

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,
Petitioner,

v.

STERLING COMPUTERS CORPORATION,
Patent Owner.

IPR2025-00430
Patent 7,716,217 B2

Before KARL D. EASTHOM, AMBER L. HAGY, and BACH V. HOANG,
Administrative Patent Judges.

HOANG, *Administrative Patent Judge.*

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

On January 31, 2025, Meta Platforms, Inc. (“Petitioner”) filed a petition requesting an *inter partes* review of claims 1–3, 5–9, 13–15, 18–19, and 22 of U.S. Patent No. 7,716,217 B2 (Ex. 1001, “the ’217 Patent”). Paper 2 (“Pet.”). Sterling Computers Corporation (“Patent Owner”) timely filed a Preliminary Response. Paper 10 (“Prelim. Resp.”). With our authorization, Petitioner filed a pre-institution reply (Paper 12, “Prelim. Reply”), and Patent Owner filed a pre-institution sur-reply (Paper 13, “Prelim. Sur-reply”).

An *inter partes* review may not be instituted unless “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a).

Having reviewed the parties’ papers and the evidence of record, we determine that Petitioner has shown a reasonable likelihood it would prevail in establishing the unpatentability of at least one challenged claim. Accordingly, we institute an *inter partes* review on all challenged claims and on all grounds raised in the Petition. See 37 C.F.R. § 42.108(a) (“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”).

A. *Real Parties in Interest*

Petitioner identifies itself, Meta Platforms, Inc., as the real party in interest. Pet. 78. Patent Owner identifies itself, Sterling Computers Corporation, as the real party in interest. Paper 5, 2 (Patent Owner’s Updated Mandatory Notices).

B. Related Matters

The parties indicate that the '217 Patent has been asserted in two district court lawsuits:

- *Sterling Computers Corporation v. X Corp.*, No. 1:24-cv-00552 (W.D. Tex. May 22, 2024).
- *Sterling Computers Corporation v. Meta Platforms, Inc.*, No. 1-24-cv-00551 (W.D. Tex. May 22, 2024).

Pet. 78; Paper 7, 2.

The '217 Patent is the subject of one other petition for *inter partes* review: IPR2025-00299 (filed by X Corp.) (*inter partes* review instituted June 10, 2025). Paper 5, 2.

C. Asserted References

Petitioner's unpatentability challenges rely on three references:

- Dumaïs et al., US 2007/0016553 A1, published January 18, 2007. Ex. 1005 ("Dumaïs").
- Rose et al., US 6,202,058 B1, filed April 25, 1994, issued on March 13, 2001. Ex. 1006 ("Rose").
- Bieganski et al., US 6,334,127 B1, filed July 17, 1998, issued December 25, 2001. Ex. 1007 ("Bieganski").

D. Testimonial Evidence

Petitioner submits a declaration from Edward A. Fox, Ph.D. Ex. 1003.

Patent Owner submits declarations from Dr. Latifur Khan (Ex. 2001) and Justin Marston (Ex. 2003).

E. The Petition's Asserted Grounds

Petitioner asserts the following grounds of unpatentability (Pet. 2):

Claims Challenged	35 U.S.C. ¹ §	Reference(s)/Basis
1–3, 5–9, 13–15, 18, 19, 22	103(a)	Dumais
1–3, 5–9, 13–15, 18, 19, 22	103(a)	Rose
1–3, 5–9, 13–15, 18, 19, 22	103(a)	Rose, Bieganski

F. The '217 Patent (Ex. 1001)

The '217 Patent relates to techniques for determining the relevance of electronic content, e.g., an email, received by a user. Ex. 1001, 3:34–51, code (57). That relevance determination may be used, for example, in an email application so that a user may browse through received emails that are sorted or ranked according to their relevance. *Id.* at 7:35–42. Or, if the user searches their emails, the search results display a relevance score for the resulting emails. *Id.* at 7:42–50.

In the '217 Patent, the relevance of electronic content with respect to a particular user is determined based on a number of factors including the importance of the sender of the electronic content, the user's actions on the electronic content (e.g., the user replies to the email), or certain *other users'* actions on the electronic content (e.g., other users delete the email).

¹ The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011), revised 35 U.S.C. §§ 102 and 103 effective March 16, 2013. Because the application for the challenged patent was filed before March 16, 2013, the pre-AIA version of § 103 applies. Neither party argues that the outcome of this case would differ based on applying the pre-AIA or post-AIA versions of these laws.

Id. at 3:36–42, 8:34–52, *see also id.* at 11:4–13:20. The other users considered in the relevance determination may be identified as part of a “cognate group” of other users who are “similar” to the user. *Id.* at 25:37–39, 35:65–36:6; *see also id.* at 43:20–30. The ’217 Patent discloses various approaches to identify a cognate group, including “role or group based; collaborative filtering; fingerprinting; cluster models; search based methods; frequency analysis; and importance value correlation.” *Id.* at 43:30–35; *see also id.* at 43:28–46:60.

G. Challenged Claims

Petitioner challenges claims 1–3, 5–9, 13–15, 18, 19, and 22 of the ’217 Patent. Of these, claims 1, 6, and 7 are independent, and for purposes of this Decision, claim 1 is representative. Claim 1 is reproduced below with Petitioner’s limitation identifiers for discussion purposes:

1[pre] A computer-implemented system for determining a relevance score of a piece of electronic content sent from a sender to a user, the relevance score determined with respect to the user, the computer-implemented system comprising:

1[a] a computer processor; and

1[b] a computer-readable storage medium storing computer program modules configured to execute on the computer processor, the computer program modules comprising:

1[c] a monitoring module configured to track actions by a plurality of users associated with an application for managing electronic content;

1[d] a first relevance measurement module coupled to the monitoring module and configured to determine a first measure of relevance of the piece of electronic content based at least in part on one or more actions of the user on the piece of electronic content;

1[e] a second relevance measurement module coupled to the monitoring module and configured to:

1[f] identify at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user, and

1[g] determine a second measure of relevance of the piece of electronic content as based at least in part on one or more measures derived from the group consisting of:

a local importance describing an importance of the sender to the user,

a global importance describing an importance of the sender within an organization with which the plurality of users are associated,

a content relevance determined responsive to content of the piece of electronic content, and

one or more actions on the piece of electronic content of the at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user; and

1[h] a relevance analysis module configured to determine the relevance score of the piece of electronic content sent from the sender to the user, the relevance score being determined based at least in part on the first determined measure of relevance and on the second determined measure of relevance.

Ex. 1001, 47:25–67; Pet. ix–x.

II. ANALYSIS

A. *Legal Standards*

“In an *inter partes* review, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion never shifts to the patent owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

The legal 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) when in evidence, objective evidence of nonobviousness.² *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). One seeking to establish obviousness based on more than one reference also must articulate sufficient reasoning with rational underpinnings to combine teachings. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

B. *Level of Ordinary Skill in the Art*

Petitioner asserts that a person of ordinary skill in the art (“POSITA”) “would have had a bachelor’s degree in electrical engineering, computer engineering, computer science, or a similar field, and two to three years of

² The current record does not include allegations or evidence of objective indicia of nonobviousness.

experience with systems estimating relevance for various types of content” and further that, “[m]ore work experience could substitute for education and vice versa.” Pet. 10 (citing Ex. 1003 ¶¶ 20–23).

Patent Owner asserts that the

person of ordinary skill in the relevant art — computer science — would have at least a bachelor’s degree in electrical or computer science/engineering, or a related field, with at least six years of experience in the design or implementation of content management and analysis systems or a master[’]s degree in electrical or computer science/engineering, or a related field, with at least two years of experience in the design or implementation of content management and analysis systems. A higher level of education or skill can make up for less experience, and vice versa.

Prelim. Resp. 12 (citing Ex. 2001 ¶ 14).

Patent Owner’s description is more restrictive than that of Petitioner because it requires the POSITA to have more experience or education in the relevant field. Based on the current record and for the purposes of this Decision, we adopt Petitioner’s proposed level of skill. Petitioner’s proposed definition generally comports with the level of skill necessary to understand and implement the teachings of the ’271 Patent and the asserted prior art. *Cf. Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (noting that the prior art itself may reflect an appropriate level of skill in the art).

Although we adopt Petitioner’s definition of a person of ordinary skill in the art, our determination regarding Petitioner’s challenge does not turn on the differences between Petitioner’s and Patent Owner’s definitions, and our conclusions would be the same under either definition.

To the extent the level of ordinary skill in the art is in dispute or either party contends makes a material difference in the obviousness analysis, the parties should brief their respective positions in this regard during trial.

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). Under the principles set forth by our reviewing court, the “words of a claim ‘are generally given their ordinary and customary meaning,’” as would be understood by a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

For the purposes of this decision, we address claim construction issues raised by the parties’ briefing. See Pet. 10–16; Prelim. Resp. 12–25; Prelim. Reply 4–7; Prelim. Sur-reply 4–7.

Aside from the constructions we address, it is not necessary to address the construction of any other claim terms or phrases at this stage. See *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe 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))). During the trial, the parties should directly address any claim construction adopted in this Decision if the party contends we should not adopt that construction in the final written decision. Moreover, if Patent Owner believes the Petition is premised on an understanding of a claim term or phrase that is erroneous in a manner material to this proceeding, then it

should specifically identify the claim construction dispute, articulate its proposed construction, and support its position with argument and evidence.

1. Means Plus Function Treatment of “module”

The parties dispute whether the recitation in claims 1 and 6 of four “computer program modules comprising” (1) “a monitoring module,” (2) “a first relevance measurement module,” (3) “a second relevance measurement module,” and (4) “a relevance analysis module” (collectively, “module limitations”) invoke 35 U.S.C. § 112 ¶ 6 and should be treated as means-plus-function limitations. For the purposes of institution, and on the record before us, we preliminarily agree with Patent Owner that these limitations do not invoke § 112 ¶ 6.

Petitioner acknowledges that the module limitations are entitled to the presumption that they do not invoke § 112 ¶ 6, but that presumption is overcome and the module limitations should be treated as means-plus-function limitations. Pet. 11. Petitioner states that “module” is a well-known nonce word that can operate as a substitute for “means.” *Id.* (citing *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1350 (Fed. Cir. 2015); MPEP § 218(I)(A)). Petitioner states the Specification describes that “a ‘module’ may be any program, circuitry, logic, and/or functionality implemented in either software and/or hardware” and acknowledges that “any combination of the modules shown therein, may run on any type of computer system.” *Id.* (citing Ex. 1001, 6:36–37, 6:56–66).

Although the Specification broadly defines “module,” the language of the claims better supports Patent Owner’s argument that the computer program module limitations connote structure in the form of computer

software instructions or code. Prelim. Resp. 14 (citing Ex. 2001 ¶ 24).

Specifically, claim 1 recites

a computer-readable storage medium storing computer program modules configured to execute on the computer processor, the computer program modules comprising... a monitoring module... a first relevance measurement module... a second relevance measurement module... and a relevance analysis module.

Ex. 1001, 47:30–32. And, claim 6 recites

the computer-program product having a computer-readable storage medium having computer program instructions encoded thereon comprising... a monitoring module... a first relevance measurement module... a second relevance measurement module... and a relevance analysis module.

Id. 48:19–51. That language suggests that the module limitations are software instructions or code because the modules are defined as “computer program modules” or “computer program instructions.” *Id.* at 47:32, 48:20–21. Moreover, the claims recite that the modules are stored in a computer-readable storage medium and are instructions to be executed by a processor, further suggesting the modules are software instructions or code. *Id.* at 47:30–32, 48:16–21. The testimony of Dr. Kahn, which we credit for institution purposes, supports that understanding; Dr. Kahn states a POSITA would understand that “‘computer program modules’ stored on a ‘computer-readable storage medium’ refers to software instructions or code.” Ex. 2001 ¶ 24.

Furthermore, the computer program module limitations are undisputedly coupled with respectively recited functions. See Pet. 11–16 (identifying corresponding functions for each recited module). Dr. Kahn testifies that the POSITA would understand the recited functions can be performed by existing or off-the-shelf systems and that the functions recited

explain how to engineer, build, or implement the modules using known and available techniques. Ex. 2001 ¶¶ 25–35. For institution purposes, we credit Dr. Khan’s testimony and determine that a POSITA would have understood the module limitations connote structure. *See Dyfan, LLC v. Target Corp.*, 28 F.4th 1360, 1369 (Fed. Cir. 2022) (“[B]ecause the recited functions can be performed by conventional off-the-shelf software, a person of ordinary skill in the art would have understood the alleged means-plus-function ‘code’ limitations in the asserted claims to connote structure.”) (citing *Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1008 (Fed. Cir. 2018)); *WSOU Invs. LLC v. Google LLC*, No. 2022-1063, 2023 WL 6889033, at *5 (Fed. Cir. Oct. 19, 2023) (“‘[C]omputer program code,’ when combined with a description of what the code is intended to accomplish, convey definite structure to the ordinarily skilled artisan.”).

Accordingly, for institution purposes, we conclude that the computer program module limitations recited in claims 1 and 6 are not written in means-plus-function format because they would have connoted sufficiently definite structure to persons of ordinary skill in the art.

Petitioner also asserts § 112 ¶ 6 is invoked by “a content presentation module,” as recited in dependent claims 2 and 13, and “a search module,” as recited in dependent claims 3 and 14. Pet. 15–16; *see* Ex. 1001, 48:2, 48:7, 50:1, 50:7. Those claims depend from claims 1 or 6 and we apply the same reasoning to determine, for institution purposes, that the terms “a content presentation module” and “a search module” also do not invoke § 112 ¶ 6.

We acknowledge that Petitioner has not had an opportunity to directly address Dr. Kahn’s testimony and present its own competing evidence at this stage; Petitioner has the opportunity to do so during trial.

2. *Markush Grouping of Alternatives*

Limitation 1[g] recites:

determine a second measure of relevance of the piece of electronic content as based at least in part on one or more measures derived from the group consisting of:

a local importance . . .

a global importance . . .

a content relevance . . .

one or more actions on the piece of electronic content[.]

Ex. 1001, 47:47–58. Petitioner asserts the claim language signals a Markush group listing alternatively useable members. Pet. 20–21 (citing *Gillette Co. v. Energizer Holdings, Inc.*, 405 F.3d 1367, 1372 (Fed. Cir. 2005); *Abbot Lab’ys v. Baxter Pharm. Prod., Inc.*, 334 F.3d 1274, 1281 (Fed. Cir. 2003) (explaining that the listing of specified alternatives within a claim is referred to as a Markush group or Markush grouping)). That is, Petitioner asserts that the claim requires only one of “a local importance,” “a global importance,” “a content relevance,” or “one or more actions on the piece of electronic content.” *See id.*

We adopt Petitioner’s construction, which Patent Owner does not dispute at this stage in the proceeding. *See* Prelim. Resp. The claimed determination is “based at least in part on *one* or more measures derived from the group” members listed. As such, the claim language is clear that only one member of the group, i.e., one of “a local importance . . . a global importance . . . a content relevance . . . and one or more actions on the piece of electronic content,” is required to meet the claim. Independent claims 6 and 7 recite similar limitations as claim 1, and for purposes of institution, we

adopt Petitioner’s claim construction for those similar limitations.
See Ex. 1001, 48:35–46, 49:1–11.

3. *“identify at least one other of the plurality of users
that is a recipient . . . and that is cognate”*

Limitation 1[f] of claim 1 recites “identify at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user.” Ex. 1001, 47:43–45. Within that limitation, the parties dispute the terms “a recipient” and “cognate.” Prelim. Sur-reply 4–7; Prelim. Reply 4–7. We address each term in turn, below.

(1) *“a recipient”*

Patent Owner argues “a recipient” should be construed as “a specific type of user – i.e., a user that has **received** a piece of electronic content **sent** from a **sender**.” Prelim. Resp. 24; Prelim. Sur-reply 4. Petitioner counters that “the plain and ordinary meaning of a recipient is someone who receives the content by any means (e.g., access control).” Prelim. Reply 4. Petitioner further asserts we need not construe this term because its challenges satisfy the claim under either party’s construction. *Id.* at 5–6.

At this stage in the proceeding, it is not necessary to construe this term. As discussed below, even under Patent Owner’s construction, this limitation is met by at least one of Petitioner’s challenges.

(2) *“cognate”*

Patent Owner argues that, to be “cognate to the user,” the other user must (1) receive content which the user has also received, and (2) the other user’s actions on that content must be tracked in order to determine the content’s relevance. See Prelim. Resp. 37 (“Every claim requires that the

system ‘identify’ a ‘cognate’ ‘user’ **that is also** ‘a **recipient** of **the** piece of electronic **content**’ . . . so that the system can ‘determine ... relevance’ based on monitored ‘actions on the ... content’ by the other ‘cognate’/‘recipient’ user.”) (citations omitted); Prelim. Sur-reply 7.

Petitioner disagrees with Patent Owner’s requirements and argues the claim “does not require identifying cognate users by analyzing past user actions or user identification as part of ‘determining a relevance score.’” Prelim. Reply 6.

At this stage in the proceeding, we determine the claim language and the Specification better support Petitioner’s interpretation, which we adopt for institution purposes.

Turning to the claim language, Patent Owner supports its construction by splicing together different portions of the claim to rearrange and remove relevant claim limitations and context. Patent Owner’s first requirement that, for the other user to be “cognate to the user,” the other user must receive the same content as the user misreads the claim. The relevant limitation more fully recites “identify at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user.” The plain reading of the claim requires that the identified other user (a) receives the same content as the user and, separate from that, (b) is cognate to the user. That is, receiving content is a condition for identifying the other user, not a condition for being cognate.

Patent Owner’s second requirement, that the other user’s actions on that content must be tracked in order to determine the content’s relevance relies on an optional feature recited in limitation 1[g]. Even assuming that option suggests a particular manner to identify a cognate other user, limitation 1[g] is an alternatively recited member of a Markush group and,

therefore, is not necessarily required to meet the claim, as discussed above. The other alternatively recited members recited in limitation 1[g] are not directed to the other user's actions, and, instead, determine relevance based on the sender or the contents of the electronic content. Ex. 1001, 43:51–57. As such, a plain reading of the claim language does not support Patent Owner's interpretation.

Furthermore, the Specification does not support Patent Owner's construction. The Specification states that a cognate group of users can be determined using many different approaches. See Ex. 1001, 43:30–37. While some of those approaches track similar user actions, they do not necessarily track actions on the same content as the electronic content received by the user and they do not necessarily track actions in order to determine a relevance score. For example, the cluster model approach identifies users who perform similar actions such as “users who reply frequently, who forward frequently, who never delete mails, [or] who send mails to large groups.” *Id.* at 44:37–45. In another example, a “role or group based” approach identifies users who are cognate to each other (“cognate entities”) simply on the basis of the users' similar jobs as human resources employees who work in form processing. Ex. 1001, 14:45–58, 43:38–46:60. As such, the Specification does not limit “cognate” in the manner Patent Owner asserts.

Accordingly, we do not adopt Patent Owner's construction, which limits the claim such that, to be “cognate to the user,” the identified other user must (1) receive content which the user has also received, and (2) the other user's actions on that content must be tracked in order to determine the content's relevance.

Independent claims 6 and 7 recite similar limitations as claim 1 and we construe those limitations similarly.

D. Obviousness over Rose

Petitioner contends that the subject matter of claims 1–3, 5–9, 13–15, 18, 19, and 22 would have been obvious over Rose. Pet. 2, 44–66. Patent Owner argues that Petitioner’s showing is insufficient, focusing its arguments on limitations recited in claim 1. Prelim. Resp. 38–48.

We have considered the parties’ arguments and the evidence presented at this stage, and we address them in the context of representative claim 1. For the reasons explained below, we determine that Petitioner has demonstrated a reasonable likelihood that it will prevail in showing that the subject matter of claim 1 would have been obvious over Rose, notwithstanding Patent Owner’s arguments to the contrary.

1. Summary of Rose (Ex. 1006)

Rose describes a system that presents ranked information to a user based on a predicted degree of relevance to the user. Ex. 1006, 2:25–28. For example, in an email system, messages particularly pertinent to a user’s interests are highly ranked while junk mail is given a low ranking. *Id.* at 4:40–44; *see id.* Fig. 3. Rose considers two factors when predicting a user’s interest in a particular piece of information: the first factor is based on the similarity between a document vector and the user’s profile vector, and the second factor is based on correlating indications provided by other users. *Id.* at 6:51–7:6.

The first factor for predicting a user’s interest in a specific document, i.e., a piece of information, considers the similarity between the document’s

vector and the user's profile vector. *Id.* at 6:51–58. Figure 5B, reproduced below, is a graph showing two-dimensional arrows representing a user profile vector and document vectors in a two-term space. *Id.* at 3:7–8; *see also id.* at 6:53–56.

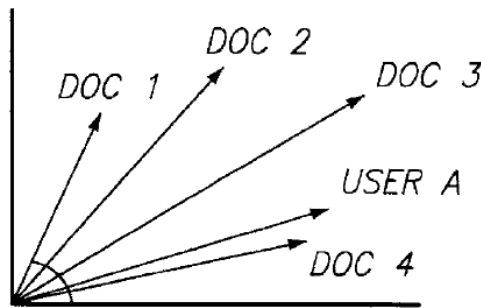


FIG. 5B

In Figure 5B, USER A is a user profile vector that represents a user's profile, and DOC 1–DOC 4 are document vectors that represent documents signified by the user to be of interest. *See id.* at 6:36–58. For example, a user indicates a document is of interest to the user through feedback in the form of a “thumbs-up” icon. *Id.* at 5:15–30; *see also id.* at Fig. 4. From that user's indication of interest in the document, the user's profile vector, which is part of the user's profile, is modified to reflect the user's interest in the document's contents, e.g., significant terms in the document. *Id.* at 6:36–43. Document vectors for respective documents are created based upon attributes, e.g., the content, of the respective document. *Id.* at 6:6–9, 6:17–19, 6:26–35. Rose predicts how relevant a document is to a user based on the similarity between a user's profile vector and the document's vector, e.g., the angle between those vectors as shown in Figure 5B. *Id.* at 6:51–58.

The second factor for predicting a user's interest in a specific document is based on other users' indications. For example, where another user, correlated to the user, favored the specific document, the document is

deemed to be of more interest to the user. *Id.* at 6:59–61, 7:25–33. Rose states that both factors are considered when predicting a user’s likely interest in a particular piece of information. *Id.* at 6:50–53, 6:59–61.

2. *Independent Claim 1*

Below, we address the limitations recited in claim 1 and focus our discussion on the claim features Patent Owner asserts are not disclosed, taught, or obvious over Rose.

a) Preamble

Petitioner contends that the Rose teaches the preamble, i.e., “[a] computer-implemented system for determining a relevance score of a piece of electronic content sent from a sender to a user, the relevance score determined with respect to the user.” Pet. 48–50 (citing Ex. 1003 ¶¶ 171–173, 206–208, 215; Ex. 1006, 1:6–10, 2:25–34, 3:14–21, 3, 36–42, 3:45–62, 6:51–7:6, claim 12, Fig. 1). Patent Owner does not dispute this contention. On this record, we agree with Petitioner that Rose teaches the preamble.³

b) Limitation 1[a]

Petitioner contends that Rose teaches “a computer processor.” Pet. 50 (citing Ex. 1003 ¶ 174; Ex. 1006, 3:14–18, 3:20–21). Patent Owner does not dispute this contention. On this record, we agree with Petitioner that Rose teaches this limitation.

³ Generally, a preamble does not limit a claim. *Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1346 (Fed. Cir. 2002). Neither party takes a position as to whether the preambles of the claims before us are limiting. At this stage of the proceeding, we need not resolve whether the preamble to claim 1 is limiting because Petitioner shows sufficiently for purposes of institution that the prior art satisfies the recitation in the preamble.

c) Limitation 1[b]

Petitioner contends that Rose teaches “a computer-readable storage medium storing computer program modules configured to execute on the computer processor, the computer program modules.” Pet. 50–51 (citing Ex. 1003 ¶¶ 175–176; Ex. 1006, 3:45–59). Patent Owner does not dispute this contention. On this record, we agree with Petitioner that Rose teaches this limitation.

d) Limitation 1[c]

Petitioner contends that Rose teaches “a monitoring module configured to track actions by a plurality of users associated with an application for managing electronic content.” Pet. 51–54 (citing Ex. 1003 ¶¶ 75, 89 n.5, 178–180; Ex. 1006, 1:13–49, 2:25–34, 2:46–57, 3:63–4:5, 4:13–20, 4:38–44, 5:8–23, 5:43–46, 5:56–64, 6:44–46, 7:7–10, 7:35–50, 8:38–40, Figs. 4, 7; Ex. 1030, 93–94; Ex. 1031, 1, 785–87; Ex. 1032, 193). Patent Owner does not dispute this contention. On this record, we agree with Petitioner that Rose teaches this limitation.

e) Limitation 1[d]

Petitioner contends that Rose teaches “a first relevance measurement module coupled to the monitoring module and configured to determine a first measure of relevance of the piece of electronic content based at least in part on one or more actions of the user on the piece of electronic content.” Pet. 54–56 (citing Ex. 1003 ¶¶ 181–184; Ex. 1006, 2:48–50, 3:51–62, 4:11–20, 4:33–35, 5:1–28, 6:26–43, 6:54–57, Fig. 5B). Relevantly, Petitioner asserts that two features in Rose each teach “a first measure of relevance of the piece of electronic content based at least in part on one or more actions

of the user on the piece of electronic content,” (1) a user’s profile that includes a user’s profile vector and (2) the score of a document’s relevance. *Id.* at 54–55.

First, regarding the user profile and profile vector, Petitioner explains that, in *Rose*, a user rates the relevance of an electronic document; that rating updates a user’s profile by updating the user’s profile vector. Pet. 46, 54–55 (citing Ex. 1006, 4:33–35, 5:21–23). Indeed, *Rose* states that “[e]ach user profile also comprises a vector, based upon the user’s indications as to his or her relative interest in previously retrieved documents” and “[e]ach time a user provides a new response to a retrieved message, the profile vector is modified in accordance with the results of the indication.” Ex. 1006, 6:36–40. The user profile, through the user profile vector, is a “first measure of relevance of the piece of electronic content based at least in part on one or more actions of the user on the piece of electronic content” because the user’s profile vector is updated to reflect the user’s indicated relevance of a document. For example, “if the user indicates interest in a document, all of the significant terms in that document can be given increased weight in the user’s profile.” *Id.* at 6:40–43. Patent Owner argues the user’s profile vector is not used to update a relevance score for the document (Prelim. Resp. 44), but that argument does not address Petitioner’s assertion that the user profile and profile vector, themselves, teach “a first measure of relevance of the piece of electronic content” (that argument pertains to Petitioner’s second assertion, which we discuss below). As such, we determine that Petitioner has adequately shown that *Rose*’s user profile, which includes a profile vector, teaches this limitation.

Second, regarding the score of the document’s relevance, Petitioner explains that score is determined based on the similarity between the user’s

profile vector and the document's vector, e.g., the angle between those vectors. Pet. 46, 55 (citing Ex. 1006, 6:36–43, 6:51–57, Fig. 5B). Patent Owner argues that, although a user may rate a document's relevancy, Rose does not describe using that user's rating “on the document as a measurement of relevancy for that same document” for the user. Prelim. Resp. 43 (citing Ex. 2001 ¶ 139). Patent Owner states that, instead, Rose uses that indication to “predict the relevance of **future** documents” for the user (as distinguished from indicating the relevance of that already-rated document). *Id.* (citing Ex. 1006, 5:15–23, 5:43–46, 5:56–60). That is, Patent Owner argues a relevance score is not calculated for a user-rated document because “because once a user already has indicated that a document is relevant (or not), there is no longer a need to **predict** the likely relevance of that document by calculating a relevance score.” *Id.* at 45.

The current record better supports Petitioner's assertion that Rose calculates a relevance score between user's profile vector and a previously rated document. Petitioner points out (Pet. 49–50) that Rose's system ranks “messages in an electronic mail network . . . according to their likely degree of relevance and displayed with an indication of their relative ranking. For example, they can be displayed in order of rank” (Ex. 1006, 2:25–35; *see also id.* at Fig. 3 (showing a client interface showing a list of emails all ranked by score)). Patent Owner's argument that a document previously indicated as relevant would not be ranked (Prelim. Resp. 43–45) suggests that, after a user rates an email, Rose would exclude that ranked email from ongoing ranked email listings. On this record, doing so is contrary to Rose's email system: “[I]n an e-mail system, *all* of the messages addressed to that user are ranked” and “displayed in order from the highest to the lowest ranking.” Ex. 1006, 4:40–59 (emphasis added).

Accordingly, Petitioner adequately shows that Rose teaches this limitation.

f) Limitation 1[e]

Petitioner contends that Rose teaches “a second relevance measurement module coupled to the monitoring module.” Pet. 56 (citing Ex. 1003 ¶¶ 178, 185; Ex. 1006, 6:59–7:6, 8:38–40). Patent Owner does not dispute this contention. On this record, we agree with Petitioner that Rose teaches this limitation.

g) Limitation 1[f]

Petitioner contends that Rose teaches “identify at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user.” Pet. 56–59 (citing Ex. 1003 ¶¶ 180, 186–188; Ex. 1006, 5:57–61, 6:26–29, 6:61–7:1, 7:35–51, Fig. 6; Ex. 1022, 533, 541; Ex. 1033, 247, 249). Patent Owner does not dispute this contention. On this record, we agree with Petitioner that Rose teaches this limitation.

h) Limitation 1[g]

Petitioner contends that Rose teaches

determine a second measure of relevance of the piece of electronic content as based at least in part on one or more measures derived from the group consisting of: a local importance describing an importance of the sender to the user, a global importance describing an importance of the sender within an organization with which the plurality of users are associated, a content relevance determined responsive to content of the piece of electronic content, and one or more actions on the piece of electronic content of the at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user.

Pet. 59–60 (citing Ex. 1003 ¶¶ 186–190, 192–193; Ex. 1006, 2:46–50, 5:8–23, 5:56–60; 6:59–66, 7:35–51). In particular, Petitioner asserts limitation 1[g] recites a Markush group and Rose teaches the last option in that group. Patent Owner does not dispute this contention. On this record, we agree with Petitioner that Rose teaches this limitation.

i) Limitation 1[h]

Petitioner contends that Rose teaches “a relevance analysis module configured to determine the relevance score of the piece of electronic content sent from the sender to the user, the relevance score being determined based at least in part on the first determined measure of relevance and on the second determined measure of relevance.” Pet. 60–61 (citing Ex. 1006, 6:36–43, 6:54–57, 6:64–66, 7:35–40, 7:44–47, 7:51–62). Referencing limitation 1[d], Petitioner reiterates that both of Rose’s user profile and the similarity between a user profile vector and a document vector, e.g., the angle between those vectors, teach a “first measure of relevance of the piece of electronic content based at least in part on one or more actions of the user on the piece of electronic content.” Petitioner asserts that the user profiles and the similarity are used to “determine the relevance score of the piece of electronic content” as required in this limitation based on Rose’s description that “a combination of attribute-based and correlation based prediction is employed to rank the relevance” of documents by, e.g., calculating a final ranking score which is a “a weighted sum of scores that are obtained from each of the content and correlation predictors.” *Id.* at 61 (citing 1006, 7:35–40).

Patent Owner contends Rose does not teach “relevance score being determined based at least in part on the first determined measure of

relevance.” Prelim. Resp. 45–48. In particular, Patent Owner argues “Rose does **not** use ‘a user’s own actions’ as an input” and, “[i]nstead, in Rose, two different measurements are used to calculate a relevance score/rank, including ‘[1] attribute-based [prediction] and [2] correlation-based prediction.’” *Id.* at 46.

On this record, Petitioner has adequately shown that Rose teaches this limitation because Rose’s document ranking is based on a user’s actions, which are reflected in Rose’s user profiles and the similarity between a user profile vector and a document vector. As discussed above in limitation 1[d], Rose explains that a user’s profile and profile vector are updated based on the user’s actions, e.g., an interest indication selection. Ex. 1006, 5:24–30, 6:36–43. Rose further explains that the user profile, profile vector, and similarity between vectors are used to determine a document’s relevance:

[o]ne factor in the prediction of a user’s likely interest in a particular piece of information can be based on the similarity between the document’s vector and the user’s profile vector . . . [a] document having a vector which is close to that of the user’s profile will be highly ranked, whereas those which are significantly different will have a lower ranking.

Id. at 6:51–58. As such, Rose’s express disclosures contradict Patent Owner’s assertion that Rose does not rank documents based on “a user’s own actions.” Prelim. Resp. 46.

Furthermore, Patent Owner’s argument that Rose’s final relevance score considers content or attribute-based data (*id.* at 46–47) does not upset Petitioner’s showing. The claim does not exclude content or attribute-based data as part of the first measure of relevance. Rather, the claim recites the first measure of relevance is “*based at least in part* on one or more actions of the user,” showing that the first measure of relevance can include more

than the user's actions, e.g., content or attributes. Indeed, the Specification of the '217 Patent appears to describe determining relevance based on the user's actions and the associated content: "[u]sers' actions 86 encompass an individual user's own actions . . . These actions may help to determine relevance, as relevance is calculated based on the way users interact with content." Ex. 1001, 8:13–18; *see also id.* 11:24–12:27. Moreover, it appears that Rose's attribute-based data is based on user action. Rose updates its profile to weigh "significant terms," i.e., content or attributes, in a document based on user interest indications. Ex. 1006, 6:40–43; *see also id.* at 6:6–19. As such, the claimed "relevance score" is taught by Rose's final ranking score because the final ranking score is calculated using attribute-based data based on user interest indications.

Additionally, Patent Owner's argument that correlation-based data does not teach a "first measure of relevance" (Prelim. Resp. 46) is not relevant to this dispute because Petitioner does not rely on correlation-based data to teach a "first measure of relevance."

Accordingly, Petitioner adequately shows that Rose teaches this limitation.

j) Conclusion as to Claim 1

For the reasons discussed above, and based on Petitioner's contentions and evidence, summarized above, we are persuaded, on this record, that Petitioner shows a reasonable likelihood of prevailing in demonstrating that claim 1 would have been obvious over Rose.

3. *Institution of Inter Partes Review*

Because we are persuaded that Petitioner has shown a reasonable likelihood of prevailing in demonstrating that the subject matter of claim 1 would have been obvious over Rose, we institute an *inter partes* review of all claims and all challenges raised in the Petition. *See SAS Inst. Inc. v. Iancu*, 584 U.S. 357, 365 (2018) (stating 35 U.S.C. § 314 “simply requires [the Director] to decide whether the petitioner is likely to succeed on ‘at least 1’ claim. Once that single claim threshold is satisfied, it doesn’t matter whether the petitioner is likely to prevail on any *additional* claims; the Director need not even consider any other claim before instituting review”); 37 C.F.R. § 42.108(a).

E. Obviousness over Rose and Bieganski

In another ground, Petitioner asserts claims 1–3, 5–9, 13–15, 18, 19, and 22 would have been obvious over Rose in combination with Bieganski. Pet. 2. Although it is sufficient to institute based on Petitioner’s obviousness challenge of claim 1 over Rose alone, we provide additional observations regarding the parties’ arguments for the other grounds and challenged claims below, to further guide the parties after institution. *See Patent Trial and Appeal Board Consolidated Trial Practice Guide* 6, 64 (Nov. 2019), *available at* <https://www.uspto.gov/TrialPracticeGuideConsolidated>. We focus on issues raised by Patent Owner’s arguments in those grounds.

1. *Summary of Bieganski (Ex. 1007)*

Bieganski describes techniques for recommending content to a user. Ex. 1007, 4:66–5:12. One technique uses “automated collaborative filtering” to match users with shared interests into “affinity groups” or

“neighborhoods.” *Id.* at 6:27–36. Neighborhoods are formed by selecting a set of users from a user population who have profiles most similar to a user’s profile. *Id.* at 7:9–11. After forming a neighborhood, a set of recommendations is generated based on the neighborhood, e.g., recommended items occurring in profiles of the user’s neighbors that do not occur in the profile of the user. *Id.* at 7:66–8:3.

2. *Combination of Rose and Bieganski*

As described above, Petitioner relies on Rose (*see* Pet. 44–61) to teach a system that ranks and lists information, e.g., emails, for a user based on relevance (Ex. 1006, 2:25–34). Rose determines the relevance of an email to the user based on, among other things, other users’ feedback on that email. *Id.* 6:59–61. Petitioner further asserts Bieganski’s collaborative filtering technique, which groups selected users into neighborhoods to recommend content, teaches identifying other users who are “cognate” to the user. Pet. 69–70, 74. Petitioner combines Bieganski’s collaborative filtering technique with Rose, explaining that doing so would improve Rose’s recommendations by refining which other users are considered when determining an email’s relevance. *Id.* at 71 (citing Ex. 1003 ¶¶ 236), 75 (citing Ex. 1003 ¶¶ 247–248).

On this record, Petitioner adequately shows that one of ordinary skill would have combined Rose and Bieganski. Rose and Bieganski are both concerned with recommending content to a user based on other users’ content preferences. Ex. 1006, code (57); Ex. 1007, code (57). Petitioner, supported by Dr. Fox, adequately shows that Bieganski discloses an improved technique for selecting which other users’ preferences are considered in a recommendation. Pet. 71 (citing Ex. 1003 ¶¶ 236), 75

(citing Ex. 1003 ¶¶ 247–248). We agree that improving Rose’s content ranking system using Bieganski’s content recommendation technique sufficiently motivates the combination. *See KSR Int’l*, 550 U.S. 417 (noting that where “a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious”).

Patent Owner does not address Petitioner’s stated motivation but, nonetheless, contends one of ordinary skill in the art would not have combined Rose and Bieganski. Prelim. Resp. 49–50.

Patent Owner first argues “a skilled artisan would not be motivated to look to Bieganski at all to solve the problems involving sent pieces of electronic content that the ’217 Patent was trying to solve “[b]ecause Bieganski is focused on a different type of content,” namely, “non-textual multimedia content such as movies and videos.” Prelim. Resp. 49–50 (citations omitted). The factual premise of this argument appears flawed. Bieganski describes “[a]nother application area” for its recommendation system “is textual information sources” such as “Internet documents.” Ex. 1007, 17:44–50. Further, Bieganski is analogous art to the ’217 Patent under both tests for analogous art, i.e., (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) whether the reference is reasonably pertinent to the particular problem with which the inventor is involved. *See In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). Bieganski and the ’217 Patent are in the same field of endeavor, specifically, identifying and recommending relevant content to a user. Ex. 1001, code (57); Ex. 1007, code (57). And, Bieganski and the ’217 Patent address similar problems — determining which other users should be considered when recommending content to a particular user. Ex. 1001, 14:59–15:11

(“[T]he actions of this particular group on an electronic mail object will give more indication of its relevance to the user than would a global reaction to the electronic mail.”); Ex. 1006, 7:11–16 (“[I]t is also important to limit the number of users that are selected as neighbors.”).

Patent Owner also argues that “combining Rose and Bieganski would not be as simple of a change as Petitioner and its expert suggest” because Bieganski uses “two threshold selections” which “are not trivial.” Prelim. Resp. 50 (citing Ex. 2001 ¶ 157). The current record better supports Petitioner and Dr. Fox. The threshold selections in Bieganski are numerical parameters used to optimize recommendations, e.g., “a minimum number of items in common with the customer before being included in a neighborhood” or a “maximum neighborhood size.” Ex. 1007, 7:16–27. We agree with Dr. Fox that selecting a number to optimize recommendations is within the ability of a skilled artisan. See Ex. 1003 ¶ 237.

Accordingly, at this stage of the proceeding, we are persuaded that Petitioner has established a reasonable likelihood that a person of ordinary skill would have combined the teachings of Rose and Bieganski for the reasons provided by Petitioner and summarized above.

3. Independent Claim 1

Petitioner contends that the combination of Rose and Bieganski teaches each of the limitations of claim 1, supporting its contentions with evidence from the asserted prior art and from the testimony of Dr. Fox. Pet. 73–76. Aside from referencing its previous arguments regarding Rose, which we have addressed above in § II.D.2, Patent Owner does not dispute whether the cited portions of the relied upon references disclose the respective limitations of claim 1 for which they are relied upon. See Prelim.

Resp. 48–50. Thus, Petitioner’s contentions with respect to the limitations of claim 1 are undisputed at this stage of the proceeding.

We have reviewed Petitioner’s contentions and determine that, at this stage of the proceeding, Petitioner has demonstrated a reasonable likelihood that the combination of Rose and Bieganski teach the preamble and limitations of claim 1. Our determination is not final and based only on the current record and arguments. At this stage of the proceeding, we have not made a final determination with respect to the patentability of the challenged claims.

F. Obviousness over Dumais

In another ground, Petitioner asserts claims 1–3, 5–9, 13–15, 18, 19, and 22 would have been obvious over Dumais. Pet. 2. As before, we provide additional observations regarding the parties’ arguments for the other grounds and challenged claims below, to further guide the parties after institution, focusing on issues raised by Patent Owner’s arguments in those grounds.

1. Summary of Asserted Prior Art Reference Dumais (Ex. 1006)

Dumais describes a technique for personalizing the ranking of search results of electronic data items, e.g., documents, files, email messages, or web pages. Ex. 1006 ¶¶ 31, 40, code (57). Dumais provides personalized search results for a specific user based on a “user model.” *Id.* ¶ 40. Such models can be derived using “collaborative filtering techniques that develop profiles by the analysis of similarities among individuals or groups of individuals.” *Id.* ¶ 52. Similarities can be based on the content or usage of items. *Id.* That is, collaborative filtering considers previous user activities

from a group of users that may indicate preferences for a given user. *Id.* ¶ 55.

2. *Prior Art Status of Dumais*

Patent Owner contends Dumais is not prior art to the '217 Patent, and offers evidence and argument seeking to antedate the invention of the '217 patent prior to the filing date of Dumais. Prelim. Resp. 27–28. Dumais was filed June 29, 2005. Ex. 1006, code (22). The '217 Patent on its face shows a later priority date of January 13, 2006 (Ex. 1001, code (60)), but Patent Owner asserts the inventors of the '217 Patent conceived of their invention before Dumais' priority date, at least as early as June 7, 2005. Prelim. Resp. 24. Patent Owner supports its assertion with a declaration from John Marton, one of the inventors of the '217 Patent. Ex. 2003. Patent Owner further supports its prior conception argument with drafts of the “BlueSpace Mail Search” system (“BlueSpace”) including metadata showing document creation and modification dates earlier than Dumais' priority date. See Ex. 2004; Ex. 2008 (collectively, “Conception Documents”). Furthermore, Patent Owner asserts the inventors were diligent in pursuing their invention based on documents showing continued work on certain BlueSpace features. Prelim. Resp. 25 (citing Exs. 2005–2013 (collectively, “BlueSpace documents”)).

Petitioner offers a number of arguments that the '217 Patent is not entitled to an earlier priority date. Because Petitioner has shown a reasonable likelihood of prevailing on its grounds based on Rose and the combination of Rose and Bieganski, this decision on institution is not contingent on determining the prior art status of Dumais. Moreover, a determination on priority is premised on underlying fact finding which, in

this case, would benefit from development during trial. However, we preliminarily discuss Petitioner's arguments based on this initial record as guidance for the parties during trial.

First, Petitioner argues Mr. Marston's testimony requires corroborating evidence. Prelim. Reply. 1 (citing *Apator Miitors ApS v. Kamstrup A/S*, 887 F.3d 1293, 1295 (Fed. Cir. 2018); *Hahn v. Wong*, 892 F.2d 1028, 1033 (Fed. Cir. 1989)). Patent Owner responds that the metadata of Conception Documents independently corroborates Mr. Marston's declaration. Prelim. Sur-reply 1–2 (citing *Unified Pats., LLC v. Flexiworld Techs., Inc.*, IPR2022-00775, Paper 41, 17 (PTAB Nov. 1, 2023); *Dana-Farber Cancer Inst., Inc. v. Ono Pharm. Co.*, 379 F. Supp. 3d 53, 86 (D. Mass. 2019)). In our assessment, Patent Owner's argument is reasonably based on the manner in which metadata is created, namely, by the computing system which created it. Moreover, even if Mr. Marston's declaration is not corroborated by the Conception Documents, the Conception Documents *themselves* are evidence of conception, which do not require further corroboration. See *Price v. Symsek*, 988 F.2d 1187, 1195 (Fed. Cir. 1993) (“‘[C]orroboration’ is not necessary to establish what a physical exhibit before the board includes. Only the inventor's testimony requires corroboration.”).

Petitioner also argues Mr. Marston's declaration is contradicted because Mr. Marston failed to name a contributor to the BlueSpace Mail Search system, Jon Fernyhough. Prelim. Reply. 3–4. Petitioner, however, does not adequately explain how the omission of Mr. Fernyhough's contributions contradicts Mr. Marston's testimony on his own conception. See *id.*

Petitioner further argues that more than ordinary skill was necessary to reduce the invention to practice because the Conception Documents recommended “continued work” and were rewritten in subsequent drafts. Prelim. Reply. 1–2 (citing Ex. 2004, 29; Ex. 2006, 53; Ex. 2007, 77). We do not, however, have evidence in the present record that more than ordinary skill would have been required to achieve the subsequent math and algorithms based on the initial math and algorithms. Nor do we have evidence in the present record that the initial math and algorithms did not, themselves, adequately reduce the invention to practice. That is, even if the initial math and algorithms were not optimal, they may still have been functional.

In addition to its arguments contesting prior conception, Petitioner argues the inventors were not reasonably diligent in reducing the invention to practice. Prelim. Reply. 2–3. Petitioner argues there is a nearly 200 day “critical period” between Mr. Marston’s stated conception and the filing of the provisional application and highlights 70-day, 32-day, 34-day, and 63-day “gaps” in inventors’ activities. *Id.* Those gaps reasonably raise questions regarding gaps in Patent Owner’s diligence. Patent Owner states that Mr. Marston explains those gaps reflect the ongoing refinement of formulas to implement the BlueSpace relevance model and the Conception Documents corroborate that testimony. Prelim. Resp. 4 (citing Ex. 2003 ¶ 10). Patent Owner, however, does not explain *how* the Conception Documents corroborate the testimony and instead, merely asserts that they do. While the Conception Documents show that work occurred, the Conception Documents by themselves do not show whether adequate ongoing work occurred during the gap periods. During trial, should it choose to do so, Patent Owner has the opportunity to introduce additional

relevant evidence and to explain why the evidence corroborates Mr. Marston's testimony or otherwise shows reasonable diligence.

3. Independent Claim 1

In addition to challenging the prior-art status of Dumais, Patent Owner contends that Petitioner does not adequately show that Dumais teaches limitation 1[f], "identify at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user." Prelim. Resp. 31–38. Patent Owner argues Dumais fails to teach the identified other user is both "a recipient" and "cognate to the user" based on the construction of the terms "a recipient" and "cognate to the user," as discussed above in § II.C.3.

On this record, Petitioner adequately shows that Dumais meets both disputed aspects of this limitation. We address each dispute below.

a) "a recipient"

Petitioner contends Dumais meets "identify[ing] at least one other of the plurality of users that is a recipient." Pet. 31–32. Petitioner points out that Dumais's system discusses emails and integration in an email system. *Id.* at 31 (citing Ex. 1006 ¶¶ 31, 36, 56, 65). Petitioner asserts that, "when considering other users' 'usage of items' in the context of email, especially in the context of collaborative filtering, a POSITA would have understood Dumais contemplates users receiving and interacting with the same email." *Id.* at 31–32 (citing Ex. 1003 ¶ 121).

Patent Owner acknowledges that Dumais discloses ranking emails, but argues that Dumais does not identify "a recipient" based on its asserted construction which requires the identified recipient of content to have been

sent, from a sender, the same piece of electronic content as the user. Prelim. Resp. 32–33. Applying Patent Owner’s claim construction at this stage, the current record favors Petitioner’s position. Patent Owner’s arguments generally fault Dumais for not providing a specific embodiment where email messages are received by both a user and another user. See Prelim. Resp. 33–36. But, the record does not support such a limited reading of Dumais’s invention. Paragraph 31 of Dumais states that the “systems and methods described herein support a plurality of data processing applications. This includes processing data items such as . . . email messages,” suggesting that its teachings are generally applicable to email. And, Petitioner has pointed out that the users’ interaction with data items in Dumais includes forwarding, replying to, and sending emails, i.e., electronic content that is sent from a sender and received by a user. Pet. 24–25 (citing Ex. 1006 ¶¶ 22, 31). As Dumais groups users based on similar usage of data items (Ex. 1006 ¶¶ 52, 55), it appears to follow that one of skill in the art would understand Dumais at least suggests that users are grouped based on receiving the same email, i.e., forwarding, replying to, and sending that email.

Accordingly, Petitioner adequately shows Dumais meets this limitation.

b) “cognate to the user”

Petitioner asserts Dumais meets “identify[ing] at least one other of the plurality of users . . . that is cognate to the user.” Pet. 31. As noted above, Petitioner relies on Dumais’ collaborative filtering to group users based on similar “usage of items.” Pet. 31; Ex. 1006 ¶¶ 22, 52, Fig. 5. Petitioner explains that grouping based users on similar interactions with, or usage of,

data items thereby identifies “cognate” other users. Pet. 31 (citing Ex. 1003 ¶ 120).

Patent Owner argues Dumais’ collaborative filtering does not identify “cognate” other users because Dumais uses its collaborative filtering to develop profiles, rather than to determine data item relevance based on actions by the identified other user. Prelim. Resp. 34.

However, as discussed above, determining relevance based on the actions of cognate other users is an alternative limitation, which is not required to meet the claim if another alternative is met. Patent Owner does not dispute Petitioner’s showing that another alternative is met by the combination. *See* Prelim. Resp. As such, Patent Owner’s argument is based on an alternative claim limitation which is not necessary to meet the claim.

And, even if we were to adopt Patent Owner’s construction, the current record appears to show that Dumais uses collaborative filtering to determine the relevance of an item. Petitioner points out that Dumais determines the relevance of the search results by providing personalized search result rankings for a user by creating a user model. Pet. 34–35 (citing Ex. 1006 ¶¶ 40–41 (“search results based on the user model 420 . . . include[] some form of re-ranking” based on “[r]elevance feedback”), 52–53, 55). That user model applies collaborative filtering to identify similar interactions with data items by other users. Ex. 1006 ¶ 52, Fig. 5. Therefore, it appears that Dumais describes a user model used to determine the relevance of data items based on other users who have similar interactions with the data items.

Accordingly, Petitioner adequately shows Dumais meets this limitation.

III. CONCLUSION

As explained above, we determine that Petitioner has established a reasonable likelihood of prevailing in its challenge to at least one claim of the '217 Patent. Thus, we institute an *inter partes* review of all challenged claims on all asserted grounds.

The factual findings and conclusions of law in this Decision are preliminary and based on the current record. They are made for the sole purpose of determining whether Petitioner meets the threshold for initiating review. Any final decision as to the patentability of the challenged claims will be based on the full record developed during trial, including any response timely filed by Patent Owner. Any arguments not raised by Patent Owner in such a response may be deemed forfeited.

IV. ORDER

ORDERED that an *inter partes* review is instituted on claims 1–3, 5–9, 13–15, 18, 19, and 22 of the '217 Patent, on all grounds of unpatentability specified in the Petition, as identified in Section I.E of this Decision; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the '217 Patent shall commence on the entry date of this Decision, and notice is hereby given of the institution of a trial.

IPR2025-00430
Patent 7,716,217 B2

FOR PETITIONER:

Jessica Kaiser
Sarah Fowler
PERKINS COIE LLP
kaiser-ptab@perkinscoie.com
stahnke-ptab@perkinscoie.com

FOR PATENT OWNER:

Devan Padmanabhan
Michelle Dawson
PADMANABHAN & DAWSON, PLLC
devan@paddalawgroup.com
michelle@paddalawgroup.com