UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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CHEGG, INC., MATCH GROUP, LLC, AND RPX CORPORATION,
Petitioner,

v.

NETSOC, LLC,
Patent Owner.

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IPR2019-01171
Patent 9,978,107 B2

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Before KALYAN K. DESHPANDE, SHEILA F. McSHANE, and
STEVEN M. AMUNDSON, *Administrative Patent Judges*.

AMUNDSON, *Administrative Patent Judge*.

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

I. INTRODUCTION

Chegg, Inc., Match Group, LLC, and RPX Corporation ("Petitioner") filed a Petition (Paper 4, "Pet.") requesting an *inter partes* review of claims 1–11 of U.S. Patent No. 9,978,107 B2 (Ex. 1001, "the '107 patent") under 35 U.S.C. §§ 311–319. NetSoc, LLC ("Patent Owner") filed a Preliminary Response (Paper 13, "Prelim. Resp.").

In our Institution Decision (Paper 16, "Inst. Dec."), we instituted review based on all challenged claims and all grounds advanced in the Petition. We have jurisdiction under 35 U.S.C. § 6. We issue this Final Written Decision under 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons explained below, Petitioner has shown by a preponderance of the evidence that claims 1–11 of the '107 patent are unpatentable. *See* 35 U.S.C. § 316(e) (2012).

II. BACKGROUND

A. Procedural History

After we instituted review, Patent Owner filed a Response (Paper 23, "Resp."), Petitioner filed a Reply (Paper 29, "Reply"), and Patent Owner filed a Sur-reply (Paper 31, "Sur-reply"). On September 9, 2020, we held an oral hearing, and the record includes the hearing transcript. *See* Paper 38 ("Tr.").

B. Real Parties in Interest

Petitioner identifies the following real parties in interest: Chegg, Inc., Match Group, LLC, RPX Corporation, IAC/InterActiveCorp, Humor Rainbow, Inc., PlentyOfFish Media, ULC, and Match Group, Inc. Pet. 1. Patent Owner identifies itself as the real party in interest. Paper 6, 2. The parties do not raise any issue about real parties in interest.

C. Related Matters

Petitioner and Patent Owner identify the following civil actions related to the '107 patent: (1) *NetSoc, LLC v. Match Group, Inc.*, No. 2:18-cv-00217 (E.D. Tex. filed May 22, 2018); (2) *NetSoc, LLC v. Match Group, LLC*, No. 3:18-cv-01809 (N.D. Tex. filed July 13, 2018); (3) *NetSoc, LLC v. Chegg, Inc.*, No. 1:18-cv-10262 (S.D.N.Y. filed Nov. 5, 2018); (4) *NetSoc, LLC v. Teladoc Health, Inc.*, No. 2:18-cv-00542 (E.D. Tex. filed Dec. 21, 2018); (5) *NetSoc, LLC v. LinkedIn Corporation*, No. 1:18-cv-12215 (S.D.N.Y. filed Dec. 26, 2018); (6) *NetSoc, LLC v. Quora, Inc.*, No. 1:18-cv-12250 (S.D.N.Y. filed Dec. 27, 2018); and (7) *NetSoc, LLC v. Yahoo! Inc.*, No. 1:18-cv-12267 (S.D.N.Y. filed Dec. 27, 2018). Pet. 1–3; Paper 6, 2 (Mandatory Notices).

Petitioner and Patent Owner also identify another petition challenging the patentability of claims 1–11 in the '107 patent, i.e., *Chegg, Inc., Match Group, LLC, and RPX Corporation v. NetSoc, LLC*, IPR2019-01165, Paper 4 (PTAB filed June 6, 2019) ("the -01165 proceeding"). Pet. 1, 5–6; Paper 6, 2–3. Petitioner filed the petitions for the -01165 proceeding and this proceeding on the same day. We issue this Final Written Decision concurrently with the Final Written Decision in -01165 proceeding.

In addition, Petitioner identifies a pending application related to the '107 patent, i.e., Application Serial No. 15/952,688 (filed Apr. 13, 2018). Pet. 3.

D. The '107 Patent (Ex. 1001)

The '107 patent, titled "Method and System for Establishing and Using a Social Network to Facilitate People in Life Issues," issued on May 22, 2018, from an application filed on December 18, 2015. Ex. 1001,

codes (22), (45), (54). Through several continuation and continuation-in-part applications, the '107 patent claims priority to a provisional application filed on September 3, 2003 (Ex. 1002, "the '107 provisional"). *Id.* at 1:8–34, codes (60), (63).

The '107 patent discloses "applications and implementations of a social network to facilitate individuals to resolve various life issues." Ex. 1001, 2:4–6, code (57). According to the patent, those issues "include problems and concerns that arise when individuals or families travel or relocate," such as "logistic problems, problems arising with assimilating family members in a community, and, in certain context, roommate pairings." *Id.* at 2:6–11, code (57).

The '107 patent describes several embodiments of matching systems that assist in resolving issues by matching service consumers (generally called "users") and service providers (generally called "participants"). *See, e.g.*, Ex. 1001, 2:4–3:21, 6:46–10:10, 12:10–14:20, Figs. 3–5. The patent explains that "participants may correspond to individuals, organizations, or groups" who "respond to inquiries from users." *Id.* at 2:21–24, 3:39–41, 6:52–55; *see id.* at 11:46–50. The patent also explains that "participants may include individuals, groups that require participation from individuals (e.g. clubs, companies) and other organizations or charters (e.g. Chambers of Commerce) that people may belong to, are employed by, volunteer for, or are somehow associated with on a professional, quasi-professional, or personal level." *Id.* at 3:30–37. The patent further explains that an "issue resolver may correspond to a participant (an individual or other entity) who is known to be able to handle, and perhaps resolve issues of a specific nature." *Id.* at 9:23–25; *see id.* at 2:48–50, 9:50–52, 12:38–41.

In one embodiment, "a social network may be established and used to assist individuals in having issues resolved at a particular geographic location, particularly one that is unfamiliar to them." Ex. 1001, 2:17–20. A "list is maintained of participants who can assist in resolving issues at the particular geographic location." *Id.* at 2:21–23. A user interface displays "a plurality of categories" to a user "from which the user may make a selection." *Id.* at 2:24–26. After the user "make[s] a category selection and enter[s] an inquiry (such as one pertaining to a problem the individual is having)," a "message is generated and sent to a service that corresponds to the user's category and issue." *Id.* at 2:26–30. "After receiving the selection of the category and receiving the inquiry, the service selects a recipient/participant for the user," and "[t]he inquiry of the user is then sent to that participant." *Id.* at 2:31–34; *see id.* at 3:39–41, 3:57–61, 4:38–40. "Subsequently, the user and the recipient/participant are enabled to communicate with one another." *Id.* at 2:34–36.

In another embodiment, the user selects the participants who receive the user's inquiry instead of the service selecting the participants. Ex. 1001, 8:43–50. In that embodiment, the user selects who "the user wishes to communicate with" and "submit[s] an inquiry or request" to the service. *Id.* at 8:52–55. Then, the service "handle[s] the request by forwarding the request to the identified participants." *Id.* at 8:55–57. The patent explains that "[i]n such an embodiment, an email address or other contact information may be shielded from the user." *Id.* at 8:57–58. The patent also explains that "[i]n one variation, it is also possible to shield the identity of the participant, or the end person who will be communicating with the user." *Id.* at 8:58–61.

In another embodiment, the service stores associations between issue categories and issue resolvers or participants. Ex. 1001, 9:21–31, Fig. 5A; *see id.* at 2:48–50. Through an interface, a user selects an issue category and creates an inquiry message. *Id.* at 9:32–49, Fig. 5A; *see id.* at 14:61–66, Fig. 6C. "[T]he user's message is routed to a participant/respondent who is designated to resolve issues for the category selected by the user. For example, service 110 may use database 214 to determine the association between the category of the issue and the issue resolver assigned to that category." *Id.* at 9:50–55, Fig. 5A; *see id.* at 2:50–55, 14:66–15:2, Fig. 6C.

In another embodiment, "the user 502 submits an inquiry 512 of an issue resolution nature to the service 510." Ex. 1001, 12:35–36. The service forwards the inquiry to Connection 1 520. *Id.* at 12:36–41, Fig. 5B. Connection 1 520 considers Connection 2 530 "an expert in the particular field in question." *Id.* at 12:47–52. So Connection 1 520 invites Connection 2 530 to join the network. *Id.* at 12:52–56. After receiving the invitation, Connection 2 530 joins the network and creates a profile. *Id.* at 12:56–59. "After the user 502 has reviewed the profile the user may allow Connection 2 530 to resolve the issue and see other issues the user has pending." *Id.* at 13:26–28. If so, "Connection 2 530 is contacted by the user through the system with the issue to be resolved." *Id.* at 13:28–29.

Figure 5A (reproduced below) illustrates a "method in which issue resolvers are provided as part of a social network, and the performance of the issue resolvers is tracked." Ex. 1001, 1:56–58, Fig. 5A.
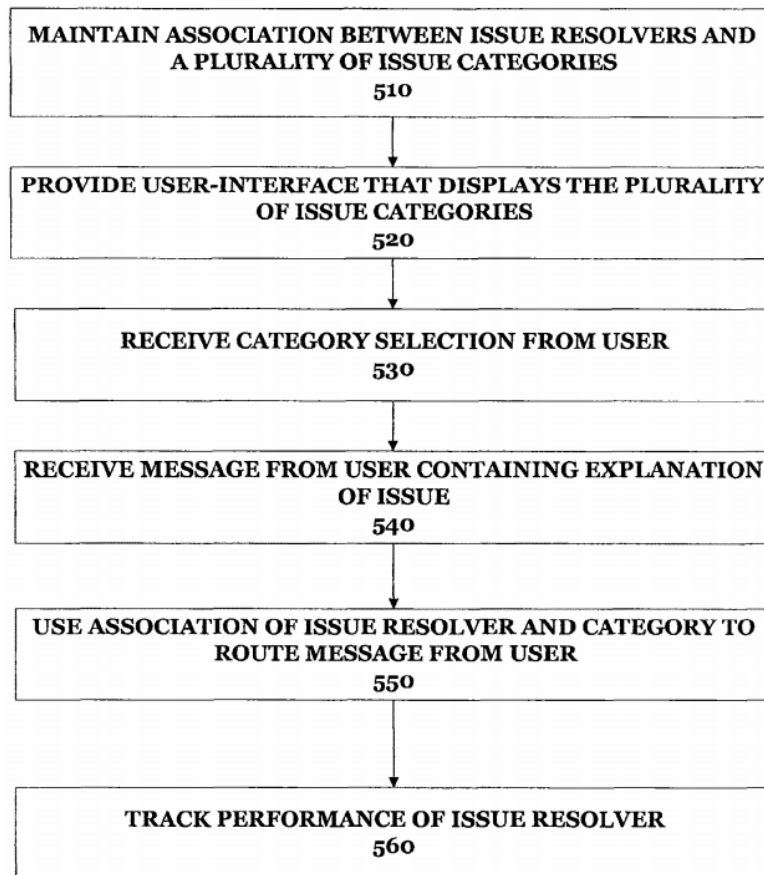
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┌─────────────────────────────────────────────────────────┐
│  MAINTAIN ASSOCIATION BETWEEN ISSUE RESOLVERS AND        │
│           A PLURALITY OF ISSUE CATEGORIES                │
│                        510                               │
└─────────────────────────────────────────────────────────┘
                            │
                            ▼
┌─────────────────────────────────────────────────────────┐
│  PROVIDE USER-INTERFACE THAT DISPLAYS THE PLURALITY      │
│               OF ISSUE CATEGORIES                        │
│                        520                               │
└─────────────────────────────────────────────────────────┘
                            │
                            ▼
┌─────────────────────────────────────────────────────────┐
│        RECEIVE CATEGORY SELECTION FROM USER              │
│                        530                               │
└─────────────────────────────────────────────────────────┘
                            │
                            ▼
┌─────────────────────────────────────────────────────────┐
│  RECEIVE MESSAGE FROM USER CONTAINING EXPLANATION        │
│                    OF ISSUE                              │
│                        540                               │
└─────────────────────────────────────────────────────────┘
                            │
                            ▼
┌─────────────────────────────────────────────────────────┐
│  USE ASSOCIATION OF ISSUE RESOLVER AND CATEGORY TO       │
│           ROUTE MESSAGE FROM USER                        │
│                        550                               │
└─────────────────────────────────────────────────────────┘
                            │
                            ▼
┌─────────────────────────────────────────────────────────┐
│        TRACK PERFORMANCE OF ISSUE RESOLVER               │
│                        560                               │
└─────────────────────────────────────────────────────────┘
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FIG. 5A

Figure 5A depicts steps 510 through 560 in "a variation to the embodiments" described above "for [the] purpose of resolving a user's issues." *Id.* at 9:13–18; *see id.* at 9:21–10:10. "In step 560, the performance of the particular issue resolver is tracked." *Id.* at 9:58–59. "Implementing a tracking step may include time stamping every communication from an issue resolver, and possibly every communication from the user to the issue resolver." *Id.* at 9:67–10:3.

E. The Challenged Claims

Petitioner challenges all claims in the '107 patent, i.e., independent method claim 1, claims 2–5 that depend directly from claim 1, independent

system claim 6, and claims 7–11 that depend directly from claim 6.

Pet. 4–5, 14–71. Claims 1 and 6 exemplify the challenged claims and

read as follows (with formatting added for clarity):

1. A method for establishing a social network, the method being implemented on a network computer system and comprising:

maintaining a list comprising a plurality of participants, wherein each participant in the plurality of participants corresponds to one or more individuals, wherein the list also includes information associated with at least one of each participant or the one or more individuals that correspond to each participant;

presenting a user with an interface from which the user makes a selection of a category from a plurality of categories;

in response to receiving the selection of the category by the user, displaying, for the user, some of the information associated with each of multiple participants from the plurality of participants which match the selection of the category by the user, while shielding contact information associated with each of the multiple participants;

wherein displaying some of the information associated with each of the multiple participants is based at least in part on a rating of individual participants in the plurality of participants;

enabling the user to send an inquiry message to one or more of the multiple participants, while shielding the contact information from the user, the contact information including any messaging identifier that is associated with each of the one or more participants;

tracking a response time of each of the one or more participants who received the message from the user; and

updating the rating associated with each of the one or more participants based at least in part on the tracked response time.

6. A computer system comprising:

a memory to store a list comprising a plurality of participants, wherein each participant in the plurality of participants corresponds to one or more individuals, wherein the list also includes information associated with at least one of each participant or the one or more individuals that correspond to each participant;

one or more processors that execute instructions to:

maintain the list;

present a user with an interface from which the user makes a selection of a category from a plurality of categories;

in response to receiving the selection of the category by the user, present, for the user, some of the information associated with each of multiple participants from the plurality of participants which match the selection of the category by the user, while shielding contact information associated with each of the multiple participants;

wherein displaying some of the information associated with each of the multiple participants is based at least in part on a rating of individual participants in the plurality of participants;

enabling the user to send an inquiry message to one or more of the multiple participants, while shielding the contact information from the user, the contact information including any messaging identifier that is associated with each of the one or more participants;

tracking a response time of each of the one or more participants who received the message from the user; and

updating the rating associated with each of the one or more participants based at least in part on the tracked response time.

Ex. 1001, 17:15–48, 18:5–38.

F. The Asserted Prior Art

For its challenges, Petitioner relies on the following prior art:

1. U.S. Patent Application Publication 2005/0038688 A1 to Collins et al., titled "System and Method for Matching Local Buyers and Sellers for the Provision of Community Based Services," filed on August 15, 2003, and published on February 17, 2005 (Ex. 1010, "Collins").

2. U.S. Patent No. 5,862,223 to Walker et al., titled "Method and Apparatus for a Cryptographically-Assisted Commercial Network System Designed to Facilitate and Support Expert-Based Commerce," filed on July 24, 1996, and issued on January 19, 1999 (Ex. 1011, "Walker").

3. U.S. Patent Application Publication 2004/0019579 A1 to Herz et al., titled "Professional Referral Network," filed on July 24, 2002, and published on January 29, 2004 (Ex. 1007, "Herz").

4. U.S. Patent Application Publication 2005/0021750 A1 to Abrams, titled "System, Method and Apparatus for Connecting Users in an Online Computer System Based on Their Relationships Within Social Networks," filed on June 16, 2003, and published on January 27, 2005 (Ex. 1008, "Abrams").

G. Testimonial Evidence

To support its challenges, Petitioner relies on two declarations of Dr. Benjamin Goldberg (Ex. 1004, "Goldberg Decl."; Ex. 1014, "Goldberg Reply Decl."). Patent Owner relies on the declaration of Ms. Emily White, the sole inventor named in the '107 patent (Ex. 2026, "White Decl.").

H. The Asserted Grounds of Unpatentability

We instituted an *inter partes* review of claims 1–11 on the following grounds:

Claims Challenged	35 U.S.C. §	References
1–3, 5–8, 10, 11	103(a)[1]	Collins, Walker
4, 9	103(a)	Collins, Walker, Herz
3, 8	103(a)	Collins, Walker, Abrams

Inst. Dec. 2, 81–82.

III. PATENTABILITY ANALYSIS

A. Legal Principles: Obviousness

A patent may not be obtained "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a). An obviousness analysis involves underlying factual inquiries including (1) the scope and content of the prior art; (2) differences between the claimed invention and the prior art; (3) the level of ordinary skill in the art; and (4) where in evidence, objective indicia of nonobviousness, such as commercial success, long-felt but unsolved needs, and failure of others.[2] *Graham v. John Deere Co.*, 383 U.S. 1, 17–18, 35–36 (1966); *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1047–48

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[1] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103 effective March 16, 2013. Because the '107 patent's effective filing date predates the AIA's amendments to § 103, this decision refers to the pre-AIA version of § 103.
[2] In its papers, Patent Owner presents no arguments or evidence regarding objective indicia of nonobviousness. *See* Resp. 9–37; Sur-reply 13–20.

(Fed. Cir. 2016) (en banc). When evaluating a combination of references, an obviousness analysis should address "whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

We analyze the obviousness issues according to these principles.

B. Level of Ordinary Skill in the Art

Factors pertinent to determining the level of ordinary skill in the art include (1) the educational level of the inventor; (2) the type of problems encountered in the art; (3) prior-art solutions to those problems; (4) the rapidity with which innovations are made; (5) the sophistication of the technology; and (6) the educational level of workers active in the field. *Envtl. Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696–97 (Fed. Cir. 1983). Evidence for these factors may not exist in every case, and one or more of these or other factors may predominate in a particular case. *Id.* Moreover, these factors are not exhaustive, but are merely a guide to determining the level of ordinary skill in the art. *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007). Further, the prior art itself may reflect an appropriate skill level. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

Petitioner asserts that a person of ordinary skill in the art would have had "a Bachelor of Science degree in computer science or a similar technical field together with 2 years of educational practicum or work experience in the field of software development (including programming for client-server systems, databases and networks), or related areas." Pet. 8 (citing Ex. 1004 ¶ 11). Petitioner also asserts that a person of ordinary skill "would have been familiar with existing participant matching systems and would have

understood how to implement such systems." *Id.* (citing Ex. 1004 ¶ 11). To support Petitioner, Dr. Goldberg testified that a person of ordinary skill would have been "familiar with the technologies (e.g., user interfaces, databases, networks, etc.) underlying existing social networks, including participant matching systems," and would have understood "how to implement such systems." Ex. 1004 ¶ 11.

Patent Owner asserts that a person of ordinary skill in the art would have had either (1) "a bachelor's degree in Computer Science, or highly related field," and "at least four years' experience in computer networking, especially in social networking systems," or (2) "eight years of experience in social networking systems" if lacking a bachelor's degree. Resp. 3–4. Patent Owner cites no evidence supporting its description. *Id.*

Petitioner's description of a person of ordinary skill in the art requires less experience ("2 years") than Patent Owner's description ("at least four years"). *See* Pet. 8; Resp. 3–4. Further, Petitioner's description requires less familiarity with social networking systems that Patent Owner's description. *See* Pet. 8; Resp. 3–4.

We adopt Petitioner's proffered level of ordinary skill in the art because it comports with the technology and claims of the '107 patent as well as the asserted prior art. For instance, two years of work experience in the field of software development and familiarity with the technology underlying existing social networks would have allowed someone to implement the claimed subject matter. *See* Ex. 1004 ¶ 11. Moreover, if the prior art renders the claimed subject matter obvious to a person with less experience and less knowledge, then the prior art renders the claimed subject

matter obvious to a person with more experience and more knowledge. *See Tokai Corp. v. Easton Enters., Inc.*, 632 F.3d 1358, 1369 (Fed. Cir. 2011).

C. Claim Construction

1. GENERALLY

Because Petitioner filed the Petition after November 13, 2018, we construe claim terms "using the same claim construction standard that would be used to construe the claim in a civil action" under 35 U.S.C. § 282(b). *See* 37 C.F.R. § 42.100(b) (2019). Under that standard, "[c]laim terms are given their ordinary and customary meaning, which is the meaning the term would have to a person of ordinary skill in the art at the time of the invention." *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 904 F.3d 965, 971 (Fed. Cir. 2018) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc)).

"[T]he person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent," including the other claims ("both asserted and unasserted") and the written description. *Phillips*, 415 F.3d at 1313–14, 1321. Further, "the prosecution history can often inform the meaning of the claim language by demonstrating how" an inventor or an examiner understood the claim language. *Id.* at 1317. Thus, the meaning of a disputed claim term may be determined by "look[ing] principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence." *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

2. "CONTACT INFORMATION"

In our Institution Decision, we construed the term "contact information" in claims 1 and 6 to mean "information, such as an email address, mailing address, or telephone number, that permits one entity to communicate directly with another entity." Inst. Dec. 38–39. No party challenges that construction. *See, e.g.*, Resp. 3–7, 10–18, 27–28, 32–37; Reply 15–19; Sur-reply 13–19; Tr. 16:22–17:5. Hence, we see no reason to depart from that construction. *See* Inst. Dec. 38–39.

3. "ENABLING THE USER TO SEND AN INQUIRY MESSAGE TO ONE OR MORE OF THE MULTIPLE PARTICIPANTS"

Claims 1 and 6 each recite the following limitation: "enabling the user to send an inquiry message to one or more of the multiple participants, while shielding the contact information from the user, the contact information including any messaging identifier that is associated with each of the one or more participants." Ex. 1001, 17:38–42, 18:28–32. The parties dispute whether the phrase "enabling the user to send an inquiry message to one or more of the multiple participants" includes an indirect communication from a user through an intermediary to a participant. *See* Resp. 10–14; Reply 15–18; Sur-reply 14–16.

In particular, Patent Owner argues that the phrase "enabling the user to send an inquiry message to one or more of the multiple participants" should not include "a situation in which the message is sent from the user to the system and from the system to the participant." Resp. 12; *see* Sur-reply 14. Patent Owner also argues that the phrase includes only to "a direct communication, as opposed to indirect communications." Resp. 11; *see* Sur-reply 14. Further, Patent Owner asserts that the phrase

uses the words "send . . . to" to specify a direct communication from a user to a participant rather than the words "send . . . for" to specify an indirect communication from a user through an intermediary to a participant. Resp. 14; Sur-reply 14.

In addition, Patent Owner contends that the '107 patent's specification discloses an embodiment where a user "goes outside of the service" to communicate with a participant. Sur-reply 14 (citing Ex. 1001, 5:47–50); *see id.* at 15–16. Patent Owner also contends that the '107 provisional discloses "a client-server system" with "a backend that provides an online email messaging system to allow direct interaction among users." Resp. 12; *see* Sur-reply 14. Patent Owner quotes the following statement from the provisional: "Employee is able to interact DIRECTLY via online email messaging system (and wireless) with these providers." Sur-reply 14 (quoting Ex. 1002, 21).

Petitioner argues that Patent Owner "attempt[s] to read substantial limitations into the claims." Reply 15; *see id.* at 18. Petitioner contends that '107 patent's specification discloses embodiments where "the system acts as an intermediary that forwards the inquiry message" from a user to a participant. *Id.* at 17 (citing Ex. 1001, 8:50–58); *see* Ex. 1014 ¶ 22. Petitioner also contends that the '107 provisional discloses examples of "indirect communication by routing messages through an intermediary messaging system" instead of using a direct communication from a user to a participant. Reply 15–16 (citing Ex. 1002, 14).

Additionally, Petitioner asserts that limiting the phrase "enabling the user to send an inquiry message to one or more of the multiple participants" to direct communications according to Patent Owner's construction would

render the claims inoperable. Reply 17; *see* Ex. 1014 ¶ 23. Petitioner explains that the "messaging system would not be able to track the participants' response times" for direct communications "outside of the messaging system." Reply 17; *see* Ex. 1014 ¶ 23. To support Petitioner, Dr. Goldberg testified that an ordinarily skilled artisan "would have understood that in order for the messaging system to be able to track response times, the communication could not be 'direct' communication or communication outside of the system." Ex. 1014 ¶ 23. Further, Petitioner asserts that the '107 patent's specification "fails to describe any mechanism by which a direct messaging system would somehow report the response time to the rating system." Reply 17; *see* Ex. 1014 ¶ 23.

In response, Patent Owner argues that the "embodiment being claimed in the '107 patent is direct messaging." Sur-reply 15 (citing Ex. 1001, col. 9). Further, Patent Owner asserts that "[i]t is possible to track response time in an embodiment" described in the '107 provisional and that "[i]t is also possible to track response time in an embodiment" described in the '107 patent's specification. *Id.* at 16 (citing Ex. 1001, 10:3–5; Ex. 1002, 21).

Based on the claim language and the '107 patent's specification, and for the reasons explained below, we agree with Petitioner and construe the phrase "enabling the user to send an inquiry message to one or more of the multiple participants" to include an indirect communication from a user through an intermediary to a participant.

The claim language supports the conclusion that the phrase "enabling the user to send an inquiry message to one or more of the multiple participants" includes an indirect communication from a user through an

intermediary to a participant. As recited in claims 1 and 6, a system that initially enables a user to send an inquiry message to the system and then sends the inquiry message to one or more participants "enabl[es] the user to send an inquiry message to one or more of the multiple participants" according to the claim language. *See* Ex. 1001, 8:46–57, Fig. 4. Hence, Patent Owner misplaces its reliance on a wording difference between "send . . . to" and "send . . . for." *See* Resp. 14; Sur-reply 14.

The '107 patent's specification also supports the conclusion that the phrase "enabling the user to send an inquiry message to one or more of the multiple participants" includes an indirect communication from a user through an intermediary to a participant. The specification describes embodiments where "the service 110 receives inquiries from users who inquire about a particular matter or issue," and "the service 110 selects the participants who will receive the inquiry based on an indication from the user of a topic or category of the communication." Ex. 1001, 3:28–30, 4:38–40; *see id.* at 3:39–45, 3:57–61, 4:12–25, 4:53–55, 5:54–60, 6:35–38, 7:8–9, 7:47–58. "As an alternative or additional selection criteria, the service 110 may select the participants who will receive the inquiry 108 based on information that is maintained about the participants." *Id.* at 4:47–50. In those embodiments, the service acts as an intermediary to receive an inquiry from a user, select the participants who will ultimately receive the inquiry, and then send the inquiry to the selected participants.

The specification includes the following example where the service acts as an intermediary to receive an inquiry from a user and send the inquiry to one or more participants:

Step 460 provides that a user-selection of one or more participants is received from the user through a second set of inputs. Given a set of biographies presented in step 450, the user may, for example, select one participant (based on the biography). Then in step 470, the user is enabled to communicate with the selected participant(s) over an online medium. For example, once the user makes a selection of which participant the user wishes to communicate with, the user may submit an inquiry or request for the participant identified in step 450. The service 110 may handle the request by forwarding the request to the identified participants.

Ex. 1001, 8:46–57, Fig. 4; *see id.* at 11:22–43.

The specification describes another embodiment where the service acts as an intermediary. In that embodiment, the service stores associations between issue categories and issue resolvers or participants. Ex. 1001, 9:21–31, Fig. 5A; *see id.* at 2:48–50. Through an interface, a user selects an issue category and creates an inquiry message. *Id.* at 9:32–49, Fig. 5A; *see id.* at 14:61–66, Fig. 6C. "[T]he user's message is routed to a participant/respondent who is designated to resolve issues for the category selected by the user. For example, service 110 may use database 214 to determine the association between the category of the issue and the issue resolver assigned to that category." *Id.* at 9:50–55, Fig. 5A; *see id.* at 2:50–55, 14:66–15:2, Fig. 6C. In that embodiment, the service acts as an intermediary to receive an inquiry from a user and send the inquiry to the assigned issue resolver or participant.

The specification describes yet another embodiment where the service acts as an intermediary. In that embodiment, "the user 502 submits an inquiry 512 of an issue resolution nature to the service 510." Ex. 1001, 12:35–36. The service forwards the inquiry to Connection 1 520. *Id.* at

12:36–41, Fig. 5B. Connection 1 520 considers Connection 2 530 "an expert in the particular field in question." *Id.* at 12:47–52. So Connection 1 520 invites Connection 2 530 to join the network. *Id.* at 12:52–56. After receiving the invitation, Connection 2 530 joins the network and creates a profile. *Id.* at 12:56–59. "After the user 502 has reviewed the profile the user may allow Connection 2 530 to resolve the issue and see other issues the user has pending." *Id.* at 13:26–28. If so, "Connection 2 530 is contacted by the user through the system with the issue to be resolved." *Id.* at 13:28–29. In that embodiment, the service acts as an intermediary to receive an inquiry from a user and send the inquiry first to Connection 1 and second to Connection 2.

The specification discloses alternative ways for a user to communicate with a participant: "One embodiment provides that the user goes through service 110 to communicate with the respondents that he chooses. Another embodiment provides that he goes outside of the service 110." Ex. 1001, 5:47–50. For an embodiment where a user "goes outside of the service" to communicate with a participant, however, the specification does not disclose a way for the service to track participant response times. *See, e.g.*, *id.* at 1:56–58, 2:17–56, 6:39–45, 9:58–11:44, Fig. 5A; Ex. 1014 ¶ 23.

Limiting the phrase "enabling the user to send an inquiry message to one or more of the multiple participants" to direct communications according to Patent Owner's construction would exclude embodiments where a user "goes through service" to communicate with a participant. A construction excluding a preferred embodiment is "rarely, if ever correct." *PPC Broadband, Inc. v. Corning Optical Commc'ns RF, LLC*, 815 F.3d 747, 755 (Fed. Cir. 2016). "[W]here claims can reasonably [be] interpreted to

include a specific embodiment, it is incorrect to construe the claims to exclude that embodiment, absent probative evidence on the contrary." *Oatey Co. v. IPS Corp.*, 514 F.3d 1271, 1277 (Fed. Cir. 2008). Here, Patent Owner identifies no such probative evidence. *See* Resp. 9–18, 33–37; Sur-reply 13–19. Instead, Patent Owner improperly attempts to incorporate into the claims a limitation from the specification. *See* Resp. 10–14; Sur-reply 14–16; *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

An analysis of the '107 provisional does not undermine the conclusion that the phrase "enabling the user to send an inquiry message to one or more of the multiple participants" includes an indirect communication from a user through an intermediary to a participant. Like the '107 patent, the '107 provisional discloses direct and indirect communications between a user and a participant. *See, e.g.*, Ex. 1002, 3, 14, 21, 41, 46, 91, 97. For example, the provisional describes an embodiment where a user selects an issue category and creates an inquiry message. *Id.* at 91. The issue categories "are connected to specific individuals or organizations or community or business services" in "various cities or other places." *Id.* When creating an inquiry message, a user sees the following instructions: "Send a separate email for each issue. Don't worry about where it goes. It's being routed to an individual or group of individuals who can answer your question directly or refer your question to someone who can." *Id.* at 97 (Fig. 48); *see id.* at 91 (referencing Fig. 48). In that embodiment, the service acts as an intermediary to receive an inquiry from a user and send the inquiry to the assigned issue resolver or participant.

Patent Owner's argument that the "embodiment being claimed in the '107 patent is direct messaging" rests on the embodiment described in

column 9. *See* Sur-reply 15. But that embodiment involves indirect messaging, not direct messaging, between a user and a participant. *See* Ex. 1001, 9:21–55, Fig. 5A. As discussed above, in that embodiment the service stores associations between issue categories and issue resolvers or participants. *Id.* at 9:21–31, Fig. 5A; *see id.* at 2:48–50. Through an interface, a user selects an issue category and creates an inquiry message. *Id.* at 9:32–49, Fig. 5A; *see id.* at 14:61–66, Fig. 6C. "[T]he user's message is routed to a participant/respondent who is designated to resolve issues for the category selected by the user." *Id.* at 9:50–52, Fig. 5A; *see id.* at 2:50–55, 14:66–15:2, Fig. 6C. Receiving a message and routing it to a participant does not correspond to direct messaging, i.e., where a user "goes outside of the service" to communicate with a participant.

As noted above, Patent Owner asserts that "[i]t is possible to track response time in an embodiment" described in the '107 provisional and that "[i]t is also possible to track response time in an embodiment" described in the '107 patent's specification. Sur-reply 16 (citing Ex. 1001, 10:3–5; Ex. 1002, 21). For an embodiment where a user "goes outside of the service" to communicate with a participant, however, Patent Owner cites nothing disclosing a way for the service to "track[] a response time" of the participant as required by claims 1 and 6. *See id.*; Ex. 1001, 17:43–44, 18:33–34. Thus, Patent Owner does not refute Dr. Goldberg's testimony that an ordinarily skilled artisan "would have understood that in order for the messaging system to be able to track response times, the communication could not be 'direct' communication or communication outside of the system." *See* Ex. 1014 ¶ 23.

For the reasons discussed above, we conclude that the phrase "enabling the user to send an inquiry message to one or more of the multiple participants" includes an indirect communication from a user through an intermediary to a participant.

4. "ONE OR MORE USERS OF THE NETWORK COMPUTER SYSTEM" IN CLAIM 4 AND "ONE OR MORE USERS OF THE COMPUTER SYSTEM" IN CLAIM 9

Claim 4 depends from claim 1 and further requires "identifying information for another participant that matches the category selection of the user based on a referral provided by one or more users of the network computer system." Ex. 1001, 17:56–60. Claim 9 depends from claim 6 and specifies that the one or more processors "identify information for another participant that matches the category selection of the user based on a referral provided by one or more users of the computer system." *Id.* at 18:48–52.

Petitioner argues that the phrase "one or more users of the network computer system" in claim 4 encompasses "participants of the network computer system, not just a user of the system seeking to have an issue resolved, e.g., the claimed 'user' in claim 1." Reply 20; *see* Pet. 60. Petitioner contends that claim 1 lacks an antecedent basis for the phrase "one or more users of the network computer system" in claim 4 and that the phrase references a new entity "not tied to 'the user' or 'the one or more participants'" recited in claim 1. Reply 21. Petitioner also contends that the '107 patent's specification "provides only one example of referrals, i.e., wherein participants refer other participants." *Id.* at 20 (citing Ex. 1001, 12:11–20); *see* Pet. 60. Petitioner relies on its arguments about claim 4 for the similar phrase "one or more users of the computer system" in claim 9. *See* Pet. 60, 64; Reply 20–21.

Patent Owner focuses on the shorter phrase "one or more users" in claims 4 and 9 and asserts that the shorter phrase "means that the recommendation is by one or more other users." Sur-reply 18. Patent Owner also asserts that "[i]t would not make sense for 'one or more users' to refer to 'the user' as a referral to 'the user' is being provided by the 'one or more users'" because "[o]ne would not make a referral to oneself." *Id.* at 18–19.

We agree with Petitioner that claim 1 lacks an antecedent basis for the phrase "one or more users of the network computer system" in claim 4 and that the phrase references a new entity not recited in claim 1. *See* Ex. 1001, 17:15–48, 17:56–60; Reply 21. The '107 patent's specification explains the nature of that new entity. *See* Ex. 1001, 5:30–46, 12:10–13:67, 14:48–60, Figs. 5B, 6B. The specification discloses a first issue resolver or participant serving as "referral source" for a second issue resolver or participant through "a social networking framework." *Id.* at 12:10–13:67, Fig. 5B; *see* Ex. 1004 ¶¶ 43, 158, 202. For example, a first participant may refer a second participant to a user by inviting the second participant to join the network and resolve the user's issue. Ex. 1001, 12:47–56, Fig. 5B; *see* Ex. 1004 ¶ 43. After joining the network, the second participant may provide a response to the user, either with the user's prior agreement or without the user's prior agreement. Ex. 1001, 12:56–13:5, Fig. 5B; *see* Ex. 1004 ¶ 43. The specification also discloses a first participant referring a user to a second participant. Ex. 1001, 5:30–46, 14:48–60, Fig. 6B. But the specification does not disclose a first user referring a second user to a participant. *See, e.g., id.* at 5:30–46, 12:10–13:67, 14:48–60, Figs. 5B, 6B. Instead, the

specification describes using participant ratings to assist a user when selecting a participant. *See id.* at 7:18–24.

Further, the phrase "one or more users of the network computer system" reads on the following entities in Figure 1 who use the network computer system in Figure 1: organizational participant 122, individual participant 124, group participant 126, and individual participant 128. Ex. 1001, 3:50–4:37, Fig. 1. The phrase also reads on the following entities in Figure 5B who use the network computer system in Figure 5B: Connection 1 520, Connection 2 530, and Connection 3 540. *Id.* at 12:10–13:67, Fig. 5B. Connection 1 520, Connection 2 530, and Connection 3 540 are participants. *Id.* at 12:10–20, 12:47–13:5, 13:28–34, 13:58–67; *see id.* at 2:21–24, 2:48–50, 3:30–41, 6:52–55, 9:23–25.

Based on the '107 patent's specification, we conclude that the phrase "one or more users of the network computer system" in claim 4 encompasses participants who use the network computer system. *See* Ex. 1001, 3:57–4:37, 5:30–46, 12:10–13:67, 14:48–60, Figs. 1, 5B, 6B; Ex. 1004 ¶¶ 43, 158, 202. For similar reasons, we conclude that the phrase "one or more users of the computer system" in claim 9 encompasses participants who use the computer system.

5. OTHER TERMS

We determine that no other claim terms require explicit constructions to decide the patentability issues. "[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy." *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999); *see Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

D. *Whether Collins Qualifies as Prior Art*

1. BACKGROUND AND CONTENTIONS

(a)   The '107 Provisional

A provisional patent application is a U.S. national application. 35 U.S.C. § 111(b). Although a provisional application need not include any claims, it must include "a specification as prescribed by" § 112 ¶ 1. 35 U.S.C. § 111(b)(1)–(2). Depending on the disclosures in a provisional application, it may establish an early effective filing date for a later nonprovisional application. *See* https://www.uspto.gov/patents-getting-started/patent-basics/types-patent-applications/provisional-application-patent.

The '107 provisional includes various pages and sections bearing various dates. Ex. 1002. For instance, the provisional includes the following:

> a provisional application cover page signed by the inventor and dated August 11, 2003 (*id.* at 1);
>
> a page called "Final Comments" and dated August 11, 2003 (*id.* at 2);
>
> a section called "Virtual Account" and dated August 11, 2003 (*id.* at 18–23);
>
> a page called "Figure 9" and stating "Monday, August 11, 2003-submitted/created- 8/29/02 EARLY VISIONS" (*id.* at 24);
>
> a page called "Virtual Account...another summary- HOW IT WORKS!!!! THE BUSINESS PROCESS" and dated August 11, 2003 (*id.* at 36);
>
> a section called "Tracking and Monitoring Performance" and dated August 11, 2003 (*id.* at 37–38);
>
> a section called "Human Resources or Relocation Director or Other" and dated August 14, 2003 (*id.* at 47–48);

a section called "Relocating Employee/ New Hire/ Remote
Candidate/ Biz Traveler etc" and dated August 14, 2003
(*id.* at 53–59);

a section called "College Intern" and dated August 14, 2003
(*id.* at 67–76);

a section called "Community Module" and dated August 13,
2003 (*id.* at 91–94);

a page called "Teenager Module" and dated August 11, 2003
(*id.* at 99);

a section called "Relocating Teenager" and dated August 13,
2003 (*id.* at 106–09);

a section called "Emily's Club" and dated August 13, 2003
(*id.* at 110–16);

a page called "Figure 58" and dated August 13, 2003
(*id.* at 119);

a section called "onlineHR Wireframes" with pages dated either
May 14 or May 21, 2001 (*id.* at 132–53);

a page called "Recruitment Management Product #1" and dated
January 2001 (*id.* at 169); and

many undated pages (*see, e.g.*, *id.* at 3–17, 125–31).

(b)   Petitioner Contends that Collins Is § 102(e) Prior Art

The pre-AIA version of § 102(e) provides that prior art may include
"an application for patent, published under section 122(b), by another filed
in the United States before the invention by the applicant for patent."
35 U.S.C. § 102(e) (2006). Petitioner contends that Collins qualifies as prior
art under § 102(e) because Collins's August 15, 2003, filing date precedes
the '107 patent's effective filing date. Pet. 6; *see* Ex. 1001, 1:8–32, codes
(22), (60), (63); Ex. 1010, code (22).

(c)   Patent Owner Contends that It Can Antedate Collins

Patent Owner contends that Collins does not qualify as prior art under
§ 102(e) for several related reasons. *See* Resp. 18–32; Sur-reply 1–13. First,
Patent Owner asserts that the '107 patent claims are entitled to the benefit
of the '107 provisional's September 3, 2003, filing date. *See* Resp. 21–32;
Sur-reply 5–12. Next, recognizing that Collins's August 15, 2003, filing
date precedes the '107 provisional's filing date, Patent Owner asserts that
the inventor "reduced the invention to practice" and "the invention was
complete" before Collins's filing date. Resp. 20–21; *see* Sur-reply 2–3.
Further, Patent Owner asserts that the inventor "clearly had possession of
the claimed subject matter of the '107 Patent" before Collins's filing date.
Sur-reply 3.

In the Response, Patent Owner identifies the date of invention as
August 11, 2003. Resp. 8; *see id.* at 20 & n.40 (citing Ex. 2026 ¶¶ 3–4).
In the Sur-reply, Patent Owner identifies the date of invention as either "no
later than August 14, 2003" or "no later than August 15, 2003." Sur-reply 1,
7–8.

Patent Owner asserts that Ms. White signed the cover page for the
'107 provisional and a page called "Final Comments" on August 11, 2003.
Resp. 7, 19–20, 22–23 (citing Ex. 1002, 1–2); *see* Ex. 2026 ¶¶ 1–3. Patent
Owner admits that "[s]ome material was added [to the provisional] after the
August 11, 2003 date." Resp. 20; *see* Ex. 2026 ¶ 4. But Patent Owner
asserts that the '107 patent claims "were supported by the information
present in the body" of the provisional before Collins's August 15, 2003,
filing date. Resp. 20; *see* Ex. 2026 ¶ 4.

To support Patent Owner's assertions, Ms. White stated, "I completed a draft of the Priority Application on August 11, 2003. . . . After I completed the draft patent application for the Priority Application, I added a few pages that were additional examples of concepts that are detailed in the Priority Application," i.e., pages dated August 13 or 14, 2003. Ex. 2026 ¶¶ 3–4. Ms. White also stated, "I recall that I mailed or couriered the Priority Application to the U.S. Patent Office on August 14 or 15, 2003. I recall this because I wanted to file the Priority Application as soon as possible after I felt the Priority Application was complete." *Id.* ¶ 5.

Further, Patent Owner asserts that for purposes of "determining a date of invention for a pre-AIA patent application filing, a draft patent application is effective as of the completion date of the as-filed version of the patent application if the relied upon disclosures are the same." Resp. 22; *see* Sur-reply 2. To support that assertion, Patent Owner cites *Spero v. Ringold*, 377 F.2d 652 (CCPA 1967), and *Haskell v. Colebourne*, 671 F.2d 1362 (CCPA 1982). Resp. 22 n.45; *see* Sur-reply 2.

(d)   Petitioner Disputes that Patent Owner Can Antedate Collins

Petitioner disputes that the "inventor reduced the invention to practice" before Collins's August 15, 2003, filing date. *See* Reply 11–14. In particular, Petitioner argues that an actual reduction to practice did not occur before Collins's filing date because no embodiment meeting all limitations of the challenged claims was constructed before that date. *Id.* at 12. In addition, Petitioner contends that Patent Owner "conflates actual reduction to practice with conception" and that *Spero* "focuses on only conception and constructive reduction to practice," not actual reduction to practice. *Id.* at 2, 10, 12 (citing *Spero*, 377 F.2d at 660). Petitioner also

contends that the "conflation of the two concepts leads Patent Owner to the untenable conclusion that" the '107 provisional "can somehow constitute both proof of conception and proof of actual reduction to practice." *Id.*

Further, Petitioner asserts that assuming that Patent Owner proved conception of the claimed subject matter before Collins's August 15, 2003, filing date, Patent Owner "cannot meet its burden to demonstrate diligence from the conception date" to the '107 provisional's September 3, 2003, filing date. Resp. 13. Petitioner contends that Patent Owner "failed to provide any explanation of diligence." *Id.* Petitioner also contends that Ms. White's testimony "provides no reliable evidence of diligence from August 15, 2003, to September 3, 2003" because nothing corroborates her testimony. *Id.* at 13–14.

Additionally, Petitioner disputes that the '107 patent claims are entitled to the benefit of the '107 provisional's filing date. *See* Reply 2–7. In particular, Petitioner argues that the provisional lacks support for the following two limitations in each of claims 1 and 6: (1) "displaying some of the information associated with each of the multiple participants is based at least in part on a rating of individual participants in the plurality of participants"; and (2) "updating the rating associated with each of the one or more participants based at least in part on the tracked response time." *Id.*

Petitioner also argues that the "effective filing date is evaluated on a claim-by-claim basis" and that "a claim is only entitled to the filing date of the earliest-filed application supporting that claim." Resp. 8 (citing *X2Y Attenuators, LLC v. Int'l Trade Comm'n*, 757 F.3d 1358, 1366 (Fed. Cir. 2014) (Reyna, J., concurring)). Petitioner contends that Patent Owner identifies "**no evidence** regarding whether the dependent claims are entitled

to the benefit of" the '107 provisional's filing date. *Id.* at 9 (emphasis by Petitioner).

(e)   Patent Owner Identifies Support for the Disputed Limitations

In response, Patent Owner identifies support in the '107 provisional for the two disputed limitations in each of claims 1 and 6. *See* Sur-reply 5–12. For the "displaying based on ratings" limitation, Patent Owner contends that the provisional "discloses the use of [a] 'rating system' 'where employees will be able to read reviews from other employees and rate his own experience with service providers.'" *Id.* at 6 (quoting Ex. 1002, 22). Patent Owner also contends that the provisional discloses (1) a "tracking & monitoring system that allows the corporation to view (monitor and track) how/when the vendor responds, interacts, communicates with the employee," and (2) a "Corporate Preferred Providers and Global Database (deleted upon receipt of poor ratings created by employees/family users)." *Id.* at 7 (quoting Ex. 1002, 38). Patent Owner asserts that "ratings would impact the ranking of a service provider with regard to their appearance" in search results when a provider's ratings "cause[] the provider to not be used again." *Id.* at 6–7; *see* Resp. 29–30. Patent Owner explains that "[i]f the provider is 'deleted upon receipt of poor ratings', the provider would not be listed" in search results. Sur-reply 7.

As support for the "updating" limitation, Patent Owner reproduces the following excerpts from the '107 provisional:

> All Corporate parties are able to distinguish between the effectiveness of service providers through a rating system/ listserv/reviews and other methods that may be written by those communicating with all corporate preferred providers, OHR providers, internal corporate employees, external community agencies and anyone within the system. . . .

This is possible through the communication tracking system. For example, through this system, all timing of emails and responses are able to be tracked.

They [corporations] are able to also to moniter [sic] and TRACK the TIME at which communication occurs between all parties. Thus, they know when service providers respond to email and other communication that goes out between employees ...So they can track their performance.

VENDOR PERFORMANCE MEASUREMENT STANDARDS A tracking & monitoring system that allows the corporation to view (monitor and track) how/when the vendor responds, interacts, communicates with the employee.

Sur-reply 9 (quoting Ex. 1002, 37–38); *see* Resp. 31–32.

In addition, Patent Owner contends that the '107 provisional describes "an embodiment in which a rating system is provided for 'tracking and monitoring performance'" that addresses the problem that "[c]orporations are not able to currently track and monitor the performance of their outsourced service providers." Sur-reply 10 (quoting Ex. 1002, 37). Patent Owner contends that a communication tracking system in that embodiment tracks the "timing of emails and responses." *Id.* at 10–11 (quoting Ex. 1002, 37). Patent Owner then asserts that "[a]s 'timing of emails and responses' are tracked, it must follow that the rating system updates a rating of a service provider after each instance in which a service provider communicates with a user." *Id.* at 11.

2. ANALYSIS FOR ENTITLEMENT TO THE BENEFIT OF THE '107 PROVISIONAL'S FILING DATE

Patent claims are entitled to the benefit of an earlier application's filing date only if the earlier application's disclosure supports the claims as required by § 112 ¶ 1. *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d

1299, 1306 (Fed. Cir. 2008); *see* 35 U.S.C. § 120. That principle applies to a provisional application. *Dynamic Drinkware*, 800 F.3d at 1381–82.

Among other things, § 112 ¶ 1 requires that the specification "contain a written description of the invention." 35 U.S.C. § 112 ¶ 1. The written-description requirement serves to "clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed." *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc) (alteration in original) (quoting *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563 (Fed. Cir. 1991)); *see Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1344 (Fed. Cir. 2016).

"[T]he test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." *Ariad*, 598 F.3d at 1351; *Mentor Graphics Corp. v. EVE-USA, Inc.*, 851 F.3d 1275, 1296 (Fed. Cir. 2017). The "test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art." *Ariad*, 598 F.3d at 1351. While the written-description requirement "does not demand any particular form of disclosure" or "that the specification recite the claimed invention *in haec verba*, a description that merely renders the invention obvious does not satisfy the requirement." *Id.* at 1352. The analysis for disclosure sufficiency may consider "such descriptive means as words, structures, figures, diagrams, formulas, etc." *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997).

For the reasons explained below, we agree with Patent Owner that the '107 provisional supports the "displaying based on ratings" limitation in

claims 1 and 6 but disagree that it supports the "updating" limitation in claims 1 and 6.

For the "displaying based on ratings" limitation, the '107 provisional describes an embodiment similar to Walker's "customer satisfaction" embodiment. In our Institution Decision, we relied on Walker's "customer satisfaction" embodiment for teaching the "displaying based on ratings" limitation. *See* Inst. Dec. 45–47.

Specifically, Walker's "customer satisfaction" embodiment employs feedback, e.g., from user complaints and peer reviews, to rate expert answers as satisfactory or unsatisfactory. Ex. 1011, 39:40–40:11, Fig. 34; *see id.* at 6:49–50, 21:52–59; Ex. 1004 ¶ 178. Negative ratings "may result in the expulsion or temporary suspension of the expert" or "in a lowering of" the expert's qualification level. Ex. 1011, 40:13–15; *see* Ex. 1004 ¶ 178. As we noted in our Institution Decision, "Petitioner contends, and we agree, that expelling or temporarily suspending an expert for poor quality according to Walker's 'customer satisfaction' embodiment teaches 'utilizing ratings to impact how (or whether)' experts or participants 'are presented to users.'" Inst. Dec. 46 (quoting Pet. 35).

Similar to Walker's "customer satisfaction" embodiment, the '107 provisional describes an embodiment permitting corporate employees to rate corporate service providers. Ex. 1002, 8, 22, 37–40, 44–45. The provisional explains that "the employee will be able to read reviews from other employees and rate his own experience with service providers." *Id.* at 22. In addition, the provisional discloses displaying service-provider ratings using a "star" rating scale, e.g., ranging "from 5 stars = excellent to 1 star = poor." *Id.* at 39–40, 44–45. The "star" rating scale "is based on"

averages from employee reviews. *Id.* at 40. The provisional also discloses deleting service-provider information from a database "upon receipt of poor ratings." *Id.* at 38. When that embodiment deletes service-provider information for poorly performing service providers and later displays ratings for properly performing service providers, that embodiment displays participant information "based at least in part on" participant ratings according to the "displaying based on ratings" limitation.

For the "updating" limitation, the '107 provisional discloses tracking service-provider response times. Ex. 1002, 37–38; *see id.* at 91. For example, the provisional explains that the "system records the 'TIME' that messages are sent by both the sender and the recipient" and that corporations can "review at what time the employee sent his request and at what time the service provider or staff member responded." *Id.* at 37; *see id.* at 91. The provisional also explains that corporations can "moniter [sic] and TRACK the TIME at which communication occurs between all parties" and "know when service providers respond to email and other communication" so "they can track their performance." *Id.* at 38.

Although the '107 provisional discloses rating service providers and tracking service-provider response times, it does not disclose updating service-provider ratings based on service-provider response times. *E.g.*, Ex. 1002, 8, 22, 37–40, 44–45, 91; *see* Ex. 1014 ¶¶ 16–21. The provisional does not connect the concept of tracking service-provider response times to the concept of rating service providers in a way that shows the inventor had possession of the "updating" limitation. *E.g.*, Ex. 1002, 8, 21–22, 37–41, 44–45, 91. According to the provisional, updated service-provider ratings result from employee reviews, not service-provider response times, since the

"star" rating scale "is based on" averages from employee reviews. *Id.*
at 40–41, 44 ("Average Rating: 4.2"), 45 ("Average Rating: 1.0"); *see id.* at
21–22, 37–39. For example, the provisional explains that an "employee has
the ability to post a review from two locations in the Service Provider area."
Id. at 41. The provisional does not explain how the system uses service-
provider response times. *E.g.*, *id.* at 8, 21–22, 37–41, 44–45, 91. For these
reasons, the provisional does not support the "updating" limitation as
required by § 112 ¶ 1.

Further, we disagree with Patent Owner's assertion that "[a]s 'timing
of emails and responses' are tracked, it must follow that the rating system
updates a rating of a service provider after each instance in which a service
provider communicates with a user." *See* Sur-reply 11. In essence, Patent
Owner argues that the '107 provisional renders the "updating" limitation
obvious. But "a description that merely renders the invention obvious does
not satisfy" the written-description requirement. *Ariad*, 598 F.3d at 1352.

Because the '107 provisional does not support claims 1 and 6 as
required by § 112 ¶ 1, claims 1 and 6 are not entitled to the benefit of the
provisional's filing date. *See* Ex. 1014 ¶¶ 16–21. Further, the dependent
claims incorporate all limitations in their respective independent claims.
35 U.S.C. § 112 ¶ 4. Because the dependent claims incorporate all
limitations in their respective independent claims, they too are not entitled
to the benefit of the provisional's filing date.

In addition, the analysis for entitlement to priority proceeds on a
claim-by-claim basis. *See Lucent Techs., Inc. v. Gateway, Inc.*, 543 F.3d
710, 718 (Fed. Cir. 2008); *Waldemar Link, GmbH v. Osteonics Corp.*,
32 F.3d 556, 558 (Fed. Cir. 1994). As Petitioner contends, Patent Owner

identifies "no evidence regarding whether the dependent claims are entitled to the benefit of" the provisional's filing date. Reply 9 (emphasis omitted); *see* Resp. 21–32; Sur-reply 5–13.

3. ANALYSIS FOR REDUCTION TO PRACTICE

A patent owner may antedate a reference by proving an earlier reduction to practice. *Purdue Pharma L.P. v. Boehringer Ingelheim GmbH*, 237 F.3d 1359, 1365 (Fed. Cir. 2001); *see* 37 C.F.R. § 1.131(b). Filing a patent application serves as a constructive reduction to practice. *Hyatt v. Boone*, 146 F.3d 1348, 1352 (Fed. Cir. 1998). For an actual reduction to practice, a patent owner must show three things: (1) construction of an embodiment or performance of a process meeting all limitations in the challenged claims; (2) "that the invention would work for its intended purpose"; and (3) "sufficient evidence to corroborate inventor testimony regarding these events." *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1169 (Fed. Cir. 2006). Except for "very simple inventions," demonstrating that the invention would work for its intended purpose requires testing. *Yorkey v. Diab*, 601 F.3d 1279, 1286 (Fed. Cir. 2010). "An inventor cannot rely on uncorroborated testimony to establish a prior invention date." *In re NTP, Inc.*, 654 F.3d 1279, 1291 (Fed. Cir. 2011).

Patent Owner acknowledges the requirements for an actual reduction to practice. Resp. 21 & n.43 (citing *Green Cross Corp. v. Shire Human Genetic Therapies, Inc.*, IPR2016-00258, Paper 89 at 11 (PTAB Mar. 22, 2017), citing *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1169 (Fed. Cir. 2006)).

We agree with Petitioner that the evidence does not establish an actual reduction to practice for the subject matter of a challenged claim before

Collins's August 15, 2003, filing date. *See* Reply 12–13. The record lacks evidence concerning construction of an embodiment meeting all limitations in a challenged claim. *See* Exs. 2001–2034, 2039–2040. For instance, Patent Owner identifies no evidence that any software accomplished any of the steps recited in claims 1 and 6. *See* Resp. 20–32; Sur-reply 1–13; Ex. 2026 ¶¶ 2–6. Further, the record lacks evidence showing that the invention would work for its intended purpose. *See* Exs. 2001–2034, 2039–2040. For instance, Patent Owner identifies no evidence that any testing occurred. *See* Resp. 20–32; Sur-reply 1–13; Ex. 2026 ¶¶ 2–6.

The '107 provisional actually indicates that an embodiment meeting all limitations in a challenged claim was not constructed before the provisional's September 3, 2003, filing date. *See* Ex. 1002, 8, 20, 29, 38, 40–41, 47, 53, 67, 92, 98–99, 106, 110, 129. As an example, under the heading "Proposed Production Environment," the provisional explains that the system "will be developed" based on a certain application server and that the "team plans to use the best technology at the time depending on what is available." *Id.* at 8; *see id.* at 129. As another example, the provisional repeatedly notes that its disclosure exemplifies "what might be used," "how it might look," and what "would go into these kinds of sections" to implement various features. *Id.* at 40, 47, 53, 67, 92, 106, 110; *see id.* at 38, 41. As yet another example, the provisional describes various "possible" webpages when explaining how something "could work." *Id.* at 99; *see id.* at 98.

As noted above, Patent Owner cites *Spero* and *Haskell* to support the assertion that "a draft patent application is effective as of the completion date of the as-filed version of the patent application if the relied upon

disclosures are the same." *See* Resp. 22 & n.45; Sur-reply 2 & n.2. Neither *Spero* nor *Haskell* supports Patent Owner's position because the facts in those cases differ in an important way from the facts here. In those cases, the record contained two versions of a patent application: an unfiled version and a filed version.

Specifically, *Spero* involved an interference with a single count covering a particular progesterone compound. *Spero*, 377 F.2d at 654. The senior party Ringold argued that a parent application of the junior party Spero did not support the count. *Id.* at 654–55. The parent application did not expressly disclose the progesterone compound. *Id.* at 655. The Board found that certain examples in the parent application necessarily produced the progesterone compound and, therefore, that the parent application inherently disclosed the progesterone compound. *Id.* at 656–57. Based on those findings, the Board determined that the parent application constituted a constructive reduction to practice. *Id.* at 655, 659. The court agreed with that determination. *Id.* at 659.

To show conception before the parent application's filing date, Spero submitted as an exhibit a "working draft" of the parent application prepared by a patent agent that was "identical in all pertinent respects" to the parent application. *Spero*, 377 F.2d at 654. In addition, Spero introduced testimony establishing the date the pertinent portions of the "working draft" were prepared. *Id.* at 659. The Board concluded that the "working draft" could not show conception because it did not "disclose the invention." *Id.* The court disagreed with that conclusion. *Id.* at 659–60. The court explained that the Board "erred in concluding, as a matter of law, that identical disclosures may be sufficient to establish constructive reduction to

practice of the subject matter of a count in interference when present in a filed application yet insufficient to establish conception when present in a working draft of that application." *Id.* at 656. Because of that error, the court remanded the case to the Board to make findings concerning conception and diligence. *Id.* at 660.

Like *Spero*, *Haskell* involved an interference where the junior party relied on an unfiled draft application for conception and a filed application "with only minor changes" for a constructive reduction to practice. *Haskell*, 671 F.2d at 1365. The court said that "[t]his position is directly supported by *Spero*." *Id.*

Here, assuming that the '107 provisional supported the challenged claims (although it does not), the provisional would correspond to the parent application in *Spero* and the filed application "with only minor changes" in *Haskell*. In contrast to the party attempting to antedate in *Spero* and *Haskell*, Patent Owner submits no exhibit comprising an unfiled draft application. *See* Exs. 2001–2034, 2039–2040. For example, Patent Owner provides nothing comparable to the "working draft" in *Spero*. The absence of an unfiled draft application distinguishes the facts here from the facts in *Spero* and *Haskell*. Patent Owner disregards that important difference. *See* Resp. 22–23; Sur-reply 2.

The facts here instead parallel the facts in *NTP*. There, to establish an actual reduction to practice, NTP submitted as an exhibit "Telefind Revision 2" dated after the critical date and did not submit "Telefind Revision 0" dated before the critical date. *NTP*, 654 F.3d at 1291. To overcome that deficiency, NTP argued that "Revision 0 and Revision 2 have all the same key components" and that "what is disclosed in Revision 2

should be treated as present in Revision 0." *Id.* To substantiate that argument, NTP provided testimony from each of the inventors. *Id.* The court criticized NTP's approach, saying, "The problem with NTP's argument is that it is circular. The [inventors] seek to corroborate their testimony with the Telefind document, but, at the same time, attempt to corroborate the date of the document with their testimony." *Id.* at 1291–92.

Similar to *NTP*, Patent Owner seeks to corroborate the inventor's testimony with various dates contained in the '107 provisional and, at the same time, seeks to corroborate those dates with the inventor's testimony. *See* Ex. 1002; Ex. 2026 ¶¶ 1–5; Tr. 21:16–22:16, 25:13–29:25, 31:14–25.

For the reasons discussed above, the evidence does not establish an actual reduction to practice for the subject matter of a challenged claim before Collins's August 15, 2003, filing date.

4. ANALYSIS FOR CONCEPTION

A patent owner may also antedate a reference by "proving earlier conception and reasonable diligence in reducing to practice." *Perfect Surgical Techniques, Inc. v. Olympus Am., Inc.*, 841 F.3d 1004, 1007 (Fed. Cir. 2016); *see* 37 C.F.R. § 1.131(b). "Conception exists when a definite and permanent idea of an operative invention, including every feature of the subject matter sought to be patented, is known." *Sewall v. Walters*, 21 F.3d 411, 415 (Fed. Cir. 1994); *see Gunter v. Stream*, 573 F.2d 77, 80 (CCPA 1978). "The conception analysis necessarily turns on the inventor's ability to describe [the] invention with particularity." *Burroughs Wellcome Co. v. Barr Labs., Inc.*, 40 F.3d 1223, 1228 (Fed. Cir. 1994). Until the inventor can do so, the inventor "cannot prove possession of the complete mental picture of the invention." *Id.*

An inventor's testimony does not alone suffice to prove conception. *Price v. Symsek*, 988 F.2d 1187, 1194 (Fed. Cir. 1993). Instead, "when a party seeks to prove conception through an inventor's testimony the party must proffer evidence, 'in addition to [the inventor's] own statements and documents,' corroborating the inventor's testimony." *Apator Miitors ApS v. Kamstrup A/S*, 887 F.3d 1293, 1295 (Fed. Cir. 2018) (alteration by the court) (quoting *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1577 (Fed. Cir. 1996)). Hence, a party must prove conception with "corroborating evidence which shows that the inventor disclosed to others [a] 'completed thought expressed in such clear terms as to enable those skilled in the art' to make the invention." *Coleman v. Dines*, 754 F.2d 353 (Fed. Cir. 1985) (quoting *Field v. Knowles*, 183 F.2d 593, 600–01 (CCPA 1950)).

We agree with Petitioner that the evidence does not establish conception of the subject matter of a challenged claim before Collins's August 15, 2003, filing date. *See* Reply 10–11. First, for the reasons discussed above, the '107 provisional does not show that the inventor had possession of the claimed subject matter as of the provisional's September 3, 2003, filing date. *See supra* § III.D.2. In particular, the provisional does not show that the inventor had possession of the "updating" limitation in claims 1 and 6. *See id.* Thus, the inventor did not have a "complete mental picture" of the subject matter of claims 1 and 6 or any dependent claim.

Second, assuming that the '107 provisional did show that the inventor had possession of the claimed subject matter as of the provisional's filing date, Patent Owner does not "proffer evidence, 'in addition to [the inventor's] own statements and documents,' corroborating the inventor's testimony." *See* Resp. 20–32; Sur-reply 1–13; Exs. 2001–2034, 2039–2040;

Apator Miitors, 887 F.3d at 1295. As testimonial evidence, Patent Owner provides only the inventor's own statements. *See* Ex. 2026. As documentary evidence, the '107 provisional comprises the inventor's own documents. *See* Ex. 1002. The absence of corroborating evidence dooms Patent Owner's attempt to antedate Collins by proving earlier conception. *See Apator Miitors*, 887 F.3d at 1295–96.

For the reasons discussed above, the evidence does not establish conception of the subject matter of a challenged claim before Collins's August 15, 2003, filing date.

5. ANALYSIS FOR DILIGENCE

"The diligence requirement implements the principle that, to antedate a reference," an inventor "must not only have conceived the invention before the reference date, but must have reasonably continued activity to reduce the invention to practice." *ATI Techs. ULC v. Iancu*, 920 F.3d 1362, 1369 (Fed. Cir. 2019). "A patent owner need not prove the inventor *continuously* exercised reasonable diligence throughout the critical period; it must show there was *reasonably continuous* diligence." *Perfect Surgical*, 841 F.3d at 1009 (emphasis by the court). An inventor's testimony does not alone suffice to prove diligence. *Id.* at 1007. A "variety of activities" may corroborate an inventor's testimony about diligence, and any corroborating evidence is considered "as a whole." *Id.* at 1007–08.

Here, Patent Owner proffers only inventor testimony to prove diligence. *See* Ex. 2026 ¶¶ 3–5. Ms. White stated, "I completed a draft of the Priority Application on August 11, 2003. . . . After I completed the draft patent application for the Priority Application, I added a few pages that were additional examples of concepts that are detailed in the Priority

Application," i.e., pages dated August 13 or 14, 2003. *Id.* ¶¶ 3–4.
Ms. White also stated, "I recall that I mailed or couriered the Priority
Application to the U.S. Patent Office on August 14 or 15, 2003. I recall this
because I wanted to file the Priority Application as soon as possible after I
felt the Priority Application was complete." *Id.* ¶ 5.

The record lacks evidence corroborating that testimony. *See*
Exs. 2001–2034, 2039–2040. For instance, Patent Owner identifies no
evidence from a courier service, such as an invoice, shipping documentation,
or tracking documentation. *See* Resp. 20–32; Sur-reply 1–13; Ex. 2026
¶¶ 2–6. Further, Patent Owner identifies no evidence from a credit card or
debit card, such as a monthly statement showing a shipping charge. *See*
Resp. 20–32; Sur-reply 1–13; Ex. 2026 ¶¶ 2–6. The absence of
corroborating evidence dooms Patent Owner's attempt to antedate Collins by
proving "reasonable diligence in reducing to practice." *See Perfect Surgical*,
841 F.3d at 1007.

For the reasons discussed above, the evidence does not establish
reasonably continuous diligence in reducing to practice the subject matter
of a challenged claim.

6. SUMMARY

For the reasons discussed above, the '107 provisional does not show
that the inventor had possession of the subject matter of claims 1–11 as
of the provisional's September 3, 2003, filing date. *See supra* § III.D.2.
Further, Patent Owner proffers insufficient evidence of an actual reduction
to practice before Collins's August 15, 2003, filing date and insufficient
evidence "proving earlier conception and reasonable diligence in reducing to

practice." *See supra* §§ III.D.3–III.D.5; *Perfect Surgical*, 841 F.3d at 1007.
Consequently, Collins qualifies as prior art for claims 1–11 under § 102(e).

E. Claims 1–3, 5–8, 10, and 11:
Obviousness over Collins and Walker

Petitioner challenges claims 1–3, 5–8, 10, and 11 under § 103(a) as
obvious over Collins and Walker. *See* Pet. 4–5, 14–55. Below, we provide
overviews of Collins and Walker, and then we consider the obviousness
issues raised by the parties.

1. OVERVIEW OF COLLINS (EX. 1010)

Collins discloses a computer-based system for matching service
consumers and service providers that includes consumer-centric features.
Ex. 1010 ¶¶ 12–16, code (57). The matching system "is consumer-centric
because a matching is performed between consumer needs and local vendor
capabilities and the results are presented back to the consumer so that the
choice of which vendors to be contacted is left to the consumer." *Id.* ¶ 13,
code (57). The system "provides an additional convenience benefit" to
a consumer because it includes "mechanisms for immediately and
automatically contacting" the selected vendors on the consumer's behalf.
Id. ¶¶ 13, 15. Also, the system allows "consumers to rate the quality of
services" provided by vendors and "may automatically collect data on
vendor response time." *Id.* ¶ 16.

Collins's Figure 8b depicts an interface that permits a consumer to
find a vendor, e.g., a plumber, by inputting details about the consumer's
service request, e.g., date, work description, and geographic location.
Ex. 1010 ¶¶ 30, 85–86, 206–213, 220–221, 225, 227–234, Fig. 8b.
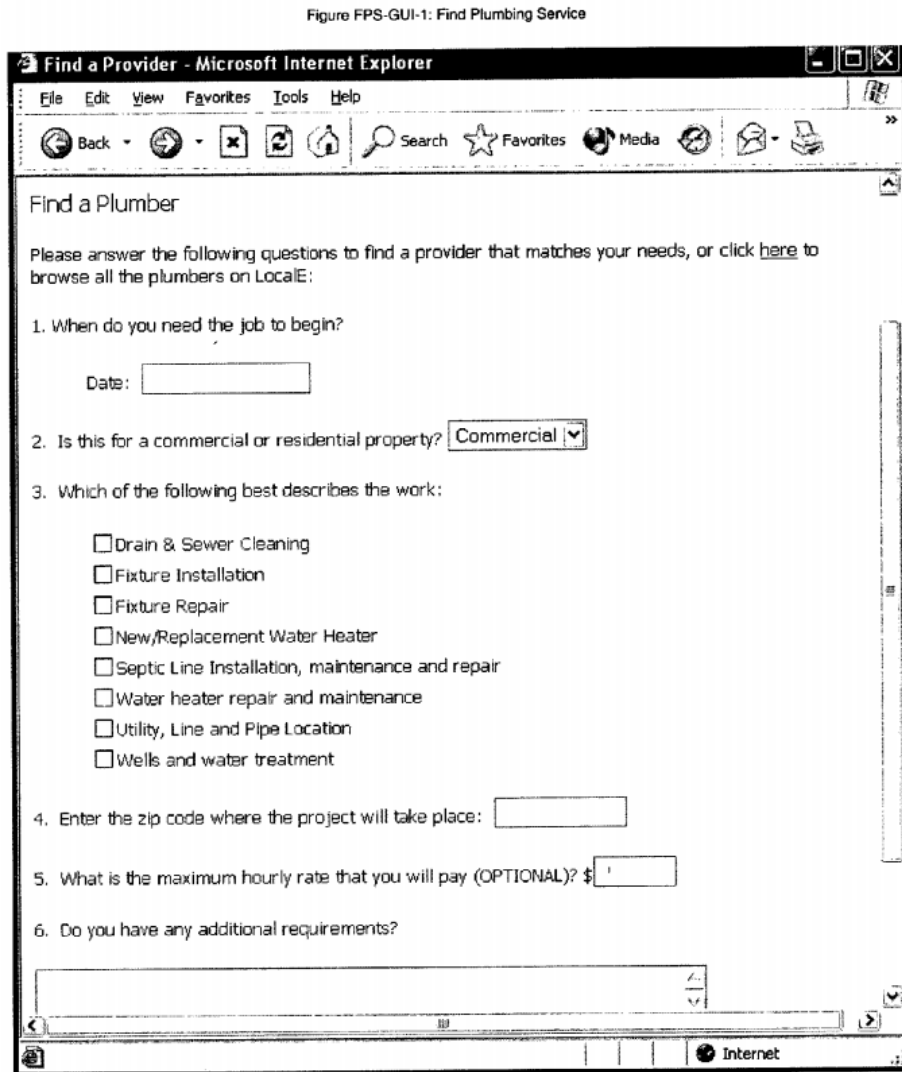Figure 8b is reproduced below:

Figure 8b

Figure FPS-GUI-1: Find Plumbing Service

Figure 8b illustrates an interface "used by the consumer to find a service provider." *Id.* ¶ 30, Fig. 8b; *see id.* ¶¶ 221, 225, 227.

After a consumer inputs details about the consumer's service request, the system "display[s] to the consumer a list of all vendors that are able and available to meet the consumer's request." Ex. 1010 ¶ 87. After viewing the matched vendors, the consumer "can choose to view further information on any vendor, including information such as years of experience in the service category, fees or rates, and insurance coverage." *Id.*

"When the consumer has made a decision about which vendor or vendors to contact," the consumer "indicate[s] this by selecting them from the list and submitting this selection" to the system. *Id.* ¶ 88; *see id.* ¶¶ 257–258, 263–268, Figs. 12–15. The system "then contacts the vendors" and provides details concerning the consumer's request but not the consumer's contact information. *Id.* ¶ 89; *see id.* ¶¶ 13, 15, 131, 250, 257–258, 263–268, Figs. 12–15. The details concerning the consumer's request include "when and where the service must be performed and any other consumer requirements." *Id.* ¶ 89; *see id.* ¶¶ 131, 249–250, 258. "The vendor is given an option to accept or reject each lead, and may be charged a fee if they accept." *Id.* ¶ 89; *see id.* ¶¶ 15, 131, 250, 259, 262, code (57).

2. OVERVIEW OF WALKER (EX. 1011)

Walker discloses a computer-based system for matching service consumers and service providers, in particular, experts in various subject areas who provide expert advice. Ex. 1011, 6:56–10:43, 17:26–28, code (57). Among other things, the matching system acts as an intermediary and manages communications between experts and users seeking expert advice. *Id.* at code (57); *see id.* at 9:66–10:5, 11:1–6.

Walker explains that experts and users may have concerns about revealing information about themselves. *See, e.g.*, Ex. 1011, 4:52–67, 10:8–19. To address those concerns, the matching system may "provide full or partial anonymity" to experts and users. *Id.* at 9:67–10:1. For example, the system may offer "no information about the expert" or represent "only that he is a member of a specific professional organization." *Id.* at 10:1–5. The system may conceal information "using very simple or very complex techniques depending on the level of security required." *Id.* at 10:5–7.

Walker describes the "ability to provide anonymity" to experts and users as "another advantage of the present invention." *Id.* at 9:66–67.

Walker's Figure 1 (reproduced below) shows a computer-based matching system. Ex. 1011, 11:59–60, 13:7–29, Fig. 1.
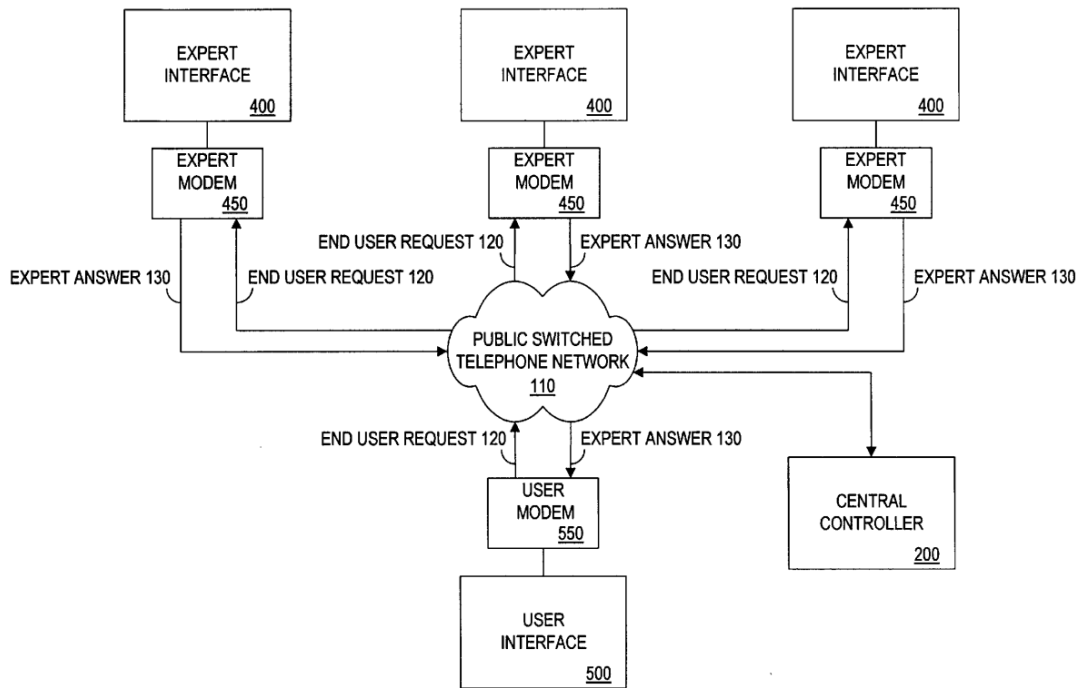

FIG. 1

Figure 1 illustrates a system including central controller 200, expert interfaces 400, and user interface 500 connected through network 110. *Id.* at 13:10–16.

Walker describes several embodiments. *See, e.g.*, Ex. 1011, 13:7–18:30, 24:67–29:13, 33:21–36:57, 39:37–40:46. In one embodiment, a user "establishes an online connection" to a central controller. *Id.* at 25:20–25, Fig. 15. Then, a user interface displays "a selection of predetermined subject areas" or categories, such as finance, law, and medicine. *Id.* at 25:26–30. Next, the user selects the following items: (1) a category, e.g., medicine; (2) a subcategory, e.g., pediatrics; and

(3) a qualification level, e.g., Level 1, Level 2, or Level 3. *Id.* at 25:31–37, Fig. 15. "Each level corresponds to predetermined groupings of expert qualifications." *Id.* at 25:37–40. After the user selects a category, subcategory, and qualification level, a "list of expert IDs [expert identifiers] is displayed along with an option to see specific expert qualifications." *Id.* at 25:40–43. Further, "ratings for that expert may be made available." *Id.* at 25:43–44. But "the user may be prevented from seeing [expert] contact information" to prevent the user "from contacting experts outside the system prior to a deal being reached" and "to ensure that payment is received for bringing the two parties together." *Id.* at 25:44–47, 36:51–54.

Based on the displayed information, the user selects one or more experts for the system to contact. Ex. 1011, 25:53–55, Fig. 15. Then, the user creates a request, such as a question "requir[ing] human judgement, evaluation, analysis, etc.," or multiple questions "bundled into one request." *Id.* at 16:62–17:1, 25:55–61, Fig. 6. Next, the user includes the user's ID and one or more expert IDs in the request. *Id.* at 17:3–4, 25:61–63, Figs. 6, 16. After the user completes the request, the user transmits it to the central controller "for distribution to the selected experts." *Id.* at 25:65–66, 26:6–7, Fig. 16.

After receiving a user's request, an expert "can either accept or reject" the request. Ex. 1011, 25:67–26:8, Fig. 16. If the expert rejects the request, "the user is notified and the transaction stops." *Id.* at 26:8–10, Fig. 16. But if the expert accepts the request, "the expert sends confirmation to [the] central controller" and "begins to answer" the request. *Id.* at 26:10–13, Fig. 16.

Walker describes a "customer satisfaction" embodiment. Ex. 1011, 39:37–40:46, Figs. 34–35. That embodiment employs feedback, e.g., from user complaints and peer reviews, to rate expert answers as satisfactory or unsatisfactory. *Id.* at 39:40–40:11, Fig. 34; *see id.* at 6:49–50, 21:52–59. For example, a "randomly selected reviewing expert of comparable expert qualifications" evaluates the acceptability of an expert answer. *Id.* at 39:65–40:5, Fig. 34. A positive evaluation causes the central controller to update an expert database to indicate satisfactory completion of the quality check, while a negative evaluation causes the central controller to update the expert database to indicate unsatisfactory completion of the quality check. *Id.* at 40:4–11, Fig. 34. After a negative evaluation, "a notice is transmitted to the expert" with a reprimand "for poor quality." *Id.* at 40:11–13, Fig. 34; *see id.* at 21:59–62. "A given number of reprimands may result in the expulsion or temporary suspension of the expert" or "in a lowering of" the expert's qualification level. *Id.* at 40:13–15. Moreover, the matching system makes expert ratings available to users to "provid[e] another parameter for the selection process." *Id.* at 21:52–59.

According to Walker, the matching system provides the following advantages: (1) improves an expert's "ability to efficiently provide expert services"; (2) improves a user's "ability to find experts capable and willing to furnish such services at a mutually agreed price and terms"; (3) improves privacy by "provid[ing] full or partial anonymity" to experts and users; and (4) "makes the finding, selling and transferring of expert advice fast, simple, efficient and market competitive." Ex. 1011, 6:64–7:1, 9:66–10:7, 11:7–10.

3. INDEPENDENT CLAIM 1

(a) Preamble

Claim 1's preamble recites "[a] method for establishing a social network, the method being implemented on a network computer system." Ex. 1001, 17:15–16.

Petitioner contends that Collins teaches claim 1's preamble because "Collins utilizes networked computers and applications to facilitate users interacting with other users with similar interests or needs." Pet. 25–26 (citing Ex. 1010 ¶¶ 13–14, 86–89, 121, code (57), Fig. 1); *see* Ex. 1004 ¶ 167. To support Petitioner, Dr. Goldberg testified that Collins discloses "a networked computer system" with "networked computers and applications to facilitate users interacting with other users with similar interests or needs." Ex. 1004 ¶ 167 (citing Ex. 1010 ¶¶ 1, 13–14, 86–89, 92–93, 121, code (57), claims 1 and 11, Figs. 1–3). Dr. Goldberg also testified that "Collins teaches a social network." *Id.*

Patent Owner does not make any arguments specific to claim 1's preamble. *See, e.g.*, Resp. 9–18, 32–33; Sur-reply 13–16.

Generally, a preamble does not limit a claim. *Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1346 (Fed. Cir. 2002). Here, we need not decide whether claim 1's preamble limits the claim because we agree with Petitioner that Collins teaches the preamble. *See* Pet. 25–26; Ex. 1004 ¶ 167; Ex. 1010 ¶¶ 19–20, 86–90, claim 1, Figs. 2–3.

For instance, Collins's Figures 2 and 3 illustrate a networked computer system. Ex. 1010 ¶¶ 19–20, Figs. 2–3; *see id.* ¶¶ 54, 58, 60, 91–101, 117, 121–124, 177, 179. Moreover, Collins's claim 1 recites "[a] computer-implemented method for matching consumers and service

providers for the provision of services by the service providers to the consumers." *Id.* at 16 (claim 1). The consumers and service providers interact via a networked computer system. *See* Ex. 1004 ¶ 167; Ex. 1010 ¶¶ 86–90, 97, 99, 101, Figs. 2–3.

(b)   Maintaining a List of Participants

Claim 1 recites "maintaining a list comprising a plurality of participants, wherein each participant in the plurality of participants corresponds to one or more individuals, wherein the list also includes information associated with at least one of each participant or the one or more individuals that correspond to each participant." Ex. 1001, 17:18–23.

Petitioner contends that Collins teaches this limitation for three related reasons. Pet. 26–27; *see* Ex. 1004 ¶ 168. First, Collins's system "includes software that captures the capabilities of the sellers of local services in a community and makes them publicly accessible." Pet. 26 (quoting Ex. 1010 ¶ 14). Second, Collins's system "maintains the profiles of the service providers on a database," e.g., system database 306a. *Id.* at 26 (citing Ex. 1010 ¶ 117); *see* Ex. 1004 ¶¶ 92, 168. Third, after a consumer submits a service request to Collins's system, it "display[s] to the consumer a list of all vendors that are able and available to meet the consumer's request." Pet. 26–27 (quoting Ex. 1010 ¶ 87); *see* Ex. 1004 ¶¶ 94–95. Petitioner contends that the displayed information includes "the vendor's name (or company name) and location, and a rating from other system users," i.e., other consumers. Pet. 26–27 (quoting Ex. 1010 ¶ 87); *see* Ex. 1004 ¶ 95.

Patent Owner does not make any arguments specific to claim 1's "maintaining a list" limitation. *See, e.g.*, Resp. 9–18, 32–33; Sur-reply 13–16.

We agree with Petitioner that Collins teaches this limitation. *See* Pet. 26–27; Ex. 1004 ¶ 168; Ex. 1010 ¶¶ 14, 109, 117, 123–124. Specifically, Collins's system "captures the capabilities of the sellers of local services" in profiles. Ex. 1010 ¶¶ 14, 109, 123; *see* Ex. 1004 ¶ 92. The profiles include information about the service providers, i.e., attributes such as "skills, experience, qualifications, geography or the area of service, payment or settlement methods, references and other service specific and self authored attributes." Ex. 1010 ¶ 123; *see id.* ¶¶ 109, 115, 117, 127–129, 167–174; Ex. 1004 ¶¶ 92, 168. Collins's system maintains the service-provider profiles in a database, e.g., system database 306a. Ex. 1010 ¶¶ 117, 123–124, 136, 221, 225, 227, 242, 258; *see* Ex. 1004 ¶¶ 92, 168. After a consumer submits a service request to Collins's system, it "display[s] to the consumer a list of all vendors that are able and available to meet the consumer's request." Ex. 1010 ¶¶ 86–87; *see* Ex. 1004 ¶¶ 94–95. The displayed information includes "the vendor's name (or company name) and location, and a rating from other system users," i.e., other consumers. Ex. 1010 ¶ 87; *see* Ex. 1004 ¶ 95. Hence, Collins's system maintains a list of service providers, and the list includes information associated with each service provider, e.g., name, location, and rating.

Accordingly, we agree with Petitioner that Collins teaches claim 1's "maintaining a list" limitation.

(c)   Presenting an Interface from Which a User Makes a Selection

Claim 1 recites "presenting a user with an interface from which the user makes a selection of a category from a plurality of categories." Ex. 1001, 17:24–26.

Petitioner contends that Collins teaches this limitation because "Collins describes a user interface where a user is able to select from multiple 'categories' corresponding to a service" that the user seeks. Pet. 27 (citing Ex. 1010 ¶ 86); *see* Ex. 1004 ¶ 171. To support that contention, Petitioner identifies Collins's Figure 8b (reproduced below) as illustrating an interface from which a user makes category selection (Pet. 27–28):
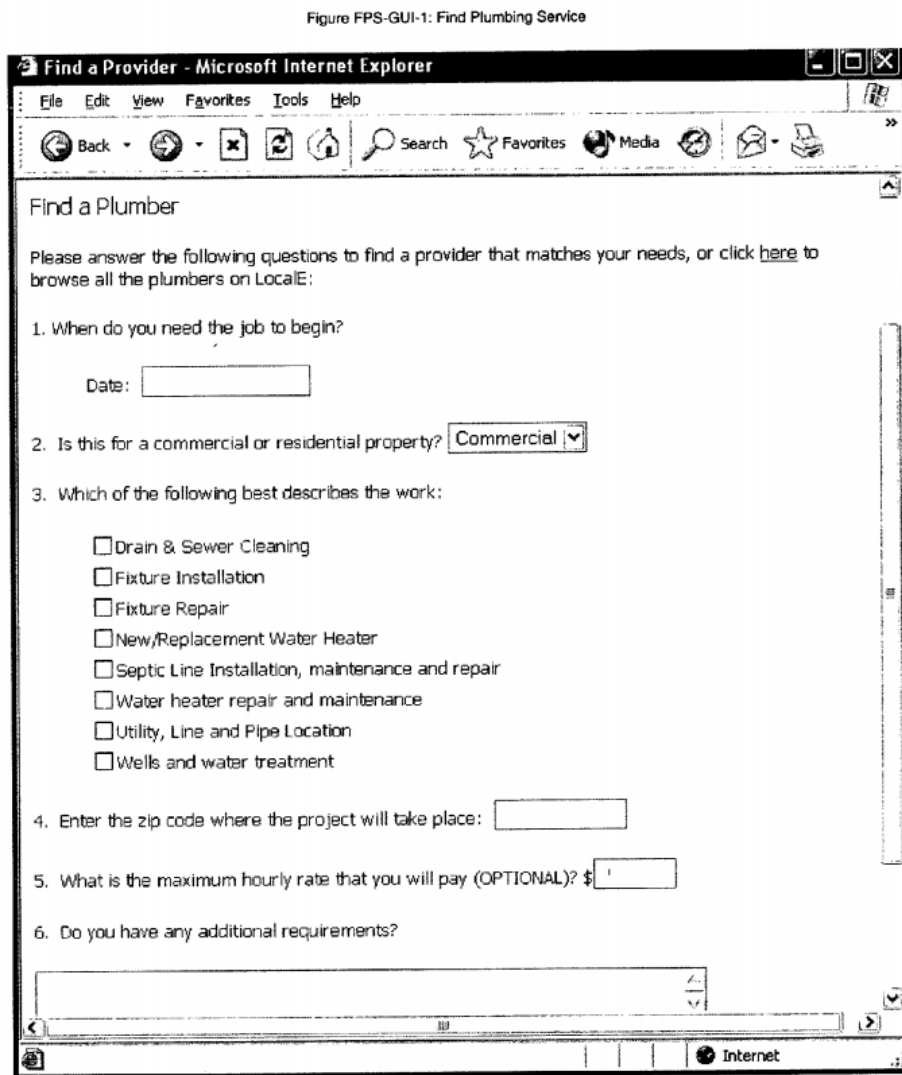
Figure 8b

Figure FPS-GUI-1: Find Plumbing Service

Find a Provider - Microsoft Internet Explorer

File   Edit   View   Favorites   Tools   Help

Back

Find a Plumber

Please answer the following questions to find a provider that matches your needs, or click here to browse all the plumbers on LocalE:

1. When do you need the job to begin?

Date:

2. Is this for a commercial or residential property? Commercial

3. Which of the following best describes the work:

☐ Drain & Sewer Cleaning
☐ Fixture Installation
☐ Fixture Repair
☐ New/Replacement Water Heater
☐ Septic Line Installation, maintenance and repair
☐ Water heater repair and maintenance
☐ Utility, Line and Pipe Location
☐ Wells and water treatment

4. Enter the zip code where the project will take place:

5. What is the maximum hourly rate that you will pay (OPTIONAL)? $

6. Do you have any additional requirements?

Internet

Figure 8b illustrates an interface "used by the consumer to find a service provider." Ex. 1010 ¶ 30, Fig. 8b; *see id.* ¶¶ 221, 225, 227.

Patent Owner does not make any arguments specific to claim 1's "presenting an interface" limitation. *See, e.g.*, Resp. 9–18, 32–33; Sur-reply 13–16.

We agree with Petitioner that Collins teaches this limitation. *See* Pet. 27–28; Ex. 1004 ¶ 171; Ex. 1010 ¶¶ 30, 86, 228–234, Fig. 8b. Collins's Figure 8b illustrates an interface from which the consumer makes a selection of a category from a plurality of categories. Ex. 1010 ¶ 30, Fig. 8b; *see id.* ¶¶ 221, 225, 227; Ex. 1004 ¶¶ 93–94. That interface permits the consumer to find a service provider, e.g., a plumber, by inputting details about the consumer's service request, e.g., date, work description, and geographic location. Ex. 1010 ¶¶ 85–86, 206–213, 220–221, 225, 227–234, Fig. 8b; *see* Ex. 1004 ¶¶ 94–95, 171. To find a plumber for example, the consumer makes a selection from among the following work-description categories: "drain & sewer cleaning; fixture installation, fixture repair; new/replacement water heater; septic line installation, maintenance and repair; water heater repair and maintenance; utility, line and pipe location; wells and water treatment; and others." Ex. 1010 ¶ 231, Fig. 8b.

Accordingly, we agree with Petitioner that Collins teaches claim 1's "presenting an interface" limitation.

(d)   Displaying Some Information While Shielding Contact Information

Claim 1 recites "in response to receiving the selection of the category by the user, displaying, for the user, some of the information associated with each of multiple participants from the plurality of participants which match the selection of the category by the user, while shielding contact information associated with each of the multiple participants." Ex. 1001, 17:27–33.

Petitioner contends that Collins alone teaches this limitation and, alternatively, that "Collins in view of Walker teaches" this limitation. Pet. 29–33; *see* Ex. 1004 ¶¶ 172–175. For Collins alone, Petitioner contends that after a consumer selects a category using Collins's system, e.g., by inputting details about the consumer's service request, and submits the service request to the system, it "displays a list of participants that match" the selected category. Pet. 29 (citing Ex. 1010 ¶¶ 32, 86–87, 221, 249, Fig. 8d); *see* Ex. 1004 ¶¶ 99, 172. To support that contention, Petitioner identifies Collins's Figure 8d (reproduced below) as displaying information associated with matched participants (Pet. 29–30):

Figure 8d

Figure FPS-GUI-3: Find Plumbing Service
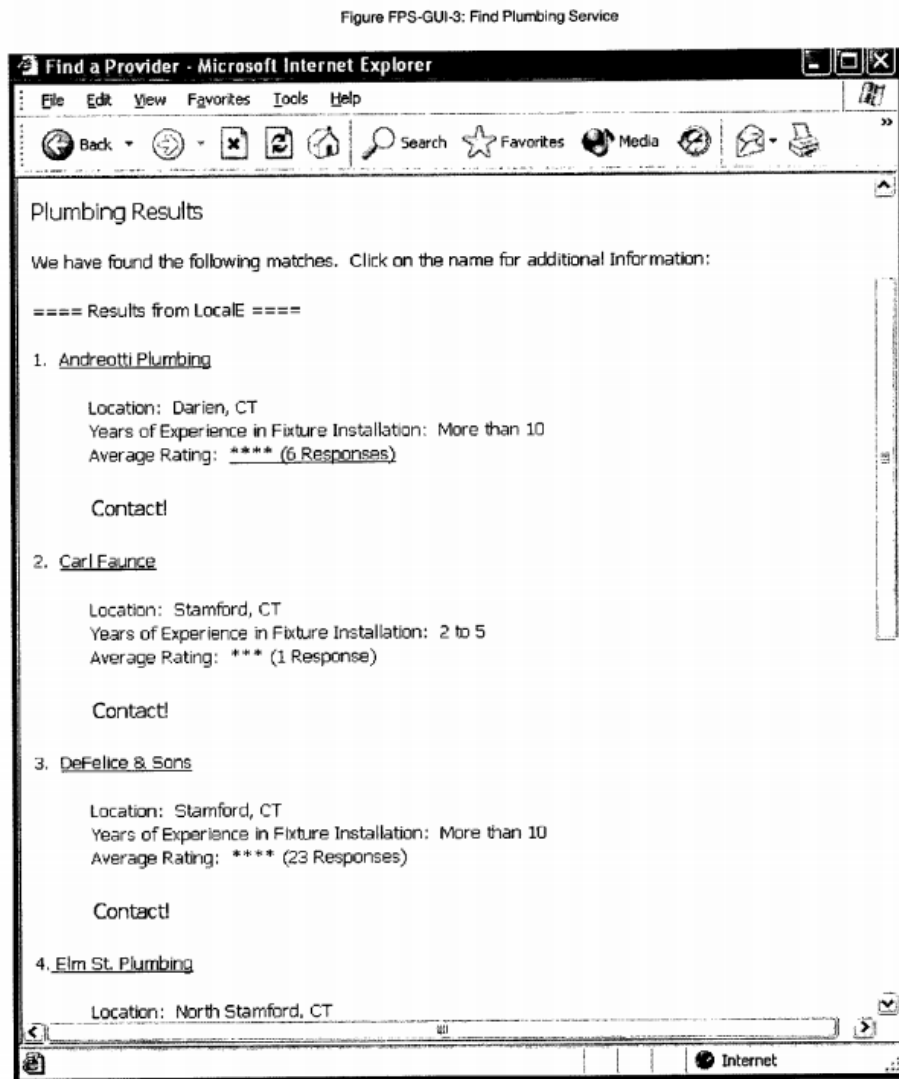
Figure 8d illustrates an interface "after a search of the available vendors" with information about matched vendors "displayed to the consumer." Ex. 1010 ¶¶ 32, 86–87, 221, 223, 225, 227, 246–247, 249, Fig. 8d. That interface displays the following information about each matched vendor: name, location (city and state), years of experience, average rating, and "Contact!" *Id.* ¶ 87, Fig. 8d; *see* Ex. 1004 ¶¶ 99, 172–173.

Petitioner asserts that Collins shields vendor contact information from consumers by displaying "Contact!" instead of contact information. Pet. 30; *see* Ex. 1004 ¶ 173. Petitioner also asserts that an ordinarily skilled artisan "would have understood that the system of Collins, e.g., as illustrated above [in Figure 8d], includes an embodiment that displays a list of multiple participants, while shielding the contact information of the participants." Pet. 31; *see* Ex. 1004 ¶ 173.

Alternatively, Petitioner contends that "[t]o the extent that it is argued that Collins does not explicitly teach displaying participant information *while shielding contact information associated with each of the multiple participants*," an ordinarily skilled artisan "would have found it obvious" to shield contact information based on Walker's teachings. Pet. 31–32 (emphasis by Petitioner); *see* Ex. 1004 ¶¶ 174–175. To support that contention, Petitioner quotes Walker's explanation that a matching system "may want to intentionally withhold" information about "one or both parties to a potential transaction in order to assure" payment for bringing the two parties together. Pet. 32 (quoting Ex. 1011, 10:20–23); *see* Ex. 1004 ¶ 175. Further, Petitioner asserts that an ordinarily skilled artisan "would have been motivated to implement the concepts described in Walker into the system of Collins at least" to (1) provide "anonymity for the participant" and (2) retain "control of the contact information for the matching system." Pet. 31–32; *see* Ex. 1004 ¶¶ 163–164, 175.

To support Petitioner, Dr. Goldberg testified that Walker would have "motivat[ed] the use of anonymous communications between consumers and service providers" in matching systems. Ex. 1004 ¶ 174 (citing Ex. 1011, 1:32–48). Dr. Goldberg also testified that Walker teaches shielding contact

information to prevent "bypassing the matching system to avoid fees charged by the matching system" and "to preserve the privacy of the participants." *Id.* ¶ 175 (citing Ex. 1011, 6:15–29, 7:62–8:8, 10:20–25, 25:44–52); *see id.* ¶¶ 163–164.

Patent Owner does not make any arguments specific to claim 1's "displaying while shielding" limitation. *See, e.g.*, Resp. 9–18, 32–33; Sur-reply 13–16.

We agree with Petitioner that Collins teaches this limitation. *See* Pet. 29–31; Ex. 1004 ¶¶ 172–173; Ex. 1010 ¶¶ 87–89, Fig. 8d. As discussed above, we construe the term "contact information" to mean "information, such as an email address, mailing address, or telephone number, that permits one entity to communicate directly with another entity." *See* Inst. Dec. 38–39; *supra* § III.C.2. In Collins's system, an interface displays the following information about each matched vendor: name, location (city and state), years of experience, average rating, and "Contact!" Ex. 1010 ¶ 87, Fig. 8d; *see* Ex. 1004 ¶¶ 99, 172–173. The displayed information does not permit a consumer to communicate directly with a matched vendor. *See* Ex. 1004 ¶ 173. Thus, the displayed information does not include contact information.

Instead, after viewing the matched vendors, a consumer "can choose to view further information on any vendor, including information such as years of experience in the service category, fees or rates, and insurance coverage." Ex. 1010 ¶ 87; *see* Ex. 1004 ¶ 95. "When the consumer has made a decision about which vendor or vendors to contact," the consumer "indicate[s] this by selecting them from the list and submitting this selection" to the system. Ex. 1010 ¶ 88; *see id.* ¶¶ 257–258, 263–268,

Figs. 12–15; Ex. 1004 ¶¶ 96, 173. The system "then contacts the vendors." Ex. 1010 ¶ 89; *see id.* ¶¶ 131, 249–250, 257–258, 263–268, Figs. 12–15; Ex. 1004 ¶¶ 97, 173.

Hence, Collins's system (1) shields contact information for matched vendors from a consumer and (2) serves as an intermediary to contact the selected vendors on the consumer's behalf. Accordingly, we agree with Petitioner that Collins teaches claim 1's "displaying while shielding" limitation.

We also agree with Petitioner that an ordinarily skilled artisan "would have found it obvious" to shield contact information based on Walker's teachings. *See* Pet. 31–32; Ex. 1004 ¶¶ 174–175; Ex. 1011, 6:29–31, 8:47–49, 9:66–10:26, 10:59–61, 11:1–10, 13:54–56, 25:44–47, 31:39–40, 33:21–53, 35:14–18, 36:40–54. Walker discloses a matching system that permits anonymous communications to improve privacy. Ex. 1011, 6:29–31, 8:47–49, 9:66–10:19, 10:59–61, 11:1–10, 13:54–56, 31:39–40, 33:21–53, 35:14–18, 36:40–50; *see* Ex. 1004 ¶¶ 101–102, 111, 175. In addition, Walker discloses withholding contact information to prevent fee avoidance due to out-of-system communications. Ex. 1011, 10:20–26, 25:44–47, 36:51–54; *see* Ex. 1004 ¶¶ 111, 163, 175. As Petitioner asserts, an ordinarily skilled artisan "would have been motivated to implement the concepts described in Walker into the system of Collins at least" to (1) provide "anonymity for the participant" and (2) retain "control of the contact information for the matching system." *See* Pet. 31–32; Ex. 1004 ¶¶ 163–164, 175.

(e)   Displaying Some Information Based in Part on Participant Ratings

Claim 1 recites "wherein displaying some of the information associated with each of the multiple participants is based at least in part on a rating of individual participants in the plurality of participants." Ex. 1001, 17:34–37.

Petitioner contends that Collins alone teaches this limitation and, alternatively, that "Collins in view of Walker teaches" this limitation. Pet. 33–36; *see* Ex. 1004 ¶¶ 176–179. For Collins alone, Petitioner contends that Collins discloses a matching system that (1) "allows the consumers to rate the quality of services" provided by vendors and (2) "compiles the ratings into meaningful indicators to aid the decision making process." Pet. 33 (quoting Ex. 1010 ¶ 16); *see* Ex. 1004 ¶¶ 98, 177. Further, Petitioner asserts that after a consumer submits a service request to Collins's system, it displays information about matched vendors including "the vendor's name (or company name) and location, and a rating from other system users," i.e., other consumers. Pet. 33–34 (quoting Ex. 1010 ¶ 87); *see* Ex. 1004 ¶¶ 95, 177. Petitioner also asserts that Collins "discloses that a 'set of documents that match a certain query' (i.e., information associated with matched service providers) is 'rank ordered and presented to the user.'" Pet. 34 (quoting Ex. 1010 ¶ 126); *see* Ex. 1004 ¶ 177.

Alternatively, Petitioner contends that "[t]o the extent that it is argued that the ratings system along with the filtering/matching system of Collins does not display information of multiple participants *based at least in part on a rating of individual participants*, Walker teaches this aspect." Pet. 34 (emphasis by Petitioner); *see* Ex. 1004 ¶ 178. Specifically, Petitioner asserts that Walker "discloses allowing a user to select a category," e.g., medicine,

"a subcategory," e.g., pediatrics, and "a rating/qualification level" and that "[o]nce the rating/qualification level has been selected, a listing of expert IDs is displayed." Pet. 34 (citing Ex. 1011, 25:35–44); *see* Ex. 1004 ¶¶ 109, 178. Petitioner also asserts that the displayed expert IDs correspond to information displayed "*based at least in part* on a rating" because the user-selected level "disclosed by Walker is a rating." Pet. 34 (emphasis by Petitioner); *see* Ex. 1004 ¶ 178.

In addition, Petitioner contends that Walker describes a "customer satisfaction" embodiment that employs feedback, e.g., from user complaints and peer reviews, to rate expert answers as satisfactory or unsatisfactory. Pet. 35 (citing Ex. 1011, 39:37–40:15); *see* Ex. 1004 ¶ 178. Petitioner asserts that in this embodiment "the system may expel, temporarily suspend, or lower the rating/qualification level" of a given expert if the "given expert has a given number of" unsatisfactory answers. Pet. 35; *see* Ex. 1004 ¶ 178. Petitioner also asserts that expelling, temporarily suspending, or lowering the rating/qualification level of the expert for poor quality "would impact the displaying of participant information because it would either cause some of the participant information to not be displayed, or to only be displayed based on a reduced-level rating." Pet. 35; *see* Ex. 1004 ¶ 178.

Further, Petitioner asserts that an ordinarily skilled artisan "would have found it obvious to modify" Collins's system "in light of the teachings of Walker." Pet. 35; *see* Ex. 1004 ¶ 179. To support that assertion, Petitioner contends that Collins teaches "that providing vendor ratings to consumers is important in decision-making" and that Walker teaches "utilizing ratings to impact how (or whether)" experts or participants "are

presented to users." Pet. 35 (citing Ex. 1010 ¶¶ 5, 16; Ex. 1011, 21:52–62, 25:35–44, 40:13–15); *see* Ex. 1004 ¶ 179.

Patent Owner does not make any arguments specific to claim 1's "displaying based on ratings" limitation. *See, e.g.*, Resp. 9–18, 32–33; Sur-reply 13–16.

We disagree with Petitioner that Collins teaches this limitation. Petitioner fails to explain how presenting the "rank ordered" search results to a user relates to displaying participant information "based at least in part on a rating of individual participants" as required by this limitation. *See* Pet. 33–34. Collins indicates that the "rank ordered" search results correspond to search results sorted based on their relevance to the search query, i.e., how well the search results "match" the search query. *See* Ex. 1010 ¶¶ 125–126. We discern no relation between sorting search results based on their relevance to the search query and displaying participant information based on participant ratings. For instance, a search query for service providers offering a certain service near a geographic location may return a list of service providers "rank ordered" based on distance from the geographic location. But the listed service providers may all have lower ratings than service providers farther from the geographic location.

In addition, Collins distinguishes between Information Retrieval (IR) and Information Filtering (IF). *See* Ex. 1010 ¶¶ 121, 125–129; *see also id.* ¶ 14. Collins describes "rank ordered" search results as a feature of Information Retrieval. *Id.* ¶ 126. In contrast to Information Retrieval, Collins's system employs Information Filtering. *Id.* ¶¶ 121, 129; *see id.* ¶ 14; Ex. 1004 ¶ 192.

But we agree with Petitioner that the combined disclosures in Collins and Walker teach claim 1's "displaying based on ratings" limitation. *See* Pet. 34–35; Ex. 1004 ¶¶ 178–179; Ex. 1010 ¶¶ 16, 292; Ex. 1011, 21:52–59, 39:37–40:46, Figs. 34–35. Collins discloses that "[o]nce the vendor has rendered the services and the transaction is complete, the consumers can rate the quality of [the] vendor's work and their level of satisfaction." Ex. 1010 ¶ 292; *see id.* ¶¶ 16, 87; Ex. 1004 ¶¶ 95, 98, 177. Collins also discloses that the ratings provide "meaningful indicators to aid the decision making process." Ex. 1010 ¶ 16; *see* Ex. 1004 ¶¶ 98, 177. Walker similarly discloses making expert ratings available to users to "provid[e] another parameter for the selection process." Ex. 1011, 21:52–59.

In addition, Walker describes a "customer satisfaction" embodiment. Ex. 1011, 39:37–40:46, Figs. 34–35; *see* Ex. 1004 ¶ 178. That embodiment employs feedback, e.g., from user complaints and peer reviews, to rate expert answers as satisfactory or unsatisfactory. Ex. 1011, 39:40–40:11, Fig. 34; *see id.* at 6:49–50, 21:52–59; Ex. 1004 ¶ 178. For example, a "randomly selected reviewing expert of comparable expert qualifications" evaluates the acceptability of an expert answer. Ex. 1011, 39:65–40:5, Fig. 34; *see* Ex. 1004 ¶ 110. A positive evaluation causes the central controller to update an expert database to indicate satisfactory completion of the quality check, while a negative evaluation causes the central controller to update the expert database to indicate unsatisfactory completion of the quality check. Ex. 1011, 40:4–11, Fig. 34; *see* Ex. 1004 ¶ 110. After a negative evaluation, "a notice is transmitted to the expert" with a reprimand "for poor quality." Ex. 1011, 40:11–13, Fig. 34; *see id.* at 21:59–62; Ex. 1004 ¶ 110. "A given number of reprimands may result in the expulsion

or temporary suspension of the expert" or "in a lowering of" the expert's qualification level. Ex. 1011, 40:13–15; *see* Ex. 1004 ¶¶ 110, 178.

As Petitioner contends, expelling or temporarily suspending an expert for poor quality according to Walker's "customer satisfaction" embodiment teaches "utilizing ratings to impact how (or whether)" experts or participants "are presented to users." *See* Pet. 35. In that embodiment, poorly performing experts correspond to lower-rated participants, and properly performing experts correspond to higher-rated participants. Hence, when that embodiment expels or temporarily suspends poorly performing experts and later displays a "list of expert IDs" for properly performing experts, that embodiment displays participant information based on participant ratings. *See* Ex. 1004 ¶ 178. That embodiment also displays participant information based on participant ratings when it lowers an expert's qualification level because of poor quality and later displays a "list of expert IDs" for experts at a higher qualification level. *See id.*

Moreover, an ordinarily skilled artisan would have been motivated to modify Collins's system according to Walker's teachings to display participant information based on participant ratings. *See* Ex. 1004 ¶ 179. In particular, the skilled artisan "would have recognized that such a modification would be beneficial to a consumer making a decision on which service provider to select." *Id.*

Accordingly, we agree with Petitioner that the combined disclosures in Collins and Walker teach claim 1's "displaying based on ratings" limitation.

(f)   Enabling the User to Send an Inquiry Message While Shielding
        Contact Information Including Any Messaging Identifier

Claim 1 recites "enabling the user to send an inquiry message to one or more of the multiple participants, while shielding the contact information from the user, the contact information including any messaging identifier that is associated with each of the one or more participants." Ex. 1001, 17:38–42.

Petitioner contends that Collins and Walker each teach this limitation. Pet. 36–37; *see* Ex. 1004 ¶¶ 180–182. For Collins, Petitioner contends that Collins discloses that a consumer "select[s] the vendor from the [displayed] list and submit[s] the selection" to the system. Pet. 36 (citing Ex. 1010 ¶¶ 88–89); *see* Ex. 1004 ¶ 180. Then, according to Petitioner, the system (1) "confirms the selection," (2) "asks the consumer to indicate" the consumer's contact preferences, and (3) "contacts the vendor" to convey "details of the consumer request such as when and where the service must be performed and any other consumer requirements." Pet. 36 (citing Ex. 1010 ¶¶ 15, 88–89, 177, 179, 250); *see* Ex. 1004 ¶ 180.

Further, Petitioner asserts that "this inquiry message is sent by the system using contact information provided to the system" by the vendor and that "Collins does not disclose providing the consumer with any messaging identifier associated with a vendor." Pet. 36–37 (citing Ex. 1010 ¶ 258); *see* Ex. 1004 ¶ 180. To support Petitioner, Dr. Goldberg testified that "[t]here is no disclosure in Collins that the service providers' contact information is supplied to the consumer when the consumer uses the system to contact the service providers." Ex. 1004 ¶ 180; *see id.* ¶ 173.

In addition, Petitioner contends that Walker teaches "enabling the user to send an inquiry message" while "shielding contact information" and that "[s]uch shielding includes any messaging identifier." Pet. 37 (citing Ex. 1011, 25:59–26:8); *see* Ex. 1004 ¶¶ 175, 181–182. Further, Petitioner asserts that Walker "states that there are instances where the service itself intentionally wants to" withhold information about the parties "to prevent the parties from contacting each other outside of" the system. Pet. 37 (citing Ex. 1011, 6:15–29, 7:62–8:8, 10:20–26, 23:29–34, 25:44–51, 33:21–53, 36:51–54); *see* Ex. 1004 ¶¶ 181–182. Petitioner then argues that an ordinarily skilled artisan "would have understood this teaching to be an instruction to withhold any messaging identifier so as to accomplish the goal of preventing contact between the parties outside of the system." Pet. 37; *see* Ex. 1004 ¶¶ 175, 182.

Patent Owner contends that neither Collins nor Walker teaches claim 1's "enabling while shielding" limitation. *See* Resp. 10–18, 32–33; Sur-reply 13–16. For Collins, Patent Owner asserts that the system "receives a communication from the consumer, and then generates a new and different communication to contact the vendor." Resp. 15; Sur-reply 15. Patent Owner also asserts that "[t]his is not a direct communication" as required by the limitation. Resp. 15; Sur-reply 15.

In addition, Patent Owner contends that Walker's system displays a "list of expert IDs" to permit expert selection and that an expert ID is used to address a message to a selected expert. Resp. 15–16 (citing Ex. 1011, 25:42, 25:61–63). Patent Owner also contends that "[t]here can only be one of two interpretations for" an expert ID and that each interpretation "place[s] Walker outside the scope of the claims." *Id.* at 16. First, that an expert ID is

a messaging identifier for an expert. *Id.* If so, the messaging identifier is displayed during expert selection, not shielded. *Id.* Second, that an expert ID is not a messaging identifier for an expert. *Id.* If so, a message "is addressed to the central controller, with the expert ID embedded in the content of the message," and a user does not directly communicate with an expert as required by the limitation. *Id.* at 16–17 (citing Ex. 1011, 14:31–38, 25:65–26:8); *see* Sur-reply 15 (citing Ex. 1011, 8:11–15, 37:63–65).

We agree with Petitioner that Collins and Walker each teach claim 1's "enabling while shielding" limitation. *See* Pet. 36–37; Ex. 1004 ¶¶ 172–173, 180–182. Regarding Collins, for the reasons discussed above for claim 1's "displaying while shielding" limitation, Collins's system shields vendor contact information from a consumer when it "display[s] to the consumer a list of all vendors that are able and available to meet the consumer's request." *See* Ex. 1004 ¶¶ 172–173, 180; Ex. 1010 ¶ 87, Fig. 8d; *supra* § III.E.3(d). For instance, the interface illustrated in Collins's Figure 8d displays the following information about each matched vendor: name, location (city and state), years of experience, average rating, and "Contact!" Ex. 1010 ¶ 87, Fig. 8d; *see* Ex. 1004 ¶¶ 99, 172–173. The displayed information does not include email addresses or other messaging identifiers for the matched vendors. Ex. 1010 ¶ 87, Fig. 8d; *see* Ex. 1004 ¶¶ 173, 180.

In Collins's system, "[w]hen the consumer has made a decision about which vendor or vendors to contact," the consumer "indicate[s] this by selecting them from the list and submitting this selection" to the system. Ex. 1010 ¶ 88; *see id.* ¶¶ 257–258, 263–268, Figs. 12–15; Ex. 1004 ¶¶ 96, 173. The system "then contacts the vendors." Ex. 1010 ¶ 89; *see id.* ¶¶ 131, 249–250, 257–258, 263–268, Figs. 12–15; Ex. 1004 ¶¶ 97, 173, 180.

"Information conveyed to the vendor during this contact includes details of the consumer request such as when and where the service must be performed and any other consumer requirements." Ex. 1010 ¶ 89; *see id.* ¶¶ 131, 249–250, 258; Ex. 1004 ¶ 97.

Hence, Collins's system enables a consumer to send a service request to one or more vendors by (1) serving as an intermediary between the consumer and the selected vendors and (2) conveying the consumer's service request to the selected vendors. *See* Ex. 1010 ¶¶ 87–89, 131, 249–250, 257–258, 263–268, Figs. 12–15. Collins's system enables consumer-vendor communications while shielding vendor contact information from the consumer. Ex. 1004 ¶¶ 172–173, 180. Accordingly, we agree with Petitioner that Collins teaches claim 1's "enabling while shielding" limitation.

Further, we agree with Petitioner that Walker also teaches this limitation. *See* Pet. 37; Ex. 1004 ¶¶ 102, 175, 181. In particular, Walker explains that a user "establishes an online connection" to a central controller. Ex. 1011, 25:20–25, Fig. 15. Then, a user interface displays "a selection of predetermined subject areas" or categories, such as finance, law, and medicine. *Id.* at 25:26–30. Next, the user selects the following items: (1) a category, e.g., medicine; (2) a subcategory, e.g., pediatrics; and (3) a qualification level, e.g., Level 1, Level 2, or Level 3. *Id.* at 25:31–37, Fig. 15. "Each level corresponds to predetermined groupings of expert qualifications." *Id.* at 25:37–40. After the user selects a category, subcategory, and qualification level, a "list of expert IDs is displayed along with an option to see specific expert qualifications." *Id.* at 25:40–43. But "the user may be prevented from seeing [expert] contact information" to

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prevent the user "from contacting experts outside the system prior to a deal being reached" and "to ensure that payment is received for bringing the two parties together." *Id.* at 25:44–47, 36:51–54.

Based on the displayed information, the user selects one or more experts for the system to contact. Ex. 1011, 25:53–55, Fig. 15. Then, the user creates a request, such as a question "requir[ing] human judgement, evaluation, analysis, etc.," or multiple questions "bundled into one request." *Id.* at 16:62–17:1, 25:55–61, Fig. 6. Next, the user includes the user's ID and one or more expert IDs in the request. *Id.* at 17:3–4, 25:61–63, Figs. 6, 16. After the user completes the request, the user transmits it to the central controller "for distribution to the selected experts." *Id.* at 25:65–66, 26:6–7, Fig. 16.

Hence, Walker's system enables a user to send a request to one or more experts by (1) serving as an intermediary between the user and the selected experts and (2) distributing the user's request to the selected experts. *See* Ex. 1011, 16:62–17:4, 25:20–26:7, Figs. 6, 15–16. Walker's system enables user-expert communications while shielding expert contact information from the user. Ex. 1004 ¶¶ 102, 175, 181. Accordingly, we agree with Petitioner that Walker teaches claim 1's "enabling while shielding" limitation.

Patent Owner's arguments that Collins and Walker do not teach this limitation rest on its construction of the phrase "enabling the user to send an inquiry message to one or more of the multiple participants" as requiring direct communication between the user and the selected participants. *See* Resp. 10–18, 32–33; Sur-reply 13–16. For the reasons discussed above, we have not adopted Patent Owner's construction. *See supra* § III.C.3.

We also disagree with Patent Owner's assertion that in Walker's system an expert ID is a messaging identifier for an expert. *See* Resp. 16. Permitting a user to directly communicate with an expert using a displayed expert ID would frustrate Walker's purpose to prevent the user "from contacting experts outside the system prior to a deal being reached" and "to ensure that payment is received for bringing the two parties together." Ex. 1011, 25:44–47, 36:51–54; *see id.* at 2:23–26, 6:16–21, 6:29–31, 8:5–8, 9:66–10:7, 10:20–26; Ex. 1004 ¶ 111. Further, Walker explains that an "expert address" for "direct[ing] communications to the expert" includes "a phone number, web page URL, bulletin board address, pager number, telephone number, email address, voice mail address, [and] facsimile number." Ex. 1011, 14:32–38; *see* Resp. 16–17 (quoting Ex. 1011, 14:35–38). That listing does not include an expert ID.

(g)   Tracking a Response Time

Claim 1 recites "tracking a response time of each of the one or more participants who received the message from the user." Ex. 1001, 17:43–44.

Petitioner contends that Collins and Walker each teach this limitation. Pet. 38–39; *see* Ex. 1004 ¶¶ 183–184. Specifically, Petitioner asserts that Collins "recognized that some prior art matching systems did 'not provide any support for tracking the status of the consumer requests.'" Pet. 38 (quoting Ex. 1010 ¶ 5); *see* Ex. 1004 ¶ 183. Petitioner also asserts that Collins endeavored to address that deficiency by providing a matching system with consumer-centric features including "status tracking" by "automatically collect[ing] data on vendor response time." Pet. 38 (quoting Ex. 1010 ¶¶ 12, 16); *see* Ex. 1004 ¶ 183.

In addition, Petitioner contends that Walker "teaches tracking a response time of each of the one or more participants who received the message from the user." Pet. 38 (citing Ex. 1011, 16:21–23, 21:43–45); *see* Ex. 1004 ¶ 184.

Patent Owner does not make any arguments specific to claim 1's "tracking" limitation. *See, e.g.*, Resp. 9–18, 32–33; Sur-reply 13–16.

We agree with Petitioner that Collins and Walker each teach this limitation. *See* Pet. 38–39; Ex. 1004 ¶¶ 98, 183–184. Specifically, Collins discloses that the system "may automatically collect data on vendor response time." Ex. 1010 ¶ 16; *see id.* ¶ 12; Ex. 1004 ¶¶ 98, 183. Further, the system "immediately informs the consumer about the status of the vendor contacts, including whether or not the vendor has accepted the lead." Ex. 1010 ¶ 13; *see id.* ¶¶ 90, 250, 270–275. By immediately informing the consumer about the status of the vendor contacts, the system apprises the consumer how long it takes for a selected vendor to respond to a service request from the consumer.

Hence, Collins teaches tracking a response time of each of the one or more vendors who received a service request from a consumer. *See* Ex. 1010 ¶¶ 12–13, 16, 90, 250, 270–275. Accordingly, we agree with Petitioner that Collins teaches claim 1's "tracking" limitation.

Further, we agree with Petitioner that Walker also teaches this limitation. *See* Pet. 38; Ex. 1004 ¶ 184. Specifically, Walker discloses time stamping a communication to an expert containing a request from a user. Ex. 1011, 35:30–36:39; *see* Ex. 1004 ¶ 184. Walker also discloses time stamping a communication from an expert containing an answer to the request. Ex. 1011, 16:20–23; *see* Ex. 1004 ¶ 184. Those disclosures parallel

the '107 patent's explanation that "[i]mplementing a tracking step may include time stamping every communication from an issue resolver, and possibly every communication from the user to the issue resolver." Ex. 1001, 9:67–10:3. In addition, Walker discloses storing expert response times in a database. Ex. 1011, 14:66–15:9, 41:15–19 (claim 3); *see* Ex. 1004 ¶¶ 103, 186.

Hence, Walker teaches tracking a response time of each of the one or more experts who received a request from a user. *See* Ex. 1011, 14:66–15:9, 16:20–23, 35:30–36:39, 41:15–19 (claim 3). Accordingly, we agree with Petitioner that Walker teaches claim 1's "tracking" limitation.

(h)   Updating the Rating Based in Part on the Tracked Response Time

Claim 1 recites "updating the rating associated with each of the one or more participants based at least in part on the tracked response time." Ex. 1001, 17:46–48.

Petitioner contends that "Collins in view of Walker teaches" this limitation. Pet. 39–41; *see* Ex. 1004 ¶¶ 185–187. Specifically, Petitioner asserts that "Collins teaches compiling ratings of service providers" and that "Collins and/or the combination of Collins and Walker teaches tracking vendor response time." Pet. 39; *see* Ex. 1004 ¶¶ 185–186. Petitioner also asserts that an ordinarily skilled artisan "would have found it obvious to use the tracked vendor response times to update service providers' ratings into meaningful indicators to aid consumers' selections of prospective service providers." Pet. 39; *see* Ex. 1004 ¶¶ 185–186.

Further, Petitioner argues that Walker "discloses that an expert's qualifications/ratings are based at least in part on tracked response times." Pet. 40; *see* Ex. 1004 ¶¶ 186–187. Specifically, Petitioner asserts that

Walker discloses (1) storing expert qualifications/ratings including expert response times in a database and (2) updating the database based on expert performance. Pet. 40 (citing Ex. 1011, 14:66–15:4, 15:7–9, 40:4–15); *see* Ex. 1004 ¶ 186. Petitioner also asserts that "[i]t follows that a change in tracked response time would change" the qualifications/ratings in the database. Pet. 40; *see* Ex. 1004 ¶ 186.

Patent Owner does not make any arguments specific to claim 1's "updating" limitation. *See, e.g.*, Resp. 9–18, 32–33; Sur-reply 13–16.

We agree with Petitioner that "Collins in view of Walker teaches" this limitation for several related reasons. *See* Pet. 39–41; Ex. 1004 ¶¶ 185–187. First, Collins discloses consumers rating vendors and making the ratings available to other consumers. Ex. 1010 ¶¶ 16, 45–48, 87, 133–134, 290–292, Figs. 8d, 21–24; *see* Ex. 1004 ¶¶ 95, 98–99, 183, 185. Second, Collins discloses tracking vendor response times. Ex. 1010 ¶ 16; *see* Ex. 1004 ¶¶ 98, 183, 185. Third, Walker discloses users rating experts and making the ratings available to other users. Ex. 1011, 14:32–33, 21:51–58, 25:35–44; *see* Ex. 1004 ¶¶ 103, 109–110. Fourth, Walker discloses tracking expert response times, e.g., by time stamping communications, and storing expert response times in a database. Ex. 1011, 14:66–15:9, 16:20–23, 35:30–36:39, 41:15–19 (claim 3); *see* Ex. 1004 ¶¶ 103, 184. Fifth, Walker discloses updating the database based on expert performance. Ex. 1011, 39:37–40:15, Fig. 34 ("database updated to indicate satisfactory" and "database updated to indicate unsatisfactory"); *see* Ex. 1004 ¶¶ 103, 186. Sixth, expert response times are one measure of expert performance. *See* Ex. 1004 ¶ 187; Ex. 1011, 14:66–15:4, 41:15–19 (claim 3). Consequently,

the combined disclosures in Collins and Walker teach updating ratings based at least in part on tracked response times. *See* Ex. 1004 ¶¶ 185–187.

(i)   Combining the Teachings of the References

Petitioner asserts that an ordinarily skilled artisan "implementing a system based on the teachings of Collins would have known" about Walker's teachings and "would have been motivated by Collins, Walker, and common sense to modify Collins" to incorporate Walker's teachings. Pet. 22–25; *see* Ex. 1004 ¶¶ 161–165. In particular, Petitioner argues that "Collins and Walker are in the same field and address the same problems" concerning "matching consumers with service providers." Pet. 22–23; *see* Ex. 1004 ¶¶ 161–162. Petitioner also argues that both references (1) "recognize and address concerns with facilitating connections between consumers and service providers to provide quality matches" and (2) "provide means for consumers to send messages to service providers while protecting contact information." Pet. 23; *see* Ex. 1004 ¶ 162.

In addition, Petitioner contends that Collins teaches (1) initially shielding "certain contact information" for privacy purposes and (2) service providers controlling information displayed to consumers. Pet. 23; *see* Ex. 1004 ¶ 163. Petitioner also contends that Walker "provides multiple advantageous reasons" for shielding service-provider contact information from consumers. Pet. 23; *see* Ex. 1004 ¶ 163. Further, Petitioner asserts that an ordinarily skilled artisan would have combined the teachings of Collins and Walker "to improve privacy" of service providers in Collins and "to allow for the designer of the [Collins] system to retain fees for providing referrals." Pet. 24; *see* Ex. 1004 ¶¶ 163–164.

To support Petitioner, Dr. Goldberg identified the following reasons that would have prompted an ordinarily skilled artisan to combine the teachings of Collins and Walker: (1) "maintaining privacy and anonymity" and (2) "ensuring that the system is able to obtain compensation for passing a referral." Ex. 1004 ¶ 163 (citing Ex. 1011, 9:66–10:7, 10:20–25, 25:44–52, 33:21–53). Dr. Goldberg explained that "by shielding contact information and then providing a messaging service, the matching system can prevent communication between the parties outside of the system and thereby prevent the loss of fees due to out-of-system communications." *Id.* ¶ 164 (citing Ex. 1011, 9:66–10:7, 10:20–25, 25:44–52, 33:21–53). He also explained that if an intermediary, such as a matching system according to Collins or Walker, "expected to earn a commission from a transaction between a consumer and a service provider, giving the service provider's contact information to the consumer (or vice versa) would allow the consumer and service provider to perform the transaction directly, bypassing the intermediary and avoiding paying the commission." Ex. 1004 ¶ 27; *see id.* ¶¶ 28–29 (citing Ex. 1011, 1:14–15, 1:22–30, 1:32–48, 4:54–59).

Patent Owner does not make any arguments disputing the rationale to combine the teachings of Collins and Walker. *See, e.g.,* Resp. 9–18, 32–33; Sur-reply 13–16.

We agree with Petitioner that an ordinarily skilled artisan would have had sound reasons, i.e., the reasons identified by Dr. Goldberg, to combine the teachings of Collins and Walker. *See* Pet. 22–25; Ex. 1004 ¶¶ 27–29, 161–165; Ex. 1011, 1:22–48, 2:23–26, 8:5–8, 10:20–26, 25:44–47, 36:51–54; *see also KSR*, 550 U.S. at 418 (explaining that "it can be

important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine" the teachings of references).

Consistent with Dr. Goldberg's testimony, Walker teaches that a matching system "may want to intentionally withhold" information about "one or both parties to a potential transaction in order to assure" payment for bringing the two parties together because "[o]nce one or both parties are able to contact each other outside the service's view, the service has no way to know whether the transaction was consummated privately." Ex. 1011, 10:20–26; *see id.* at 1:22–48, 2:23–26, 8:5–8. Walker similarly teaches that "the user may be prevented from seeing [expert] contact information" to prevent the user "from contacting experts outside the system prior to a deal being reached" and "to ensure that payment is received for bringing the two parties together." *Id.* at 25:44–47, 36:51–54. Incorporating those teachings into Collins's system would have improved the system "at least by increasing privacy for the service providers." Ex. 1004 ¶ 163.

(j)   Conclusion on Obviousness of Claim 1

For the reasons discussed above, Petitioner has shown by a preponderance of the evidence that claim 1 is unpatentable under § 103(a) as obvious over Collins and Walker.

4. INDEPENDENT CLAIM 6

(a)   Preamble

Claim 6's preamble recites "[a] computer system." Ex. 1001, 18:5.

Petitioner contends that Collins teaches claim 6's preamble because "Collins teaches a computer system." Pet. 48–49 (citing Ex. 1010 ¶¶ 92–93, claims 1 and 11, Figs. 1–3); *see* Ex. 1004 ¶ 167. To support Petitioner, Dr. Goldberg testified that Collins discloses "a networked computer system"

with "networked computers and applications to facilitate users interacting with other users with similar interests or needs." Ex. 1004 ¶ 167 (citing Ex. 1010 ¶¶ 1, 13–14, 86–89, 92–93, 121, code (57), claims 1 and 11, Figs. 1–3).

Patent Owner does not make any arguments specific to claim 6's preamble. *See, e.g.*, Resp. 33–34; Sur-reply 13–16.

Generally, a preamble does not limit a claim. *Allen Eng'g*, 299 F.3d at 1346. Here, we need not decide whether claim 6's preamble limits the claim because we agree with Petitioner that Collins teaches the preamble. *See* Pet. 48–49; Ex. 1004 ¶ 167.

For instance, Collins's Figures 2 and 3 illustrate a networked computer system. Ex. 1010 ¶¶ 19–20, Figs. 2–3; *see id.* ¶¶ 54, 58, 60, 91–101, 117, 121–124, 177, 179. Further, as noted in our Institution Decision, Walker's Figures 1 and 2 also illustrate a networked computer system. Ex. 1011, 11:59–62, Figs. 1–2; *see id.* at 13:7–15:46; Inst. Dec. 60.

(b)   A Memory and One or More Processors

Claim 6 specifies that the "computer system" comprises "a memory" storing a list of participants according to claim 1 and "one or more processors" executing instructions to perform steps according to claim 1. Ex. 1001, 18:5–38.

Petitioner contends that Collins discloses "a memory" storing a list of participants according to claim 1 and "one or more processors" executing instructions to perform steps according to claim 1. Pet. 49–50 (citing Ex. 1010 ¶¶ 54, 58, 117, Fig. 3; *see* Ex. 1004 ¶ 169–170. To support Petitioner, Dr. Goldberg testified that an ordinarily skilled artisan would have understood Collins's system database 306a "to have been stored on

a form of computer memory." Ex. 1004 ¶ 169. Dr. Goldberg also testified that an ordinarily skilled artisan would have understood that steps according to claim 1 "would have been executed by one or more processors" in Collins's system. *Id.* ¶ 170.

Patent Owner does not make any arguments regarding claim 6's requirements for "a memory" and "one or more processors." *See, e.g.*, Resp. 33–34; Sur-reply 13–16.

We agree with Petitioner that Collins discloses "a memory" storing a list of participants according to claim 1 and "one or more processors" executing instructions to perform steps according to claim 1. *See* Pet. 49–50; Ex. 1004 ¶¶ 168–170; Ex. 1010 ¶¶ 19–20, 54, 58, 60, 92–101, 117, 121–124, 177, 179, Figs. 2–3; *supra* §§ III.E.3(b)–III.E.3(h). Specifically, Collins's system includes system database 306a that serves as "a memory." Ex. 1010 ¶¶ 99, 117, 121, 124, 136, 177, 179, Fig. 3; *see* Ex. 1004 ¶ 169. Collins's system also includes servers or clients with "one or more processors." Ex. 1010 ¶¶ 54, 58, 92–101, 162, Figs. 2–3; *see* Ex. 1004 ¶ 170.

In addition, as noted in our Institution Decision, Walker's system comprises "a memory" and "one or more processors." Ex. 1011, 11:59–62, 13:7–15:46, Figs. 1–2; *see* Inst. Dec. 61. For instance, Walker's system includes a central controller with random-access memory (RAM) 215, read-only memory (ROM) 220, and processors 205, 210, 225, and 230. Ex. 1011, 13:29–67, Fig. 2.

(c)   <u>The Other Limitations in Claim 6</u>

Claim 6's other limitations parallel claim 1's limitations. *Compare* Ex. 1001, 17:15–48, *with id.* at 18:5–38. For instance, claim 1 recites

"presenting a user with an interface from which the user makes a selection of a category from a plurality of categories," while claim 6 recites "present a user with an interface from which the user makes a selection of a category from a plurality of categories." *Id.* at 17:24–26, 18:13–16. Patent Owner admits that "Claim 6 has all of the elements of Claim 1." Resp. 33; *see* Prelim. Resp. 39 n.66, 66 n.70, 68 n.71, 71 n.72, 74 n.73.

Petitioner contends that Collins and Walker teach claim 6's other limitations for the same reasons the references teach claim 1's limitations. *See* Pet. 49–53; Ex. 1004 ¶¶ 168–187.

Patent Owner disputes only that Collins and Walker teach claim 6's "enabling while shielding" limitation. *See* Resp. 33–34; Sur-reply 13–16.

We agree with Petitioner that Collins and Walker teach claim 6's other limitations for the same reasons the references teach claim 1's limitations. *See* Pet. 26–41, 49–53; Ex. 1004 ¶¶ 168–187; *supra* §§ III.E.3(b)–III.E.3(h). Patent Owner's arguments about claim 6's "enabling while shielding" limitation fail for the same reasons as its arguments about claim 1's "enabling while shielding" limitation. *See supra* § III.E.3(f).

(d) Conclusion on Obviousness of Claim 6

For the reasons discussed above, Petitioner has shown by a preponderance of the evidence that claim 6 is unpatentable under § 103(a) as obvious over Collins and Walker.

5. DEPENDENT CLAIMS 2 AND 7

Claim 2 depends from claim 1 and recites "wherein receiving the selection of the category from the plurality of categories includes receiving

input that identifies a geographic location." Ex. 1001, 17:49–51. Claim 7 depends from claim 6 and recites a similar limitation. *Id.* at 18:39–42.

Petitioner contends that "Collins in view of Walker teaches" the subject matter of claims 2 and 7. Pet. 41–42, 53; *see* Ex. 1004 ¶ 188. Specifically, Petitioner asserts that Collins "discloses receiving input that identifies a geographic location" because "users identify their geographic location to assist in the matching process." Pet. 41 (citing Ex. 1010 ¶¶ 206–209); *see* Ex. 1004 ¶ 188. Petitioner also asserts that Collins's Figure 8b illustrates an interface that permits a consumer to find a service provider by inputting details about the consumer's service request including geographic location. Pet. 41–42 (citing Ex. 1010, Fig. 8b); *see* Ex. 1004 ¶ 188. To support Petitioner, Dr. Goldberg stated that Figure 8b depicts a "zip code input field" almost identical to the "zip code input field" in '107 patent Figure 6B. Ex. 1004 ¶ 188.

Patent Owner argues that claims 2 and 7 "are patentable for at least the same reasons" as claims 1 and 6. Resp. 34; Sur-reply 17. Patent Owner does not articulate any additional reasons for claims 2 and 7. Resp. 34; Sur-reply 17. For the reasons discussed above, we do not consider persuasive Patent Owner's arguments directed to claims 1 and 6. *See, e.g.,* *supra* §§ III.E.3(f), III.E.4(c).

We agree with Petitioner that "Collins in view of Walker teaches" the subject matter of claims 2 and 7. *See* Pet. 41–42, 53; Ex. 1004 ¶ 188; Ex. 1010 ¶¶ 30, 85–86, 206–213, 220–221, 225, 227–234, Fig. 8b. Collins's Figure 8b illustrates an interface that permits a consumer to find a service provider by inputting details about the consumer's service request, e.g., date, work description, and geographic location. Ex. 1010 ¶¶ 30, 85–86,

206–213, 220–221, 225, 227–234, Fig. 8b; *see* Ex. 1004 ¶ 188. The work description corresponds to the claimed "category." Ex. 1010 ¶¶ 228, 231, Fig. 8b. In addition, Collins describes other "categories" available for user selection, e.g., "commercial or residential property" as shown in Figure 8. *Id.* ¶¶ 30, 230, Fig. 8b.

After a consumer selects one or more "categories," e.g., "residential property" and "fixture repair," the consumer enters "the zip code where the project will take place." Ex. 1010 ¶¶ 230–232, Fig. 8b. And when the consumer enters "the zip code where the project will take place," the system "receiv[es] input that identifies a geographic location" according to claims 2 and 7.

For the reasons discussed above, Petitioner has shown by a preponderance of the evidence that claims 2 and 7 are unpatentable under § 103(a) as obvious over Collins and Walker.

6. DEPENDENT CLAIMS 3 AND 8

Claim 3 depends from claim 1 and recites "wherein displaying some of the information associated with each of multiple participants includes displaying an image that is included in the information associated with each of the multiple participants." Ex. 1001, 17:52–55. Claim 8 depends from claim 6 and recites a similar limitation. *Id.* at 18:43–47.

Petitioner contends that "Collins in view of Walker teaches" the subject matter of claims 3 and 8. Pet. 43–45, 54; *see* Ex. 1004 ¶¶ 189–191. Specifically, Petitioner asserts that Collins's Figure 8d "display[s] images for each of the multiple participants, e.g., images of stars representing ratings." Pet. 43–44 (citing Ex. 1010, Fig. 8d); *see* Ex. 1004 ¶ 189. To support Petitioner, Dr. Goldberg stated that Figure 8d depicts a "web page

displaying a list of service providers resulting from the matching process, including displaying an average rating for each service provider as a number of stars." Ex. 1004 ¶ 189; *see* Pet. 44. He also stated that if Figure 8d's graphical representation of stars "does not expressly constitute an image," an ordinarily skilled artisan "would have understood that the web page could be designed to display star-ratings textually (e.g., asterisks), or graphically (e.g., star images)." Ex. 1004 ¶ 190; *see* Pet. 45.

Patent Owner argues that claims 3 and 8 "are patentable for at least the same reasons" as claims 1 and 6. Resp. 34; Sur-reply 17. Patent Owner does not articulate any additional reasons for claims 3 and 8. Resp. 34; Sur-reply 17. For the reasons discussed above, we do not consider persuasive Patent Owner's arguments directed to claims 1 and 6. *See, e.g., supra* §§ III.E.3(f), III.E.4(c).

We agree with Petitioner that "Collins in view of Walker teaches" the subject matter of claims 3 and 8. *See* Pet. 43–45, 54; Ex. 1004 ¶¶ 189–191; Ex. 1010 ¶¶ 32, 87, 221, 223, 225, 227, 246–247, 249, Fig. 8d. The claims require "displaying an image" associated with "each of the multiple participants." Ex. 1001, 17:52–55, 18:43–47. The images of stars representing ratings in Collins's Figure 8d are associated with "each of the multiple participants," i.e., each of the matched vendors. Ex. 1010 ¶¶ 32, 87, 221, 223, 225, 227, 246–247, 249, Fig. 8d; *see* Ex. 1004 ¶¶ 189–190. Specifically, Figure 8d shows (1) an image of four stars associated with the first vendor, (2) an image of three stars associated with the second vendor, and (3) an image of four stars associated with the third vendor. Ex. 1010 ¶¶ 32, 87, Fig. 8d; *see* Ex. 1004 ¶¶ 99, 189. Thus, as Petitioner argues, Figure 8d "display[s] an image that is included in the information associated

with each of the multiple participants" according to claims 3 and 8. *See* Pet. 43–44.

For the reasons discussed above, Petitioner has shown by a preponderance of the evidence that claims 3 and 8 are unpatentable under § 103(a) as obvious over Collins and Walker.

7. DEPENDENT CLAIMS 5 AND 10

Claim 5 depends from claim 1 and recites "wherein displaying some of the information associated with each of the multiple participants includes displaying information associated with individual participants who match the category selection and have a higher rating in favor of information associated with individual participants who match the category selection and have a lower rating." Ex. 1001, 17:61–18:4. Claim 10 depends from claim 6 and recites a similar limitation. *Id.* at 18:53–59.

Petitioner contends that "Collins in view of Walker teaches" the subject matter of claims 5 and 10. Pet. 45–48, 54–55; *see* Ex. 1004 ¶¶ 192–195. Specifically, Petitioner asserts that Collins "discloses displaying information associated with individual participants who match the category selection and have a ***higher rating in favor of*** information associated with individual participants who match the category selection and have ***a lower rating***." Pet. 46 (emphases by Petitioner); *see* Ex. 1004 ¶ 192. Petitioner bases that assertion on Collins's disclosure that "in an Information Retrieval (IR) system, a 'set of documents that match a certain query' (i.e., information associated with matched service providers) is 'rank ordered and presented to the user.'" Pet. 46 (quoting Ex. 1010 ¶ 126); *see* Ex. 1004 ¶ 192.

Petitioner concedes that Collins's system employs Information Filtering (IF). Pet. 46; *see* Ex. 1004 ¶ 192; Ex. 1010 ¶¶ 121, 129. But Petitioner contends that Information Filtering and Information Retrieval "have 'equivalent underlying goals' and 'represent the information need (query and profile respectively) and the document set in a manner suitable for comparison and matching.'" Pet. 46 (quoting Ex. 1010 ¶ 125); *see* Ex. 1004 ¶ 192.

Alternatively, Petitioner argues that Walker describes a "customer satisfaction" embodiment that (1) employs feedback, e.g., from user complaints and peer reviews, to rate expert answers as satisfactory or unsatisfactory and (2) may expel or temporarily suspend an expert "based on performance." Pet. 47 (citing Ex. 1011, 39:37–40:15); *see* Ex. 1004 ¶¶ 178, 193. Petitioner asserts that expelling or temporarily suspending an expert for poor quality teaches "impact[ing] the display of that expert's information in relation to" a higher-rated expert's information and "caus[ing] one expert's results to be displayed lower in favor of another's results." Pet. 47; *see* Ex. 1004 ¶ 193. To support Petitioner, Dr. Goldberg testified that an ordinarily skilled artisan would have understood Walker's disclosures about rating experts and expelling or temporarily suspending experts for poor quality "to teach displaying information associated with experts (service providers) that have a higher rating over those with a lower rating." Ex. 1004 ¶ 193 (citing Ex. 1011, 21:52–54, 21:58–61, 25:35–44, 40:11–15).

Patent Owner argues that claims 5 and 10 "are patentable for at least the same reasons" as claims 1 and 6. Resp. 34; Sur-reply 17. Patent Owner does not articulate any additional reasons for claims 5 and 10. Resp. 34;

Sur-reply 17. For the reasons discussed above, we do not consider persuasive Patent Owner's arguments directed to claims 1 and 6. *See, e.g.,* *supra* §§ III.E.3(f), III.E.4(c).

We disagree with Petitioner that displaying "rank ordered" search results according to Collins teaches displaying participant information by favoring information associated with higher-rated participants over information associated with lower-rated participants. As discussed above for claim 1's "displaying based on ratings" limitation, Collins indicates that "rank ordered" search results correspond to search results sorted based on their relevance to the search query, i.e., how well the search results "match" the search query. *See* Ex. 1010 ¶¶ 125–126; *supra* § III.E.3(e). We discern no relation between sorting search results based on their relevance to the search query and displaying participant information by favoring information associated with higher-rated participants over information associated with lower-rated participants.

Based on Walker's "customer satisfaction" embodiment, however, we agree with Petitioner that "Collins in view of Walker teaches" the subject matter of claims 5 and 10. *See* Pet. 47–48, 54–55; Ex. 1004 ¶¶ 178–179, 193–195; Ex. 1011, 39:37–40:46, Figs. 34–35. In Walker's "customer satisfaction" embodiment, poorly performing experts correspond to lower-rated participants, and properly performing experts correspond to higher-rated participants. Hence, when that embodiment expels or temporarily suspends poorly performing experts and later displays a "list of expert IDs" for properly performing experts, that embodiment displays participant information by favoring information associated with higher-rated participants over information associated with lower-rated participants. *See*

Ex. 1004 ¶¶ 178, 193. That embodiment also displays participant information by favoring information associated with higher-rated participants over information associated with lower-rated participants when it lowers an expert's qualification level because of poor quality and later displays a "list of expert IDs" for experts at a higher qualification level. *See id.* ¶¶ 178, 193.

For the reasons discussed above, Petitioner has shown by a preponderance of the evidence that claims 5 and 10 are unpatentable under § 103(a) as obvious over Collins and Walker.

8. DEPENDENT CLAIM 11

Claim 11 depends from claim 6 and recites "wherein the computer system corresponds to a server, or a combination of servers." Ex. 1001, 18:60–62.

Petitioner contends that "Collins in view of Walker teaches" claim 11's subject matter. Pet. 55; *see* Ex. 1004 ¶ 196. Specifically, Petitioner asserts that Collins "discloses a computer system" with "software and hardware components" including web server 302 and application server 304. Pet. 55 (citing Ex. 1010 ¶¶ 99, 101, Fig. 3); *see* Ex. 1004 ¶ 196. To support Petitioner, Dr. Goldberg testified that Collins's Figure 3 shows "a networked computer system comprising a 'Web Server' module and an 'Application Server' module" and that an ordinarily skilled artisan "would have understood that such a networked computer system corresponds to a server." Ex. 1004 ¶ 196.

Patent Owner argues that claim 11 is "patentable for at least the same reasons" as claim 6. Resp. 34; Sur-reply 17. Patent Owner does not articulate any additional reasons for claim 11. Resp. 34; Sur-reply 17. For

the reasons discussed above, we do not consider persuasive Patent Owner's arguments directed to claim 6. *See, e.g.*, *supra* § III.E.4(c).

We agree with Petitioner that "Collins in view of Walker teaches" claim 11's subject matter. *See* Pet. 55; Ex. 1004 ¶ 196; Ex. 1010 ¶¶ 20, 98–101, 162, Fig. 3. Collins discloses a computer system with "software and hardware components" including web server 302 and application server 304. Ex. 1010 ¶¶ 20, 98–101, 162, Fig. 3 ("Software and Hardware Components"); *see* Ex. 1004 ¶ 196. Collins explains that web server 302 (1) "fields all HTTP requests," (2) "maintains and serves" certain static data, and (3) "delegates all dynamic requests" to application server 304. Ex. 1010 ¶ 101; *see id.* ¶ 162. Collins's web server 302 and application server 304 correspond to "a server, or a combination of servers," according to claim 11.

For the reasons discussed above, Petitioner has shown by a preponderance of the evidence that claim 11 is unpatentable under § 103(a) as obvious over Collins and Walker.

F. Dependent Claims 4 and 9:
Obviousness over Collins, Walker, and Herz

Petitioner challenges claims 4 and 9 under § 103(a) as obvious over Collins, Walker, and Herz. *See* Pet. 4–5, 56–64. Below, we provide an overview of Herz, and then we consider the obviousness issues raised by the parties.

1. OVERVIEW OF HERZ (EX. 1007)

Herz discloses a computer-based system for matching service consumers called "clients" and service providers called "professionals." Ex. 1007 ¶¶ 1–6, 14, 30–32, code (57), Figs. 1–2. The matching system includes a referral mechanism permitting one professional to refer a client to

another professional. *Id.* ¶¶ 5–6, 14–22, code (57). The matching system also includes rating mechanisms permitting (1) clients to rate professionals and (2) professionals to rate other professionals. Ex. 1007 ¶¶ 25–26, 31. For example, client ratings for professionals may reflect "overall quality of treatment and personability as well as a variety of other relevant criteria." *Id.* ¶ 31.

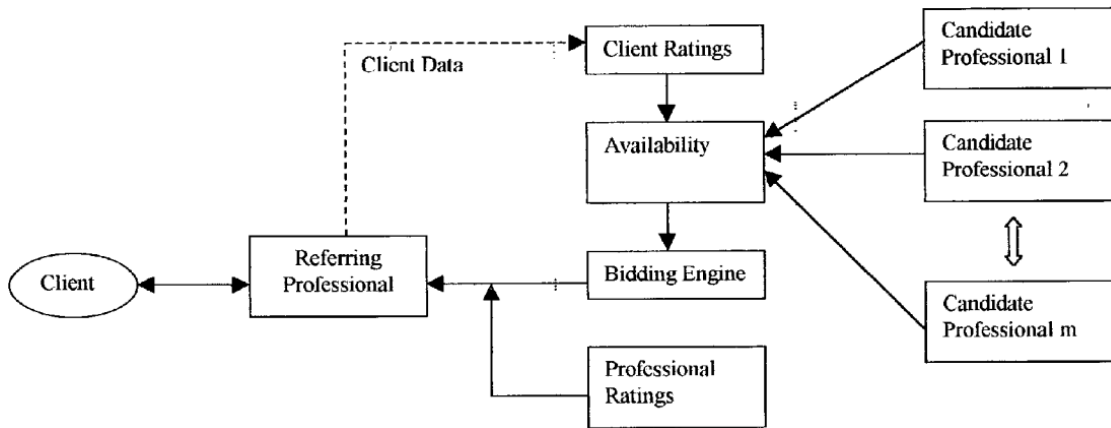Herz's Figure 2 (reproduced below) shows a computer-based matching system. Ex. 1007 ¶¶ 2, 4, 6.

Figure 2 illustrates a system including a client-ratings database, a professional-ratings database, a bidding engine for referrals, and an availability list for professionals. *Id.* ¶ 14.

Candidate professionals "register their availability with the system." Ex. 1007 ¶ 16. "Availabilities may be conditioned on any number of factors, including the nature of the work sought, times available, geographic limitations, etc." *Id.* Candidate professionals specify bidding parameters for referrals, such as maximum and minimum fees they will pay for referrals. *Id.* ¶ 17.

A referring professional submits information about a client's needs to the system. Ex. 1007 ¶ 20. Then, the system presents the referring

professional "with a screen of the most suitable candidates, including information on (1) their identity, (2) their bids, and (3) their Professional Rating." *Id.* ¶ 22; *see id.* ¶ 30. Next, the referring professional refers the client to a selected candidate professional based on "the judgement of the referring professional to choose the most appropriate specialist for" the client. *Id.* ¶ 22.

According to Herz, the referral network provides the following advantages:

(1)   offers "much greater efficiency in the referral process";

(2)   improves "quality of service to the client through receiving of professional services by those professional practitioners who are better suited to particular needs of the client" by "identifying the best-qualified individuals or groups";

(3)   increases "business quantities to those professionals who demonstrate superior skill" after receiving referrals;

(4)   incentivizes "practitioners who are not ideally suited to provide services to certain clients to refer them to" better-suited practitioners; and

(5)   creates an "environment wherein practitioners are able to become more focused and specialized with the specialty domains in which they excel."

Ex. 1007 ¶¶ 5, 33–34, code (57); *see id.* ¶ 1.

2. DEPENDENT CLAIMS 4 AND 9

Claim 4 depends from claim 1 and further requires "identifying information for another participant that matches the category selection of the user based on a referral provided by one or more users of the network computer system." Ex. 1001, 17:56–60. Claim 9 depends from claim 6 and specifies that the one or more processors "identify information for another

participant that matches the category selection of the user based on a referral provided by one or more users of the computer system." *Id.* at 18:48–52.

Petitioner contends that the Collins-Walker-Herz combination teaches the subject matter of claims 4 and 9. Pet. 60–64; *see* Ex. 1004 ¶¶ 203–204. Specifically, Petitioner asserts that Collins teaches "identifying information for another participant that matches the category selection of the user" because Collins's system "identifies information associated with participants that matches the selection of the user." Pet. 60–61 (citing Ex. 1010 ¶¶ 86–87, 221, 249, Fig. 8d); *see* Ex. 1004 ¶¶ 172–173, 199, 203. According to Petitioner, Collins's Figure 8d illustrates information for each of multiple participants that match the "plumber" category selection of the user. Pet. 61–62; *see* Ex. 1004 ¶¶ 99, 172, 203.

In addition, Petitioner contends that "[t]o the extent that Collins does not explicitly disclose 'identifying information for another participant that matches the category selection of the user based on a referral provided by one or more users of the network computer system,'" that "concept was commonly known in prior art systems that implement the same types of technologies." Pet. 62–63; *see* Ex. 1004 ¶ 203. Further, Petitioner asserts that Herz "discloses a 'professional referral network,' wherein service providers may be identified based on referrals from one or more users (e.g., clients or professionals)." Pet. 63 (citing Ex. 1007 ¶¶ 6, 14, 16, 18, 20–22, 30–32, Fig. 2); *see* Ex. 1004 ¶¶ 87, 197, 203. To support Petitioner, Dr. Goldberg testified that Herz "discloses a feature of participant referrals," i.e., a "referral system [that] allows physicians to refer clients to other physicians, using a matching process to determine a list of appropriate physicians to refer the client to." Ex. 1004 ¶¶ 87, 197.

Patent Owner contends that the Collins-Walker-Herz combination does not render claims 4 and 9 unpatentable because no reference discloses or suggests the "enabling while shielding" limitation in claims 1 and 6. Resp. 35–36; Sur-reply 17–18. Patent Owner makes no other patentability arguments for claims 4 and 9. Resp. 35–36; Sur-reply 17–18.

We agree with Petitioner that the Collins-Walker-Herz combination teaches the subject matter of claims 4 and 9. *See* Pet. 60–64; Ex. 1004 ¶¶ 87, 172–173, 197, 199, 203–204; Ex. 1007 ¶¶ 16–22, 30–32; Ex. 1010 ¶¶ 86–87, 246–247, 249, Fig. 8d. Collins teaches "identifying information for another participant that matches the category selection of the user" according to claims 4 and 9. Ex. 1010 ¶¶ 32, 86–87, 221, 223, 225, 227, 246–247, 249, Fig. 8d; *see* Ex. 1004 ¶¶ 172–173, 199, 203. Specifically, Collins's system identifies and displays the following information about each matched vendor: name, location (city and state), years of experience, average rating, and "Contact!" Ex. 1010 ¶ 87, Fig. 8d; *see* Ex. 1004 ¶¶ 99, 172–173, 199, 203.

Further, as discussed above, the phrase "one or more users of the network computer system" in claim 4 and the similar phrase in claim 9 encompass participants who use the network computer system. *See supra* § III.C.4. Herz teaches a participant referring a client to another participant. Ex. 1007 ¶¶ 16–22, 30–32; *see* Ex. 1004 ¶¶ 87, 197, 203. For example, a referring professional refers a client to a selected candidate professional based on "the judgement of the referring professional to choose the most appropriate specialist for" the client. Ex. 1007 ¶ 22; *see* Ex. 1004 ¶ 87.

3. COMBINING THE TEACHINGS OF THE REFERENCES

Petitioner asserts that an ordinarily skilled artisan would have looked to the teachings of Collins and Herz when designing a matching system similar to the systems disclosed in the '107 patent. Pet. 57–59; *see* Ex. 1004 ¶¶ 197–201. In particular, Petitioner argues that "Collins and Herz are in the same field and address the same problems." Pet. 57; *see* Ex. 1004 ¶ 198. Petitioner also argues that "Collins and Herz both relate to matching consumers (e.g., clients) with service providers (e.g., professionals)" and both "provide means for rating service providers/professionals." Pet. 57–58; *see* Ex. 1004 ¶ 198.

In addition, Petitioner contends that Herz "teaches that it is advantageous to use a referral system that identifies the best-qualified individuals or groups for a specialty problem to provide quality matches to clients." Pet. 58; *see* Ex. 1004 ¶ 199. Petitioner asserts that an ordinarily skilled artisan would have modified Collins's system according to Herz's teachings to "utilize a referral network" and "allow for additional matches to be identified to ensure a consumer has access to quality results." Pet. 58–59; *see* Ex. 1004 ¶¶ 199–200.

To support Petitioner, Dr. Goldberg testified that Herz "teaches that it is advantageous to use a referral network system that identifies the best-qualified individuals or groups for a specialty problem to provide quality matches to clients." Ex. 1004 ¶ 199 (citing Ex. 1007 ¶¶ 1, 5, 33–34). Dr. Goldberg also testified that an ordinarily skilled artisan would have (1) "understood that this could increase the quality of matches for a consumer looking for a service provider" and (2) "found it desirable to

provide referrals to consumers using the system of Collins." *Id.* ¶¶ 199–200; *see id.* ¶ 204.

Patent Owner does not make any arguments disputing the rationale to combine Herz's teachings with the teachings of the other references. *See, e.g.*, Resp. 35–36; Sur-reply 17–19.

We agree with Petitioner that an ordinarily skilled artisan would have had sound reasons, i.e., the reasons articulated by Dr. Goldberg, to combine Herz's teachings with the teachings of the other references. *See* Pet. 57–59, 63–64; Ex. 1004 ¶¶ 197–201; Ex. 1007 ¶¶ 1, 5, 33–34, code (57). Consistent with Dr. Goldberg's testimony, Herz teaches that the referral network improves "quality of service to the client through receiving of professional services by those professional practitioners who are better suited to particular needs of the client" by "identifying the best-qualified individuals or groups." Ex. 1007 ¶¶ 5, 33, code (57). Incorporating that teaching into Collins's system would have improved the system "to identify additional matches to improve the quality of the results." Ex. 1004 ¶ 199.

4. CONCLUSION ON OBVIOUSNESS OF CLAIMS 4 AND 9

For the reasons discussed above, Petitioner has shown by a preponderance of the evidence that claims 4 and 9 are unpatentable under § 103(a) as obvious over Collins, Walker, and Herz.

G. Dependent Claims 3 and 8:
Obviousness over Collins, Walker, and Abrams

Petitioner challenges claims 3 and 8 under § 103(a) as obvious over Collins, Walker, and Abrams. *See* Pet. 4–5, 64–71. Below, we provide an overview of Abrams, and then we consider the obviousness issues raised by the parties.

1. OVERVIEW OF ABRAMS (EX. 1008)

Abrams discloses a computer-based system for matching or connecting people based on their relationships within online social networks. Ex. 1008 ¶¶ 1–2, 30, 41, 49, code (57). Abrams explains that online social networks generally (1) "allow users to post profiles and photos, as well as search through the profiles and photos of other users," and (2) provide matching features that "match users based on indicated profile criteria about themselves and their desired matches." *Id.* ¶ 30; *see id.* ¶ 29.

Abrams's Figure 1 (reproduced below) "shows a block diagram of components of a system for connecting people based on their relationships" within online social networks. Ex. 1008 ¶ 49.
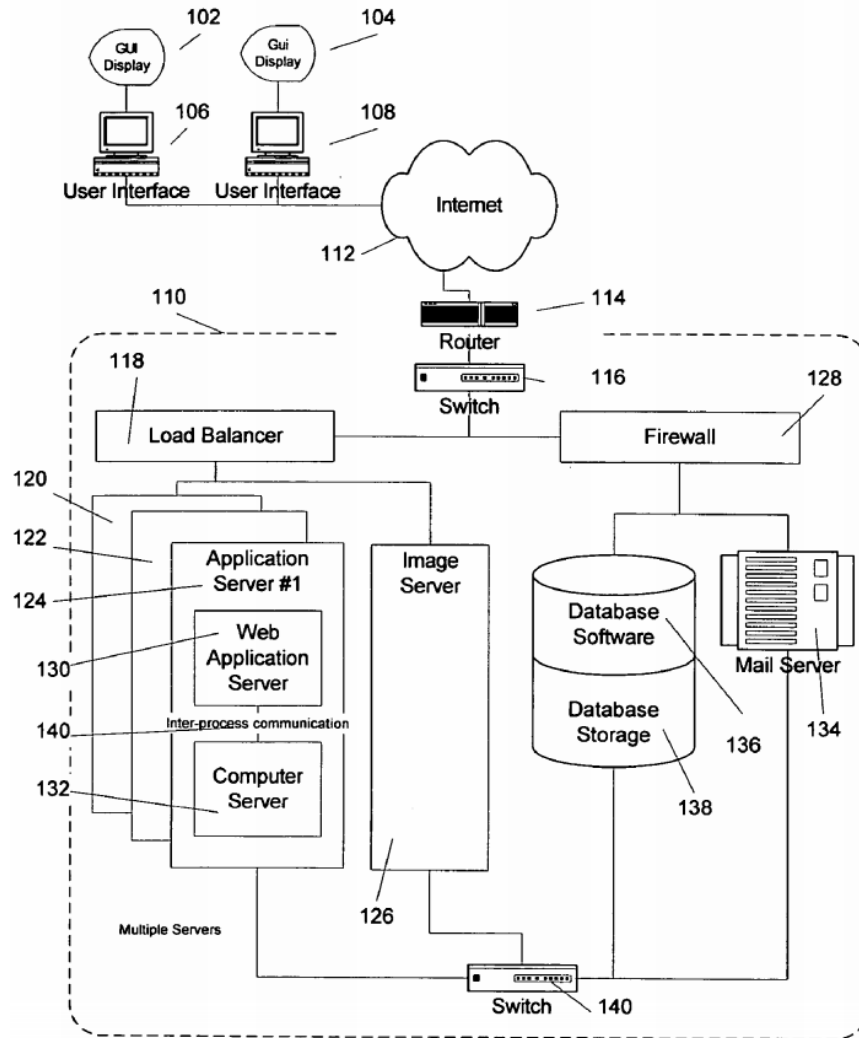
FIG. 1
System Diagram

Figure 1 illustrates graphical user interfaces 102 and 104 presented through network 112 to users of user interface devices 106 and 108. *Id.* ¶¶ 74, 77. Figure 1 also illustrates application servers 120, 122, and 124, image server 126, mail server 134, and database 138. *Id.* ¶¶ 75–76, 86–88. Image server 126 manages "digital photographs and other human viewable images." *Id.* ¶ 86.

Abrams defines "descriptive data" as "[i]nformation that describes a user or characteristics of a user." Ex. 1008 ¶¶ 64, 91; *see id.* ¶ 41. Abrams

explains that "descriptive data" includes the following information for a user: (1) "a first and last name"; (2) "attributes of the user, such as gender, marital status or occupation"; and (3) "a digital image—a photograph—of the user." *Id.* ¶¶ 64, 91. Abrams defines "relationship data" as "[i]nformation about the friends of a user of the system." *Id.* ¶ 70; *see id.* ¶ 95.

Abrams's Figure 5 (reproduced below) "shows an exemplary graphical user interface for displaying a 'gallery' of descriptive and relationship data" for a user. Ex. 1008 ¶ 54.
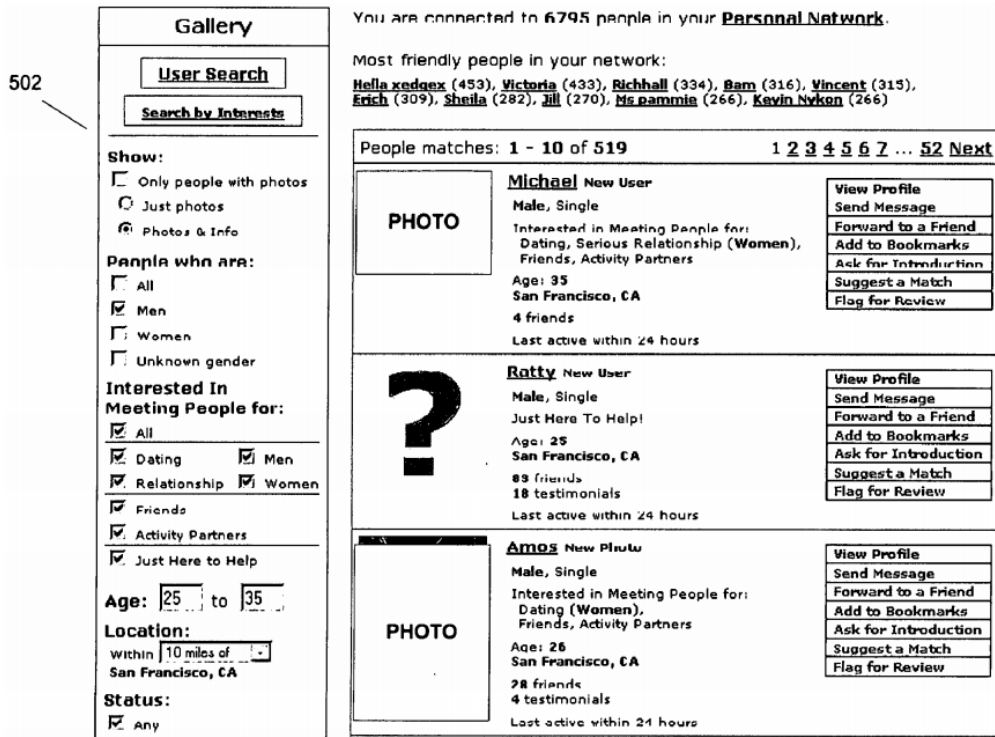

Figure 5 depicts "exemplary screen 502 provided to a user" that "presents to the user the other users" in the user's social network. *Id.* ¶ 102. Among other things, Figure 5's exemplary screen displays photographs associated with other users in the user's social network. *Id.* ¶ 103, Fig. 5.

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Further, Figure 5's exemplary screen permits the user to "screen what types of other users" appear in the gallery. Ex. 1008 ¶ 102. The "screening criteria" include "whether a digital image is available, gender, interests, age, location, relationship status, when last active in the system, etc." *Id.* The "data displayed about each screened user" include "a digital image, gender, interests, age, location, relationship status, when last active in the system, etc." *Id.* ¶ 103.

2. DEPENDENT CLAIMS 3 AND 8

Claim 3 depends from claim 1 and recites "wherein displaying some of the information associated with each of multiple participants includes displaying an image that is included in the information associated with each of the multiple participants." Ex. 1001, 17:52–55. Claim 8 depends from claim 6 and recites a similar limitation. *Id.* at 18:43–47.

Petitioner contends that the Collins-Walker-Abrams combination teaches the subject matter of claims 3 and 8. Pet. 69–71; *see* Ex. 1004 ¶¶ 210–211. Specifically, Petitioner asserts that Collins discloses displaying "information associated with each of multiple participants," i.e., information associated with each matched service provider. Pet. 69 (citing Ex. 1010 ¶¶ 86–87, 221, 249, Fig. 8d); *see* Ex. 1004 ¶¶ 207, 210. Petitioner also asserts that Abrams discloses displaying "images (e.g., photographs) associated with each participant" along with other descriptive information associated with each participant. Pet. 69–70 (citing Ex. 1008 ¶¶ 91, 102–105, Fig. 5); *see* Ex. 1004 ¶¶ 207, 211.

Patent Owner contends that the Collins-Walker-Abrams combination does not render claims 3 and 8 unpatentable because no reference discloses or suggests the "enabling while shielding" limitation in claims 1 and 6.

Resp. 36–37; Sur-reply 19. Patent Owner makes no other patentability arguments for claims 3 and 8. Resp. 36–37; Sur-reply 19. For the reasons discussed above, we do not consider persuasive Patent Owner's arguments directed to claims 1 and 6. *See, e.g.*, *supra* §§ III.E.3(f), III.E.4(c).

We agree with Petitioner that the Collins-Walker-Abrams combination teaches the subject matter of claims 3 and 8. *See* Pet. 69–71; Ex. 1004 ¶¶ 23, 25–26, 114–115, 207, 210–211; Ex. 1008 ¶¶ 30, 50, 52, 54, 64, 86, 91, 100, 102–103, Figs. 2, 3b, 5; Ex. 1010 ¶¶ 86–87, 221, 223, 225, 227, 249, Fig. 8d. For the reasons discussed above, Collins teaches claim 1's "displaying while shielding" limitation including "displaying, for the user, some of the information associated with each of multiple participants." *See supra* § III.E.3(d). Abrams teaches associating an image with each user of a social network. Ex. 1008 ¶¶ 30, 50, 52, 86, 91, 100, Figs. 2, 3b; *see* Ex. 1004 ¶¶ 23, 25–26, 207. Abrams also teaches displaying for a user images associated with other users in the user's social network. Ex. 1008 ¶¶ 54, 102–103, Fig. 5; *see* Ex. 1004 ¶¶ 114–115, 207, 211. For instance, Abrams's Figure 5 "shows an exemplary graphical user interface for displaying a 'gallery' of descriptive and relationship data" for a user including photographs associated with other users in the user's social network. Ex. 1008 ¶¶ 54, 102–103, Fig. 5.

3. COMBINING THE TEACHINGS OF THE REFERENCES

Petitioner asserts that an ordinarily skilled artisan would have looked to the teachings of Collins and Abrams when designing a matching system similar to the systems disclosed in the '107 patent. Pet. 66–68; *see* Ex. 1004 ¶¶ 205–209. In particular, Petitioner argues that "Collins and Abrams are in the same field and address similar issues with respect to providing interfaces

for a user to navigate social network systems." Pet. 66; *see* Ex. 1004 ¶ 206. Petitioner also argues that "Collins and Abrams both relate to social networking systems that match individuals with other individuals and facilitate connections between them." Pet. 66–67; *see* Ex. 1004 ¶ 206.

In addition, Petitioner contends that Collins "provides a consumer-centric" matching system for supplying "information about service providers to a consumer." Pet. 67; *see* Ex. 1004 ¶¶ 172–173, 207. Petitioner also contends that Abrams discloses displaying images for potential matches. Pet. 67; *see* Ex. 1004 ¶ 207. Petitioner asserts that an ordinarily skilled artisan would have understood from Abrams "that in some instances it is advantageous to provide additional information (e.g., images) for each of the service providers such that consumers have more information available to them to identify suitable matches." Pet. 70 (citing Ex. 1008 ¶¶ 45, 91, 102–105, Figs. 3b, 5); *see* Ex. 1004 ¶¶ 23–24, 211.

To support Petitioner, Dr. Goldberg testified that displaying images for potential matches in Collins's system would advantageously provide additional information to consumers about "each of the service providers so consumers would have more information available to them to identify suitable matches." Ex. 1004 ¶ 211. Dr. Goldberg also testified that an ordinarily skilled artisan would have understood that making more information available to consumers would help them make more informed decisions and "improve the quality of potential matches." *Id.* ¶ 207; *see id.* ¶ 208.

Patent Owner does not make any arguments disputing the rationale to combine Abrams's teachings with the teachings of the other references. *See, e.g.*, Resp. 36–37; Sur-reply 19.

We agree with Petitioner that an ordinarily skilled artisan would have had sound reasons, i.e., the reasons articulated by Dr. Goldberg, to combine Abrams's teachings with the teachings of the other references. *See* Pet. 66–68; Ex. 1004 ¶¶ 205–209, 211; Ex. 1008 ¶¶ 54, 102–103, Fig. 5.

4. CONCLUSION ON OBVIOUSNESS OF CLAIMS 3 AND 8

For the reasons discussed above, Petitioner has shown by a preponderance of the evidence that claims 3 and 8 are unpatentable under § 103(a) as obvious over Collins, Walker, and Abrams.

IV. CONCLUSION

Based on the evidence presented with the Petition, the evidence introduced during the trial, and the parties' respective arguments, Petitioner has shown by a preponderance of the evidence that (1) claims 1–3, 5–8, 10, and 11 are unpatentable under § 103(a) as obvious over Collins and Walker; (2) claims 4 and 9 are unpatentable under § 103(a) as obvious over Collins, Walker, and Herz; and (3) claims 3 and 8 are unpatentable under § 103(a) as obvious over Collins, Walker, and Abrams.[3]

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[3] Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding after the issuance of this Final Written 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).

In summary:

Claims	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–3, 5–8, 10, 11	103(a)	Collins, Walker	1–3, 5–8, 10, 11	
4, 9	103(a)	Collins, Walker, Herz	4, 9	
3, 8	103(a)	Collins, Walker, Abrams	3, 8	
Overall Outcome			1–11	

V. ORDER

Accordingly, it is

ORDERED that claims 1–11 of the '107 patent are determined to be unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, the 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.

PETITIONER:

Nathan J. Rees
R. Ross Viguet
Robert L. Greeson
Erik Janitens
NORTON ROSE FULBRIGHT US LLP
nate.rees@nortonrosefulbright.com
ross.viguet@nortonrosefulbright.com
robert.greeson@nortonrosefulbright.com
erik.janitens@nortonrosefulbright.com
RPX_IPR_Service@nortonrosefulbright.com

PATENT OWNER:

William P. Ramey, III
Melissa D. Schwaller
RAMEY & SCHWALLER, LLP
wramey@rameyfirm.com
mschwaller@rameyfirm.com