

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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FACEBOOK, INC.,  
Petitioner,

v.

PALO ALTO RESEARCH CENTER LLC,  
Patent Owner.

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IPR2021-01472  
Patent 9,137,190 B2

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Before KARL D. EASTHOM, DANIEL J. GALLIGAN, and  
CHRISTOPHER L. OGDEN, *Administrative Patent Judges*.

GALLIGAN, *Administrative Patent Judge*.

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

## I. INTRODUCTION

In this *inter partes* review, Facebook, Inc. (“Petitioner”) challenges the patentability of claims 9–16 of U.S. Patent No. 9,137,190 B2 (“the ’190 patent,” Ex. 1001), which is assigned to Palo Alto Research Center LLC (“Patent Owner”).

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision, issued pursuant to 35 U.S.C. § 318(a), addresses issues and arguments raised during the trial in this *inter partes* review. For the reasons discussed below, we determine that Petitioner has proven by a preponderance of the evidence that claims 9–16 of the ’190 patent are unpatentable. *See* 35 U.S.C. § 316(e) (2018) (“In an *inter partes* review instituted under this chapter, the petitioner shall have the burden of proving a proposition of unpatentability by a preponderance of the evidence.”).

### A. Procedural History

Petitioner filed a Petition (Paper 2, “Pet.”) challenging claims 9–16 of the ’190 patent on the following grounds:

| Claims Challenged | 35 U.S.C. § | References/Basis                                                                                               |
|-------------------|-------------|----------------------------------------------------------------------------------------------------------------|
| 9–16              | 103         | Heidloff, <sup>1</sup> Riggsby, <sup>2</sup> RFC 5233, <sup>3</sup><br>Low, <sup>4</sup> RFC 2369 <sup>5</sup> |

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<sup>1</sup> US 7,543,031 B2, issued June 2, 2009 (Ex. 1003).

<sup>2</sup> Matt Riggsby et al., *Mastering Lotus Notes and Domino 6* (Ex. 1004).

<sup>3</sup> K. Murchison, Request for Comments 5233, “Sieve Email Filtering: Subaddress Extension,” dated Jan. 2008 (Ex. 1005).

<sup>4</sup> US 2007/0038777 A1, published Feb. 15, 2007 (Ex. 1006).

<sup>5</sup> G. Neufeld et al., Request for Comments 2369, “The Use of URLs as Meta-Syntax for Core Mail List Commands and their Transport through Message Header Fields,” dated July 1998 (Ex. 1007).

| Claims Challenged | 35 U.S.C. § | References/Basis                                               |
|-------------------|-------------|----------------------------------------------------------------|
| 9–16              | 103         | Heidloff, Riggsby, RFC 5233, Low, RFC 2369, Hazel <sup>6</sup> |

Pet. 2–3. Patent Owner filed a Preliminary Response. Paper 7. We instituted trial on the asserted grounds of unpatentability. Paper 9 (“Inst. Dec.”) at 19.

During the trial, Patent Owner filed a Response (Paper 15, “PO Resp.”), Petitioner filed a Reply (Paper 18, “Pet. Reply”), and Patent Owner filed a Sur-reply (Paper 20, “PO Sur-reply”).

An oral hearing was held on December 7, 2022, a transcript of which appears in the record. Paper 28 (“Tr.”).

Petitioner relies on testimony from Mr. Christopher M. Schmandt. Exs. 1002 (Declaration), 1022 (Reply Declaration). Patent Owner relies on testimony from Dr. David Martin. Ex. 2003. The parties have entered in the record transcripts of the depositions of these declarants. Exs. 2006 (Schmandt Deposition), 1023 (Martin Deposition).

#### *B. Real Parties in Interest*

Petitioner identifies itself as the real party in interest. Pet. 1. Patent Owner identifies itself, Xerox Corp., and Xerox Holdings Corp. as real parties in interest. Paper 4 at 2; Paper 26 at 1 (noting change of name from Palo Alto Research Center Inc. to Palo Alto Research Center LLC).

#### *C. Related Matters*

As required by 37 C.F.R. § 42.8(b)(2), the parties identify various related matters. Pet. 1; Paper 4 at 2–3.

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<sup>6</sup> Philip Hazel, *Exim: The Mail Transfer Agent* (2001) (Ex. 1008). On this record, we are persuaded that Hazel is a prior art printed publication. *See* Pet. 7 (citing Ex. 1015 ¶¶ 48–53)

*D. The '190 Patent and Illustrative Claim*

The '190 patent is generally directed to content-based message distribution. Ex. 1001, code (57). Claim 9, which is the only independent claim that is challenged, is reproduced below.

9. A method for content-based message distribution, comprising the steps of:
  - receiving an incoming message with a recipient address and a tag address comprising one or more content tags, each of the content tags associated with one or more users;
  - identifying at least one of the content tags within the tag address and a recipient associated with the recipient address;
  - adding the recipient to the at least one content tag as one of the users;
  - displaying the incoming message to at least one of the users associated with the at least one content tag; and
  - delivering to the recipient an additional message comprising a notification that the recipient has been added to the at least one content tag, wherein the additional message further comprises a removal button and the recipient is removed from the at least one content tag upon activating the removal button,wherein the steps are performed by a suitably-programmed computer.

II. ANALYSIS

*A. Principles of Law*

A patent claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art;

(2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) any secondary considerations, if in evidence.<sup>7</sup> *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18 (1966).

*B. Level of Ordinary Skill in the Art*

Citing the testimony of its declarant, Christopher M. Schmandt, Petitioner contends that a person of ordinary skill in the art

would have possessed at least a bachelor’s degree in electrical engineering or computer science, and two years of work experience in the design and implementation of electronic messaging and content distribution and management systems. A person could also have qualified as a person of ordinary skill in the art with some combination of (1) more formal education (such as a master’s of science degree) and less technical experience, or (2) less formal education and more technical or professional experience in the fields identified.

Pet. 4 (citing Ex. 1002 ¶ 12).

In the Institution Decision, we accepted Petitioner’s uncontested assessment of the level of ordinary skill, except that we deleted the qualifier “at least” to eliminate vagueness as to the amount of education. Inst. Dec. 5. Patent Owner applies this level of skill in its analysis. PO Resp. 13 (citing Inst. Dec. 4–5).

Thus, Petitioner’s proposed level of skill in the art, as qualified in the Institution Decision, is uncontested. We apply this skill level, as the references of record and the ’190 patent support it.

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<sup>7</sup> Patent Owner does not present any objective evidence of nonobviousness (i.e., secondary considerations) as to any of the challenged claims.

*C. Claim Construction*

We interpret 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).” 37 C.F.R. § 42.100(b) (2021).

Petitioner argues that no claim terms need to be construed. Pet. 6. Patent Owner does not address claim construction expressly. *See* PO Resp.; PO Sur-reply. Patent Owner’s Sur-reply, however, raises an issue of claim construction involving the following steps of independent claim 9: “receiving an incoming message with a recipient address and a tag address comprising one or more content tags, each of the content tags associated with one or more users,” and “displaying the incoming message to at least one of the users associated with the at least one content tag.” Patent Owner argues that this language of claim 9 “requires that the incoming message (i) include a tag address and recipient address, and (ii) be displayed to one or more users” and, therefore, that “the tag address and recipient address must be displayed to one or more users as they are part of the incoming message.” PO Sur-reply 2.

During the oral hearing, Petitioner’s counsel argued that this was a new argument presented in the Sur-reply for the first time. Tr. 23:7–24:9. We agree. Our Rules provide that a

reply may only respond to arguments raised in the corresponding opposition, patent owner preliminary response, patent owner response, or decision on institution. A sur-reply may only respond to arguments raised in the corresponding reply and may not be accompanied by new evidence other than deposition transcripts of the cross-examination of any reply witness.

37 CFR 42.23(b). Patent Owner’s Response does not use the word “display” at all, let alone address the scope of the “displaying” limitation in claim 9.

*See* PO Resp. Consistent with our Rules, Petitioner’s Reply has no reference to the “displaying” limitation. *See* Pet. Reply. Yet, in its Sur-reply, Patent Owner disputes Petitioner’s showing for the “displaying” limitation for the first time.

At oral argument, Patent Owner’s counsel stated that its Sur-reply arguments about the “displaying” limitation are not improper because those arguments address certain of Petitioner’s reply arguments, and counsel further stated that Patent Owner’s Response asserted that the alleged incoming message of the prior art “did not include both the tag address and the recipient address.” Tr. 39:11–40:14. The argument in Patent Owner’s Response about the “receiving” step, however, does not justify a new argument about the scope of a different limitation. Petitioner’s contentions for the “displaying” limitation are set forth clearly at pages 45 to 46 of the Petition. Petitioner explains that the incoming message is displayed but makes no mention of displaying the tag address and the recipient address as those addresses are not recited in the “displaying” step. Pet. 45–46. Patent Owner, therefore, was on notice of Petitioner’s contentions for the “displaying” limitation and chose not to dispute them in its Response. Consequently, Patent Owner’s raising this argument for the first time in the Sur-reply is improper under our Rules. Because Patent Owner improperly raised this argument in its Sur-reply, we overrule Patent Owner’s objection at the oral hearing to Petitioner’s argument on this issue. *See* Tr. 38:13–39:5 (objecting to “the entirety of Facebook’s argument regarding this display claim element”).

Nevertheless, even if we consider Patent Owner’s argument as a proper response under our rules, we conclude that Patent Owner’s proposed interpretation of the claims is incorrect for the reasons explained below.

The issue before us is whether “displaying the incoming message” requires displaying information that is received *with* that message, specifically the tag address and recipient address. Petitioner contends that Figure 6 of the ’190 patent is the embodiment in which the message is displayed, that no address is displayed in Figure 6, and that there is no embodiment in which the tag address and the recipient address are displayed on an incoming message. Tr. 25:9–26:17. Patent Owner counters that Figure 4 shows an incoming message that includes a tag address and a recipient address. Tr. 44:6–9. Patent Owner also cites the disclosure in column 8, lines 52–55 of the ’190 patent as allegedly disclosing the display of these addresses. Tr. 44:10–17. According to Petitioner, however, Figure 4 describes composing the email, not displaying a received message. Tr. 83:12–15.

As an initial matter, there are disclosures that suggest that Figure 4, reproduced below, is displaying both a message that is being drafted and a message that has been received.

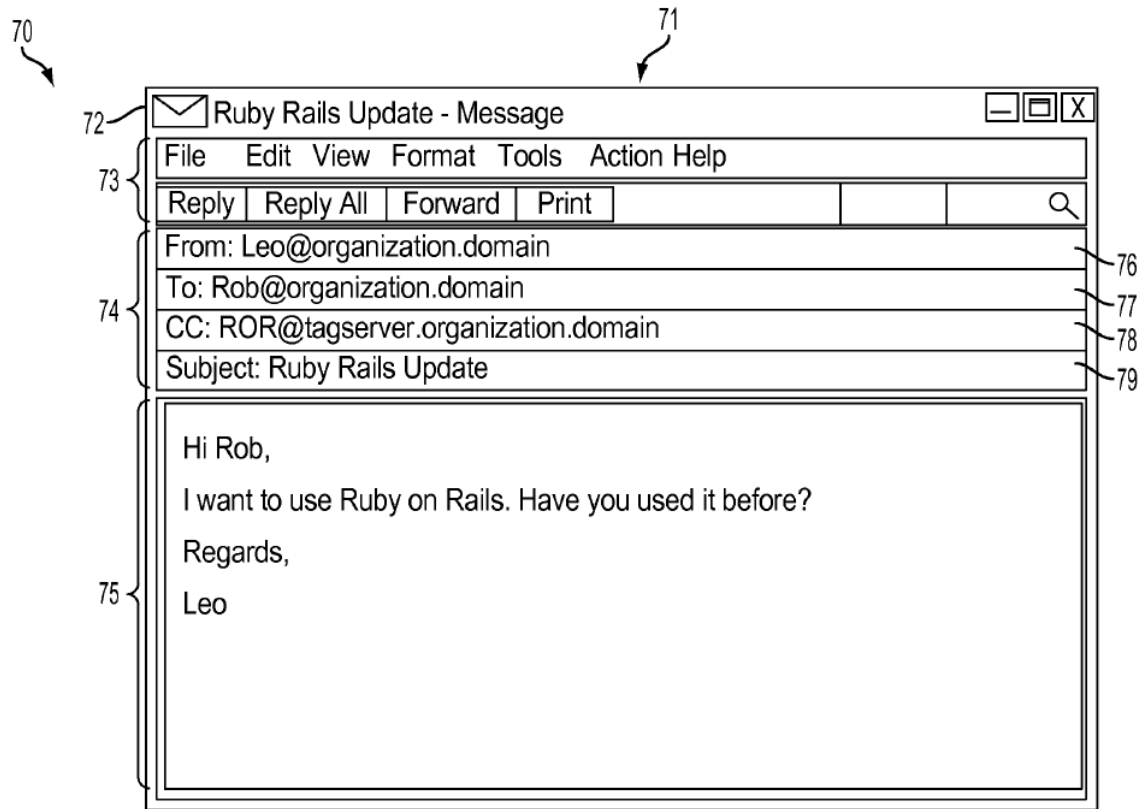


FIG. 4

Figure 4 of the '190 patent, reproduced above, is a screenshot of an email message 71 having title field 72, user option field 73, transmission field 74 and content field 75. Ex. 1001, 5:49–55. Some disclosures indicate that this is a received email. For example, user option field 73 includes the options “Reply,” “Reply All,” “Forward,” and “Print.” These options suggest that the message has been received as it is unclear how a user replies to an email that the user is composing. The '190 patent also states that “[t]he content tag-user association record can be used to identify users as recipients of an incoming email message, which is further discussed below with reference to FIG. 4.” Ex. 1001, 5:44–47. Thus, these disclosures certainly indicate that the message shown in Figure 4 has been received. Yet, other disclosures suggest that this screenshot shows an email being composed before transmission. *See* Ex. 1001, 5:57–59 (“The user option

field 73 includes user-selectable options for composing and transmitting the email message 41 [sic, 71].”), 5:66–6:1 (“Prior to transmission of the email message 71, one or more of the fields, including the recipient 77 or copy 78 subfields, can be populated with an email address or a tag address.”).

We need not determine whether Figure 4 shows an incoming message, a received message, or both because that is not determinative of the issue before us. As an incoming message, Figure 4 clearly depicts a tag address 78 (ROR@tagserver.organization.domain) and a recipient address 77 (Rob@organization.domain). Thus, if this were all the claims required, Patent Owner’s argument that the “displaying” limitation requires displaying the tag address and the recipient address may have some merit. The dependent claims, however, recite limitations that are not shown in the email message of Figure 4. For example, dependent claim 14 recites “displaying a list of all of the received messages associated with the at least one content tag to the at least one user.” Figure 4 shows one message, not a list of messages. Claim 11 recites “displaying to the at least one user one or more of the content tags that the at least one user is associated with” and “removing the at least one user from one of the displayed content tags upon receiving a user command.” Claim 12 recites “altering the content tags in the tag address of the displayed message upon receiving a user command, comprising at least one of: removing one of the displayed content tags from the displayed message; and adding a new content tag to the displayed message.” Assuming email message 71 of Figure 4 is an incoming, i.e., received, message, as Patent Owner asserts (Tr. 44:6–17), Figure 4 and the accompanying description include no functionality for the recipient of that message to alter, remove, and a delete a content tag. Indeed, the ’190 patent states that the “composed email message is then transmitted by the sending

user for processing of the tag address.” Ex. 1001, 6:40–43. The message is received and processed “by an email server” before the server sends the message to the recipients. Ex. 1001, 4:51–5:14, Fig. 2 (blocks 31, 32, 36). Thus, to the extent Figure 4 shows an incoming message, it shows tags that have already been processed by the server.

The ’190 patent provides the functionality recited in various dependent claims via an “association Web page,” which allows users to control “associations with content tags, email messages, other users, and email messages.” Ex. 1001, 4:18–21. The “association Web pages allow the user to set digest preferences, add or remove a content tag, add or remove other users or a group of other users, and conduct a search of content tags, other users, or email messages.” Ex. 1001, 4:28–31. The ’190 patent explains that received email messages are displayed “on an association Web page.” Ex. 1001, 5:6–10. Figure 6 below depicts an exemplary association Web page.

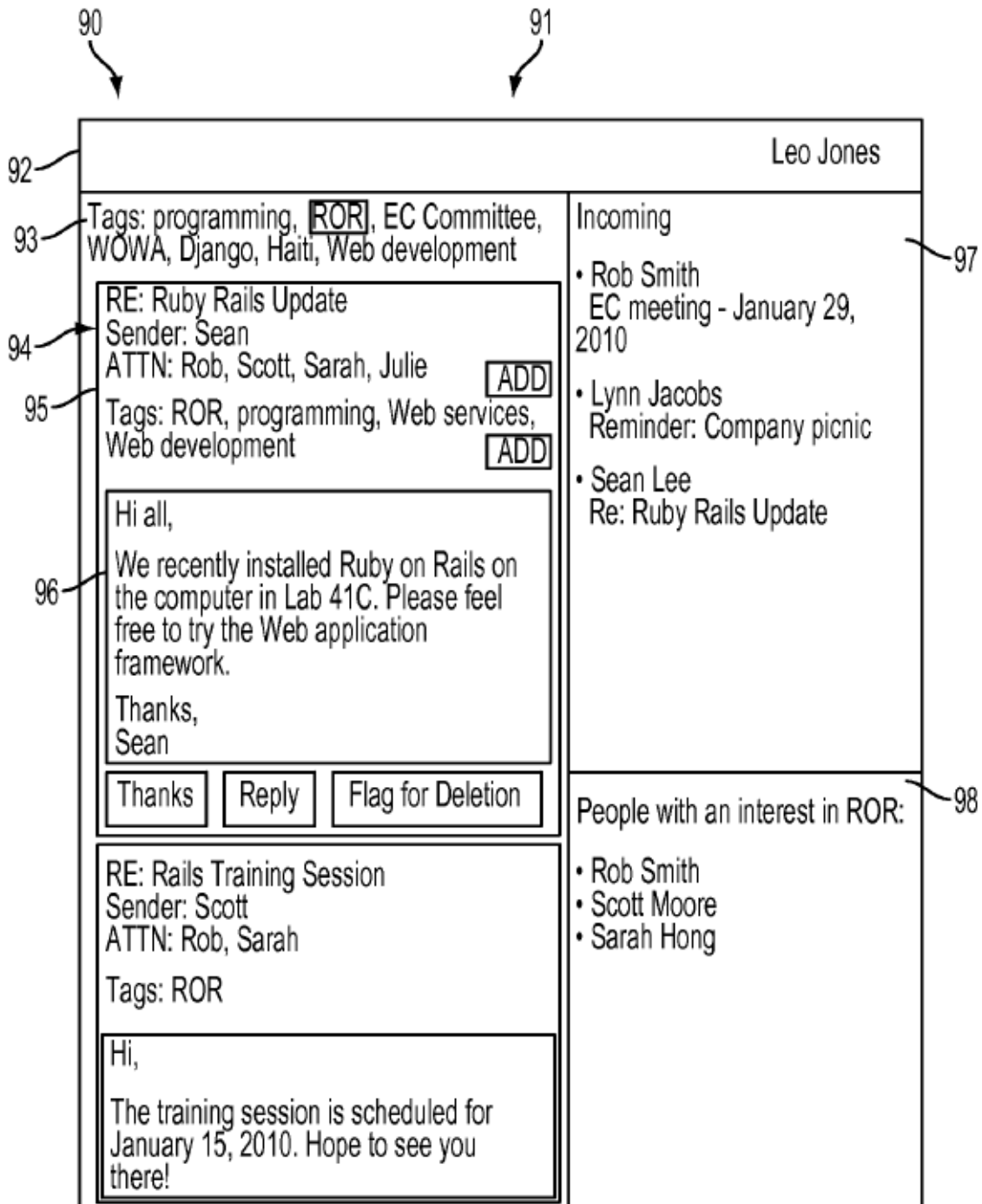


FIG. 6

Figure 6 of the '190 patent, reproduced above, shows “an association Web page 91 for viewing content tags 93, users 98, and email messages 94.”

Ex. 1001, 8:29–31. “The association Web page 91 can include a page header 92, tag cloud 93, email messages 94, *a list of incoming email messages* 97, and a list of other users 98 associated with one of the content tags in the tag cloud 93.” Ex. 1001, 8:37–41 (emphasis added). Thus, Figure 6 depicts the list of messages recited in claim 14.

With reference to Figure 6, the ’190 patent explains that “a ‘delete’ or ‘remove’ button can be provided to allow the user to remove a tag from an email message or remove himself from a group associated with a particular content tag.” Ex. 1001, 8:67–9:3. These functions are recited, respectively, in claims 12 (“removing one of the displayed content tags from the displayed message”) and 11 (“removing the at least one user from one of the displayed content tags upon receiving a user command”).

As shown above, dependent claims 11, 12, and 14 read on the embodiment of Figure 6 and not on the disclosure of Figure 4. “By definition, an independent claim is broader than a claim that depends from it, so if a dependent claim reads on a particular embodiment of the claimed invention, the corresponding independent claim must cover that embodiment as well.” *Littlefuse, Inc. v. Mersen USA EP Corp.*, 29 F.4th 1376, 1380 (Fed. Cir. 2022) (citing *Baxalta Inc. v. Genentech, Inc.*, 972 F.3d 1341, 1346 (Fed. Cir. 2020)). Thus, because claims dependent on independent claim 9 read on Figure 6, claim 9 must cover the embodiment in Figure 6, even if it covers Figure 4 as well.

This conclusion is significant because Figure 6 depicts no addresses. Patent Owner cites the disclosure in column 8, lines 52–55 of the ’190 patent as allegedly disclosing the display of the addresses. Tr. 44:10–17. This passage states the following: “Each email message 94 displayed can include an email header 95 and email content 96. The email header 95 can include a

subject field, sender field, attention or recipient field, and content tag field.” Ex. 1001, 8:52–55. But the sender, attention (recipient), and tag fields in the header 95 of Figure 6 show names and tags, not addresses. Ex. 1001, Fig. 6.

Turning back to the claim construction dispute, claim 9 recites “receiving an incoming message with a recipient address and a tag address comprising one or more content tags, each of the content tags associated with one or more users,” and “displaying the incoming message to at least one of the users associated with the at least one content tag.” The issue is whether the claim requires displaying the tag address and the recipient address that are received *with* the incoming message. Consistent with the disclosure of Figure 6, an embodiment on which claim 9 reads, we conclude that claim 9 does not require displaying the tag address and the recipient address, although claim 9 clearly requires that these addresses be received with the message.

We further note that it is not entirely clear how the content of the displayed information is functionally related to the claimed process. *See King Pharm., Inc. v. Eon Labs, Inc.*, 616 F.3d 1267, 1278–79 (Fed. Cir. 2010); *In re Distefano*, 808 F.3d 845, 848–51 (Fed. Cir. 2015). To the extent claim 9 requires displaying information having a certain content, specifically a tag address and a recipient address, it appears that such information would be solely for informational purposes because no other claim limitations require the use of that displayed information. For example, claim 9 recites delivering an *additional* message notifying a recipient that the recipient has been added to a content tag. Claim 10 recites identifying content tags from a tag address, but this is performed by an email server and does not depend on what a human sees or perceives from certain information. *See* Ex. 1001, 4:47–5:3, Fig. 2. Claim 12 recites “displaying to

the at least one user all of the content tags in the tag address of the displayed message,” which allows the user to remove or add a content tag. Thus, the content tags must be displayed, not the tag address itself. Claim 14 recites “receiving one or more additional messages with tag addresses comprising the at least one content tag; and displaying a list of all of the received messages associated with the at least one content tag to the at least one user.” Messages must be displayed but not the tag addresses received with those messages, consistent with Figure 6. Thus, it is not clear that the particular content of displayed information for which Patent Owner advocates lends any patentable weight to the claimed method. We do not resolve this question, however, because the record has not been developed before us given the late-arising nature of this claim construction dispute.

We determine that no further claim interpretation is required to resolve the patentability issues before us. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

*D. Obviousness over  
Heidloff, Riggsby, RFC 5233, Low, and RFC 2369  
(Claims 9–16)*

Petitioner asserts that claims 9–16 are unpatentable under 35 U.S.C. § 103 over the combined teachings of Heidloff, Riggsby, RFC 5233, Low, and RFC 2369. Pet. 2, 7–68. Patent Owner opposes. PO Resp. 13–36; PO Sur-reply 1–20.

*1. Overview of the Prior Art*

Heidloff is a U.S. patent that discloses “allowing users to send email messages to shared sources by using natural language destination email addresses,” which are then “parsed for keywords, which may include topics or phrases, that have been registered as interest profiles associated with corresponding shared sources.” Ex. 1003, 1:60–66. Heidloff explains that, “[i]f a match with a keyword is found, the message is forwarded to a predetermined email destination associated with the shared source that registered the keyword as part of its interest profile.” Ex. 1003, 1:66–2:2.

Riggsby is a book explaining various features of Lotus Notes and Domino software, including email features and mail-in databases. Ex. 1004, 1 (cover). Petitioner presents evidence that Riggsby was published before the earliest possible effective filing date for the ’190 patent. *See* Pet. 7 (citing Ex. 1015 ¶¶ 42–47).

RFC 5233 is a Request for Comments document of the Internet Engineering Task Force (IETF) that describes an email feature called subaddressing. Ex. 1005, 1 (p. 1).<sup>8</sup> Petitioner presents evidence that RFC 5233 was published before the earliest possible effective filing date for the ’190 patent. *See* Pet. 7 (citing Ex. 1002 ¶ 53; Ex. 1016).

Low is a U.S. patent application publication that discloses an email feature whereby a recipient of an email can be added to a conversation address. Ex. 1006 ¶ 61.

RFC 2369 is a Request for Comments document of the IETF that describes including various commands, such as “Unsubscribe,” as a button

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<sup>8</sup> For this and other non-patent references, we cite the exhibit page numbers followed parenthetically by a reference’s internal page numbers when they are different.

in an email message. Ex. 1007, 8 (p. 13). Petitioner presents evidence that RFC 2369 was published before the earliest possible effective filing date for the '190 patent. *See* Pet. 7 (citing Ex. 1002 ¶ 53; Ex. 1017).

We discuss additional pertinent details of the references below.

## *2. Claim 9*

### *a) Preamble*

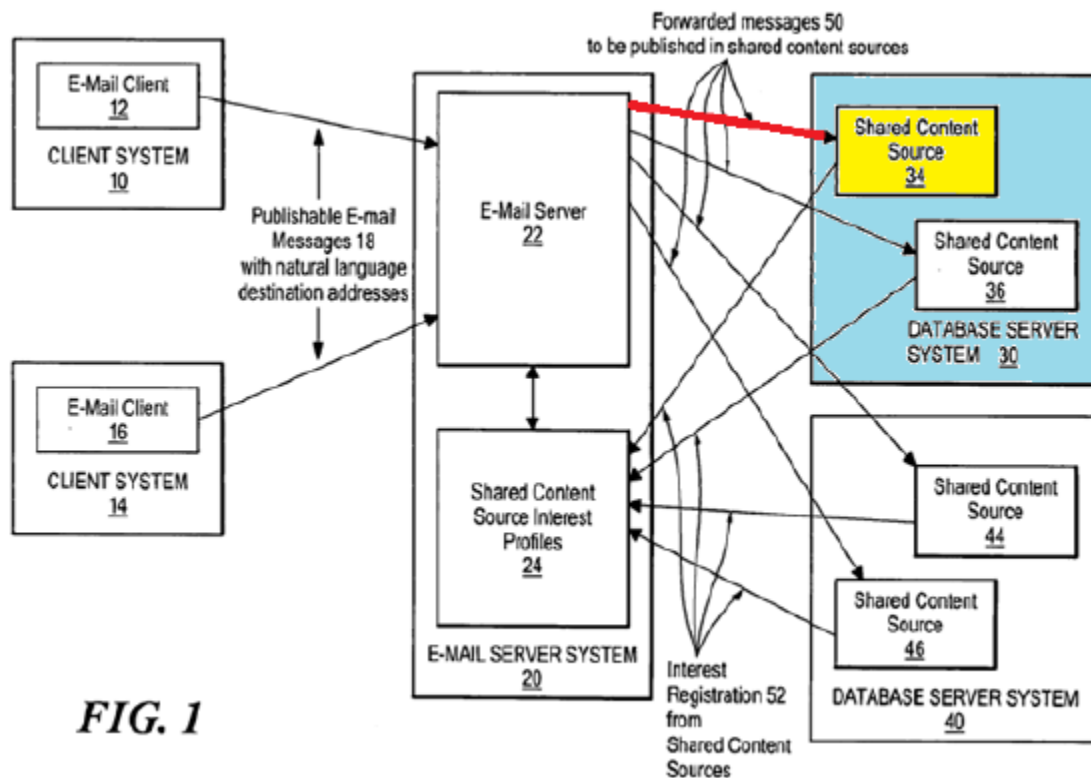
Petitioner contends that Heidloff teaches “[a] method for content-based message distribution,” as recited in the preamble of claim 9. Pet. 10–15 (citing Ex. 1003, code (57), 1:21–22, 1:28–30, 1:32–33, 1:46–48, 1:58–2:8, 2:10–13, 2:51–3:10, 3:15–19, 3:56–4:11, 4:34–5:18, Figs. 1, 2; Ex. 1002 ¶¶ 64, 66–70, 72–73). In particular, Petitioner contends that, “[b]ecause the distribution of a given message to shared sources depends on the topic or topics to which it relates – which would be based in turn on the message’s content – Heidloff teaches and suggests a ‘content based’ message distribution system.” Pet. 15 (emphasis omitted) (citing Ex. 1002 ¶¶ 68–69, 73). Patent Owner does not dispute this contention. Petitioner’s contentions for the preamble are persuasive, and we find Heidloff teaches this subject matter. *See, e.g.*, Ex. 1003, 5:1–6 (distributing messages based on keywords in the destination address).

### *b) “Receiving an incoming message”*

#### *(1) Petitioner’s contentions*

The first step of claim 9 recites “receiving an incoming message with a recipient address and a tag address comprising one or more content tags, each of the content tags associated with one or more users.” Petitioner relies on the combined teachings of Heidloff, RFC 5233, and Riggsby to address this subject matter. Pet. 16–39.

Petitioner provides an annotated version of Heidloff's Figure 1, reproduced below.



Pet. 16. The Figure above is a Petitioner-annotated version of Heidloff's Figure 1. Pet. 16. Figure 1 of Heidloff illustrates an embodiment that includes client systems 10 and 14 (having, respectively, email clients 12 and 16), email server system 20 (having email server 22 and shared content source interest profiles 24), and database server systems 30 and 40 (having shared content sources). Ex. 1003, 2:29–37, 3:11–17, 3:39–41. Petitioner denotes database server system 30 with blue coloring, shared content source 34 within system 30 with yellow coloring, and the line from email server 22 to shared content source 34 (captioned “Forwarded messages 50 to be published in shared content sources”) with red coloring. Pet. 16–17. Petitioner contends that database server system 30 (blue) receives a message from email server 22 as indicated by the red line. Pet. 16–17 (citing

Ex. 1003, 2:37–43, 3:39–55, 4:7–11, 5:15–18; Ex. 1002 ¶¶ 76–78).

Petitioner asserts that, in the proposed combination, database server system 30 receives this message with a recipient address and a tag address, as explained below. Pet. 17–39.

For the “tag address comprising one or more content tags,” Petitioner argues that Heidloff discloses “sender-provided keywords specifying the topic(s) of interest for the message.” Pet. 18 (citing Ex. 1003, 1:63–66, 2:3–7, 2:60–64, 3:17–19, 4:45–53; Ex. 1002 ¶¶ 106–108). Heidloff discloses that

a user creates and sends an email message for publication that has a natural language destination address. For example, using an embodiment of the disclosed system, a user can create an email message with a destination or “TO:” field value of “publish: RCP, smart client, Eclipse”. In this example, the predetermined command string “publish:” is followed by free text consisting of a comma separated list of keywords such as words, acronyms, phrases or other text strings.

Ex. 1003, 4:45–53. Petitioner argues that RCP, smart client, and Eclipse are content tags “because each can specify a topic of interest for the message.” Pet. 18 (citing Ex. 1003, 1:63–66, 2:3–7, 3:17–19, 3:58–64; Ex. 1002 ¶¶ 87, 94).

Petitioner further relies on Heidloff’s disclosure of processing the keywords at the email server. Pet. 20 (citing Ex. 1003, 5:1–14). Heidloff explains that the free text entered by the user is compared to keywords and that, “[i]f any of the strings ‘RCP’, ‘smart client’, or ‘Eclipse’ matches a registered keyword, the message is forwarded to the email address of the associated shared content source.” Ex. 1003, 5:1–6. As an example, Heidloff discloses that “RCP,” “smart client,” and “Eclipse” may be registered as keywords with the email address RCPTeamroom@ibm.com, in

which case “the email server system would operate to forward the publishable email message to the email address ‘RCPTeamroom@us.ibm.com.’” Ex. 1003, 5:6–14.

Although “RCP” is a keyword in Heidloff and is in the email address, Petitioner does not rely on this disclosure to show the “tag address” recited in claim 9. Pet. 20. Rather, Petitioner argues that it would have been obvious to “includ[e] the sender-identified topical keyword(s) (‘content tags’) in the full email address used to route a message from the email server to its destination” in view of RFC 5233 and Riggsby. Pet. 21 (emphasis omitted). In particular, Petitioner relies on RFC 5233’s disclosure of subaddressing. Pet. 22–23 (citing Ex. 1005, 1–3 (pp. 1–4)). RFC 5233 discloses that “[s]ubaddressing is the practice of augmenting the local-part of an [RFC2822] address with some ‘detail’ information in order to give some extra meaning to that address.” Ex. 1005, 1 (p. 2) (brackets in original), *quoted in* Pet. 22–23. RFC 5233 explains that a “common way of encoding ‘detail’ information into the local-part is to add a ‘separator character sequence’, such as ‘+’, to form a boundary between the ‘user’ (original local-part) and ‘detail’ sub-parts of the address,” such that “[a] message addressed to ‘ken+sieve@example.org’ is delivered into a mailbox called ‘sieve’ belonging to the user ‘ken.’” Ex. 1005, 1 (p. 2).

Petitioner argues that combining RFC 5233’s disclosures of subaddressing with Heidloff would “have improved Heidloff by providing the recipient database with the sender-identified topical keyword(s) associated with a given message (‘incoming message’), thus allowing the database to readily access, and use, this additional information.” Pet. 27 (emphasis omitted) (citing Ex. 1002 ¶¶ 100, 102, 107–111). Petitioner also argues that “RFC 5233 provides an express motivation to combine by

teaching that subaddressing augments an existing email address by injecting it with ‘some “detail” information in order to give extra meaning to that address.’” Pet. 26 (emphasis omitted) (citing Ex. 1005, 1 (p. 2)). Petitioner argues that Riggsby’s disclosure of organizing documents in a database around categories further supports the motivation to combine. Pet. 30–31 (citing Ex. 1004, 40, 86, 104 (pp. 115, 194, 211), Fig. 7.3; Ex. 1002 ¶¶ 49, 93–96, 98). For example, Riggsby discloses mail-in databases, in which documents can be emailed to a database, including discussion databases, and it also discloses category fields for documents in a discussion database. Ex. 1004, 86, 104 (pp. 194, 211). Petitioner argues that, in its proposed combination, Heidloff’s address RCPTeamroom@us.ibm.com would be augmented with a keyword, such as “Eclipse,” to become “RCPTeamroom+Eclipse@us.ibm.com,” which “takes the form of ‘DatabaseOriginalLocalPart+Category@Domain.’” Pet. 34–35 (citing Ex. 1002 ¶¶ 94, 108, 111). Thus, Petitioner argues, the “Category” is a “content tag.” Pet. 35.

For the recitation “each of the content tags associated with one or more users,” Petitioner relies on Riggsby’s disclosure of notifying users when messages are added to a certain category in the database. Pet. 35–37 (citing Ex. 1004, 87 (p. 195), Fig. 7.6; Ex. 1002 ¶¶ 49, 59, 93–96, 98, 106–108, 112–113, 117–118, 122–125). Riggsby discloses a feature that informs a user of new documents that are added to discussion databases in certain categories. Ex. 1004, 87 (p. 195), Fig. 7.6. Petitioner argues that this feature would have improved Heidloff’s system “by allowing users to be notified about new messages posted in individual information ‘categories,’ thus obviating the need for a user to constantly and repeatedly check to see if

new messages of interest have been added to the database.” Pet. 37 (citing Ex. 1002 ¶¶ 117–118).

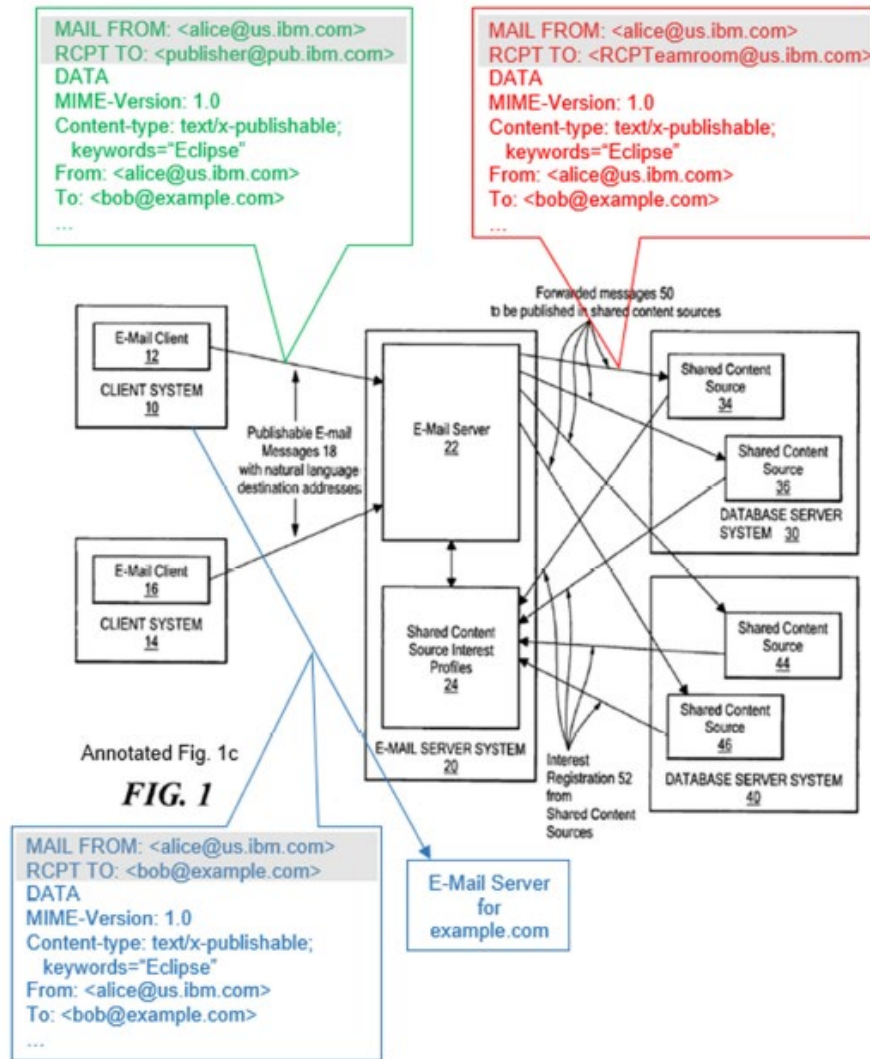
In addition, claim 9 recites “receiving an incoming message with a recipient address.” Petitioner argues that it would have been obvious for a message to have a recipient address in addition to a tag address because, “[a]s anyone who has ever used email would have appreciated, a sender can address a single email to multiple different addresses” using, for example, “TO:” and “CC:” fields. Pet. 38 (citing Ex. 1002 ¶ 83).

*(2) Patent Owner’s arguments and our analysis*

For the “receiving” step of claim 9, Patent Owner argues that the incoming message does not have both “a recipient address and a tag address comprising one or more content tags,” and Patent Owner also disputes Petitioner’s reasons to combine. PO Resp. 14–25.

*(a) Recipient address*

Patent Owner argues that Petitioner “has failed to prove that its alleged incoming message includes a recipient address.” PO Resp. 19. Patent Owner notes that, when an email is sent, an envelope is added to the message that includes the destination address. PO Resp. 16 (citing Ex. 2003 ¶¶ 53–56; Ex. 1002 ¶¶ 78 n.7, 114 n.26). Patent Owner contends that multiple envelopes are created when there are recipients at different destinations. PO Resp. 16 (citing Ex. 2003 ¶¶ 57, 123). With this background, Patent Owner provides the following annotated version of Heidloff’s Figure 1:



PO Resp. 17. The Figure above is a Patent Owner-annotated version of Heidloff's Figure 1. PO Resp. 17. In the figure above, Patent Owner includes annotations to explain how an email would be routed in the Heidloff system, using Petitioner's examples of recipient bob@example.com and keyword "Eclipse." PO Resp. 16-17; Ex. 2003 ¶¶ 120-121. According to Patent Owner and Dr. Martin, email client 12 in client system 10 sends two messages with different envelopes, one in green that goes to email server 22 and one in blue that goes to the email server for example.com. PO Resp. 17-18; Ex. 2003 ¶¶ 121-125. Patent Owner and Dr. Martin contend that email server 22 then sends the message in red to shared content

source 34. PO Resp. 18; Ex. 2003 ¶¶ 121–125. The annotated figure depicts envelope addresses in shaded gray as follows: green (“MAIL FROM: <alice@us.ibm.com> RCPT TO: <publisher@pub.ibm.com>”); blue (“MAIL FROM: <alice@us.ibm.com> RCPT TO: <bob@example.com>”); red (“MAIL FROM: <alice@us.ibm.com> RCPT TO: <RCPTeamroom@us.ibm.com>”). PO Resp. 17–18; Ex. 2003 ¶ 121. Based on this explanation, Patent Owner asserts that Petitioner’s contentions fail because the forwarded message (red), which Petitioner identifies as the received message, does not include bob@example.com as a destination address in the envelope. PO Resp. 18–19 (citing Ex. 2003 ¶¶ 121–124).

We disagree with this argument because Patent Owner’s explanation shows that the forwarded message in red includes bob@example.com, which demonstrates that the message is received “with a recipient address,” as recited in claim 9. The claim does not require that the recipient address be located in the envelope, as Patent Owner suggests, or in any other particular location. Patent Owner’s argument regarding the envelope appears to be based on its assertion that Petitioner “states that the envelope is the preferred mechanism for identifying recipients, and discounts the email message itself as unreliable.” PO Resp. 15. This does not accurately characterize Petitioner’s assertion, which focuses on using the envelope for subaddressing as taught in RFC 5233. *See* Pet. 28–29 (citing Ex. 1005, 2 (pp. 2–3); Ex. 1002 ¶¶ 114–115; Ex. 1008, 116 (p. 99)); *see also* Pet. Reply 8–9 (explaining that RFC 5233’s preference for using the envelope for subaddressing). Petitioner’s declarant, Mr. Schmandt, testifies that the recipient address “could be identified from either the message envelope, the message header, or some combination of the two.” Ex. 1002 ¶ 135 n.2.

Thus, Petitioner's contentions do not require that the recipient address be in the message envelope, and this is not a requirement of claim 9.

We agree with Petitioner that it would have been obvious for an incoming message to be received with a recipient address. *See* Pet. 38–39 (citing Ex. 1003, 2:53–60; Ex. 1002 ¶¶ 83, 85–88). Heidloff expressly discloses that “email clients 12 and 16 are each capable of providing a graphical user interface through which a user can define email messages, including message body, attachments, *destination email addresses*, and any other appropriate message attributes for a given implementation.” Ex. 1003, 2:53–57 (emphasis added). Dr. Martin testifies that “Heidloff does not discuss a scenario where a publishable message also includes a conventional email address.” Ex. 2003 ¶ 120; *see also* PO Resp. 5 (“Heidloff’s publishable message uses keywords—like RCP, smart client, and Eclipse—in the address line, not a traditional email address and not a keyword address.”). Even if Heidloff does not disclose that particular scenario because it focuses on processing natural language destination addresses, Petitioner’s contention is that it would have been obvious that this would happen “at least sometimes.” *See* Pet. 38. This is supported by Heidloff’s disclosure that the email client provides this capability. Heidloff explains that “[t]he user interface *further allows* for receipt of a user-provided natural language destination address value.” Ex. 1003, 3:5–7 (emphasis added). Thus, Heidloff allows a composer of an email to include natural language destination addresses in addition to regular destination email addresses. Based on this evidence, we agree with Petitioner that receiving a message with a recipient address would have been obvious. Patent Owner’s explanation, discussed above, shows that such destination email addresses would still be received with the message by shared content source 34, even

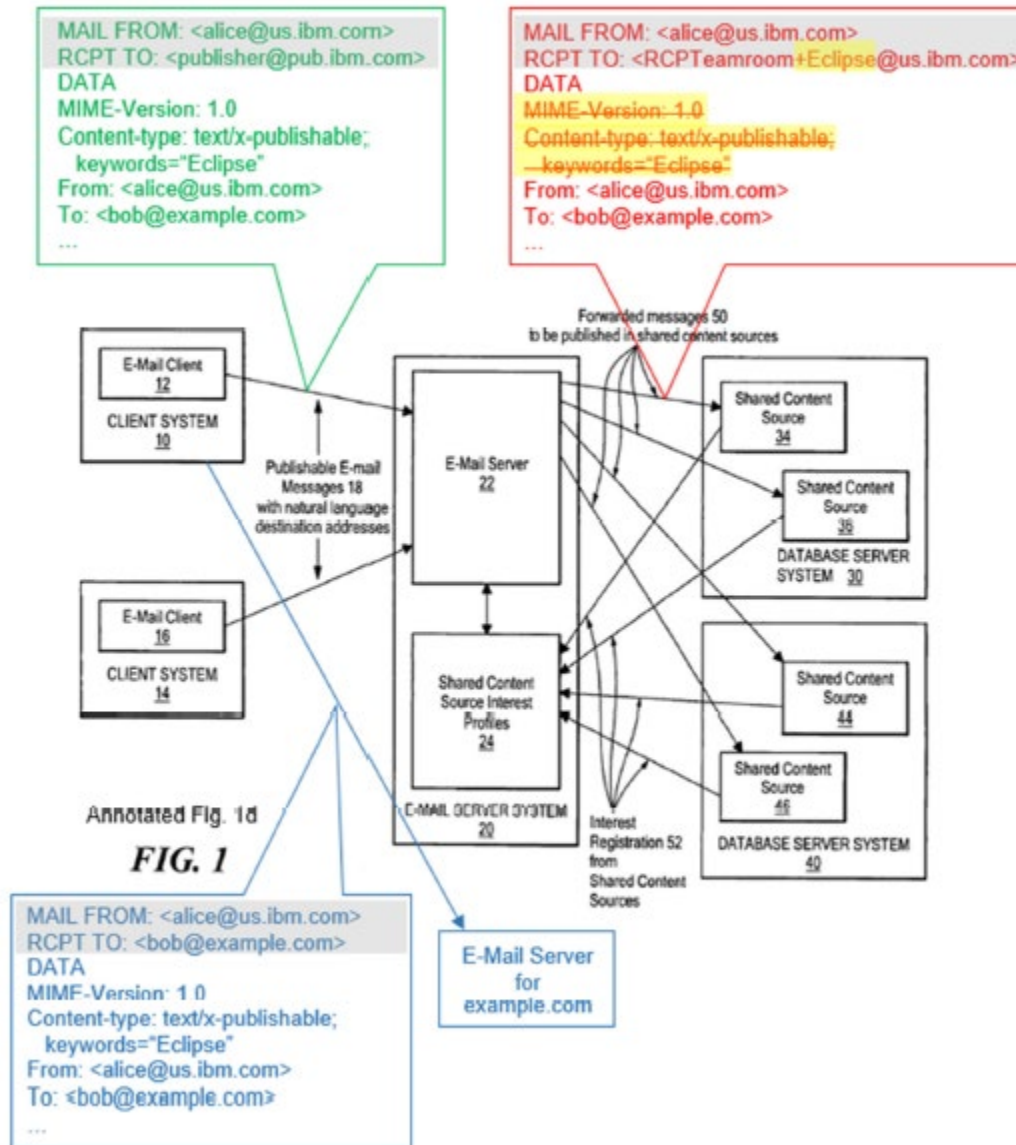
if they are not in the envelope, because they would be part of the forwarded message. Therefore, we disagree with Patent Owner’s suggestion that a recipient address included in a publishable email from email client 12 to email server 22 would not be received with the forwarded email received at shared content source 34. *See* PO Resp. 24–25 (asserting that whether “a ‘publishable email’ can include the claimed ‘recipient address’ . . . is irrelevant” because it is a different message from the forwarded message).

Thus, for the reasons stated above, we determine Petitioner has demonstrated by a preponderance of evidence that the asserted combination of prior art teaches “receiving an incoming message with a recipient address.”

*(b) Rationale to combine*

Patent Owner argues that a person of ordinary skill in the art would not have used RFC 5233’s subaddressing techniques with Heidloff. Pet. 20–25. According to Patent Owner, Petitioner’s “motivation to combine Heidloff with RFC 5233 relies on the presumption that the user’s keywords disappear from the publishable message such that they must be added back to the forwarded message through RFC 5233’s ‘subaddressing’ technique.” PO Resp. 20 (citing Ex. 1002 ¶ 100). Patent Owner argues that the keywords entered by the user would be in the message that is ultimately sent to the server, obviating the need to add them with RFC 5233’s subaddressing technique. PO Resp. 22 (citing Ex. 2003 ¶¶ 63–79, 99–109; Ex. 2006, 55:11–14).

Patent Owner’s argument is based on another annotated version of Heidloff’s Figure 1, reproduced below, which Dr. Martin prepared.



Ex. 2003 ¶ 125; PO Resp. 21–22. The Figure above is a second Patent Owner-annotated version of Heidloff’s Figure 1. The figure above is similar to the annotated figure from page 17 of the Response, which we describe in the previous section. In the annotated figure above, Dr. Martin depicts a message from email client 12 to email server 22 in green that includes the following: “MIME-Version 1.0 Content-type:text/x-publishable; keywords=‘Eclipse.’” Ex. 2003 ¶ 125. In the message (red) from email server 22 to shared content source 34, Dr. Martin depicts with yellow

highlighting the differences from the message in green, which include deleting the MIME information quoted in the previous sentence and adding “+Eclipse” to the envelope address to arrive at “<RCPTeamroom+Eclipse@us.ibm.com>.” Ex. 2003 ¶ 125–126.

Patent Owner’s argument is based on one possible implementation for Heidloff’s system that Dr. Martin chose based on the following passage in Heidloff: “Indication that a given message is publishable may also be provided in various ways. For example, a publishable message may be marked internally by using a special MIME (Multipurpose Internet Mail Extensions) content type. Any appropriate indication may be used for a given embodiment.” Ex. 1003, 4:58–62; *see* Ex. 2003 ¶¶ 66–67 (discussing this disclosure). Dr. Martin testifies that the disclosure in this passage is a “suggestion to structure a publishable message using a ‘MIME (Multipurpose Internet Mail Extensions) content type,’” which “clearly communicates an appropriate embodiment for emails 18.” Ex. 2003 ¶ 67. Petitioner argues that Dr. Martin’s example is just a hypothetical that does not reflect a standard MIME content-type field. Pet. Reply 12. Patent Owner, however, argues that its and Dr. Martin’s “discussion of including keywords in a MIME content-type header is based on explicit disclosures in Heidloff regarding the use of MIME content-type fields.” PO Sur-reply 9.

We agree with Patent Owner to the extent that Heidloff clearly states that a MIME content type *can* be used to indicate that a message is publishable. Ex. 1003, 4:58–62. Whether or not Heidloff’s suggestion to use MIME would result in the implementation produced by Dr. Martin is a dispute between the parties that we need not resolve because Heidloff does not limit its disclosure to using MIME. It states that “[i]ndication that a given message is publishable may also be provided in various ways,”

including using a MIME content type, but it also states that “[a]ny appropriate indication may be used for a given embodiment.” Ex. 1003, 4:58–62. Petitioner simply applies RFC 5233’s teachings to arrive at a standardized way to give the receiving database some detail about the keywords that triggered the match that resulted in forwarding the message to the database. Pet. 27–28. As Petitioner points out (Pet. 27), one of a number of keywords could have triggered the forwarding under Heidloff’s “logical ‘OR’ approach.” Ex. 1003, 4:18–21. Petitioner contends that providing additional detail through subaddressing, as taught by RFC 5233, would have improved the Heidloff system. Pet. 28–29.

Dr. Martin’s proposed MIME implementation may provide the same information to shared content source 34 and may even be superior and simpler than Petitioner’s proposed combination, but a person of ordinary skill is not limited to just one option. Rather, “a person of ordinary skill has good reason to pursue the known options within his or her technical grasp” to solve a given problem. *KSR*, 550 U.S. at 421. Thus, we disagree with Dr. Martin’s testimony that a person of ordinary skill in the art “would effectively ignore RFC 5233.” Ex. 2003 ¶ 118. Moreover, an obviousness showing “does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art in order to provide motivation for the current invention.” *Novartis Pharms. Corp. v. West-Ward Pharms. Int’l Ltd.*, 923 F.3d 1051, 1059 (Fed. Cir. 2019) (quoting *Fulton*, 391 F.3d at 1200). Dr. Martin acknowledges that, apart from the passage at column 4, lines 58–62, which mentions MIME as one option for indicating that a message is publishable, “Heidloff contains no other significant discussion of the email 18 structure.” Ex. 2003 ¶ 67.

Heidloff certainly does not disclose the particular MIME structure posited by Dr. Martin.

Patent Owner argues that the keywords must be in the email message for Heidloff's matching algorithm to work. PO Resp. 22–23 (citing Ex. 2003 ¶¶ 63–79, 106–107). Therefore, according to Patent Owner, it “makes no sense to remove the keywords from Heidloff's publishable email, only to then go to the trouble of reinserting them elsewhere through a very onerous process” of extracting the keywords, adding them to a subaddress of a message envelope, and adding functionality to the shared content source to extract and process the subaddress. PO Resp. 23 (citing Ex. 2003 ¶¶ 102–109, 117–119, 125–131). We do not understand Petitioner's contention to be that keywords need to be removed or deleted, as Dr. Martin proposes. *See* Ex. 2003 ¶ 125 (striking through of the MIME content type information indicating that it was deleted). Petitioner contends that “RFC 5233 specifically discloses standardized techniques for specifying ‘detail’ information in email addresses that can then be used by the recipient system to sort received messages.” Pet. 25 (citing Ex. 1005, 1 (p. 2); Ex. 1002 ¶¶ 104–105, 111). Thus, this detail information would simply be added to the address as disclosed in RFC 5233. Although the subaddressing technique would require functionality at the shared content source to process the subaddress, some functionality would be needed at the shared content source to find the keywords in any implementation, such as in a MIME implementation.

Patent Owner also argues that including subaddress information in external email addresses may cause failure if the email servers do not have subaddressing capability or if they implement such capability differently. PO Resp. 23–24 (citing Ex. 2003 ¶¶ 108, 118). Petitioner is arguing that it

would have been obvious to use subaddressing in the context of a shared content source mail-in database system of Heidloff and Riggsby. In Petitioner's combination, therefore, Heidloff's shared content source would be equipped with the functionality to process the subaddresses, just as it is equipped with certain functionality to receive and store forwarded messages. Ex. 1003, 3:39–64. Heidloff assumes some coordination between the shared content sources and the email servers. *See, e.g.*, Ex. 1003, 3:58–61 (“The shared content sources 34, 36, 44 and 46 are further operable to register keywords in the shared content source interest profiles 24 by sending interest registrations 52 to the email server system 20.”). Petitioner's contention is that, in the combination, the “database, being provided with this additional detail in the destination address for each message received, is then able to ‘sort messages based on how they were addressed.’” Pet. 34 (citing Ex. 1005, 2 (p. 2)). It is not clear why the email server in the proposed combination would forward an email to an external shared content source that is not registered with the server and not capable of receiving emails from it, as Patent Owner's argument suggests. *See* PO Resp. 23–24.

Petitioner's asserted reasons to combine the teachings of Heidloff, Riggsby, and RFC 5233, summarized above in § II.D.2.b.1, are persuasive. As Petitioner points out, Riggsby discloses features of mail-in databases, and Heidloff discloses an improvement to existing mail-in databases. *See* Pet. 30–32 & n.7. Heidloff discloses a natural language solution to the problem in existing mail-in databases “that users still often do not know the appropriate email address(es) of the shared source(s).” Ex. 1003, 1:43–53. As noted above, Riggsby discloses mail-in databases, in which documents can be emailed to a database, including discussion databases, and it also discloses category fields for documents in a discussion database. Ex. 1004,

86, 104 (pp. 194, 211); *see* Pet. 30–31 (discussing this disclosure). We find that Riggsby’s disclosure of its mail-in database as a “great collaboration tool” having features such as viewing documents by category would have motivated a person of ordinary skill in the art to combine Riggsby’s mail-in database teachings with Heidloff’s mail-in database system. *See* Ex. 1002 ¶¶ 90–96 (Mr. Schmandt testifying about the beneficial features of Riggsby and the combination with Heidloff).

We further find that RFC 5233’s disclosure that subaddressing provides detail that gives “extra meaning” to an email address and facilitates sorting of received email would have motivated a person of ordinary skill in the art to combine RFC 5233’s subaddressing teachings with the combination of Heidloff and Riggsby. *See* Ex. 1005, 1 (p. 2) (“Subaddressing is the practice of augmenting the local-part of an [RFC2822] address with some ‘detail’ information in order to give some extra meaning to that address.” (brackets in original)), 1–2 (p.2) (discussing sorting messages and delivering to particular mailboxes for a user based on the subaddress information). Furthermore, Riggsby explains that documents in a mail-in database can be organized by categories (Ex. 1004, 86 (p. 194)), underscoring that the keywords entered by the user in the natural language address of Heidloff, which “represent topics relating to corresponding shared content sources” (Ex. 1003, 3:17–19), are important to convey to the database. As Petitioner correctly points out (Pet. 27), any one keyword in Heidloff may trigger email forwarding under the “logical ‘OR’ approach,” so using the subaddressing to convey the keyword that triggered the match takes advantage of RFC 5233’s teachings to provide useful information to the database.

We further find that Riggsby's newsletter feature, which informs a user of new documents that are added to discussion databases in certain categories, would have improved Heidloff's system. Ex. 1004, 87 (p. 195), Fig. 7.6; *see* Pet. 35–36 (“Riggsby discloses an additional feature in which a user can ask to be notified in the event new messages are added within a specified ‘category’ of the database . . . .” (citing Ex. 1004, 87 (p. 195), Fig. 7.6)). Riggsby explains that the “newsletter process consists of automatic e-mails sent to notify you that documents of interest were added to the discussion that day” and that it “runs every night.” Ex. 1004, 87 (p. 195). We credit Mr. Schmandt's testimony that this feature is beneficial because it keeps users apprised of new documents of interest without requiring them to constantly check. Ex. 1002 ¶ 113. The daily frequency would also address Heidloff's concern of flooding users with emails. Ex. 1003, 1:22–27. Furthermore, we find that Riggsby's disclosure that a user can specify categories in which the user is interested in updates via the newsletter (Ex. 1004, 87 (p. 195)) teaches content tags (categories) that are associated with one or more users, as recited in claim 9.

*(3) Determination for “receiving an incoming message”*

Based on Petitioner's persuasive argument and evidence, summarized and addressed above, we determine that the step of “receiving an incoming message with a recipient address and a tag address comprising one or more content tags, each of the content tags associated with one or more users” would have been obvious to a person of ordinary skill in the art based on the asserted combination of prior art.

*c) “Identifying” and “adding”*

Claim 9 recites “identifying at least one of the content tags within the tag address and a recipient associated with the recipient address” and

“adding the recipient to the at least one content tag as one of the users.”

Petitioner argues that it would have been obvious that the content tag would be identified in the proposed combination so that the message can be categorized according to the tag. Pet. 40 (citing Ex. 1005, 2 (p.2); Ex. 1002 ¶ 121). Petitioner further relies on Low. Pet. 40–45. In particular, Petitioner argues that Low discloses using a single email address for multiple recipients in a conversation and adding a new recipient to the address associated with the conversation. Pet. 40–42 (citing Ex. 1006 ¶¶ 7, 56–67; Ex. 1002 ¶¶ 132–134). For example, Low discloses that “an email can be sent to a single email address, and all participants will be forwarded a copy of the email, once a discussion has been established.” Ex. 1006 ¶ 7.

Low also discloses adding new participants to the conversation:

The forward component 118 in processing an email addressed to the conversation address determines whether additional recipient addresses are included in the email, which are not already participants to the identified conversation (step 220). If so, the forward component 118 instructs the establishment component 114 to add the additional recipient addresses as participant addresses by storing them in the database 122 against the conversation (step 222).

Ex. 1006 ¶ 61.

Petitioner argues that applying Low’s teachings “would have predictably resulted in the Heidloff-Riggsby-RFC 5233 system [having] the added ability to identify an additional recipient in the incoming message and add that recipient to the group of users who will be notified of new messages in the category specified in the tag address (e.g. ‘Eclipse’).” Pet. 43 (citing Ex. 1002 ¶¶ 132–134). Petitioner contends that Low’s disclosure would have “provid[ed] perhaps the simplest and most convenient way for one user to add someone else as a group participant to be notified about ongoing

messages relating to a particular information ‘category’ – simply identify that person as an individual recipient within a message to be published to the associated group.” Pet. 44 (citing Ex. 1006 ¶ 66; Ex. 1002 ¶ 137).

Patent Owner argues that there is no recipient address in the envelope, as explained with respect to the “receiving an incoming message” step, and, therefore that there is no recipient to add to the content tag. PO Resp. 26–27; *see also* PO Resp. 34 (“[S]ince there is no recipient address in Facebook’s alleged combination, the combination is also unable to ‘identify[] a recipient associated with *the recipient address*.’” (brackets in original)). For the reasons discussed above in Section II.D.2.b.2.a, we disagree with Patent Owner’s argument that a recipient address is not received with the message. Claim 9 does not require the recipient address to be received in the envelope. Mr. Schmandt testifies that a recipient address “could be identified from either the message envelope, the message header, or some combination of the two (*e.g.*, an attempt to identify additional personal addresses in the envelope, followed by a subsequent attempt to identify additional personal addresses in the message header).” Ex. 1002 ¶ 135 n.2 (citing Ex. 1004, 212 (p. 715)). We credit this testimony because it is supported by Riggsby’s disclosure of agents that can automatically perform certain functions when new mail is received, including “chang[ing] the value of fields (such as, for example, the subject line) in incoming email.” Ex. 1004, 212 (p. 715). Furthermore, Dr. Martin testifies that communicating information in header fields was common, citing “examples of systems designed to reliably communicate information in message header fields from the message originator to the ultimate message recipients.” Ex. 2003 ¶ 78 (citing RFC 2369 (Ex. 1007) and RFC 2919 (Ex. 2011)). This testimony supports Mr. Schmandt’s position that a recipient address can be

identified in the header. Ex. 1002 ¶ 135 n.2. Thus, we find that the asserted combination of references teaches “identifying . . . a recipient associated with the recipient address.”

Patent Owner also argues that a person of ordinary skill in the art “would not be motivated to add users to shared content source categories without their permission and doing so would contradict Heidloff’s express purpose.” PO Resp. 27. According to Patent Owner, adding users to content tags without their permission would exacerbate the flooding problem that Heidloff seeks to avoid and also would be providing messages to users based on other users’ interests. PO Resp. 27–29 (citing Ex. 1003, 1:22–30, 1:57–60, 2:2–3; Ex. 2003 ¶¶ 133–135).

We acknowledge that there are downsides to Petitioner’s proposed combination, including that a user will be added to a category in which he or she may not be interested. But, “a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine.” *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006). “Instead, the benefits, both lost and gained, should be weighed against one another.” *Id.* (quoting *Winner Int’l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n.8 (Fed. Cir. 2000)). In Petitioner’s proposed combination, the flooding problem is alleviated by Riggsby’s newsletter service, which is how the user is notified of new documents and which runs every night. *See* Ex. 1004, 87–88 (pp. 195–96). Furthermore, just as a user may be added to a category in which he or she is not interested, as asserted by Patent Owner, Petitioner’s proposed combination may also apprise a user of information in which the user may have an interest. As Mr. Schmandt testifies, adding the recipient to the category

provides a compelling benefit because it allows the individual recipient of an initial message on a particular discussion topic or “category” to be automatically notified of subsequent messages on the same topic, which that person may very well be interested in based on the fact that he was specifically addressed by the creator of an earlier message on the topic.

Ex. 1002 ¶ 137. We find that this would have provided a person of ordinary skill in the art a reason to apply Low’s teachings of adding an email recipient to a topical conversation to the combination of Heidloff, Riggsby, and RFC 5233, which similarly deals with category-based discussions.

In the Sur-reply, Patent Owner argues that Petitioner’s reliance on Riggsby’s newsletter feature in the Reply is a new argument that was not made in the Petition with respect to the “adding” step and should be excluded. PO Sur-reply 13. According to Patent Owner, the Petition only mentions the newsletter feature in the discussion of the “delivering” step. PO Sur-reply 13.

We disagree that Petitioner’s reliance on the newsletter for the “adding” step is late and improper. In explaining how the asserted combination teaches “each of the content tags associated with one or more users,” which is recited in the “receiving” step,” Petitioner contends that “Riggsby discloses an additional feature in which a user can ask to be notified in the event new messages are added within a specified ‘category’ of the database . . . .” Pet. 35–36 (citing Ex. 1004, 87 (p. 195), Fig. 7.6). Petitioner reproduces Riggsby’s Figure 7.6 and argues that it “shows an example in which a user asked to be notified of new documents in the ‘**Exquisite Wine**’ and ‘**Vacation**’ categories.” Pet. 36 (citing Ex. 1004, 87–88 (pp. 19[5]–96); Ex. 1002 ¶¶ 117–118). These arguments expressly rely on the newsletter disclosure of Riggsby, even if Petitioner did not use that

word. The corresponding disclosure in Riggsby states the following: “The My Interest Profile link brings up your interest profile for this database, which specifies the kinds of documents to notify you about when they are added; *this is part of the newsletter service of the discussion database*. Figure 7.6 shows an interest profile.” Ex. 1004, 87 (p. 195) (emphasis added). Petitioner relies on the “newsletter” feature for other limitations of claim 9, as Patent Owner acknowledges. Pet. 50; *see also* PO Sur-reply 13 (citing Pet. 50). Because the Petition provides ample notice of Petitioner’s reliance on Riggsby’s newsletter feature, Petitioner’s arguments are not improper. Furthermore, for the reasons given above in Section II.D.2.b and elsewhere discussing Petitioner’s reasons to combine, we disagree with Patent Owner’s assertion that Petitioner “has not explained how the teachings of the different prior art references, including Riggsby’s nightly newsletter, would be combined to arrive at the claimed invention.” *See* PO Sur-reply 14.

Patent Owner contends that “Low’s conversation address bears no resemblance to the claimed content tag.” PO Resp. 32; *see also* PO Sur-reply 17 (arguing that “notifying a new participant of a ‘conversation address’ as described in Low is not the same as notifying a recipient that he/she has been added to a content tag”). We disagree and, instead, find persuasive Petitioner’s contention that a “conversation in Low is directly analogous to an information ‘category’ in Riggsby’s discussion database, as both provide a means for a group of users to exchange a series of messages over time, and be notified of new communications relating a particular topic or subject matter.” Pet. 43 (citing Ex. 1006 ¶ 7; Ex. 1002 ¶¶ 129, 133). Petitioner’s contention is consistent with Low’s disclosure that each conversation has a subject that is “the topic of the conversation.” Ex. 1006

¶ 37. Low’s topical conversations are similar to the mail-in discussion databases of Riggsby, in which documents (messages) are organized by category. Ex. 1004, 86 (p. 194) (description of categorizing documents in a database), 104 (p. 211) (description of mail-in databases).

We also disagree with Patent Owner’s argument that “[t]here is no reason to create a relationship between the two recipients [i.e., the database and the recipient] that survives beyond the email message, and to suggest otherwise relies on impermissible hindsight.” PO Resp. 31. Low expressly discloses creating a relationship between a recipient and a conversation on which the recipient is included. Ex. 1006 ¶ 61. Thus, Petitioner relies on the express disclosure of the references, not on hindsight.

Based on Petitioner’s persuasive argument and evidence, summarized and addressed above, we determine that steps of claim 9 reciting “identifying at least one of the content tags within the tag address and a recipient associated with the recipient address” and “adding the recipient to the at least one content tag as one of the users” would have been obvious to a person of ordinary skill in the art based on the asserted combination of prior art.

*d) “Displaying the incoming message”*

Claim 9 recites “displaying the incoming message to at least one of the users associated with the at least one content tag.” Petitioner argues that the asserted combination teaches this “because the message would be displayed based on its category (along with other messages in the same category).” Pet. 45–46 (citing Ex. 1004, 84, 86 (pp. 192, 194), Fig. 7.3; Ex. 1002 ¶ 144).

Patent Owner’s Response does not address Petitioner’s showing for the “displaying” step. *See* PO Resp.; *see also* Tr. 23:12–24:4 (Petitioner’s

counsel noting that the word “displaying” does not even appear in the Response). In its Sur-reply, Patent Owner argues that Petitioner has not shown that both the tag address and the recipient address are displayed because the envelope that contains one of the addresses in Petitioner’s combination is not displayed to the user. PO Sur-reply 2–3, 7. Patent Owner does not otherwise dispute Petitioner’s contention that the message is displayed. *See* PO Resp.; PO Sur-reply. For the reasons discussed above in Section II.C, we conclude that claim 9 does not require displaying the tag address and the recipient address.

Petitioner’s contentions for the displaying step are persuasive. Referring to its Figure 7.3 (not shown), Riggsby explains that “[e]ach document that contains identical information in the Category field is what allows it to become grouped for display purposes.” Ex. 1004, 86 (p. 194). Thus, documents in a certain category are displayed to users who desire to see documents in that category. Riggsby also discloses an interface for discussion databases that indicates whether a document has been opened, which shows that documents (messages in a mail-in database) are displayed. Ex. 1004, 84 (p. 192).

Based on Petitioner’s persuasive argument and evidence, summarized and addressed above, we determine that “displaying the incoming message to at least one of the users associated with the at least one content tag” would have been obvious to a person of ordinary skill in the art based on the asserted combination of prior art.

*e) “Delivering . . . an additional message”*

Claim 9 recites “delivering to the recipient an additional message comprising a notification that the recipient has been added to the at least one content tag, wherein the additional message further comprises a removal

button and the recipient is removed from the at least one content tag upon activating the removal button.” Petitioner argues that Low discloses sending a notification message to recipients who are added to an email conversation. Pet. 46–48 (citing Ex. 1006 ¶¶ 61–66; Ex. 1002 ¶¶ 145–147). In particular, Low discloses that, after a new recipient has been added to a conversation, “forward component 118 then instructs the send component 116 to generate a notification email for the new additional recipients to advise them of the conversation address, and this is sent to the new participants by the email server 106 (step 224).” Ex. 1006 ¶ 61. Petitioner argues that a person of ordinary skill in the art

would have been motivated to include this feature from Low because, under the proposed combination, the recipient could have been added to the notification group for a “category” by *someone else*, thus making it important to inform the recipient why he will now begin receiving messages about new messages in that “category.”

Pet. 48 (citing Ex. 1002 ¶ 146).

Petitioner further relies on RFC 2369 for including a “removal button” in the notification message. Pet. 48–51 (citing Ex. 1007, 2, 3, 7, 8 (pp. 2, 4–5, 11, 13); Ex. 1002 ¶¶ 151–156). RFC 2369 discloses an “unsubscribe” command that allows a user to be removed from a mailing list, and it explains that there can be an “Unsubscribe” button in a message. Ex. 1007, 3, 8 (pp. 4, 13). RFC 2369 explains that “Unsubscribe” is a “key command[] needed by almost every list.” Ex. 1007, 7 (p. 11). Petitioner argues that a removal button would have benefitted the combination because “the new recipient may have been added to the notification group for a ‘category’ by *someone else*, thus making it important to provide a way for

the recipient to opt out of receiving further messages.” Pet. 50–51 (citing Ex. 1002 ¶ 155).

Patent Owner argues that “Low’s conversation address bears no resemblance to the claimed content tag” and, therefore, that “notifying a new participant of the ‘conversation address’ as described in Low is not the same as notifying a recipient that he/she has been added to the claimed content tag.” PO Resp. 32 (citing Ex. 2003 ¶¶ 139–142). These arguments, however, address Low without appreciating Petitioner’s reliance on Low’s teachings “[i]n the context of the proposed combination.” *See* Pet. 47–48. As explained above in Section II.D.2.c, Low’s topical conversations are similar to Riggsby’s mail-in discussion databases organized by category, and Petitioner relies on Low’s teachings in combination with the teachings of Heidloff and Riggsby regarding shared content sources and mail-in databases. Pet. 42–45.

Patent Owner also argues that Low describes an email-based distribution system that causes the type of email flooding that Heidloff seeks to avoid, thus undermining the combination. PO Resp. 33 (citing Ex. 1003, 1:22–27, 2:9–13; Ex. 2003 ¶¶ 143–144). Petitioner, however, is not proposing that Low’s email conversations should be implemented in the combination. As discussed above in Section II.D.2.b.2.b, Riggsby already discloses sharing information using a nightly newsletter, which helps alleviate email flooding. Ex. 1004, 87 (p. 195).

Petitioner’s contentions for the delivering step are persuasive. We find that a person of ordinary skill in the art would have had reason to alert a user that the user has been associated with a category of documents in a mail-in database just as Low teaches alerting a user that the user has been added to a topical conversation. As Mr. Schmandt credibly testifies, because

the user was added by someone else, it would be “important to explain to the recipient why he or she will now begin receiving notification messages about new documents in that ‘category.’” Ex. 1002 ¶ 146. We also find that a person of ordinary skill in the art would have had reason to provide a removal button in the additional message so that the user can unsubscribe from receiving category notifications. RFC 2369 states that “Subscribe and Unsubscribe are the key commands needed by almost every [email distribution] list.” Ex. 1007, 7 (p. 11); *see* Pet. 51 (discussing this disclosure). As Petitioner points out (Pet. 50), Low discloses “allow[ing] a user to remove himself from a conversation” (Ex. 1006 ¶ 112). Providing a removal or unsubscribe button is consistent with Riggsby’s disclosure that a user can manage the categories about which to be notified through the “Interest Profile.” Ex. 1004, 87 (p. 195) (Fig. 7.6); *see* Pet. 50 (citing discussion of Figure 7.6).

Based on Petitioner’s persuasive argument and evidence, summarized and addressed above, we determine that “delivering to the recipient an additional message comprising a notification that the recipient has been added to the at least one content tag, wherein the additional message further comprises a removal button and the recipient is removed from the at least one content tag upon activating the removal button” would have been obvious to a person of ordinary skill in the art based on the asserted combination of prior art.

*f) “Performed by a . . . computer”*

Claim 9 recites “wherein the steps are performed by a suitably-programmed computer.” Petitioner argues that it would have been obvious that the steps of claim 9 would have been performed by one or more computers in the proposed combination. Pet. 51–52 (citing Ex. 1002 ¶ 157;

Ex. 1003, 5:19–56). Patent Owner does not dispute this contention. Petitioner’s contention is persuasive. *See, e.g.*, Ex. 1003, 5:19–56 (discussing that the Heidloff teachings are implemented by computer).

Based on Petitioner’s persuasive argument and evidence, we determine that performing the steps of claim 9 on a computer would have been obvious to a person of ordinary skill in the art based on the asserted combination of prior art.

*g) Conclusion for Claim 9*

We have considered the full trial record, and, for the reasons discussed above and based on Petitioner’s contentions and evidence, we conclude that the subject matter of claim 9 would have been obvious to a person of ordinary skill in the art based on the combined teachings of Heidloff, Riggsby, RFC 5233, Low, and RFC 2369.

*3. Dependent Claim 10*

Claim 10 recites, “[a] method according to claim 9, further comprising: identifying in the tag address of the incoming message one or more additional content tags associated with one or more different users; and adding the different users associated with the additional content tags to the at least one content tag.”

Petitioner argues that RFC 5233 teaches or suggests that there can be multiple instances of “detail” information included in subaddressing because RFC 5233 discloses that the separator character (e.g., “+”) may occur more than once. Pet. 53 (citing Ex. 1005, 2–3 (pp. 3–4); Ex. 1002 ¶ 183). Petitioner argues that it would have been obvious to include multiple content tags in the tag address based on Riggsby’s disclosure that a single message may belong to multiple categories. Pet. 54 (citing Ex. 1004, 86 (p. 194), Fig. 7.4; Ex. 1002 ¶¶ 183). Petitioner also argues that a message in Heidloff

could relate to two different keywords, such as “Eclipse” and “smart client,” and that it would be beneficial to distinguish such a message from one that relates only to “Eclipse.” Pet. 55 (citing Ex. 1003, 5:6–14; Ex. 1002 ¶ 185). Petitioner argues that users associated with one of the keywords (e.g., “smart client”) may be interested in any discussion of “Eclipse” as well because both are keywords associated with the same message, which would have motivated a person of ordinary skill in the art to add users associated with one keyword (tag) to another tag. Pet. 56–57.

Patent Owner argues that subscribing all users associated with any tag to all other tags in a message “could quickly escalate to hundreds or thousands of users being added to different tags, and result in hundreds or thousands of unwanted emails,” which would cause the email flooding that Heidloff seeks to avoid. PO Resp. 36 (citing Ex. 1003, 1:22–27; Ex. 2003 ¶¶ 149–150); *see also* PO Resp. 35 (“Facebook’s alleged combination system results in an exponential increase in unwanted email, which is the exact opposite of Heidloff’s stated intention.”).

We disagree with Patent Owner’s position that the possibility of email flooding would deter a person of ordinary skill in the art from making the proposed combination. As discussed above in §§ II.D.2.b.2.b and II.D.c, Riggsby’s nightly newsletter avoids the flooding problem that Heidloff identifies. Riggsby explains that the “newsletter service runs every night in a discussion database and searches interest profiles for items to compile and mail as a newsletter.” Ex. 1004, 87–88 (pp. 195–196). The newsletter notifies users “that documents of interest were added to the discussion that day.” Ex. 1004, 87 (p. 195). Riggsby’s “My Interest Profile . . . specifies the kinds of documents to notify you about when they are added.” Ex. 1004, 87 (p. 195). In Petitioner’s proposed combination, a user may be apprised of

more documents of interest via the nightly newsletter, but there would not be “an exponential increase in unwanted email” in a user’s inbox, as Patent Owner asserts. *See* PO Resp. 35.

Petitioner’s contentions for claim 10 are persuasive. We find that a person of ordinary skill in the art would have been motivated to associate users with content tags based on their association with other content tags of the message, which may indicate an interest in similar matters, thus benefiting the user by apprising the user of potentially interesting topics. *See* Pet. 56–57; Ex. 1002 ¶ 187. As Petitioner points out (Pet. 54), Riggsby discloses that a document can belong to multiple categories, such as “Dark Wine” and “Exquisite Wine.” Ex. 1004, 86 (p. 194), Fig. 7.4. Similarly, multiple keywords in Heidloff, such as “Eclipse” and “smart client,” could trigger forwarding an email to the shared content source. Ex. 1003, 5:6–14 (disclosing that “a shared content source with an email address of ‘RCPTeamroom@us.ibm.com’ may have previously registered one or more of the keywords ‘RCP’, ‘smart client’ and ‘Eclipse,’” such that “at least one match” would result in forwarding the email to the shared content source); *see* Pet. 55 (discussing this disclosure). Petitioner’s proposed combination, therefore, would provide the benefit of apprising users of other documents that may be of interest to them. For example, a sender of an email may include keywords “Eclipse” and “smart client,” as disclosed in Heidloff. Ex. 1003, 5:3–14. As Petitioner points out, a user who is associated with “smart client” discussions may also have an interest in “Eclipse” discussions, based on the relationship identified by the sending user. *See* Pet. 56–57.

We have considered the full trial record, and, based on Petitioner’s persuasive argument and evidence, summarized and addressed above, we

conclude that the subject matter of claim 10 would have been obvious to a person of ordinary skill in the art based on the asserted combination of prior art.

#### *4. Dependent Claims 11–16*

Petitioner argues that the subject matter of dependent claims 11–16 would have been obvious to a person of ordinary skill in the art based on the combined teachings of Heidloff, Riggsby, RFC 5233, Low, and RFC 2369. Pet. 57–68.

Claim 11 recites a “method according to claim 10, further comprising: displaying to the at least one user one or more of the content tags that the at least one user is associated with; and removing the at least one user from one of the displayed content tags upon receiving a user command.” Petitioner argues that Riggsby’s disclosure of a user interface through which a user can specify categories of interest teaches this subject matter. Pet. 57–58 (citing Ex. 1004, 87–88 (pp. 195–96), 206–20 (pp. 709–23), Fig. 7.6; Ex. 1002 ¶¶ 179, 188–189).

Claim 12 recites a

method according to claim 9, further comprising: displaying to the at least one user all of the content tags in the tag address of the displayed message; and altering the content tags in the tag address of the displayed message upon receiving a user command, comprising at least one of: removing one of the displayed content tags from the displayed message; and adding a new content tag to the displayed message.

Petitioner cites Riggsby’s display in Figure 7.3 (not shown) and argues that “[t]his display provides ‘all of the content tags in the tag address of the displayed message,’ because it would show the incoming message (along with other messages) alongside the category or categories to which it is

assigned.” Pet. 59–60 (citing Ex. 1004, 86 (p. 194), Fig. 7.3). Petitioner argues that Riggsby’s Figure 7.4 (not shown), which is captioned “Categorizing a document,” discloses a dialog box through which content tags (categories) can be added or removed from a document. Pet. 60–61 (citing Ex. 1004, 86–87 (pp. 194–95), Fig. 7.4); *see* Ex. 1004, 87 (p. 195) (“Using this dialog box, you can change the category to another that already exists in the Category field of one of the other documents, or you can add a new word or phrase to use as a category.”).

Claim 13 recites a

method according to claim 9, further comprising: storing the incoming message in a database associated with the at least one content tag; and retrieving the stored message based on the at least one content tag associated with the message upon receiving a request from the at least one user.

Petitioner argues that the combination teaches this subject matter because the mail-in discussion database of Riggsby stores messages and displays them to users based on category, as depicted in Figure 7.3 (not shown). Pet. 62–63 (citing Ex. 1004, 86–87 (pp. 194–95), Figs. 7.3, 7.4; Ex. 1003, 1:10–14, 3:58–64, 4:18–21; Ex. 1002 ¶¶ 165–166, 168)

Claim 14 recites a “method according to claim 9, further comprising: receiving one or more additional messages with tag addresses comprising the at least one content tag; and displaying a list of all of the received messages associated with the at least one content tag to the at least one user.” Petitioner argues that the asserted combination teaches this subject matter because messages of the same category received by Riggsby’s mail-in database would be displayed to the user via an interface such as that of Figure 7.3 (not shown). Pet. 63–65 (citing Ex. 1004, 86 (p. 194), Fig. 7.3; Ex. 1002 ¶¶ 170–171).

Claim 15 recites a “method according to claim 9, further comprising: delivering the incoming message to all of the users associated with the at least one content tag.” Petitioner argues that the asserted combination teaches this subject matter because Riggsby’s database will notify users of new messages for a category to which they are subscribed and the users can display those messages as shown in Figure 7.3. Pet. 65–66 (citing Ex. 1004, 84, 86–88 (pp. 192, 194–96), Fig. 7.3; Ex. 1002 ¶¶ 173–174).

Claim 16 recites a “method according to claim 9, further comprising: placing the incoming message into a digest associated with the at least one user; and delivering the digest to the at least one user upon a satisfaction of an event trigger associated with the digest.” Petitioner relies on Riggsby’s newsletter features to teach the recited “digest” and argues that the newsletter is sent based on “an event trigger” (e.g., time of day) because it is sent nightly. Pet. 66–68 (citing Ex. 1004, 87–88, 206–20 (pp. 195–96, 709–23), Figs. 7.6, 25.6; Ex. 1002 ¶¶ 176–179).

Patent Owner does not raise additional arguments for these claims. We have reviewed Petitioner’s arguments and evidence, summarized above, and we find them persuasive. Therefore, having considered the full record developed during the trial, we conclude that claims 11–16 are unpatentable as obvious over the combined teachings of Heidloff, Riggsby, RFC 5233, Low, and RFC 2369.

*E. Obviousness over  
Heidloff, Riggsby, RFC 5233, Low, RFC 2369, and Hazel  
(Claims 9–16)*

Petitioner asserts that claims 9–16 also are unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Heidloff, Riggsby, RFC 5233, Low, RFC 2369, and Hazel. Pet. 69–70. Petitioner argues that Hazel

shows the knowledge of a person of ordinary skill in the art, but Petitioner expressly includes Hazel in this ground in case Patent Owner “argue[s] that some particular disclosure from Hazel cited by Mr. Schmandt goes beyond an ordinarily skilled artisan’s background knowledge.” Pet. 69. Patent Owner does not make this argument and indeed relies on Hazel in its briefing. *See* PO Resp. 15–16; PO Sur-reply 3. Patent Owner characterizes Hazel as “a selection of pages from a book that describes how Internet mail works at a high level.” PO Resp. 12. This is the type of knowledge that a person of ordinary skill in the art would have possessed. *See* Section II.B above (determining that the person of ordinary skill in the art would have had “two years of work experience in the design and implementation of *electronic messaging* and content distribution and management systems” (emphasis added)). The information provided by Hazel is properly considered as part of the background knowledge of the ordinarily-skilled artisan. *See Koninklijke Philips N.V. v. Google LLC*, 948 F.3d 1330, 1337 (Fed. Cir. 2020) (“[T]he inquiry into whether any ‘differences’ between the invention and the prior art would have rendered the invention obvious to a skilled artisan necessarily depends on such artisan’s knowledge.”). Thus, a separate ground including Hazel is not necessary, but the claims are unpatentable based on this ground for the same reasons as discussed above in Section II.D.

### III. CONCLUSION<sup>9</sup>

For the reasons discussed above, we determine that Petitioner has proven, by a preponderance of the evidence, that claims 9–16 of the '190 patent are unpatentable, as summarized in the following table:

| <b>Claim(s)</b>            | <b>35<br/>U.S.C. §</b> | <b>Reference(s)/Basis</b>                               | <b>Claims<br/>Shown<br/>Unpatentable</b> | <b>Claims<br/>Not Shown<br/>Unpatentable</b> |
|----------------------------|------------------------|---------------------------------------------------------|------------------------------------------|----------------------------------------------|
| 9–16                       | 103                    | Heidloff, Riggsby,<br>RFC 5233, Low,<br>RFC 2369        | 9–16                                     |                                              |
| 9–16                       | 103                    | Heidloff, Riggsby,<br>RFC 5233, Low,<br>RFC 2369, Hazel | 9–16                                     |                                              |
| <b>Overall<br/>Outcome</b> |                        |                                                         | 9–16                                     |                                              |

### IV. ORDER

Accordingly, it is

ORDERED that claims 9–16 of the '190 patent have been shown to be unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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<sup>9</sup> Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

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