including (Caller Unique ID, phone number, email address). *Id.* at 1:56–63, 2:35–36, 2:40–44. According to the ’612 patent, the caller profile

⁴ Unauthorized exhibits (2008 and 2009) filed with Patent Owner’s Sur-Reply were expunged (Paper 21), and portions of the Sur-Reply that improperly relied on the expunged evidence were redacted (Paper 35).

information in the database is operated by a service provider, maintained by the users who created them, and serves to automatically identify the Caller. *Id.* at 2:45–49, 2:64–65. Further, the '612 patent indicates that “[t]he profiles contained in the database are created, modified, maintained, and distributed by the user, or by a third party at the request of the user.” *Id.* at 3:14–17.

Figure 3 illustrates the centralized caller profile system of the invention, and is reproduced below:



(Figure 3 shows a centralized caller profile system including a caller, a called party, and an agent, all connected to a centralized database.)

In particular, as further depicted in Figure 3 above, upon detecting an incoming call from caller (1), called party’s agent (12) issues a query including a unique identifier of the caller to the centralized cloud database (7), which subsequently returns to the agent the content of the caller profile. *Id.* at 1:64–2:26; 2:57–67, 7:44–47. If agent (12) determines that the retrieved caller profile information is inaccurate, the agent can edit the

profile information, and update it. *Id.* at 6:43–50. Therefore, according to the '612 patent, the claimed system and method provide an enhanced customer service by allowing authorized parties (e.g., caller, called party, and respective agent) to update the same set of profile information from a central database. *Id.* at 2:35–47, 3:14–17, Abst.

D. Illustrative Claim

Of the challenged claims, claims 1 and 11 are independent claims. Claims 2 through 9 depend directly or indirectly from claim 1. Claims 12 through 19 depend directly or indirectly from claim 11. Claim 1 is illustrative and is reproduced below with italics added:

1. A Centralized Caller Profile System comprising:
 - a Caller;
 - a Called Party;
 - a *Cloud Database*, connected to the internet;
 - a telephone connection between the Caller and the Called Party;
 - the *Called Party retrieving a Unique Identifier* from the Caller;
 - the Called Party transmitting the Unique Identifier to the Cloud Database; and
 - the Cloud Database transmitting Content to the Called Party;
 - wherein the Cloud Database is maintained by each of a service provider, a user, and a third party;
 - and wherein updated Content is registered and stored in the Cloud Database.

Ex. 1001, 10:25–40.

II. DISCUSSION

A. Claim Construction

We interpret claims in an unexpired patent using the “broadest reasonable construction in light of the specification of the patent in which

[they] appear[.]” 37 C.F.R. § 42.100(b) (2017).⁵ Under this standard, we interpret claim terms using “the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant’s specification.” *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997); see *In re Smith Int’l, Inc.*, 871 F.3d 1375, 1382–83 (Fed. Cir. 2017) (“[The] broadest reasonable interpretation . . . is an interpretation that corresponds with what and how the inventor describes his invention in the specification.”). “Under a broadest reasonable interpretation, words of the claim must be given their plain meaning, unless such meaning is inconsistent with the specification and prosecution history.” *TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1062 (Fed. Cir. 2016).

In our Decision on Institution, we found no material dispute between the parties as to claim construction in the present proceeding. Inst. Dec. 6. Patent Owner’s Response, however, proffers differing constructions of various claim terms to dispute Petitioner’s proposed construction of those same claim terms. PO Resp. 6–16, Pet. 8–17. We determine that explicit construction of the following terms and phrases is necessary to resolve the issues before us. See *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor*

⁵ Petitioner filed the Petition on May 11, 2018, prior to the effective date of the rule change that replaces the broadest reasonable interpretation standard with the federal court claim interpretation standard. See *Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (“This rule is effective on November 13, 2018 and applies to all IPR, PGR and CBM petitions filed on or after the effective date.”).

Co. Ltd., 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“Because we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy,’ we need not construe [a particular claim limitation] where the construction is not ‘material to the . . . dispute.’” (Citations omitted)).

a. Centralized Caller profile System

Patent Owner argues “Centralized Caller Profile System,” recited in the preamble of independent claims 1 and 11, is limiting and refers to caller profiles in a central location accessible and revisable by multiple parties. PO Resp. 8–9. According to Patent Owner, unlike caller profiles traditionally stored at a single location, the caller profiles are stored at a centralized database accessible and updatable by the user and authorized third parties (e.g., user’s agent, service provider). *Id.* at 9–10 (citing Ex. 2005 ¶¶ 40–44). Accordingly, Patent Owner submits that, as acknowledged by Petitioner, “Centralized Caller Profile System” encompasses not only caller profiles located at a single location, but also that which is accessible and revisable by multiple parties. *Id.* at 10–11 (citing Ex. 2005 ¶¶ 38, 44–54, Ex. 2004, 17:2–18:7, 18:9–13, 21:7–14). Patent Owner therefore argues that Petitioner’s contention that the preamble is not limiting for lack of antecedent basis, and relates merely to a location (e.g. centralized or on the cloud) is not persuasive because it overlooks the ’612 patent’s description that the “Centralized Caller Profile System” permits multiple parties to access the database. *Id.* at 11–12, Sur-Reply 2–4. In response, Petitioner reasserts that the preamble is not limiting because it does not provide antecedent basis for and does not breathe meaning into the claims. Pet. Reply 3, Pet. 25. According to Petitioner, because the proposed construction of the preamble

is already recited in the claim, namely “the Cloud Database is maintained [(meaning ‘accessible and revisable’)]” by each of a service provider, user, and third party, the reading of the preamble into the claim is duplicative and thereby non-limiting. Pet. Reply 3. We agree with Petitioner insofar as it is undisputed by the parties that the claim, as a whole, requires the Centralized Caller Profile System that comprises the Cloud Database including contents, which are maintained (i.e., accessible and revisable) by each of a user, a service provider, and a third party. Consequently, it is immaterial whether the preamble, which recites similar limitation, is limiting or not.

b. Cloud Database is maintained by each of a service provider, a user, and a third party

Patent Owner argues that the phrase “the Cloud Database is maintained by each of a service provider, a user, and a third party” as recited in independent claims 1 and 11, means that any of the user, service provider, and authorized third party can update the content in the Cloud Database, as acknowledged by Petitioner’s expert. PO Resp. 12–13 (citing Ex. 2005 ¶¶ 56–62, Ex. 1032 ¶¶ 44, 80). Therefore, Patent Owner submits the following:

a POSITA would have understood “the Cloud Database is maintained by each of a service provider, a user, and a third party” to mean each of a service provider, a user, and a third party can update the Content in the cloud database[...] Accordingly a POSITA would have understood that maintaining a database does not relate to operating the hardware/software systems that house the database, but instead refers to maintaining the file.

Id. at 14 (citing Ex. 2005 ¶¶ 63–66.)

In response, Petitioner re-acknowledges that under the broadest reasonable interpretation (BRI) “maintained” connotes “accessible and revisable or updatable”. Reply 4, Pet. 16. Therefore, there is no material

dispute between the parties that the recitation “Cloud Database is maintained by each of a service provider, user, and a third party” requires that the Cloud Database be accessible and revisable or updatable by each of the cited parties. However, Petitioner contends revising or updating the Cloud Database pertains to the cited parties updating not only to the content stored in the Database, but also to updating the hardware and the software that form the Database. Reply 4–5. According to Petitioner, because the claim explicitly recites “the Cloud Database transmit[s] Content to the Called Party”, and also recites that “updated Content is registered and stored in the Cloud Database,” it delineates a distinction between maintaining the “Cloud Database” and maintaining the “Content” thereof. *Id.* at 4. Therefore, Petitioner argues Patent Owner’s proposed construction of maintaining the “Cloud Database” as updating and revising the “Content” thereof vitiates the claim language. *Id.* at 5. We do not agree with Petitioner. We begin our analysis by giving the phrase “*Cloud Database is maintained*” its broadest reasonable interpretation consistent with the ’612 patent’s disclosure, as explained in *In re Morris*:

[T]he PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant’s specification.

In re Morris, 127 F.3d 1048, 1054 (Fed. Cir. 1997). *See also In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989) (stating that “claims must be interpreted as broadly as their terms reasonably allow.”). Our reviewing court further states, “the ‘ordinary meaning’ of a claim term is its meaning to the ordinary artisan after reading the entire patent.” *Phillips v. AWH Corp.*, 415 F.3d

1303, 1321 (Fed. Cir. 2005) (en banc). The '612 patent states in relevant part:

The system and methods disclosed herein provide a caller profile system and service that enable third parties the ability to rapidly identify a caller via *a centralized caller profile database. A caller profile may contain any type of Content, including text, image, or other form of multimedia content.* The profiles are maintained by the user who created them to establish the profiles that are delivered to called parties with the delivery of each call, and/or at the request of the user. *The Content (e.g., caller profile information) may be stored in a Caller Profile Database operated by a service provider, but may also be stored in a corporate or user operated Caller Profile database. However stored, the Content may be created and revised by the user, as needed, using a network terminal, such as a computer-based World Wide Web browsing system, or an interactive voice response system. The updates are registered and stored in the database, and can be sent at the users' discretion to third parties.*

Third parties are able to access a caller associated Content(e.g., the caller's profile information) using the caller's Unique Identifier, which can be a telephone number, email address, or other identifier unique to the Caller. This profile can be used by third parties in any way that is helpful to that party and its business, or in any way the information is important to the relationship between the user and the party.

Ex. 1001, 2:40–63 (emphasis added).

We agree with Patent Owner that, consistent with the cited disclosure of the '612 patent, a POSITA would have understood that maintaining the “Cloud Database” relates to updating the “Content” thereof. PO Resp. 12–13. As correctly noted by Patent Owner, the disclosure of the '612 patent discusses in great detail updating the “Content” of the Cloud Database in connection with maintaining the Database, whereas Petitioner has not

provided any references in the '612 patent to support that maintaining the “Cloud Database” pertains also to updating the software and hardware thereof. *Id.*, Sur-Reply 5–6. Accordingly, we construe “the Cloud Database is maintained” as being limited to updating or revising the “Content” of the caller information (e.g., profile or billing info) in the “Cloud Database”.

c. Content

Patent Owner argues that the '612 patent defines “Content” as profile and billing information (about the caller) including text, images, sounds, videos, and animations. PO Resp. 14–15 (citing Ex. 1001, 2:30–31, 2:43–44, 2:51–54, 3:18–19, 5:47–51, 6:40–50, 10:33–34, Ex. 2004, 22:11–23:6, Ex. 2005 ¶¶ 67–69, 71). Therefore, Patent Owner argues that a POSITA would have understood “Content” to include caller information (e.g. profile and billing information) which is revisable, but not the voice communication of the telephone call itself. *Id.* at 15, Sur-Reply 7–8. In response, Petitioner argues that the '612 patent does not limit “Content” to information about a caller, but simply refers to “Content” as “textual, visual or aural content”. Pet. Reply 6 (citing Ex. 1001, 5:47–48), Pet. 16–17. According to Petitioner, the claim does not require that the Content be revisable- only that the “Cloud Database” is revisable thereby allowing that some Content may be revisable while other content is not. Pet. Reply 6. We do not agree with Petitioner. The '612 patent defines “Content” as textual, visual, and/or aural content (i.e., text, image, sound, video, and/or animations) chosen from a caller’s profile or billing information. Ex. 1001, 5:47–56. Thus, while that the '612 patent does not expressly define “Content” to exclude the voice information of the telephone call itself, the cited disclosure of the '612 patent does limit “Content” to text, image, sound, and video taken from the caller’s profile or

billing information, which is stored and updatable in the Cloud Database. Accordingly, we construe “Content” as text, image, sound, and/or video taken from the caller’s profile or billing information, which is stored and updatable in the Cloud Database.

d. Caller

Patent Owner argues that because the ’612 patent defines “Caller” to mean Calling Party (i.e., a person or a party placing or initiating a telephone call to a Called Party), the term encompasses the person or party interacting or conversing with an agent to place a call. PO Resp. 15 (citing Ex. 1001, 4:31–33, Ex. 2005 ¶ 72). Therefore, Patent Owner argues Petitioner’s contention that the term “Caller” also encompasses “the equipment enabling the person to place the call” is inconsistent with the disclosure of the ’612 patent as it does not disclose any description of the caller as anything beyond the person or party placing the call. *Id.* According to Patent Owner, while transmitting data from the “Caller” at one location to the Called Party at another location requires the use of equipment, one of ordinary skill in the art would not construe the “Caller” to encompass any such equipment. *Id.* at 16 (citing Ex. 1032 ¶ 67). Patent Owner further argues the fact that the ’612 patent describes an “Agent” to possibly include a non-human entity suggests that “Agent” encompasses such equipment, whereas the ’612 patent associates the “Caller” with a human entity only. *Id.* at 16 (citing Ex. 1001, 6:15–18, Ex. 2005 ¶¶ 73–75). Therefore, Patent Owner concludes that while the ’612 patent defines “Agent” as encompassing equipment, it does not define “Caller” to encompass any such equipment. *Id.*; Sur-Reply 9–10. In response, Petitioner argues that a POSITA would have understood the claim recitation that “[a] Centralized Caller Profile System” compris[es] ...a

Caller” is intended to encompass a system of components, not people. Pet. Reply 7. Therefore, Petitioner submits that the term “Caller” recited as part of the “Centralized Caller Profile System” encompasses more than just a mere person. *Id.* Further, Petitioner argues the proposed interpretation of “caller” to encompass equipment for placing a call is corroborated by Patent Owner’s deposition, Mr. Geier, who refers to the “Caller” as one of the *components* of the “Centralized Caller Profile System.” *Id.* at 7–8 (citing Ex. 1034, 123:10–23, Ex. 1038 ¶ 13). Additionally, Petitioner argues that Patent Owner’s proposed construction of Caller” as being limited to a mere person overlooks scenarios in which a caller may be comprised of equipment, such as a call by an auto-dialer or robocaller.” *Id.* at 8 (citing Ex. 1038 ¶ 15). We agree with Petitioner. While the ’612 patent refers to a “Caller” as a calling party (i.e. a party placing or initiating a call to a Called Party), nowhere does the patent specifies the nature of said calling party, let alone limiting said calling party to a mere person. Ex. 1001, 4:31–33. Therefore, Patent Owner’s argument that the word “party” is synonymous with “person” is unavailing because there is no evidence on the record before us to support this allegation. Sur-Reply 9. Instead, we agree with Petitioner that a POSITA, having read the ’612 patent, would have understood that a telephone call occurs between a Calling Party and a Called Party via necessary communication equipment (e.g., phone, robocaller, auto-dialer). Pet. Reply 8. Accordingly, we construe “Caller” as a Calling Party to encompass, under BRI, any entity including a person, a party and/or an equipment capable of initiating or placing a call to another party.

e. Billing Information

Patent Owner argues that the '612 patent defines "billing information" as name, address, and other information required to complete a sales transaction (e.g., credit card number, credit card verification code, checking account, bank routing number, credit rating). PO Resp. 16 (citing Ex. 2005 ¶¶ 76–79). Petitioner does not dispute Patent Owner's proposed construction. We have reviewed the parties' positions and the underlying evidence cited in support thereof. Because the record before us supports Patent Owner's position, we agree with and adopt Patent Owner's construction of 'billing information' for the purpose of this Decision.

B. Level of Ordinary Skill in the Art

In determining the level of ordinary skill in the art, various factors may be considered, including the "type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field." *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (internal quotation and citation omitted). In that regard, Petitioner's Declarant, Leonard J. Forys, Ph.D., testifies that a person with ordinary skill in the art at the time of the invention

would have had a B.S. degree in Computer Science, or Electrical Engineering, or similar engineering discipline with an emphasis in communications and at least three years of experience designing and/or developing contact center solutions, including network interconnection, computer-telephony integration, and customer and agent interfaces.

Ex. 1032 ¶¶ 56–58. Further, Petitioner contends that the level of ordinary skill could have varied somewhat so as to allow industry experience and education to compensate for each other. Pet. 8. Patent Owner's response

does not address Petitioner's proposed assessment of the level of the ordinary skill in the art.

On this record, we observe that Petitioner's undisputed assessment of a person of ordinary skill in the art appears to be consistent with the level of ordinary skill in the art at the time of the invention as reflected in the prior art in the instant proceeding. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the prior art itself may reflect an appropriate level of skill in the art); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978). We adopt the Petitioner's proposed level of ordinary skill in the art.

C. Obviousness over Bushnell, Pickering, and Bala

In our Decision on Institution, we concluded that the arguments and evidence advanced by Petitioner demonstrated a reasonable likelihood that claims 1–20 are unpatentable under 35 U.S.C. § 103(a) as obvious over the combined teachings of Bushnell, Pickering, and Bala. Inst. Dec. 18-19. We must now determine whether Petitioner has established by a preponderance of the evidence that the specified claims are unpatentable over the cited prior art. 35 U.S.C. § 316(e).

1. *Principles of Law*

A 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. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any

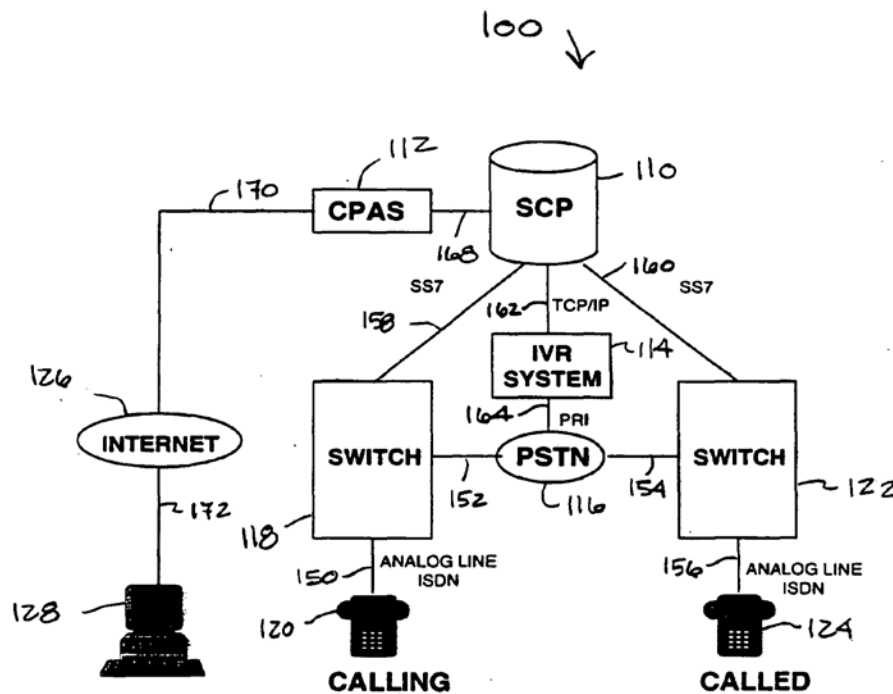
differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations.⁶ *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We also recognize that prior art references must be “‘considered together with the knowledge of one of ordinary skill in the pertinent art.’” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (quoting *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)). We analyze Petitioner’s obviousness grounds with the principles identified above in mind.

2. Overview of Bushnell

As shown in Figure 1 below, Bushnell describes a method and system utilizing switches (118, 122) for delivering to called party (124) profile information of calling party (120) retrieved from a centralized caller profile database located at service control point (110). Ex. 1006, Abst., ¶ 30. The profile database is operated by a service provider, and is accessible by users to edit and create profiles via the Internet. *Id.* ¶¶ 9, 10.

Figure 1 illustrates the caller profile system for use in a circuit-based telecommunication system, and is reproduced below:

⁶ Secondary considerations, such as “commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.” *Graham*, 383 U.S. at 17–18. The record contains no evidence of secondary considerations.



(Figure 1 depicts a caller profile system for use in a circuit-based telecommunication system.)

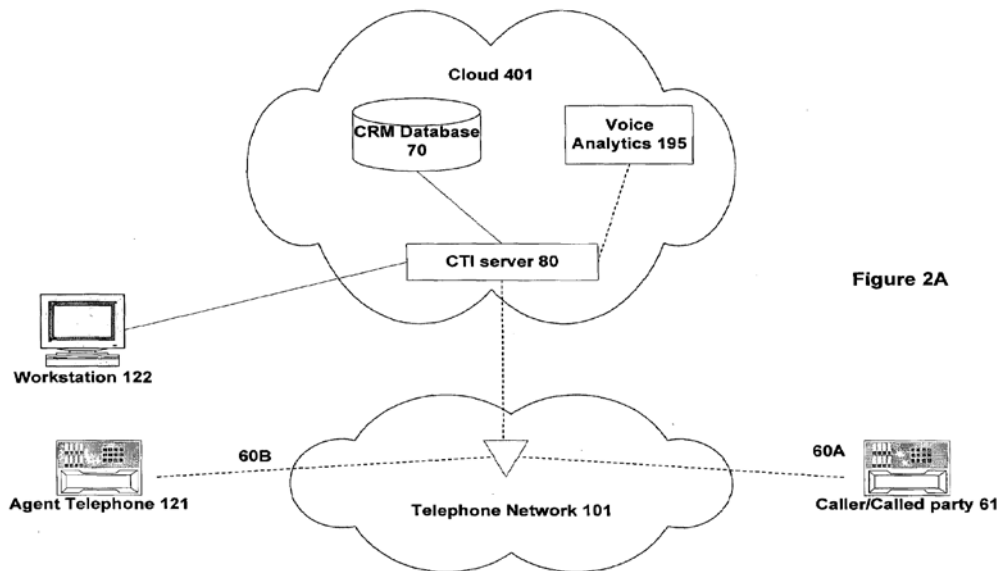
In particular, Bushnell describes that, upon confirming the caller's subscription to the Caller's profile service, switch (118) on the calling party (120) side queries the profile database with the called number (called party's Unique ID) to determine what options along with the call to deliver to the called party. Ex. 1006 ¶¶ 30, 60–61. Then, upon receiving the forwarded call and confirming that the called party also subscribes to the caller ID service, switch (122) on the called party side queries the profile database so as to retrieve and deliver to the called party the profile content of the caller. *Id.* ¶¶ 63–64.

3. Overview of Pickering

As shown in Figure 2A below, Pickering describes a computer-telephony integration (CTI) method and system for handling a telephone call

between calling party (61) and called party (61) via telephone network (101). Ex. 1008 ¶¶ 34, 38. Pickering discloses customer relationship management (CRM) database (70) located in cloud (401) for storing caller profile information. *Id.* ¶ 45. According to Pickering, the cloud is an efficient, cost-effective, and high data capacity processing center that can be scaled up to cope with increased call volume without the supplier having to install or provide new hardware. *Id.* ¶¶ 45–48.

Figure 2A illustrates Pickering’s disclosure of a service provider equipment (SPE) environment using a cloud implementation and voice analytics, and is reproduced below:



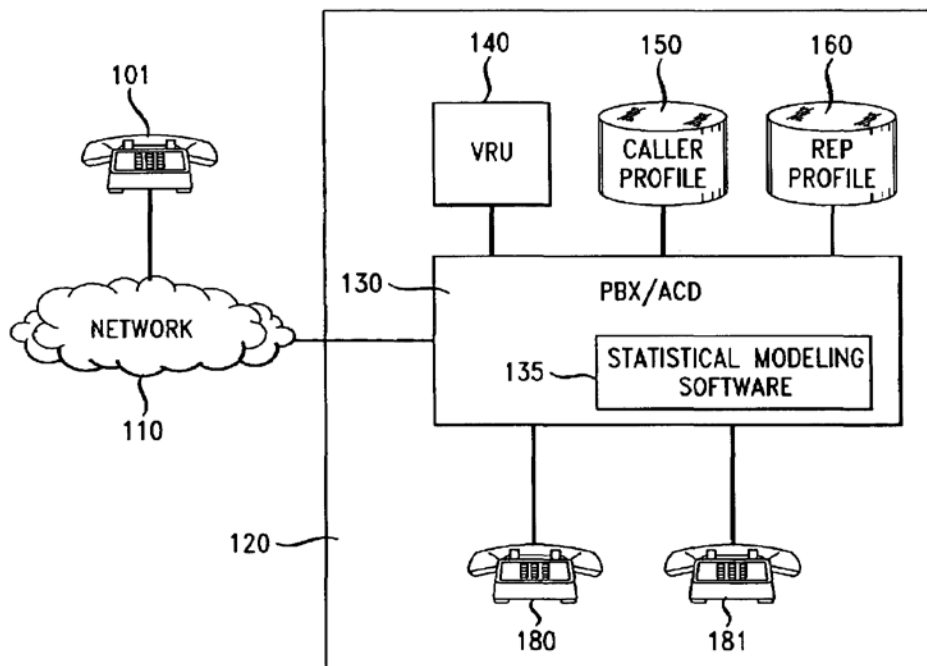
(Figure 2A illustrates a call being bridged in a service provider equipment (SPE) environment using a cloud implementation and voice analytics.)

4. Overview of Bala

Bala describes a method and system using an automatic number identification (ANI) for intelligent routing of incoming calls to

representatives based on the profile of the caller in a call center. Ex. 1007, Abstract, 1:31–42. As depicted in Figure 1 below, Bala describes that, upon receiving a call from caller (101), call center (120) routes the call to the appropriate representative after looking up the caller profile information in profile database (150). *Id.* 2:57–65. As is known in the art, ANI allows the called party to utilize the caller's phone number (a unique ID) from the received call so as to retrieve the caller's profile from the profile database. *Id.* 3:19–24.

Figure 1 illustrates Bala's disclosure of a communications system including an automatic number identification (ANI), and is reproduced below:



(Figure 1 illustrates a communications system including an automatic number identification (ANI) for intelligent routing of incoming calls.)

5. *Obviousness Analysis*

Petitioner provides explanations to account for all of the claim limitations required by claims 1–20, and reasons combining the teachings of Bushnell, Pickering, and Bala, citing Dr. Forys’s Declaration for support. Pet. 25–74, Ex. 1032. We begin our analysis with claim 1. We have reviewed the Petition, Patent Owner Response, Petitioner’s Reply, and Patent Owner’s Sur-Reply as well as the relevant evidence discussed in those papers and other record papers. We are persuaded that the record before us establishes Petitioner’s contentions for claims 1–20 by a preponderance of the evidence.

6. *Petitioner’s Positions*

a. *Claim 1*

The preamble of independent claim 1 recites, “[a] Centralized Caller Profile System comprising.” Ex. 1001, 10:25. Petitioner contends Bushnell’s disclosure of a “Caller Profile System” for allowing a called party to deliver a call contemporaneously with the caller’s profile to a called party teaches the claimed centralized “Caller Profile System.” Pet. 25–26 (citing Ex. 1006, Abst., ¶¶ 1, 9–11, 23, 28, 29, 45, 46, Ex. 1032 ¶¶ 100–102). In particular, Petitioner asserts that Bushnell’s Caller Profile System is centralized because it includes a Caller Profile Database System (CPDS) and a Profile Administrative Server (CPAS) that provide their respective subscriber service functions at a Service Control Point (SCP) central to the system. *Id.* at 27 (citing Ex. 1006 ¶¶ 10, 49, Ex. 1032 ¶ 102). We are persuaded by Petitioner’s showing and find that Bushnell’s “Caller Profile System” teaches a “Centralized Caller Profile System”.

Independent claim 1 further recites “a Caller.” Ex. 1001, 10:26. Petitioner contends “Caller” broadly encompasses a “calling party, i.e., the party placing or initiating a call, especially a telephone call, to a ‘Called party.’” Pet. 27 (quoting Ex. 1001, 4:31–33). According to Petitioner, Bushnell’s disclosure of “a person placing a call and the equipment enabling the person to place the call” teaches a “Caller.” *Id.* In particular, Petitioner asserts that because “Bushnell refers to the calling party as a subscriber of the caller profile service,” Bushnell’s disclosure of the person/subscriber placing the call teaches a “Caller.” *Id.* at 28–29 (citing Ex. 1006 ¶¶ 37–39, 43, 55–67, Ex. 1032 ¶¶ 103–104). Further, Petitioner asserts that Bushnell discloses a telecommunication system including calling subscriber terminal 120 coupled to originating switching system 118 via line 150 for calling another party. Pet. 27–28 (citing Ex. 1006 ¶¶ 1–30, Fig. 1). Therefore, Petitioner asserts that Bushnell’s calling equipment such as subscriber terminal 120, or even originating switch 118 also teaches the “Caller,” as broadly claimed. *Id.* We are persuaded by Petitioner’s showing and find that Bushnell’s disclosure of a person using an equipment to place or initiate a phone call to another party teaches a “Caller.”

Independent claim 1 further recites “a Called Party.” Ex. 1001, 10:27. Petitioner contends “Called Party” broadly encompasses “a party receiving a call from a “Caller.” Pet. 29 (quoting Ex. 1001, 4:34–35). According to Petitioner, Bushnell’s disclosure of “a person receiving a call and the equipment for receiving the call” teaches a “Called Party.” *Id.* (citing Ex. 1032 ¶ 106). In particular, Petitioner asserts that Bushnell’s disclosure of a person answering a telephone call teaches a “Called Party.” *Id.* at 30 (citing Ex. 1032 ¶¶ 108). Further, Petitioner asserts that Bushnell discloses a

telecommunications system including called subscriber terminal 124 coupled to terminating switching system 122 via line 156 for receiving a call and/or information about a “Calling Party.” Pet. 29–30 (citing Ex. 1006 ¶¶ 1–30, Fig. 1, Ex. 1032 ¶¶ 107–108). Therefore, Petitioner asserts Bushnell’s called party user terminal 124 and called switch 122 also teach the “Called Party,” as broadly claimed. *Id.* We are persuaded by Petitioner’s showing and find that Bushnell’s disclosure of a person using an equipment for receiving a phone call from Caller teaches a “Called Party”.

Independent claim 1 further recites “a Cloud Database, connected to the internet.” Ex. 1001, 10:28. Petitioner contends that the combination of Bushnell and Pickering teaches the cited limitation. Pet. 30. In particular, Petitioner contends that Bushnell’s disclosure of a “Caller Profile Database” that stores “caller profile information” accessible at the SCP/CPDS by various subscriber elements via Caller Profile Administrative Server (CPAS) in a public packet network teaches a database connected to the internet. *Id.* at 30–31 (citing Ex. 1006, Abst., ¶¶ 9–11, 27–30, 33–34, 37, 44, 46, 48, Figures 1–2; 1032 ¶¶ 109–120). Petitioner contends that Bushnell does not expressly disclose that the “Caller Profile Database” is a “Cloud Database.” *Id.* at 31. However, Petitioner asserts the ’612 patent admits “cloud computing platforms were well known by the time of the alleged invention”. *Id.* at 31–32 (citing Ex. 1001, 4:56–58). Petitioner, therefore, contends that Pickering’s disclosure of implementing a computer telephony system including a customer relationship management (CRM) database on a cloud platform confirms the cited disclosure in the ’612 patent. *Id.* at 32 (citing Ex. 1008

¶¶ 17, 45, 46, 48 and 49, Ex. 1032 ¶¶ 111–112). According to Petitioner, because Pickering’s CRM database is connected to the internet and stores caller information, analogously to Bushnell’s customer profile database, it would have been obvious to one of ordinary skill in the art to implement Bushnell’s database and associated equipment on a cloud computing platform as taught by Pickering. *Id.* at 32–34 (citing Ex. 1032 ¶¶ 113–116). Petitioner asserts that the proposed modification would provide Bushnell’s system a more flexible and scalable arrangement without requiring customers to acquire or maintain additional hardware. *Id.* at 34–35. Petitioner also asserts that the proposed modification would provide Bushnell’s system more efficient and cost effective CTI services. *Id.* So Petitioner submits that

[M]odifying Bushnell to locate the database in the cloud is nothing more than “the mere substitution of one [known] element” (database) “for another known in [the] field” (database implemented on a cloud-computing platform) that “yield[s] ... predictable result[s]” (e.g., improved flexibility, efficiency, scalability, etc.) *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). (See also *Forys*, ¶¶118-119.)

Id. at 35.

We are persuaded by Petitioner’s showing and find that Bushnell’s disclosure of a “Caller Profile Database” connected to the Internet, taken in combination with Pickering’s CRM database implemented in a Cloud environment teaches a “Cloud Database connected to the Internet.”

Independent claim 1 further recites “a telephone connection between the Caller and the Called Party.” Ex. 1001, 10:29–30. Petitioner contends that Bushnell’s disclosure of a live connection between a calling party and a called party in a telecommunications network including a calling subscriber

terminal coupled to an originating switch communicating with a called switch coupled to a called subscriber terminal teaches the claimed telephone connection between the Caller and the Called party. Pet. 35–36 (citing Ex. 1006 ¶¶ 23, 25, 63, Ex. 1032 ¶¶ 121–123). We are persuaded by Petitioner’s showing and find that Bushnell’s disclosure of a live connection between a calling party and a called party in a telecommunications network teaches the claimed telephone connection between the Caller and the Called party.

Independent claim 1 further recites “the Called Party retrieving a Unique Identifier from the Caller.” Ex. 1001, 10:31–32. Petitioner contends that the combination of Bushnell and Bala teaches the cited limitation. Pet. 37. In particular, Petitioner contends that Bushnell’s disclosure of a Called party, upon receiving a call, querying a Caller profile database in a Caller ID service subscribed by the Caller to retrieve the Caller’s profile information including the caller’s telephone number teaches the Called party retrieving a Unique Identifier from the Caller. *Id.* 37–38 (citing Ex. 1032 ¶ 126). Petitioner further contends that Bushnell does not specify what information the Called party uses to query the profile database. *Id.* at 38. However, Petitioner asserts that Bala’s disclosure of using ANI to identify the Caller’s phone number, which a Called party subsequently uses to query a database so as to retrieve the Caller’s profile teaches the Called party using a unique identifier to query the database. *Id.* at 39 (citing Ex. 1007, 1:39–42, 3:19–24, Ex. 1032 ¶ 128). According to Petitioner, it would have been obvious to the ordinarily skilled artisan to use ANI in Bushnell’s system to identify the Caller’s number, which the Called party would subsequently use as part of the query to retrieve the Caller’s profile information. *Id.* at 39–40 (citing Ex. 1010, Ex. 1032 ¶ 129). Petitioner asserts that Bushnell’s disclosure of the

Caller querying the profile database using the Called party's phone number (i.e., including the dialed/called number in the query) to verify that the Called party subscribes to the Caller ID service constitutes adequate motivation to use ANI— a conventional caller ID method— as evidenced in Bala to similarly query (i.e., query + Caller's ID retrieved via ANI) the database on the Called party's side. *Id.* at 40 (citing Ex. 1007 ¶ 61, Ex. 1032 ¶ 129). Accordingly, Petitioner submits that the ordinarily-skilled artisan would have combined the cited disclosures of Bushnell and Bala because they amount to nothing more than using prior art elements according to known methods to yield predictable results. *Id.* We are persuaded by Petitioner's showing and find that Bushnell's disclosure of a Called party retrieving from a Caller profile database the Caller's profile information including the caller's telephone number, taken in combination with Bala's disclosure of using ANI to retrieve the Caller's ID from the database teaches “the Called Party retrieving a Unique Identifier from the Caller.”

Independent claim 1 further recites “the Called Party transmitting the Unique Identifier to the Cloud Database.” Ex. 1001, 10:33–34. Petitioner contends that the combination of Bushnell, Bala, and Pickering teaches the cited limitation. Pet. 40–41. In particular, as discussed above, Petitioner contends that although Bushnell's disclosure of the called switch querying the profile database to retrieve the Caller's profile does not specify using the Caller's Unique ID as part of the query transmitted to a cloud database, Bala's disclosure of using ANI to query the database and Pickering's disclosure of using a cloud database teaches the missing limitations. *Id.* at 41–43 (citing Ex. 1032 ¶¶ 131–137). We are persuaded by Petitioner's showing and find that Bushnell's disclosure of a Called party retrieving

Caller's profile information from a Caller profile database, taken in combination with Bala's disclosure of retrieving the Caller's ID from the database, and in further combination with Pickering's Cloud Database teaches "the Called Party transmitting the Unique Identifier to the Cloud Database."

Independent claim 1 further recites "the Cloud Database transmitting Content to the Called Party." Ex. 1001, 10:35–36. Petitioner contends that the combination of Bushnell and Pickering teaches the cited limitation. Pet. 43. In particular, as discussed above, Petitioner contends that Bushnell's disclosure of a Caller profile database transmitting Caller profile information to the Called party, taken in combination with Pickering's disclosure of a cloud database teaches a cloud database transmitting content (caller profile) to the Called party. *Id.* at 43–44 (citing Ex. 1032 ¶¶ 139–142). We are persuaded by Petitioner's showing and find that Bushnell's disclosure of a Caller profile database transmitting Caller profile information to the Called party, taken in combination with Pickering's disclosure of a cloud database teaches "the Cloud Database transmitting Content to the Called Party."

Independent claim 1 further recites "the Cloud Database is maintained by each of a service provider, a user, and a third party." Ex. 1001, 10:37–38. Petitioner contends that the combination of Bushnell and Pickering teaches the cited limitation. Pet. 44. In particular, Petitioner contends that Bushnell discloses a service provider or a user maintaining (i.e., accessing, updating, revising) the Caller profile database. *Id.* at 44–45 (citing Ex. 1006 ¶¶ 9, 29, 55, Ex. 1032 ¶¶ 140, 143–152). According to Petitioner, the ordinarily-skilled artisan would have understood that the service provider would need to access the database as well as to update the hardware and software thereof

so as to operate the database. *Id.* 45. Further, Petitioner contends the service provider would have the necessary administrative rights to access the database, as well as to edit and update the content of the database. *Id.* at 46 (citing Ex. 1032 ¶ 146). Likewise, Petitioner contends that Bushnell discloses a user including a Caller maintaining the database via a computer-based World Wide Web browsing system or interactive voice system. *Id.* at 47 (citing Ex. 1006 ¶ 36, Ex. 1032 ¶ 147). Petitioner asserts that Bushnell does not particularly state a third party maintaining the database. *Id.* Petitioner contends, however, that Pickering’s disclosure of an agent storing in a database information received from a caller would have led the ordinarily-skilled artisan to understand that the agent (a third party) has access to update and revise the content of the database. *Id.* at 47–48 (Ex. 1008 ¶ 69, Ex. 1032 ¶¶ 148–150). Therefore, Petitioner submits that the ordinarily-skilled artisan would have had numerous incentives for a third party to update contents of the database because it would provide a more accurate call routing if the party can maintain and update the caller profile database, as taught by Bala. *Id.* at 48 (citing Ex. 1007, 1:63–67, 4:66–5:3). Thus, Petitioner submits that “[h]aving the called third party maintain the database would therefore streamline future calls because the caller profiles would have accurate and complete information.” *Id.* (Ex. 1032 ¶ 150). We are persuaded by Petitioner’s showing and find that Bushnell’s disclosure of a service provider or a user maintaining the Caller profile database, taken in combination with Pickering’s disclosure of a third party agent maintaining caller information in a database renders obvious the limitation that “the Cloud Database is maintained by each of a service provider, a user, and a third party.”

Independent claim 1 further recites “wherein updated Content is registered and stored in the Cloud Database.” Ex. 1001, 10:39–40. Petitioner contends that the combination of Bushnell and Pickering teaches the disputed limitations. Pet. 49. In particular, Petitioner contends that Bushnell’s disclosure of a user updating caller profile information in the database teaches a subscriber updating content stored and registered in the database. *Id.* at 49–50 (Ex. 1006 ¶ 38, Ex. 1032 ¶¶ 154, 155). According to Petitioner, the ordinarily-skilled artisan would have recognized that the “updated caller profile information is ‘*registered*’ in the caller profile database because the updated information is entered and recorded into the database in the same manner described in the ’612 patent.” *Id.* at 50. We are persuaded by Petitioner’s showing and find that Bushnell’s disclosure of a user updating the Caller profile information in the database, taken in combination with Pickering’s disclosure of a third party agent maintaining caller information in database renders obvious the limitation “wherein updated Content is registered and stored in the Cloud Database.”

b. Claim 11

Independent claims 1 and 11 are substantially similar. Specifically, claims 1 and 11 have substantially similar limitations, but differ in that claim 1 is written in system form, “Centralized Caller Profile System,” and claim 11 is written in method form, “a method of providing a Caller Profile to an Agent.” Ex. 1001, 10:25–40, 10:64–11:12. The differences between these two claims do not affect our patentability analysis. For reasons similar to those discussed, above, regarding claim 1, we find that the combination Bushnell, Bala, and Pickering discloses the limitations of claim 11. *See* Pet.

65–70. Patent Owner does not address these limitations of claim 11. We have considered the entirety of the evidence submitted by the parties, both for and against obviousness.

c. Claims 2–10 and 12–20

We have considered Petitioner’s arguments and supporting evidence, including Dr. Forsy’s testimony regarding dependent claims 2–10, and 12–20 of the ’612 patent. Pet. 51–65, 70–74. We find that Petitioner has shown that the combined teachings of Bushnell, Bala, and Pickering teach the limitations of the cited claims. Likewise, Petitioner has provided sufficiently “articulated reasoning,” with “rational underpinning” and evidentiary support, to combine the teachings of these references to predictably yield the recited systems and methods. *See KSR*, 550 U.S. at 418 (quoting *Kahn*, 441 F.3d at 988). Except as discussed below, Patent Owner does not explicitly address the additional limitations of all the dependent claims.

7. Patent Owner’s Assertions

Patent Owner argues that the challenged claims would not have been obvious over the combination of Bushnell, Bala, and Pickering for the following reasons: (a) “Petitioner has not shown by a preponderance of the evidence that the combination yields the claimed invention”. PO Resp. 17–31 (emphasis omitted)); (b) “The sole instituted ground cannot render obvious claims 1–20 (*id.* at 31–50) (emphasis omitted). In particular, Patent Owner presents the following seven sub-arguments: (i) “Petitioner has not shown by a preponderance of the evidence that the prior art renders obvious

the ‘Cloud Database is maintained by each of a service provider, a user, and a third party’ limitations of claims 1 and 11” (*id.* at 31–38) (emphasis omitted); (ii) “Petitioner has not shown by a preponderance of the evidence that the prior art renders obvious the ‘Centralized Caller Profile System’ limitation of claim 1” (*id.* at 39) (emphasis omitted); (iii) “Petitioner has not shown by a preponderance of the evidence that the prior art renders obvious the ‘Cloud Database, connected to the Internet’ limitation of claims 1 and 11” (*id.* at 39–44) (emphasis omitted); (iv) “Petitioner has not shown by a preponderance of the evidence that the prior art renders obvious the ‘updated content is registered and stored in the Cloud Database’ limitations of claims 1 and 11” (*id.* at 44–46) (emphasis omitted); (v) “Petitioner has not shown by a preponderance of the evidence that the prior art renders obvious the ‘Called Party retrieving a unique identifier from the caller and ‘acquiring a unique Identifier from the caller’ limitation of claims 1 and 11” (*id.* at 46–47); (vi) “Petitioner has not shown by a preponderance of the evidence that the prior art renders obvious the ‘transmitting content from the called party to the agent’ limitation of claim 3” (*id.* at 47–48) (emphasis omitted); and (vii) “Petitioner has not shown by a preponderance of the evidence that the prior art renders obvious the ‘billing information’ limitation of claim 9” (*id.* at 48–50) (emphasis omitted). We address each argument in turn.

Claims 1 and 11

Independent claims 1 and 11 recite in relevant part a Centralized Caller Profile System comprising... a Cloud Database connected to the Internet... wherein the Cloud Database is maintained by each of a service provider, a user, and a third party. Ex. 1001, 10:25, 28, 37–38. Patent Owner argues that Petitioner has failed to present articulated reasoning or

bases to demonstrate that the proposed combination of Bushnell, Pickering, and Bala would have predictably resulted in the claimed subject matter of the '612 patent. PO Resp. 18. In particular, Patent Owner argues that, absent impermissible hindsight, none of the prior art references teaches the Centralized Caller Profile System recited in claims 1 and 11. *Id.* (citing Ex. 2005 ¶108). According to Patent Owner, each of the cited references instead relates more closely to a proprietary single-establishment caller database similar to those the claims in the application were distinguished from during prosecution of the '612 patent. *Id.* at 18–20 (citing Ex. 2005 ¶¶ 87–105, 110–113). In particular, Patent Owner argues that Bala's disclosure of Call Center (120) using its internal Caller Profile (150) to match a caller with "the service representative that is most likely to successfully meet the customer's needs" informs a POSITA that access to the Caller Profile is limited to the Call Center, which uses and maintains data therein. *Id.* at 21 (citing Ex. 1007, Abstr., 2:55–58, 2:66–3:4, 3:19–24, 4:66–5:7, Ex. 2004, 75:8–14, 77:10–13, Ex. 2005 ¶¶ 114, 115). Accordingly, Patent Owner argues that Bala teaches only an internal caller database for use by one establishment, as opposed to a central database that can be maintained by a user, a service provider, and a third party as required by the claim. *Id.* at 22, (Ex. 2005 ¶¶ 115, 116), Sur-Reply 1–2.

Further, Patent Owner argues that Pickering similarly discloses a proprietary single establishment caller database or customer relationship management (CRM) database used as part of a call center of a company to handle telephone calls between the company's agent and a customer. PO Resp. 22 (citing Ex. 1008 ¶¶ 19, 38, 39, and 64,). According to Patent Owner, while Pickering discloses hosting the CTI server and the CRM

database in a cloud, the database is accessed internally by an agent of the company to process a caller's request, as opposed to an external user, a service provider and a third party accessing and maintaining the database. *Id.* at 22–23 (citing Ex. 2005 ¶¶ 120–121). Furthermore, Patent Owner argues that even if Pickering teaches using an interactive voice response (IVR) unit in lieu of the agent to access or update the database, the disclosed IVR and agent are controlled by the company. *Id.* at 24–25 (citing Ex. 2005 ¶¶ 124–125). Therefore, Patent Owner submits that Pickering fails to teach the customer or a third party directly accessing or updating the database. *Id.* at 26–27 (citing Ex. 2005 ¶¶ 126–127).

Additionally, Patent Owner admits that unlike Bala and Pickering, Bushnell discloses a proprietary Caller Profile System, which provides the caller control over his own profile as well as information sent to a called party. *Id.* at 25 (citing Ex. 1006 ¶¶ 6–9, Ex. 2005 ¶¶ 127–129). Patent Owner argues that, while Bushnell teaches the calling party and the called party as subscribers, Bushnell does not allow any one (e.g. called party, subscriber, third party) besides the caller that to access or update the caller's profile information. *Id.* at 25–27 (citing Ex. 1006 ¶¶ 37, 39, Ex 1032 ¶¶ 176–177). Conversely, Patent Owner notes that Bushnell also discloses information delivered with a call controlled and maintained by a telecommunications service provider, and cannot be edited or modified by the caller. *Id.* at 28 (citing Ex. 1006 ¶7, Ex. 2005 ¶ 131). Therefore, Patent Owner submits that a POSITA would not have understood Bushnell's teaching a user's profile could have been modified by another user. *Id.* Furthermore, Patent Owner argues that because the disclosure of the '612 patent indicates that the centralized caller profile allowing access to multiple

parties from a centralized database is an improvement over an existing idea described in Bushnell, the Patent Office has already considered Bushnell. *Id.* at 29 (citing Ex. 2005 ¶¶ 134–35). Accordingly, Patent Owner submits that, absent impermissible hindsight, the combination of Bala, Pickering and Bushnell does not teach a Centralized Caller Profile having a Cloud Database accessible and updatable by a user, a service provider and a third party, as recited in claim 1 of the '612 patent. *Id.* at 30.

Petitioner counters that, as established in the Petition, and undisputed by Patent Owner, Bushnell either alone or in combination with Pickering teaches a user and a third party accessing and updating a database. Reply 10, Pet. 44–49. According to Petitioner, Patent Owner's argument that maintaining the database requires updating solely the content thereof is not supported by the '612 patent because a POSITA would have understood that a Cloud Database includes hardware and software in addition to its content. *Id.* Alternatively, Petitioner argues that even if the claim requires updating merely the content of the database, Patent Owner acknowledges that Bushnell teaches a user and a third party updating the content of the database. Reply at 10. Further, Petitioner argues that a POSITA would have understood that the content would be accessible to the service provider for the purpose of purging data, adding fields, fixing corrupted profiles. *Id.* at 10–11 (citing Ex. 1032 ¶¶ 145, 146). Additionally, Petitioner argues that the proposed combination of Pickering and Bushnell is proper because Pickering's disclosure of allowing a caller to update its own profile

complements, and does not teach away from Bushnell's disclosure of a third party updating a caller's profile. Reply 11–12.

For the following reasons, we find Petitioner has shown by a preponderance of the evidence that the combination of Bushnell, Pickering and Bala renders obvious claims 1–20 of the '612 Patent (claim 1–20).

a. User, Third Party and Service Provider Maintaining Cloud Database

Patent Owner argues that Petitioner has not shown by a preponderance of the evidence that the prior art teaches the “Cloud Database is maintained by each of a service provider, a user, and a third party,” as recited in independent claim 1 and 11 of the '612 patent. PO Resp. 32. In particular, Patent Owner reiterates that Bushnell does not teach the cited limitation because Bushnell allegedly discloses a caller profile can be created and revised by the Caller only. PO Resp. 32–33 (citing Ex. 1006 ¶¶ 9–11, 37, 38, Ex. 2005 ¶¶ 139–140). According to Patent Owner, while Bushnell also discloses that a database operator may maintain the content of the database, the database operator is not a party maintaining the content in the database. *Id.* at 33 (citing ¶¶ 9, 34), Sur-Reply 11–13. We do not agree with Patent Owner. As an initial matter, we note in our claim construction section above that the claim, as a whole, requires the Cloud Database be accessible and revisable by each of a user, a service provider, and a third party. Further, we construe “the Cloud Database is maintained” as being limited to updating or revising the “Content” of the caller information (e.g., profile or billing info) in the “Cloud Database.” Here, although Patent Owner correctly delineates a difference between a user updating a caller's profile in a database and a database administrator performing housekeeping duties in the database, the

two functions are not mutually exclusive. *Id.* at 33–34. In other words, we agree with Petitioner that a POSITA would have appreciated that Bushnell’s disclosure of an operator maintaining the database teaches at least a third party maintaining the database to purge obsolete records, to add fields, and fix corrupted files. Pet. 44–45. As acknowledged by Patent Owner, a POSITA would have appreciated that the database administrator would not need any permission to perform such housekeeping duties in the database. PO Resp. 34. Thus, while such access to user’s sensitive data may open the door to potential data breach by service provider’s employees, Patent Owner correctly notes that such privileged access is typically limited to trustworthy personnel as a way to minimize possibilities of data breach and unauthorized access. *Id.* at 34–35. Accordingly, we agree with Petitioner that a POSITA would have understood Bushnell’s disclosure of the caller being able to update his/her own caller profile along with the operator maintaining the database teaches the user and the database operator maintaining the database to update the content thereof. Pet. 44–45. Therefore, based on the evidence before us, we are persuaded that Bushnell teaches “the Cloud Database is maintained by each of a service provider, a user, and a third party” as recited in independent claims 1 and 11.

b. Centralized Caller Profile System

Patent Owner argues that Petitioner has not shown by a preponderance of the evidence that the prior art teaches the “Centralized Caller Profile System” as recited in independent claim 1. PO Resp. 39. According to Patent Owner, Pickering and Bala disclose proprietary single-establishment caller databases, which can be only accessed internally by the company, whereas Bushnell discloses a caller profile database, which can only be

updated by the caller. *Id.* Therefore, Patent Owner submits that none of the disclosed caller profile databases allows multiple parties to access the same caller data, as required by independent claims 1 and 11. *Id.*, Sur-Reply 13.

These arguments are not persuasive. As discussed in the preceding section, Bushnell does disclose a caller profile database that can be accessed by a user to update his/her own profile, as well as by a database administrator to perform housekeeping duties on the contents thereof. Therefore, based on the evidence before us, we are persuaded that Bushnell teaches “Centralized Caller Profile System” as recited in independent claims 1 and 11.

c. Cloud Database Connected to the Internet

Patent Owner argues that Petitioner has not shown by a preponderance of the evidence that the prior art teaches the “a Cloud Database connected to the Internet,” as recited in independent claim 1 and 11 of the ’612 patent. PO Resp. 39. In particular, Patent Owner argues that although Bushnell discloses a Caller Profile Administrative Server (CPAS) connected to the Internet, wherein the CPAS is coupled to a service control point (SCP), Bushnell does not teach that the SCP itself is connected to the Internet. *Id.* at 40. According to Patent Owner, “[a] POSITA would have understood that isolating the SCP from the Internet provides improved security and ensures that any potential malicious access to the CPAS does not result in malicious access to the SCP.” *Id.* at 40–41. Further, Patent Owner argues that applying Pickering’s disclosure of implementing a CRM database on a cloud computing platform environment to move Bushnell’s SCP and CPAS to the cloud Bushnell would not have led a POSITA to arrive at the claimed invention. *Id.* at 42 (citing Ex. 1032 ¶ 115, Ex. 2005 ¶ 165). According to

Patent Owner, because Pickering’s CRM database is maintained only by a business (i.e. the “called party” in Bushnell), whereas Bushnell only allows the Caller to create and edit their profiles, the two references are not properly combinable. *Id.* at 42–43 (citing Ex. 1006 ¶ 37). Further, Patent Owner argues because Pickering discloses a proprietary system having a CRM database accessible only by a company’s agent for recording the result of monitored telephone conversations with a customer, whereas Bushnell discloses a database accessible to the caller for updating his/her own profile, the two references are not properly combined to teach the disputed claim limitations. *Id.* at 43–44, Ex. 1006 ¶¶ 7, 9, Ex. 1008 ¶¶ 16, 58, Sur-Reply 14.

These arguments are not persuasive. As an initial matter, we agree with Petitioner that because the claim does not require a direct connection between the database and the internet, Bushnell’s disclosure of the SCP being connected to the CPAS, which is connected to the Internet teaches that the SCP is connected (albeit indirectly) to the Internet via the CPAS. Pet. Reply 12–13. Further, we note Patent Owner’s arguments are tantamount to an individual attack against the references. One cannot show non-obviousness by attacking the references individually where the rejections are based on combinations of references. *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).⁷ In this case, as discussed above, Petitioner relies

⁷ “The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.” *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). “The obviousness analysis cannot be confined by the formalistic conception of the words teaching, suggestion,

upon Bushnell's Caller Profile database, which is accessible by the Caller and the database administrator, which a POSITA would have recognized as a third party (i.e., another party besides the calling party and the called party). As further discussed above, Petitioner also relies upon Pickering's teaching of putting a database in a cloud computing environment to modify Bushnell's CRM database so as to increase the utility of Bushnell's system. Pet. Reply 11–12. We agree with Petitioner that a POSITA would have understood that the proposed combination would predictably result in Bushnell's database being located on a cloud computing environment to facilitate access to the content thereof by the user, the service provider and the third party. *Id.* Therefore, based on the evidence before us, we are persuaded that the combination of Bushnell and Pickering teaches “a Cloud Database connected to the Internet” as recited in independent claims 1 and 11.

d. Storing and Registering Updated Content in the Cloud Database

Patent Owner argues that Petitioner has not shown by a preponderance of the evidence that the prior art teaches the “updated content is registered and stored in the Cloud Database,” as recited in independent claims 1 and 11 of the '612 patent. PO Resp. 44. In particular, Patent Owner argues that Petitioner has not shown that Bushnell teaches registering content (i.e. making entry in the log or record of changes made to the database). *Id.* 44–45. According to Patent Owner, Petitioner relies upon Bushnell's disclosure of merely storing data in the database, as opposed to registering the data,

and motivation, or by overemphasis on the importance of ... the explicit content of issued patents.” *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398. 419 (2007).

which would require the database administrator to know what changed, and when it changed. *Id.* at 45. Therefore, Patent Owner submits that a “POSITA would have understood that registering content would not have been necessarily (and thus inherently) present in Bushnell’s SCP, because databases do not always feature a register.” *Id.* These arguments are not persuasive.

At the outset, we note Patent Owner disputes Petitioner’s construction of registering as “to make or secure official entry of in a register” or “make record of” and argues that the term instead requires an entry in a log/record of the change made to a database. Pet. Reply 14; Pet 50 (citing Ex. 2005 ¶ 155). However, we discern no significant distinction between storing data in memory and registering the data because, under BRI, both refer to writing the data to memory, and both thereby involve making changes to or updating the database. Further, we agree with Petitioner that even when registering is construed as logging or recording changes before they are committed in the database, a POSITA would have recognized that such a practice was a well-known procedure for maintaining database consistency at the time of the ’612 patent. Pet. Reply 15. Accordingly, we agree with Petitioner that a POSITA would have understood that Bushnell’s disclosure of updating the caller profile in the profile database, at the time of the ’612 patent, teaches registering and storing the caller information in the database. *Id.*, Pet. 50.⁸ Therefore, based on the evidence before us, we are persuaded that the prior

⁸ We do not agree with Patent owner that the statement of obviousness is a newly submitted argument. Sur-Reply 15–16. As noted above, Petitioner relies on the same line of argument in the Petition. Pet. 50.

art of record teaches “updated content is registered and stored in the Cloud Database,” as recited in independent claims 1 and 11.

e. *Called Party Retrieving And Acquiring a Unique Identifier From Caller*

Patent Owner argues that Petitioner has not shown by a preponderance of the evidence that the prior art teaches the “Called Party retrieving a Unique Identifier[...and] acquiring a unique Identifier from the Caller,” as recited in independent claims 1 and 11 of the ’612 patent. PO Resp. 46. In particular, Patent Owner argues that Caller does not include equipment, but its construction is confined only to a person or party initiating a call. *Id.* (citing Ex. 1001, 4:31–33, Ex. 2005 ¶¶ 172–173). Further, Patent Owner argues because Bushnell discloses a Caller ID without indicating its origin, a POSITA would have understood that the Caller ID originates from switch (118), and not Caller (120). *Id.* at 46–47 (citing Ex. 2005 ¶ 174). Likewise, Patent Owner indicates Bushnell does not expressly indicate that the Caller ID is sent to the called party (e.g., the SCP) as contended by Petitioner. *Id.* at 47. These arguments are not persuasive.

As an initial matter, we note that, in our claim construction section above, we construe “Caller” to encompass “any entity including a person, a party and/or an equipment capable of initiating or placing a call to another party”. We agree with Petitioner that Bushnell’s disclosure of a called party using a caller’s phone number as the Caller’s Unique ID to retrieve and acquire a caller’s profile information (when it is not readily available or automatically provided) teaches the Called Party retrieving and acquiring the Caller’s Unique ID. Pet. Reply 16 (citing Ex. 1006 ¶ 60). Further, we agree with Petitioner that a POSITA would have appreciated that Bushnell’s

disclosure of an originating Gatekeeper/Feature Server Gateway (GFSG) system prompting a Calling Party not subscribed with Caller ID service to provide his/her unique ID for the purpose of retrieving the party's profile information teaches the Called Party retrieving or acquiring the Calling party's profile information from the CPAS consistent with our claim construction above. *Id.* at 16 (citing Ex. 1006 ¶ 55). Therefore, based on the evidence before us, we are persuaded that the prior art of record teaches "Called Party retrieving a Unique Identifier[...and] acquiring a unique Identifier from the Caller," as recited in independent claims 1 and 11.

f. Transmitting Content From the Called Party to the Agent.

Patent Owner argues that Petitioner has not shown by a preponderance of the evidence that the prior art teaches "transmitting Content from the Called Party to the Agent," as recited in dependent claim 3 of the '612 patent. PO Resp. 47. In particular, Patent Owner argues that the combination of Bushnell and Bala teaches transmitting textual, visual or aural content. *Id.* According to Patent Owner, a POSITA would have understood "Content" to encompass information about the Caller, but not Caller communications. *Id.* Therefore, Patent Owner submits that Bala's disclosure of aural content in a call does not teach "Content transmitted from a Called Party to an Agent. *Id.* Further, Patent Owner argues that Bushnell discloses delivering caller profile information to a called party, and not to an Agent, and Bala merely uses a caller profile to direct calls to an Agent. *Id.* at 47-48 (citing Ex. 1006 ¶ 37, Ex. 2005 ¶ 177), Sur-Reply 16-17. These arguments are not persuasive.

At the outset, we note that, in our claim construction section above, we construe “Content” as text, image, sound, and/or video taken from the caller’s profile or billing information, which is stored and updatable in the Cloud Database. While a POSITA would have been apprised of how to store and update the content of a call (initiated by the Caller) as part of the Caller’s profile in a database, Petitioner has not shown that the prior art of record does store let alone update such calls. Nonetheless, it is undisputed by the parties that Bushnell discloses delivering a Caller’s profile to a Called Party. Pet. 55 (citing Ex. 1006 ¶ 64), Pet. Reply 18. As discussed above, the Caller’s profile disclosed in Bushnell is stored in database, and it is revisable/updateable at least by the caller. Ex. 1006 ¶¶ 9–10. Likewise, it is undisputed that Bala discloses redirecting to an Agent a call originating from a Caller to a Called party. Reply 17, Pet 53–54. Therefore, we agree with Petitioner that a POSITA would have appreciated that the combination of Bushnell with Bala would have predictably resulted in call originating from a caller to Called party being redirected to an Agent to store and update in a database the content of the Caller’s profile teaches the disputed limitation of claim 3. Reply 18. Therefore, based on the evidence before us, we are persuaded that the prior art of record teaches “transmitting Content from the Called Party to the Agent,” as recited in dependent claim 3.

g. Choosing Content From Profile/Billing Information

Patent Owner argues that Petitioner has not shown by a preponderance of the evidence that the prior art teaches “the Content [information] is chosen from profile information and billing information,” as recited in dependent claim 9 of the ’612 patent. PO Resp. 48. In particular, Patent Owner argues Bala fails to remedy Bushnell’s admitted failure to specify

information included in the caller's profile, nor does it teach billing information including name, address and other information required to complete a sales transaction. *Id.* According to Patent Owner, while Bala discloses a home address, age, product purchased length of time as a customer, it lacks information that the profile includes name or other information required to complete the sales transaction. *Id.* at 49–50, Sur-Reply 18–19. These arguments are not persuasive.

As an initial matter, we reiterate our adoption of Patent Owner's undisputed construction of "billing information" as including "name, address, and other information required to complete a sales transaction (e.g., credit card number, credit card verification code, checking account, bank routing number, credit rating)." Nonetheless, we agree with Petitioner that the claim limitation "Content is chosen from profile information and billing information" requires that text, audio, image or aural content be selected either from profile information, billing information or both. Reply 19–20. That is, it suffices that the cited content is selected from at least one of the categories of information to meet the disputed claim language. *Id.* We agree with Petitioner that a POSITA would have understood Bushnell's disclosure of a caller ID identifying the name of a Caller associated with the calling number teaches content taken from either billing information, profile information or both. Pet. Reply 21(citing Ex. 1006 ¶ 2). Likewise, we agree with Petitioner that Bala's disclosure of a customer's profile information including age, address along with the customer's billing information including address and past information teaches content selected from the billing information and the profile information, and is thereby sufficient to meet the disputed claim language. *Id.* at 20, Pet. 62–63 (citing Ex. 1007

3:30–38). Therefore, based on the evidence before us, we are persuaded that the prior art of record teaches “the Content [information] is chosen from profile information and billing information,” as recited in dependent claim 9.

6. *Conclusion*

We have considered the entirety of the evidence of record, both for and against obviousness, and determine that Petitioner has shown, by a preponderance of the evidence, that claims 1–20 of the ’612 patent would have been obvious over the combined teachings of Bushnell, Bala, and Pickering.

III. CONCLUSION⁹

Petitioner has demonstrated, by a preponderance of the evidence, that:

Claims 1–20 of the ’612 patent are unpatentable under 35 U.S.C. § 103(a) over the combination of Bushnell, Bala, and Pickering.

IV. ORDER

In consideration of the foregoing, it is:

ORDERED that,

In summary:

⁹ 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).

Claims	35 U.S.C. §	Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
1-20	103 (a)	Bushnell, Bala, Pickering	1-20	none
Overall Outcome	103(a)	Bushnell, Bala, Pickering	1-20	none

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.

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