

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.

Petitioner,

v.

STERLING COMPUTERS CORPORATION

Patent Owner.

Case IPR2025-00430

U.S. Patent No. 7,716,217

**PATENT OWNER'S PRELIMINARY RESPONSE
UNDER 37 C.F.R. § 42.107**

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	BACKGROUND	5
	A. The ‘217 Patent	5
	B. ‘217 Patent Claims.	9
	C. Petitioner’s Grounds	11
III.	PERSON OF ORDINARY SKILL.....	12
IV.	CLAIM CONSTRUCTION.....	12
	A. Legal Standard	12
	B. The “<i>module</i>” terms are not subject to Section 112(6).	12
	1. Petitioner Has Not Overcome the Presumption that Section 112(6) Does Not Apply.	13
	2. The Specification Confirms That the “ <i>module</i> ” Limitations Recite Sufficiently Definite Structure.....	16
	3. Petitioner and Its Expert Admit That the “ <i>module</i> ” Limitations Disclose a Specific Structure.	17
	4. The Claims Continue by Reciting Specific Modules, Confirming That “ <i>Computer Program Modules</i> ” Constitutes Structure.....	17
	C. Construction of “<i>a recipient</i>”	24
V.	THE BOARD SHOULD NOT INSTITUTE ON ANY OF GROUNDS 1-3.....	26
	A. Legal Standards	26
	1. Petitioner’s Burden	26
	2. Obviousness	26
	B. The Board Should Reject Ground 1-3 Because <i>Dumais</i> Is Not Prior Art to the ‘217 Patent.	27

C.	The Board Should Reject Ground 1 Because Dumais Does Not Render Obvious Any Claim of the ‘217 Patent.....	29
1.	The Dumais Reference.....	29
2.	Ground 1: Dumais Does Not Teach, Disclose, or Render Obvious Limitation Nos. 1[f] / 6[d] / 7[b]: “ <i>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.</i> ”.....	31
D.	The Board Should Reject Grounds 2 & 3 Because the Rose Reference, Alone or in Combination with Bieganski, Does Not Render Obvious Any Claim of the ‘217 Patent.....	38
1.	The Rose and Bieganski References.....	39
2.	Rose Does Not Teach, Disclose, or Render Obvious the Limitation of “ <i>determin[ing] 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</i> ” and, Therefore, Rose Does Not Render Obvious Any Claim.....	42
3.	Rose Does Not Teach, Disclose, or Render Obvious the Limitation of “ <i>determin[ing] the relevance score ... based at least in part on the first determined measure of relevance ...</i> ” and, Therefore, Rose Does Not Render Obvious Any Claim.....	45
4.	The Combination of Rose and Bieganski Does Not Teach, Disclose, or Render Obvious the “ <i>identify...</i> ” Limitation and, Therefore, Rose/Bieganski Does Not Render Obvious Any Claim.....	48
5.	A POSA Would Not Be Motivated to Combine Rose and Bieganski.....	49
VI.	CONCLUSION.....	50

TABLE OF AUTHORITIES

<u>Case</u>	<u>Page(s)</u>
<i>BioDelivery Scis. Int’l, Inc. v. Aquestive Therapeutics, Inc.</i> , 935 F.3d 1362 (Fed. Cir. 2019).....	26
<i>Dyfan, LLC v. Target Corp.</i> , 28 F.4th 1360 (Fed. Cir. 2022).....	13-15, 17, 19
<i>Ecolochem, Inc. v. S. California Edison Co.</i> , 227 F.3d 1361 (Fed. Cir. 2000).....	27
<i>In re Am. Acad. of Sci. Tech. Ctr.</i> , 367 F.3d 1359 (Fed. Cir. 2004).....	34
<i>In re Kahn</i> , 441 F.3d 977 (Fed. Cir. 2006).....	27
<i>In re Magnum Oil Tools Int’l, Ltd.</i> , 829 F.3d 1364 (Fed. Cir. 2016).....	26
<i>InTouch Technologies, Inc. v. VGO Communications, Inc.</i> , 751 F.3d 1327 (Fed. Cir. 2014).....	27
<i>KSR Int’l Co. v. Teleflex, Inc.</i> , 550 U.S. 398 (2007).....	27
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005).....	12, 24
<i>Rohm & Haas Co. v. Brotech Corp.</i> , 127 F.3d 1089 (Fed. Cir. 1997).....	34
<i>Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.</i> , 655 F.3d 1364 (Fed. Cir. 2011).....	27
<i>Williamson v. Citrix Online LLC</i> , 792 F.3d 1339 (Fed. Cir. 2015).....	15-16
<i>Zeroclick, LLC v. Apple, Inc.</i> , 891 F.3d 1003 (Fed. Cir. 2018).....	15, 19
<u>Statutes, Etc.</u>	<u>Page(s)</u>
35 U.S.C. § 103.....	12, 26
35 U.S.C. § 102.....	12
35 U.S.C. § 316(e)	26

<u>Statutes, Etc. (cont.)</u>	<u>Page(s)</u>
35 U.S.C. §112, ¶ 6.....	12-14 & 23
MPEP § 2142.....	1
MPEP § 2181.....	13

EXHIBIT LIST

Patent Owner's Exhibit No.	Exhibit Description
2001	Declaration of Latifur Khan
2002	Curriculum vitae of Latifur Khan
2003	Declaration of Justin Marston
2004	"BlueSpace Mail Search" Document, Sept. 2, 2004
2005	"The Development of the Mathematical Algorithms," May 12, 2005
2006	"BlueSpace Mail Relevance," June 7, 2005
2007	"BlueSpace Mail Relevance," Aug. 16, 2005
2008	"BlueSpace Mail Relevance," Aug. 17, 2005
2009	"Importance," Sept. 18, 2005
2010	"BlueSpace Mail Relevance," Oct. 6, 2005
2011	"BlueSpace Mail Relevance," Oct. 7, 2005
2012	"BlueSpace Mail Relevance," Oct. 7, 2005
2013	"There are many cognate relevance values that must be calculated," Nov. 9, 2004
2014	Claim Chart for BlueSpace Mail Documents

I. INTRODUCTION

Sterling Computers Corporation (“Patent Owner”) submits this Preliminary Response to the Petition of Meta Platforms, Inc. (“Petitioner”) seeking *inter partes* review (“IPR”) of U.S. Patent No. 7,716,217 (“the ‘217 Patent”). Patent Owner respectfully requests that the Board deny the Petition. As set forth herein, the prior art references that Petitioner relies upon do not expressly or impliedly suggest all of the limitations required by the claims, and Petitioner does not argue that it would have been obvious to add those features to its asserted combinations. MPEP § 2142 (explaining that, “[t]o support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention” or there must be “a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references” (quoting *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985))). Therefore, Petitioner has failed to show a *prima facie* case of obviousness and has failed to establish a reasonable likelihood that it will prevail in showing that the challenged claims are unpatentable.

The ‘217 Patent describes and claims inventions relating to determining a relevance score of sent pieces of electronic content (e.g., emails, instant messages, etc.) and displaying the electronic messages to a recipient based on the relevance determination. As described in the specification, determining the relevance score of an electronic message involves very complicated mathematics as applied to actions by a recipient to the electronic message. Using the relevance score, in part, to determine the order in which electronic

messages are displayed provides significantly greater benefits to users of applications for managing messages.

The claims cover inter-person communications systems and methods that display content to a recipient based on relevance to the recipient. A relevance score is determined for every electronic message in the system because relevance is used to determine the order in which electronic messages are displayed to each user in the system. The relevance score is personalized to the specific user. In order to determine the relevance score for a piece of sent electronic content, the system tracks the actions of both the specific user (e.g., a “first” user) and also tracks the actions of a plurality of users (i.e., other recipients of sent pieces of electronic content – e.g., a “second” user). For example, a piece of sent electronic content would receive a higher relevance score if the first user opened the message and forwarded it on to other users and if a second recipient of the same piece of content also read the message and, e.g., replied to it.

The prior art relied on by the Petitioner never tackled the problem of determining a relevance score for piece of sent electronic content based on the actions on that piece of electronic content by **both** (1) the first user and (2) other recipients. One of the references, Dumais, is not focused on inter-person communications, but instead describes systems for retrieving results in response to a search query (e.g., on the Internet). Because Dumais is not focused on inter-person communications, it does not disclose, discuss, or render obvious “*identify[ing]*”¹ any other “*recipient*” of the content – i.e., another user that

¹ Italics indicate claim language.

received the same piece of sent content as a first user – for the purpose of tracking those other users' actions. Because “*identify[ing] ... a recipient*” is a requirement of every claim of the ‘217 Patent, the Dumais reference does not render obvious any claim.

An independent reason that Dumais does not render obvious any claim of the ‘217 Patent is because Dumais does not qualify as prior art. This is because the inventors of the ‘217 Patent, Justin and Paul Marston, invented before Dumais' patent application was filed. Because Petitioner relies upon Dumais as the primary reference in the first Ground of Petitioner's challenge, for this reason alone, the Board should not institute on Ground 1.

Even if the Dumais reference were prior art to the ‘217 Patent, which it is not, Dumais, alone or in combination with other art, fails to render any challenged claim obvious. In addition to the fact that Dumais does not teach, disclose, or render obvious the “*identify[ing] ... a recipient*” limitation of the claims, another reason Dumais does not render obvious any claim is because a skilled artisan would not look to Dumais to solve the problems addressed by the ‘217 Patent. This is because Dumais is a very different invention from the ‘217 Patent, for numerous reasons. First, the ‘217 Patent ranks all sent content in a database, whereas Dumais ranks only the documents that result from a user's search. Second, in the ‘217 Patent, content is ranked without the benefit of a user telling the system what the user is searching for, whereas, in Dumais, the user tells the system what files or content the user is searching for when the user conducts the search. These are critical differences between the ‘217 Patent and the retrieval system of Dumais. A skilled artisan would not look to a reference that is focused on searching and retrieving results to create the inventions of the ‘217 Patent, which focus on pieces of electronic content that

are “*sent*” from “*a senders*” to “*a recipient*,” and which require an examination of other users that received the same piece of electronic content as the first user. In sum, a skilled artisan would not look to the retrieval system in Dumais to solve the problem of receiving an unwieldy number of messages in an inter-person communications system.

Turning to Petitioner's second ground, the Rose reference also does not render obvious any claim. The Rose reference is focused on **predicting** whether content is **likely** to be relevant to the first user – i.e., assigning a relevancy score **before** the user has interacted with the content. The Rose reference does this by calculating a predicted relevance based upon (1) attribute-based predication (e.g., the content of the document, such as words/terms or date) and (2) predictions based upon the actions of other users who have already interacted with the content and provided their feedback. Because Rose is focused on assigning a score for the content **before** the first user accesses it, Rose does not teach or disclose scoring the piece of content based upon the actions of the **first user** on that piece of content. Moreover, it would not be obvious to add this feature to Rose 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. As a result, the Rose reference does not teach, disclose, or render obvious (1) “*determin[ing] a first measure of relevance*” based upon “*actions of the [first] user on the piece of electronic content*”; or (2) using that “*first determined measure of relevance*” to “*determine the relevance score of the piece of electronic content.*” For this reason, Petitioner's second ground does not render obvious any claim of the '217 Patent.

Petitioner's third ground involves an obviousness challenge based upon the combination of Rose and Bieganski. However, Petitioner does not rely upon the secondary reference (Bieganski) to supply the "*first measure of relevance*" limitations (*see generally* Pet., at 66-78), which, as discussed above, are missing from Rose. Therefore, Petitioner's third ground – i.e., obviousness based upon the combination of Rose and Bieganski – also does not render obvious any claim of the '217 Patent.

II. BACKGROUND

A. The '217 Patent

The '217 Patent, entitled "[d]etermining relevance of electronic content," involves systems and methods relating to person-to-person communications. Every claim requires electronic communications, including "*a sender*," a "*sent*" "*piece of electronic content*," and "*a recipient*." EX1001, Claims 1, 6, 7. "Electronic content" is defined broadly to include all electronic content that is sent from a sender to a recipient, and may include e-mail, instant messages, and blogs that are delivered to users by blog publishers (similar to newsletters). EX1001, 3:43-51; EX1003, at 58.

The invention of the '217 Patent is designed to assist users to efficiently manage their electronic content. For example, the '217 Patent addresses the large volume of email that people may receive. EX1001, 1:27-27. Even after weeding out "junk" email, users "must still take the time to go through those emails to determine which ones are more important than others." EX1001, 1:28-34. In order to find the important emails prior to the invention of the '217 Patent, users were forced to mine through email using

“unintelligent mechanisms (e.g., keyword, sender, recipient, and/or date range searches).”

EX1001, 1:40-44.

To address this problem, the ‘217 Patent determines a “*relevance score*” for each “*piece of electronic content that is sent from a sender to a user.*” EX1001, Claims 1, 6, 7.

The invention determines relevance and importance values by monitoring users’ actions, EX1001, 6:1-3; user “actions” “represent the ways users interact with the electronic mail system, e.g. reading mails, replying to mails, changing settings.”² EX1001, 8:32-35.

These user actions provide valuable information regarding the relative importance of the message or email:

[U]sers’ actions may indicate valuable information about both content and entities in the system. For example, if a user receives an electronic mail object, saves the electronic mail in a custom folder and subsequently forwards it to three other users, then the electronic mail is likely to be much more relevant to those users than if the sending user had just deleted the electronic mail as soon as he or she had finished reading it.

EX1001, 5:11.

The system tracks and uses the first user’s actions to determine a relevance score. EX1001, 11:10-23. Significantly, however, the system also monitors and uses the actions of **other users** – i.e., “*actions by a plurality of users* – as well. The ‘217 Patent is focused on how multiple, different users interact with the same piece of sent electronic content. For example, every claim of the ‘217 Patent requires tracking the actions of multiple

² These are just general examples; the patent provides a long and non-exclusive list of relevant “user actions.” See EX1001, at 11:10-23.

users with respect to those electronic communications. EX1001, Claims 1, 6, 7

(“*track[ing] actions by a plurality of users associated with an application for managing electronic content*” (emphasis added)). In order to do so, every claim of the ‘217 Patent requires “*identify[ing]*” at least one other “*recipient*” of the same piece of electronic content. EX1001, Claims 1, 6, 7.

The ‘217 Patent describes using the actions of other users that are “*cognate*” to the first user, i.e., “other users considered to be the most similar to the user concerned.” EX1001, 33:58-62 and Claims; *see also* EX1001, 42:62-63. In order to determine a “*relevance score*,” the ‘217 Patent identifies other recipients that received the same piece of electronic content and then monitors “the direct actions of the cognate group on this particular electronic mail object.” EX1001, 36:29-31. *See also* EX1001, 36:28-29; EX1001, 36:59-62 (“[I]t may be particularly useful to a given user to know what, for example, cognate users, have done with the electronic mail object soon after it arrives.”).

The specification provides a detailed description, over the span of 20+ columns, of the mathematical calculations that may be used in a relevance analysis engine, including how such a relevance analysis engine may be implemented in software and/or hardware. EX1001, 25:17-23; *see generally id.* 25:17-46:60. The specification also provides a description of “measures of relevance” used by the system. Specifically, the “*relevance score*” is determined “*based at least in part on the first determined measure of relevance and on the second determined measure of relevance.*” EX1001, Claims 1, 6, 7 (emphasis added).

The “*first measure of relevance*” is “*based at least in part on one or more actions of the user on the piece of electronic content*” – i.e., on the actions of the first user on that specific piece of electronic content. EX1001, Claims 1, 6, 7; *see also* EX1001, 5:45-48 (“an electronic mail relevance application helps users make sense of vast quantities of electronic mail by inferring a user’s interest in content and other users based on **monitoring that user’s actions** with in [sic] the application.” (emphasis added)).

The “*second measure of relevance*” is “*based at least in part on one or more measures derived from the group consisting of*”: [i] “*a local importance describing an importance of the sender to the user,*” [ii] “*a global importance describing an importance of the sender within an organization with which the plurality of users are associated,*” [iii] “*a content relevance determined responsive to content of the piece of electronic content,*” and [iv] “*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.*”³ EX1001, Claims 1, 6, 7.

The “*local importance*” measure focuses on the “*importance of the sender to the user.*” EX1001, Claims 1, 6, 7. For example, “it is likely that a user’s direct manager will be important to the user because the user will typically read messages from their manager in a timely manner, will often reply to those messages, and will send their manager a significant number of electronic mail objects.” EX1001, 6:12-17.

³ The ‘217 Patent makes clear that users can provide active feedback to “improve [the] accuracy of the relevance analysis engine.” EX1001, at 7:64-67.

The “*global importance*” measure focuses on the “*importance of the sender within an organization with which the plurality of users are associated.*” EX1001, Claims 1, 6, 7. Specifically, “users’ actions ... reflect how significant a given entity is to a given user or set of users.” EX1001, 8:46-47.

“[A] *content relevance*” measure is “*determined responsive to content of the piece of electronic content.*” EX1001, Claims 1, 6, 7. “Relevance **84** may have as inputs the mail data **80** (properties of **the content** in question)....” EX1001, 8:58-59 (emphasis added).

The final measure that makes up the second measure of relevance is “*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.*” EX1001, Claims 1, 6, 7.

B. ‘217 Patent Claims.

The Petition challenges each of the ‘217 Patent’s independent claims. Claim 1 is exemplary:

1. 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:

a computer processor; and

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

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

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;

a second relevance measurement module coupled to the monitoring module and configured to:

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

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

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.

EX1001, Claim 1. Independent Claim 6 shares many limitations with Independent Claim 1 but claims a computer program product. Independent Claim 7 also shares many limitations with independent Claim 1, but Claim 7 is a method claim and does not contain the “*module*” limitations of Claims 1 and 6.

The relevance determination of a piece of electronic content as claimed requires the following:

- actions of the first user on the piece of electronic content to determine a first relevancy measure;
- identification of one of the other users that is both (1) a recipient of the same piece of electronic content and also (2) is cognate to the first user;
- using at least one of the following to get a second relevance measure:
 - Local importance of the sender to the user;
 - Global importance of the sender in the organization;
 - Content relevance based on content in the piece of electronic content;
 - or
 - Actions on the piece of electronic content by another user that is both a recipient of the same piece of electronic content and also is cognate to the user; and
- determining a relevance score based at least in part on (1) the first determined measure of relevance and (2) the second determined measure of relevance.

EX1001, Claims 1, 6, 7.

C. Petitioner's Grounds

Petitioner challenges Claims 1-22 of the '217 Patent (the "Challenged Claims") pursuant to three grounds:

Ground	Challenged Claims	Asserted Prior Art	Statutory Grounds
1.	1-3, 5-9, 13-15, 18-19, 22	Dumais	§ 103
2.	1-3, 5-9, 13-15, 18-19, 22	Rose	§ 103
3.	1-3, 5-9, 13-15, 18-19, 22	Rose, Bieganski	§ 103

The statutory ground for each of the five challenges is obviousness under Section 103; Petitioner does not assert that any claim is anticipated under Section 102.

III. PERSON OF ORDINARY SKILL

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 masters 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. EX2001, ¶ 14. A higher level of education or skill can make up for less experience, and vice versa. *Id.*

IV. CLAIM CONSTRUCTION

A. Legal Standard

In this proceeding, the claim terms must be construed according to the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–15 (Fed. Cir. 2005).

B. The “module” terms are not subject to Section 112(6).

When “[a]n element in a claim for a combination [is] expressed as a means or step for performing a specified function without the recital of structure, material, or acts in

support thereof, ... such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. 112, ¶ 6. “A claim limitation is presumed to invoke 35 U.S.C. 112(f) when it explicitly uses the term ‘means’ or ‘step’ and includes functional language.” MPEP § 2181. “By contrast, a claim limitation that does not use the term ‘means’ or ‘step’ will trigger the rebuttable presumption that 35 U.S.C. 112(f) does not apply.” *Id.* In order to overcome the presumption that Section 112(6) does not apply, Petitioner must show by a preponderance of the evidence that a person of skill in the art would not have understood the “limitations to connote structure in light of the claim as whole.” *Dyfan, LLC v. Target Corp.*, 28 F.4th 1360, 1367 (Fed. Cir. 2022) (internal citation omitted).

1. Petitioner Has Not Overcome the Presumption that Section 112(6) Does Not Apply.

Here, none of the claims use the term “means” or “step”; therefore, the presumption is that Section 112(6) does not apply. *Dyfan*, 28 F.4th at 1367. Petitioner concedes that “there is a rebuttal presumption that [these challenged claim terms] are not [Means-Plus-Function].” this point. Pet., 11. Nevertheless, Petitioner and its expert argue that the presumption is overcome because, they assert, “*module*” “does not convey to a POSITA a specific structure for performing the functions of the Challenged Claims.” Pet., 11; EX1003, ¶ 73. In so arguing, Petitioner and its expert improperly ignore the context of the claim as whole, which – far from invoking “black box” claiming of Section 112(6) – clearly and expressly recite structure. EX2001, ¶¶ 21-41 EX2003, ¶¶ 16-28.

In order to overcome the presumption that Section 112(6) does not apply, Petitioner must show by a preponderance of the evidence that a person of skill in the art would **not** have understood the “*module*” limitations “to connote structure in light of the claim as whole.” *E.g., Dyfan*, 28 F.4th at 1365 (internal citation omitted). Petitioner's expert, Dr. Fox, does not address this issue of whether the recited “*modules*” connote structure **in light of the claim as whole**. Instead, Dr. Fox opines that, for example, the term “*relevance analysis module*” is a “generic” “module” that “do[es] not convey to a POSITA a particular structure that performs the claimed function.” Ex. 1003, ¶ 73. But the rule is not whether a term **in the abstract** is understandable to a POSITA; the rule is whether a POSITA would have understood the recited “*modules*” to connote structure **in light of the claim as whole**. Petitioner's expert's conclusory opinions on the “*module*” limitations fail to apply this standard.

When the “*module*” limitations are construed in the context of the claims as a whole, the limitations set forth in the claims do convey to a PHOSITA a particular structure. Specifically, **every claim** that claims a “*module*” explains that each “*module*” is a “**computer program module**” (Claim 1) or “**computer program instructions**” (Claim 6). Every claim that claims a “*module*” also recites **where** these “*computer program modules*” / “*computer program instructions*” are stored: the “*computer program modules*” of Claim 1 are stored on “*a computer-readable storage medium*” (and are “*configured to execute on the computer processor*”), and the “*computer program instructions*” of Claim 6 are “*encoded on*” “*a computer-readable storage medium*.” This claim language conveys to a POSITA that each “*module*” is computer software instructions or code. EX2001, ¶ 24.

The Federal Circuit has long held that limitations such as these recite structure. For example, in *Zeroclick, LLC v. Apple, Inc.*, the Federal Circuit held that the terms “program” and “user interface code” were not means-plus-function terms, reversing a district court decision that improperly “removed the terms from their context, which otherwise strongly suggest the plain and ordinary meaning of the terms.” 891 F.3d 1003, 1008 (Fed. Cir. 2018). Similarly, in *Dyfan*, the Federal Circuit held that limitations directed to “code” were directed to structure, because one of skill would recognize that “code” was directed to conventional programs or code. 28 F.4th at 1367-68. The court noted expert testimony that one of skill would understand that “code” is “a bunch of software instructions.” *Id.* at 1368.

Like the claim language in *Dyfan* and *Zeroclick*, the “*module*” limitations in the claims at issue here, when construed in the context of the claims as a whole, refer to “conventional structures known to persons of ordinary skill in the pertinent art.” *Id.*, 28 F.4th at 1367-68; *see also Zeroclick*, 891 F.3d at 1008 (holding that a person of ordinary skill in the art could reasonably discern from the claims that “program” and “user interface code” “are not used as generic terms or black box recitations of structure or abstractions, but rather as specific references to conventional graphical user interface programs or code”). EX2001, ¶¶ 21-41 EX2003, ¶¶ 16-28.

Petitioner cites to a single case in support of its position that the presumption that the claim terms are not MPF is overcome for the “*module*” limitations. *See* Pet. at 11 (citing *Williamson v. Citrix Online LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015)). But the *Williamson* case is distinguishable. In that case, the claim at issue was directed to a system for conducting distributed learning among computers in a network, including (a) a

presenter's computer system, (b) audience member's computer system, (c) a distributed learning server remote from (a) and (b); and (d) **a distributed learning control module** for receiving communications transmitted between the presenter and the audience member computer systems and for relaying the communications to an intended receiving computer system and for coordinating the operation of the streaming data module. In *Williamson*, unlike the present case, nothing in the claim language "impart[ed] structure" to the distributed learning control module. *Id.* at 1351. In this case, as shown above, the context of the limitations in the claims as a whole demonstrates that the "*module*" limitations recite a specific structure – i.e., "*computer program modules*" and "*computer program instructions*."

2. The Specification Confirms That the "*module*" Limitations Recite Sufficiently Definite Structure.

Consistent with the claim language, the specification also explicitly defines the term "*module*" as having a specific structure. The specification explicitly defines the term "*module*" as "any program, circuitry, logic, and/or functionality implemented in either software and/or hardware." EX1001, 6:36-38. Although Petitioner's expert opines that this definition is "broad" (EX1003, ¶ 72), he ignores that the both the claim language and additional disclosures in the specification further limit the structure for each "*module*." As set forth above, the claim language explicitly indicates that each recited "*module*" is a "*program*," and the fact that the "*modules*" are stored on "*a computer-readable storage medium*" means that they are software instructions. EX2001, ¶ 24. Moreover, the specification further confirms that the recited modules are software instructions that "may

run on any type of computer system” EX1001, 6:65-7:2. The specification makes clear that when “*modules*” are contained on a “*computer-readable storage medium*” (as claimed), “the functionality [of the modules] ... may be carried out in response to one or more processors executing software instructions stored on the computer-readable medium.” EX1001, 7:2-12. *See also* E.g., EX1003, at 83 (“Software Implementation”); EX1001, 6:37-39. Thus, consistent with the claim language, the written description also describes the recited modules in the *very language* that was held dispositive in *Dyfan*—“software instructions”—confirming that the modules constitute structure. *Dyfan*, 28 F.4th at 1367-68; *see also* EX2001, ¶¶ 22-24; EX2003, ¶¶ 15-16.

3. Petitioner and Its Expert Admit That the “*module*” Limitations Disclose a Specific Structure.

As set forth above, the claim language establishes that the “*module*” limitations refer to “*computer program*,” which a PHOSITA would understand to be computer software instructions or code. EX2001, ¶ 24. In contradiction of their position that “*module*” “does not convey to a POSITA a specific structure for performing the functions,” but consistent with the claim language, Petitioner and its expert identify “[s]oftware and/or algorithms” as the structure for the “*module*” limitations. Pet, at 11-16; EX1003, ¶¶ 72-82. This admission further confirms why the presumption is not overcome.

4. The Claims Continue by Reciting Specific Modules, Confirming That “*Computer Program Modules*” Constitutes Structure.

After reciting “*a computer-readable storage medium* [a structure that holds content and is readable by a computer] *storing computer program modules* [structures made up of groups of software instructions] *configured to execute on the computer processor* [more

details on the previous structure, reflecting that the groups of software instructions for a computer are engineered to execute on the computer processor (which is another structure)],” Claim 1 then goes on to recite a number of these specific “*computer program module*” structures, confirming that each “module” is software instructions that constitute structure. Similarly, after reciting “*a computer-readable storage medium* [a structure that holds content and is readable by a computer] “*having computer program instructions encoded thereon* [structures made up of groups of software instructions], Claim 6 then goes on to recite a number of these specific “*computer program*” structures, confirming that these “*module[s]*” are software instructions that constitute structure.

“Monitoring Module”: Claims 1 and 6 recite “*a **monitoring module** configured to track actions by a plurality of users associated with an application for managing electronic content.*” The claim language explains what the structure is and what it does: it tracks actions by the users of an application for electronic content. Monitoring user actions is a conventional and necessary feature of systems that allow users to send electronic content. EX2001, ¶ 25; EX2003, ¶¶ 17-19. Indeed, without monitoring user actions the system would not know when a user wanted to send or review content. *Id.* Existing or off the shelf systems at the time of the invention could provide this monitoring. *Id.* The patent notes that “[t]he electronic mail system 250 has a monitoring module 252, which generally monitors and registers user actions and those of users associated or corresponding with a particular user.” EX1001, 6:39-42. The term “*monitoring module*” in the ‘217 Patent is not used as a generic term or black box recitation of structure or abstractions, but rather as a specific reference to known and

existing techniques for monitoring user actions at the time of the invention. EX2001, ¶¶ 25-26; EX2003, ¶¶ 15-19. *See Dyfan*, 28 F.4th at 1367-68; *Zeroclick*, 891 F.3d at 1008.

“First Relevance Measurement Module”: The claims also recite a “*first relevance measurement module*” that is “*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.*” This, too, recites structure. EX2001, ¶¶ 27, 31 & 33-35, EX2003, ¶¶ 15-16 & 20-21, 23-25. The claim does not simply say that a black box module mysteriously determines a first relevance measure. *Id.* Rather, the claim explains how that structure is arranged and exactly what it does. *Id.* The structure is coupled to the monitoring structure so that that it has access to the actions of the various users on the piece of electronic content. *Id.* But then further, the claim recites that the module is structured to determine a first measure of relevance based at least in part on “*one or more actions of the user on the piece of electronic content.*” These are structural limitations required for the first relevance measurement module. *Id.* The presence or absence of these structures can be – must be – determined from the underlying technical documents, not just from the output of the system. *Id.*

The written description provides supporting information as to the first relevance measurement module.

As will be apparent from the description herein, users' actions may indicate valuable information about both content and entities in the system. For example, if a user receives an electronic mail object, saves the electronic mail in a custom folder and subsequently forwards it to three other users, then the electronic mail is likely to be much more relevant to those users than if the sending user had just deleted the electronic mail as soon as he or she had finished reading it.

EX1001, 6:4-11. The '217 Patent explains the "Individual Relevance Component: an IRC value is a relevance score for a piece of content respective to a given individual user, and is based on the actions of that user. [symbol: $xIRC_r$ for recipient r 's actions on electronic mail object x from senders $\{s\}$]" EX1001, 25:45-49. Similarly, the '217 Patent describes the global relevance value for a piece of content, the cognate relevance value for a piece of content, and the local importance value for a piece of content, among others. EX1001, 25:55-26:52. The '217 Patent explains that "[t]he relevance determination module **256** assesses user action data provided by the monitoring module **252** and calculates relevance scores for objects accessible to the user." *Id.* 6:45-48.

"Second Relevance Measurement Module": The claims recite that the "*second relevance measurement module*" is coupled to the monitoring module and configured to determine a second measure of relevance for the piece of electronic content based at least in part on one or more measures derived from, a local importance of the sender to the user, a global importance of the sender within the organization, a content relevance of the piece of electronic content, and one or more actions on the piece of electronic content by the one other recipient of the piece of electronic content that is cognate to the user. These limitations all define the structure of the second relevance measurement module. EX2001, ¶¶ 27, 32-33; EX2003, ¶¶ 15-16 & 22-25.

The written description provides disclosure supporting and informing these structural limitations for each aspect of the second measure of relevance:

- Local Importance: "Local Importance: a local importance value is the importance value for an entity (e.g., a sender, a job code) to a given user

which is shown to that user through the interface. It is a function of the user's own IIC for that sender, together with global and cognate importance values for the sender. [symbol: I_{sr}^1 for local importance of sender s to recipient r].” EX1001, 26:24-30.

- Global Importance: “Global Importance: a global importance value is an importance score for an entity respective to the entire system, and is a weighted average of all IIC values for that entity. [symbol: I_s^g for sender-entity s].” EX1001, 25:55-59.
- Content Relevance: “Keywords of high relevance in a community of users may be automatically discovered based on statistical techniques. The frequencies of words in a set of mail content may be compared to regular (average) values, to discover the words that are used more than average in the volume of electronic mail. The more frequent words may then be correlated to content relevance, to highlight more frequent words (compared to average values) that are used in the more relevant content.” EX1001, 41:17-25.
- Actions by Cognate Recipients:
 - “Cognate Group: for each user, over time, the system identifies a “cognate group” of the n other users regarded as most similar. This group is defined by similar past user actions and assessments, and/or a direct input by a user. It is noted that it is not assumed that the population of recipients falls into separate and mutually exclusive cognate groups. Rather, each recipient may have their own cognate group of those the system regards as most similar to that recipient. Thus, in some cases, for example, user A may be in user B's cognate group (because A is in the n users most similar to B), but at the same time, B may not be in A's cognate group (because there are n other users more similar to A than B is).” EX1001, 25:65-26:10.
 - “Cognate Relevance Value: a cognate relevance value is a relevance score for a piece of content respective to a given recipient based on a weighted average of the IRC's of the n users considered to be the cognate group for that recipient. [symbol: $^xR_r^c$ for the relevance input from the cognate group c of recipient r, on electronic mail object x sent by senders {s} to recipient r].” EX1001, 26:11-17.

“Relevance Analysis Module”: The claims recite that the “*relevance analysis module*” is “*configured to determine the relevance score of the piece of electronic content,*”

“determined based at least in part on the first determined measure of relevance and on the second determined measure of relevance.” Again, these are structural limitations required for the relevance analysis module. EX2001, ¶¶ 27-30; EX2003, ¶¶ 26-28. In explaining the “relevance analysis engine,” the written description identifies and defines all the structural components that can inform the relevance score. *See id.*; EX1001, 25:37-26:52 (portions quoted above). The written description then addresses Figure 21, “an example chronological scenario for the relevance analysis engine”:

FIG. 21 shows at a high level how the terms described above relate to each other and the process by which they are calculated in the functioning of relevance analysis engine. Below is provided a more in-depth description of relevance techniques and computational implementation. It is noted that the scenario in FIG. 21 depicts a final relevance mechanism (described below), which includes cognate relevance.

EX1001, 26:53-61.

“Content Presentation Module”: The module limitations in the dependent claims, too, recite structure. With respect to the “*content presentation module*” (Claims 2 & 13), the claims contain sufficient structure for the “content presentation module” to do its intended job. EX2001, ¶¶ 34-35. The claims state that the “*content presentation module*” is “*configured to present the piece of electronic content to the user in accordance with the determined relevance score and to present to the user a value describing the determined relevance score.*” EX1001, Claims 2 & 13. A POSA would recognize that software instructions (e.g., programs or code) are structure used to present the piece of electronic content to the user in accordance with the determined relevance score and to present to the user a value describing the determined relevance score. EX2001, ¶¶ 34-37. The claims

disclose sufficient structure for the “*content presentation module*” to present the piece of electronic content to the user in accordance with the determined relevance score and to present to the user a value describing the determined relevance score. *Id.* A POSA would be able to implement the “*content presentation module*” using known and available techniques. *Id.* A POSA would recognize that the claims are directed to structure, not some “black box.” *Id.*

“Search Module”: With respect to the “*search module*” limitation (Claims 3 & 14), the claims also discuss a “*search module*.” EX1001, Claim 3 & 14. The claims contain sufficient structure for the “*search module*” to do its intended job. EX2001, ¶¶ 38-41. The claims state that the “*search module*” is “*configured to search the electronic content in accordance with the determined relevance score.*” EX1001, Claim 3 & 14. A POSA would recognize that software instructions (e.g., programs or code) are structure used to search the electronic content in accordance with the determined relevance score. EX2001, ¶¶ 38-41. The claims disclose sufficient structure for the “*search module*” to search the electronic content in accordance with the determined relevance score. *Id.* A POSA would be able to implement the “*search module*” using known and available techniques. *Id.* A POSA would recognize that the claims are directed to structure, not some “black box.” *Id.*

In sum, a person of skill in the art would have understood that each “*module*” is computer program code or instructions, which connotes structure in light of the claim as whole. EX2001, ¶¶ 21-43. As such, these “*module*” claim limitations should be given their plain and ordinary meaning and not treated as means-plus-function limitation under Section 112(6).

C. Construction of “a recipient”

Every claim of the '217 Patent requires “*identify[ing] a recipient.*” EX1001, at Claims. Applying the *Phillips* standard, the proper construction of “a recipient” is a specific type of user – i.e., a user that has **received** a piece of electronic content **sent** from a **sender**. EX2001, ¶¶ 113-114. This construction is supported by the claims and the specification. Nevertheless, Petitioner and its expert seem to be construing “a recipient” to be any “user” that “used,” a piece of electronic content. EX1003, ¶¶ 120 (citing EX1005, [0052]); *see also* Petition, at 31. The claims and specification, however, make clear that – in conformity with plain and ordinary language – “a recipient” is not just a “user” that interacted with, used, or looked at content, but, instead, must be a user that actually **received** the piece of electronic content **sent** from a **sender**. *E.g.*, EX1001, Claim 1 (system is for “*determining a relevance score of a piece of electronic content sent from a sender,*” and system “*identif[ies] ... a recipient*” for the purpose of tracking “*actions on the piece of electronic of the at least one other of the plurality of users that is a recipient of the piece of electronic content*” (emphasis added)); *id.* 2:26-28 (“FIG. 4 shows different techniques as to how an electronic mail object may be **sent to** external **recipients**” (emphasis added)); *id.* 1:35-37 (“As an email is **received** and **sent** over time, the **recipient's** ‘inbox’ and ‘sent folder’ becomes a vast store of information.” (emphasis added)). *id.* 5:1-2 (same); *id.* at 5:3-5 (“a user ... **sends** ... **to recipients**” (emphasis added)); *id.* 5:12-14 (same); *id.* 5:21-23 (same); *id.* Fig. 22 (“**sender** s **to recipient** r” (emphasis added)); *id.* 26:23-24 (same); *id.* 9:44-45 (“the **sender** indicates the electronic mail requires action by the **recipient**” (emphasis added)); *id.* at 12:35-37 (“if a user **sends** an electronic mail object to a group of

users, and most of the recipients reply...”(emphasis added)); *id.* at 12:52-54 (“if a user sends a submessage to another user, but the recipient does not read the submessage” (emphasis added)); *id.* 29:64-66 (“This number may be the same for all recipients of all electronic mails from that sender ...”(emphasis added)); *id.* at 30:54-55 (“If recipient i receives electronic mail from sender s”(emphasis added)); *see also* EX2001, ¶¶ 113-114. Petitioner’s attempt to read “*a recipient*” to mean any user that “uses” any electronic content (e.g., a webpage on the Internet) is improper. *Id.*

Construing “*a recipient*” to require that the user actually received a piece of electronic content sent by a sender conforms with the plain and ordinary definition of “*a recipient*.” *Id.* In particular, a POSA would understand that, in the context of systems and methods for electronic messaging, “*a recipient*” is a user that actually receives content sent by a sender. *Id.* A POSA would not understand a user that simply uses electronic content, e.g., on the Internet, or in a database, to be “*a recipient*” of the content, because the content was never received by the user; the content was only accessed by the user. *Id.* If nothing is sent, there is nothing for a receiver to receive. *Id.*

Just as the specification and the plain and ordinary meaning support this construction of “a recipient,” the claims themselves also support this construction. In particular, every claim of the ‘217 Patent relates to “*determining a relevance score of a piece of electronic content sent from a sender.*” Therefore, “*a recipient*” of such a piece of electronic content is necessarily a user that has received the content “*sent from a sender*.”

V. THE BOARD SHOULD NOT INSTITUTE ON ANY OF GROUNDS 1-3

A. Legal Standards

1. Petitioner's Burden

The law provides that “[t]he Director may not authorize an inter partes review to be instituted unless the Director determines that 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). “Subsection (a) identifies a threshold requirement that must be met before the Director is even authorized to institute review” *BioDelivery Scis. Int’l, Inc. v. Aquestive Therapeutics, Inc.*, 935 F.3d 1362, 1365 (Fed. Cir. 2019).

“In an inter partes review, the burden of persuasion is on the petitioner to prove ‘unpatentability by a preponderance of the evidence,’ and that burden never shifts to the patentee.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1375 (Fed. Cir. 2016) (internal citations omitted).

2. Obviousness

To prevail on its obviousness challenges, Petitioner must prove by a preponderance of the evidence that “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” 35 U.S.C. § 316(e) & 35 U.S.C. § 103.

“[E]ven when all claim limitations are found in prior art references, the fact-finder must not only determine what the prior art teaches, but whether prior art teaches away from

the claimed invention and whether there is a motivation to combine teachings from separate references.” *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1374–75 (Fed. Cir. 2011) (citations omitted). Accordingly, a party seeking to establish the obviousness of a patent must do more than simply say that the elements of the patent were in the prior art. See *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007). There must be some reason to combine the prior art in the way embodied by the patent; some motivation or incentive is needed. *Id.* “A reason for combining disparate prior art references is a critical component of an obviousness analysis; ‘this analysis should be made explicit.’” *InTouch Technologies, Inc. v. VGO Communications, Inc.*, 751 F.3d 1327, 1351 (Fed. Cir. 2014) (quoting *KSR*, 550 U.S. at 418). Put another way, “there ... must be evidence that ‘a skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.’” *Ecolochem, Inc. v. S. California Edison Co.*, 227 F.3d 1361, 1375 (Fed. Cir. 2000) (internal citation omitted).

“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

B. The Board Should Reject Ground 1-3 Because Dumais Is Not Prior Art to the ‘217 Patent.

The Dumais reference is the only reference or primary reference for Ground 1 advanced by Petitioner. The Board should decline to institute based on Ground 1 because

the Dumais reference is not prior art to the '217 Patent. As set forth in the sworn Declaration of Justin Marston, the inventors of the '217 Patent conceived of their invention at least as early as June 7, 2005, and, therefore, the '217 Patent has a priority date that is earlier than the Dumais priority date. *See generally* EX2003 (Declaration of Justin Marston, Mar. 12, 2025); *see also* EX2014.

The priority date of Dumais is June 29, 2005. EX1005. The conception of the '217 Patent predates this. *See* EX2003, EX2004, EX2008, EX2014. In particular, as set forth in the declaration of Justin Marston, Exhibit Nos. 2004 and 2008 are draft documents prepared by Justin Marston on September 2, 2004, and June 7, 2005, respectively (hereinafter, collectively, the "Conception Documents"). EX2004, EX2006. The Conception Documents disclose each limitation of the Challenged Claims, as set forth in the chart that is Exhibit 2014. Additional Exhibits cited in the declaration of Justin Marston show continued work on the mathematics for the relevance model between September 2, 2004, and the filing of the provisional patent application on January 13, 2006. EX2005, EX2006, EX2007, EX2008, EX2009, EX2010, EX2011, EX2012, EX2013. Accordingly, the inventors of the '217 Patent conceived of their invention prior to June 7, 2005, and were diligent in pursuing their invention from prior to June 7, 2005, until they filed their provisional patent application.

Accordingly, the Board should decline to institute on Ground 1 because Dumais is not prior art to the '217 Patent.

C. The Board Should Reject Ground 1 Because Dumais Does Not Render Obvious Any Claim of the '217 Patent.

Even if the Dumais reference were prior art to the '217 Patent, which it is not, Dumais still would not provide a basis for institution, because Petitioner has failed to establish a reasonable likelihood that it will prevail in showing that Dumais renders obvious any claim of the '217 Patent. *See* EX2001, ¶¶ 112-127.

1. The Dumais Reference

Dumais, which is entitled “Sensing, Storing, Indexing, and Retrieving Data Leveraging Measures of User Activity, Attention, and Interest” (EX1005), focuses on the retrieval of data *in response to a search*, not on the receipt of emails, messages, or other electronic content. *See, e.g.*, EX1005, at Abstract (discussing “items returned in a search”). Unlike the '217 Patent, which focuses on determining a relevance score of a piece of content sent from a sender to a recipient, the focus of Dumais is query modification, i.e., modifying the list of results returned in response to a search query. *E.g.*, EX2001, ¶ 106; *see also id.* ¶¶ 70-77 (describing Dumais); *id.* ¶¶ 105-111 (describing differences between Dumais and the '217 Patent).

Dumais sets out to solve problems in prior art systems for searching/retrieval. One problem was that prior search/retrieval systems were “somewhat content centric,” such that when data is “retrieved” in response to a search, the data retrieved is “based on the actual content of the data stored.” EX1005, [0001]. For example, if a user searched for “John,” “the retrieved list” would include all data items “associated with the term ‘John.’” EX1005, [0001]. The resulting “list” of retrieved data items may be a large number. EX1005, [0001].

Dumais solves this problem by assigning “activity weight” to data items (or parts of data items or groups of data items), which is employed to retrieve “a smaller or more manageable set of items” in response to a user’s search. EX1005, [0008]. Dumais aims to “differentiate personalized searches from generalized searches and to facilitate rich data processing according to determined activity data.” *Id.*, [0043]. “For example, instead of merely searching a set of data items for a content-centric keyword, searching for information can be augmented via activity enhanced clues to more efficiently retrieve desired data of interest.” EX1005, [0008].

Another problem in prior art systems identified in Dumais is that “systems usually return complete documents,” which is “one of the primary reasons behind the feeling of ‘information overload’” EX1005, [0005]. This is particularly true when the documents searched for include “whole books.” EX1005, [0005]. Dumais solves this problem by ranking results from a user query by giving “more weight to terms that appear in ... sections of a document that have been edited or the user has spent lots of time reading.” EX1005, [0025]; EX1005, [0033] (discussing “yield[ing] more weight to terms or objects that appear in sections of a data item that a user has attended to”); EX1005, Claim 17.

In Dumais, “query modification” encompasses both changes to query terms and alterations in the algorithm used to match queries with documents, ensuring more personalized search results. EX1005, [0040]. Query modification ensures that a subset of items is delivered to a user in a specific order or ranking. E.g., EX1005, [Abstract] (“to influence the rank of items returned in a search”); EX1005, [0033] (“a ranking score can be utilized for data retrieval”); EX1005, [0041] (“modification of [search] results usually

includes some form of re-ranking"); EX1005, [0025] ("a score can be assigned based on the similarity of a user's query to the content of the document").

Ranking in Dumais is a two-step process. First, after query and submissions to a search engine, results will be returned from the search engine; and second, the returned results are modified through "query modification." EX1005, [0040]; EX2001, ¶ 77. The "query modification" in Dumais is focused on a single user, including a single user's interest, via tags. EX1005, [0040]; EX2001, ¶¶ 77, 107.

Dumais discloses that data items that can be searched and retrieved include "documents, files, email messages, calendar appointments, web pages, sub-sections within the data items or cross-item abstractions." E.g., EX1005, [0031]. Although "email messages" are among the types of data items that can be searched for and retrieved in Dumais (similar to the '217 Patent's description of searching in prior art systems (EX1001, 1:40-43)), Dumais does not teach or disclose identifying other recipients that received the same message. *See generally* EX1005.

The inventions in the '217 Patent are very different from the invention in Dumais, in many ways. EX2001, ¶¶ 105-111.

2. Ground 1: Dumais Does Not Teach, Disclose, or Render Obvious Limitation Nos. 1[f] / 6[d] / 7[b]: "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."

Each of the independent claims of the '217 Patent requires "identifying 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, at Claims 1, 6 & 7 (emphasis added). In other words,

the “*at least one other of the plurality of users*” (i.e., the second user) being “*identif[ied]*” in the claims must be both (1) “*a recipient*” of the same piece of electronic content that the first user received and also (2) “*cognate to the [first] user.*” *Id.* This “*identify...*” limitation is important to the claims because other limitations require it; for example, it would not be possible to assess “*one or more actions ... of ... a recipient*” if the method/system does not first “*identify*” that other “*recipient.*” EX1001, Claims; *see also* EX2001, ¶ 126.

In Ground 1, Petitioner relies exclusively upon Dumais to supply this (and every) limitation. *See* Pet. 31-32. Dumais, however, does not teach or disclose this limitation, including both because (1) Dumais does not teach or disclose the “*identify ... a recipient*” limitation; and (2) Dumais does not teach or disclose the “*identify at least one ... cognate [user]*” limitation. EX2001, ¶¶ 112-127. given this gap in the Petitioner’s evidence, Petitioner fails to make a *prima facie* case of obviousness based on Dumais. *Id.*⁴

a) Dumais Does Not Teach, Disclose, or Render Obvious the “*identify ... a recipient*” limitation.

Dumais does not disclose “*identify[ing]*” “*a recipient*” – i.e., a person to whom the “*sender*” has “*sent*” a piece of electronic content. *See supra* at 24-25 (discussing proper construction of “*a recipient*”); EX2001, ¶¶ 112-122. Although Dumais discloses that emails are among the data items that can be ranked, Dumais never “*identif[ies]*” another “*recipient*” of the data items – i.e., another user to which the “*sender*” has also “*sent*” the

⁴ Patent Owner reserves the right to raise additional issues with Petitioner’s analysis regarding Dumais in Ground 1, including the dependent claims, in the future.

piece of electronic content. *See generally* EX1004; EX2001, ¶¶ 112-122. Therefore, Petitioner has not established a *prima facie* case of obviousness with respect to Dumais.

Petitioner and its expert cite several passages in Dumais in support of its argument that Dumais discloses this limitation, but none of Petitioner's citations discloses “*identify[ing]*” “*at least one other of the plurality of users that is a recipient of the piece of electronic content....*”

First, Petitioner argues that Dumais “Dumais explicitly discloses identifying other recipients of electronic content” because Dumais “analyze[s] ‘similarities among...groups of individuals...based on the content *and/or usage of items.*’” Petition, at 31 (citing Dumais, ¶¶ 22, 52 & Fig. 5; Fox, ¶120). To the extent that Petitioner and its expert are defining “*a recipient*” to be any user that “used,” a data item, that definition is incorrect. *See supra* at 24-25; EX2001, ¶¶ 113-114. Every claim of the ‘217 Patent requires the identification of another “*recipient of the piece of electronic content.*” EX1001, Claims. The limitation requires more than “*identify[ing]*” another “*user*”; it is discussing identifying a particular type of “*user*,” one who is “*a recipient of the piece of electronic content*” (and also is “*cognate to the user*”). EX2001, ¶ 115. A POSA would understand that, in the ‘217 Patent, “*a recipient*” is another user that **received** a piece of **sent** electronic content from a **sender**. *E.g.*, EX1001, 2:26-28 (“an electronic mail object may be **sent to** external **recipients**”); *see also supra* at 24-25; EX2001, ¶¶ 114. Thus, a POSA would understand that, in the ‘217 Patent, “*a recipient*” is a “*user*” that received a sent piece of electronic content. *Id.* Dumais’ disclosure of monitoring “users” interactions does not disclose “*identify[ing]* ... *a recipient of the piece of electronic content.*”

Second, Petitioner's expert opines that because "Dumais teaches that 'data items' can include emails" and "discuss[es] emails and integrating with a user's 'e-mail system,'" "a POSITA would have understood [that] Dumais **contemplates** ... identifying all of those receiving an email message based on inclusion in the TO or CC fields." EX1003, ¶ 121 (emphasis added). Petitioner's expert's use of the verb "contemplates" is perplexing. Dumais does not **expressly** teach or disclose "identifying all of those receiving an email message based on inclusion in the TO or CC fields." *See generally* EX1005; EX2001, ¶ 117. Indeed, Petitioner's expert cites **no portion of Dumais** in support of this statement. *See* EX1003, ¶ 121; EX2001, ¶ 117. Moreover, Petitioner does not argue that Dumais would need to be modified to **add** this limitation. *See* EX1003, ¶ 120 ("Dumais **explicitly discloses** identifying other recipients of electronic content...." (emphasis added)).⁵

Next, Petitioner's expert argues that "[i]t is common for collaborative filtering techniques to take advantage of other recipients listed in these fields." EX1003, ¶ 121. However, he provides **no evidence in support**. *Id.*; EX2001, ¶ 121. The unsupported conclusory testimony should be given no weight. *See Rohm & Haas Co. v. Brotech Corp.*, 127 F.3d 1089, 1092 (Fed. Cir. 1997) ("Nothing in the [federal] rules [of evidence] or in our jurisprudence requires the fact finder to credit the unsupported assertions of an expert witness."); *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1368 (Fed. Cir. 2004) ("lack

⁵ This understanding that Petitioner is relying upon some express disclosure in Dumais, rather than an argument that it would be obvious to add this limitation to Dumais, is further supported by the fact that Petitioner includes zero analysis as to why a skilled artisan would be motivated to add the limitation to Dumais or why a skilled artisan would expect that adding the limitation to Dumais would be successful.

of factual support for expert opinion may render the testimony of little probative value”); 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”). Certainly, Dumais does not support the unsupported, conclusory statement. EX2001, ¶ 121. This is because Dumais discusses collaborative filtering solely in the context of creating profiles for new users (EX1005, [0052] & [0055]), and Dumais does not disclose using or identifying information from any email field, let alone the “recipient” email fields. *Id.* Petitioner’s expert’s unsupported statements about what Dumais “contemplates” should be disregarded.

Third, Petitioner’s expert discusses “a POSITA would understand that it is very common for emails to have more recipients than senders.” EX1003, ¶ 121. It is unclear how it supports Petitioner’s expert’s opinion that Dumais “explicitly discloses identifying other recipients.” EX2001, ¶ 120. There is simply no such disclosure in Dumais. *Id.*

Finally, Petitioner’s expert appears to argue that the “*identify ... a recipient*” is somehow “contemplated” by Dumais because Dumais “contains robust disclosures discussing emails.” EX1003, ¶ 121. As an initial matter, generic discussions of e-mail is not the same as disclosing the need to “*identify*” a second user that received the same piece of sent electronic content that the first user received. In any event, the “robust disclosures” about emails that Petitioner’s expert refers to actually includes a citation to just four paragraphs of Dumais. *Id.* (citing EX1005, ¶¶ 31, 36, 56, 65). None of these paragraphs discuss or disclose “*identify[ing]*” another “*recipient*” of the content (EX2001, ¶ 118-19):

- Paragraph 65 relates to linking desktop phone messages to an e-mail system, and it discusses one way to search and retrieve content – i.e., “implicit”

“queries” in a “retrieval service application[]”; it contains no discussion of any e-mail “*recipient*.”

- Paragraph 31 relates to applying tags to data items (e.g., a tag representing a total number of times an item has been accessed); it contains no discussion of an e-mail “*recipient*.”
- Paragraph 36 discusses e-mail search tools based on, e.g., content (e.g., “search for all files that have the keyword computer and have had at least one graphical image associated with the file in the past month”); it contains no discussion of any e-mail “*recipient*.”
- Paragraph 56 relates to “access-based information retrieval” for analyzing the content of accessed data items; it contains no discussion of any e-mail “*recipient*.”

EX2001, ¶ 118-19. In sum, none of Dumais’ alleged “robust disclosures discussing emails” discuss or disclose “*identify[ing]*” another “*recipient*” of the same piece of electronic content. *Id.*

Because Dumais does not teach, disclose, or render obvious the “*identify ... a recipient*” limitation, and because Petitioner does not rely upon any other reference to supply this missing limitation, the Board should reject Ground 1. EX2001, ¶ 112-122.

b) Dumais Does Not Teach, Disclose, or Render Obvious the “*identify at least one other of the plurality of the users ... that is cognate to the user*” limitation.

The “*identify*” limitation requires not only that the second “*user*” be a “*recipient*,” but also that the “*user*” be “*cognate to the [first] user*.” E.g., EX1001, Claim 1; EX2001,

¶ 123. Dumais also does not teach or disclose “*identify[ing]*” a second user that is “*cognate*” to the first user. EX1001, at Claims; EX2001, ¶¶ 123-27.

Dumais focuses on a single, target user (the user doing the searching); Dumais does not discuss or disclose “*identify[ing]*” other “*cognate*” users. EX2001, ¶¶ 77, 107, 124. In Dumais, a query is modified based on the target user's interests, via tags. EX1005; *id.* ¶ 124. Although Dumais discusses that collaborative filtering can be used to create profiles (*id.* ¶ 126), Dumais does not teach, disclose, or render obvious “*identify[ing]* ...*at least one other of the plurality of users that is cognate to the user.*” *Id.* ¶¶ 123-27. This is because cognate users in the '217 Patent are more restricted than the generic collaborative filtering described in Dumais. *Id.* ¶ 125. In particular, every claim requires that the system “*identify*” a “*cognate*” “*user*” **that is also** “*a recipient of the piece of electronic content.*” EX1005, Claim 1; EX2001, ¶ 100. Moreover, the claims go on to explain **why** the system needs to “*identify*” this “*cognate*”/“*recipient*” user: so that the system can “*determine ... relevance*” based on monitored “*actions on the ... content*” by the other “*cognate*”/“*recipient*” user. *Id.*; EX1001, Claim 1 (one measure of relevance includes “*actions ... 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*”); EX2001, ¶ 126. Collaborative filtering in Dumais does not do any of this. *See generally* EX1005. Instead, collaborative filtering in Dumais is used to “develop profiles” for individuals or groups and to “predict likely or possible profiles for new users of a system.” EX1005, [0052], [0055]. This is different from the '217 Patent requirement to “*identify ...at least one other of the plurality of users that is cognate to the user*” as part of “*developing a relevance score.*” EX2001, ¶ 126.

Accordingly, Dumais does not disclose “*identify[ing] 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.*” EX2001, ¶¶ 123-27. Because every claim of the ‘217 Patent requires this limitation, Dumais does not render obvious any claim of the ‘217 Patent. *Id.* Therefore, Petitioner has failed to establish a reasonable likelihood that it will prevail in showing that the challenged claims are unpatentable with respect to Ground 1 based on Dumais.

D. The Board Should Reject Grounds 2 & 3 Because the Rose Reference, Alone or in Combination with Bieganski, Does Not Render Obvious Any Claim of the ‘217 Patent.

As set forth above, every claim of the ‘217 Patent recites “*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.*” EX1001, Claims. And, every claim of the ‘217 Patent requires that this “*first measure of relevance*” be used to “*determine the relevance score of the piece of electronic content.*” *Id.* The Rose reference, however, does not determine a relevance score based upon actions of the first user. Instead, the Rose reference attempts to **predict** whether electronic content will be relevant to the first user based upon (1) its attributes/content and (2) the actions of **other users**. Therefore, the Rose reference does not render obvious any claim of the ‘217 Patent, and the Board should reject Petitioner’s challenge in Ground 2.

In Petitioner’s third and final ground, Petitioner relies upon the combination of the Rose reference with the Bieganski reference. Petitioner does not, however, rely upon the Bieganski reference to supply the “*first measure of relevance*” limitation, which is missing from Rose. Therefore, the combination of Rose and Bieganski does not render obvious any

claim of the '217 Patent for the same reasons the Rose reference does not render obvious any claim of the '217 Patent. The Board should reject Petitioner's challenge in Ground 3.

1. The Rose and Bieganski References

a) The Rose Reference.

Rose is titled "System for ranking the relevance of information objects accessed by computer users." EX1005. Rose is focused on the predicted relevance of a piece of electronic content to a recipient **before** an electronic mail object is opened: "[i]nformation presented to a user via an information access system is ranked according to **a prediction of the likely degree of relevance** to the user's interests." *Id.* at Abstract (emphasis added); *id.* at 2:6-7 ("It is desirable, therefore, to employ a system for predicting the likely relevance of items of information to a particular user ..."). In contrast to the prior art, in which content alone was used to rank information, in Rose, the prediction of relevance is based upon both (1) content ("attribute-based" prediction) and (2) "community feedback" ("correlation-based" prediction). *Id.* at Abstract & EX1006, 6:6-11 & 7:35-37. Rose discloses that, "[i]n addition to content and correlation scores," "event times can be used in the ranking equation, where older items might get lower scores." *Id.* at 8:13-17.

Because Rose is based on predicting relevancy before the first user has read the content, Rose does not teach or disclose using the first user's actions to calculate the relevancy score. *See generally* EX1005; EX2001, ¶ 91.

Rose does not teach or disclose re-scoring or re-ranking a document after the initial score is determined. *See generally* EX1005; EX2001, ¶ 92.

b) Background on the Bieganski Reference.

The Bieganski patent is titled “System, method and article of manufacture for making serendipity-weighted recommendations to a user.” The application that led to the issuance of the Bieganski patent was filed on July 17, 1998.

The Bieganski patent seeks to provide a “reliable computerized process for estimating the quality of the content of most items that are the subject of a recommender system.” EX1007, 1:47-49. The Bieganski patent is focused on how a recommender system recommends “non-textual multimedia content such as movies and videos.” EX1007, 1:49-50.

The Bieganski patent explains that existing recommendation systems often tend to suggest the most popular items to users – i.e., “the highest-ranking positive preference values.” EX1007, 3:1-3. The Bieganski patent explains that this technique does not always provide a desirable effect because the recommendations can be obvious to the user, such that the system has provided the user with no value. EX1007, 3:3-8; 5:22-25. For example, a recommendation to purchase milk at the grocery store would be an obvious recommendation, and not very helpful, because the customer already had that knowledge. EX1007, 3:8-20.

The Bieganski patent addresses this limitation of existing recommender systems by introducing serendipity into recommendation systems. EX1007, 3:30-33. A serendipitous recommendation system suggests items that a user would not normally encounter, thereby enhancing discovery and diversity. EX1007, 5:13-22. Traditional systems typically provide

obvious, expected recommendations, but they often lack the element of novelty that serendipitous suggestions offer. EX1007, 5:22-25.

The recommendation system described in the Bieganski patent includes three core components:

- (a) the recommendation engine,
- (b) the serendipity control function applicator, and
- (c) the serendipity integration unit.

EX1007, 5:55-58.

The outputs of the recommendation engine and the serendipity control function are fed into the serendipity integration unit. EX1007, 5:59-61. This unit produces a final set of recommendations that are both serendipity-weighted and filtered, resulting in a balanced mix of accuracy and novelty. EX1007, 5:61-63.

The recommendation engine uses automated collaborative filtering to generate candidate items. EX1007, 6:27-29. It groups users with shared interests into affinity groups or neighborhoods. EX1007, 6:29-31. To form a neighborhood for a target user, the engine identifies users with preference profiles most similar to that of the target. EX1007, 6:31-34. Similarity is typically measured by counting the number of shared items between profiles. EX1007, 6:34-36.

The Bieganski patent uses two thresholds to limit the neighborhood size: minimum neighbor similarity and maximum neighborhood size. EX1007, 7:16-19. Once a neighborhood is identified, the engine generates a set of candidate items by selecting all

items found in the profiles of the neighbors, excluding any already present in the target user's profile. EX1007, 7:66-8:3.

The serendipity control function is a mathematical function that maps an item's popularity in the community to a probability value. EX1007, 9:54-57. Several strategies are proposed, including:

High-frequency cutoff

Low-frequency cutoff

High-frequency dampening

Mixed functions

EX1007, 9:64-11:67.

Finally, the serendipity integration unit combines the predictive accuracy of the recommendation engine with the serendipitous value of the items to produce a refined list of recommendations. EX1007, 15:34-37.

2. Rose Does Not Teach, Disclose, or Render Obvious the Limitation of “determin[ing] 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” and, Therefore, Rose Does Not Render Obvious Any Claim.

Every claim of the '217 Patent requires “*determining 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.*” EX1001, at Claims. In particular, in the '217 Patent, the first user's own actions are actively monitored. EX2001, ¶ 137 (citing EX1001, 11:4-8). For example, if the first user moves the piece of electronic content to a folder, forwards it to another user, or prints it, the system interprets these first user's own actions as

indications that the piece of electronic content is significantly important to the first user. EX1001, 11:8-12:27. The system considers the first user's actions – i.e., “a user's own actions” – as “*a first measure of relevance.*” EX2001, ¶ 137 (citing EX1001, 11:26-12:27 & Claims 1, 6 & 7).

In contrast, Rose does not use “*actions of the [first] user*” “*on the piece of electronic content*” to “*determine a first measure of relevance of the piece of electronic content.*” *Id.* This is because Rose is focused on **predicting** whether electronic content that a user has not yet read **will be** relevant to a particular user. EX2001, ¶ 139 (citing EX1006, Abstract). As such, Rose contains no disclosure of using the first user's **own actions** on the document as a measurement of relevancy for that same document. EX2001, ¶ 139; *see generally* EX1006. Instead, in Rose, the first user's “*actions*” “*on the piece of electronic content*” (e.g., whether the first user gave the document a “thumbs up” or a “thumbs down”) are used for **different** purposes. EX2001, ¶ 139. First, the first user's “*actions*” “*on the piece of electronic content*” can be used to predict whether “*the piece of electronic content*” will be relevant to “**other** users.” *Id.* (citing EX1006, 5:56-60 (emphasis added)). Second, the first user's “*actions*” “*on the piece of electronic content*” can be used to adjust the first user's profile to better predict the relevance of **future** documents for the first user. *Id.* (citing EX1006, 5:15-23, 5:43-46 & 5:56-60). Rose, however, contains no disclosure of using the first user's “*actions*” “*on the piece of electronic content*” to “*determine[e] a first measure of relevance of the piece of electronic content.*” *Id.*; *see generally* EX1006.

The only relevance measures that Rose considers are attribute-based predictions (i.e., predictions based upon the documents' content, such as keywords or date) and

correlation-based predictions (i.e., predictions based upon other users' feedback). EX2001, ¶ 140; EX1006, at Claims.

Petitioner's expert asserts that when the first user "rates electronic content, the system updates weights for 'significant terms in that document' in the user's profile, which then increases (or decreases) the relevance of that document for that user." EX1003, ¶ 182 (emphasis added & citing EX1006, 6:36-43; *id.* 3:51-62, 4:11-20, 5:1-23). The passage that he cites in support of this statement, however, does not support his conclusion. *See* EX1006, 6:36-43; *see also* EX2001, ¶ 141. Instead, the citation states: "Each time a user provides a new response to a retrieved message, the profile vector is modified in accordance with the results of the indication"; "[f]or 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." EX1006, 6:36-43 (emphasis added). This citation states only that user feedback (for example, giving a document a "thumbs up" or a "thumbs down") is used to update the user's profile. EX1006, 6:36-43; EX2001, ¶ 141. It says nothing about updating the relevance score of that particular document. *Id.* There is no discussion in Rose determining a relevance score for a particular document by using the user's feedback on that particular document as an input or measure of relevancy. EX2001, ¶ 141; *see generally* EX1006.

Importantly, Rose is about "predicting the likely relevance of items of information to a particular user." EX1006, 2:6-7. Rose does not discuss or disclose re-ranking the relevance score for a document after a user has read and provided feedback on the content. EX2001, ¶ 142; *see generally* EX1006. Moreover, it would not be obvious to a skilled

artisan to modify Rose to add the first user's actions on a piece of electronic content as a measure of relevancy for that particular piece of content. This is 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. EX2001, ¶ 142. Rose does not disclose using the first user's feedback on a particular document to rank that particular document. EX2001, ¶ 142; *see generally* EX1006.

In sum, Rose does not teach, disclose, or render obvious using “*actions of the [first] user*” “*on the piece of electronic content*” to “*determine a first measure of relevance of the piece of electronic content.*” EX2001, ¶¶ 137-142. Therefore, Petitioner has not established a case of *prima facie* obviousness based upon the Rose reference, and the Board should decline to institute on the basis of Ground 2.

3. Rose Does Not Teach, Disclose, or Render Obvious the Limitation of “*determin[ing] the relevance score ... based at least in part on the first determined measure of relevance ...*” and, Therefore, Rose Does Not Render Obvious Any Claim.

In the ‘217 Patent, after determining “*a first measure of relevance*” based upon the user's own actions, the ‘217 Patent then uses this “*first measure of relevance*” to “*determine[]*” “*the relevance score.*” Every claim of the ‘217 Patent requires that “*the relevance score being determined based at least in part on the first determined measure of relevance*” – i.e., based upon “*one or more actions of the user on the piece of electronic content.*” EX1001, at Claims 1, 6 & 7. Rose, however, does not teach, disclose, or render obvious this requirement of using a “*first measure of relevance*” (i.e., a user's own actions) to “*determine[]*” “*the relevance score.*” EX2001, ¶¶ 144-153.

When Rose determines a relevance score or rating, Rose does **not** use “a user’s own actions” as an input. EX2001, ¶ 145; *see generally* EX1006. Instead, in Rose, two different measurements are used to calculate a relevance score/rank, including “[1] attribute-based [prediction] and [2] correlation-based prediction.” EX1006, 7:35-37; EX2001, ¶ 145.

Attribute-based predictions are based upon the attributes, or content, of the document. EX1006, 6:11-25; 6:51-59; *id.* 8:12-16; EX2001, ¶ 146. For example, attribute-based predictions in Rose may include the words/terms that appear in a document or the date/age of a document. *Id.*; EX1006, 8:13-17. Using the attributes, or content, of a document to determine a relevance score, however, is **not** a “*first measure of relevance*” in the ‘217 Patent. EX2001, ¶ 147. Instead, in the ‘217 Patent, “*content relevance*” is “a ***second*** *measure of relevance.*” EX1001, at Claims 1, 6, 7 (emphasis added); EX2001, ¶ 147.

Another input used to calculate a relevance score/rank in Rose is correlation-based predictions. EX2001, ¶ 148; EX1006, 6:61-52; *id.* 6:60-7:34. Correlation-based predictions are based upon community feedback – i.e., “indications provided by other users.” *E.g.*, EX1006, 6:61-52; *id.* 6:60-7:34. Using community feedback on a document to determine a relevance score, however, is **not** a “*first measure of relevance*” in the ‘217 Patent. EX2001, ¶ 149. Instead, in the ‘217 Patent, “*actions on the piece of electronic content of the at least one other of the plurality of users*” is part of “a ***second*** *measure of relevance.*” EX1001, at Claims 1, 6, 7 (emphasis added).

In sum, the Rose patent considers two types of inputs in calculating a relevance score/rank – i.e., attribute-based predictions and correlation-based predictions – but neither of the two inputs is a “*first measure of relevance*” in the ‘217 Patent. EX2001, ¶ 150.

Petitioner's expert asserts that Rose's “user profiles” “contain[] the first measure of relevance.” EX1003, ¶ 194. That is incorrect. EX2001, ¶ 151. The “*first measure of relevance*” in the ‘217 Patent must be based upon “*actions of the user on the piece of electronic content.*” EX1001, at Claims; EX2001, ¶ 151. As discussed above, however, the Rose reference does not use “*actions of the user on the piece of electronic content*” as a measure of relevance. *Supra* at 42-45. Instead, the measures of relevance that the Rose reference uses to predict a relevance score include only (1) attribute-based data (e.g., content) and (2) correlation-based data. EX1006, 6:6-11 & 7:35-37; EX2001, ¶ 151.

Rose's “user profiles” are not a “*first measure of relevance*” as set forth in the ‘217 Patent. The user profiles in Rose store attributes (e.g., content), such as significant terms/words. EX1006, at Abstract. In calculating a relevance score, Rose compares the content in the profile to the content in the document. EX1006, 6:11-13 & 6:51-59. The content-based information stored in the user profile, and used to determine a relevance score in Rose, is not a “*first measure of relevance*” in the ‘217 Patent. Instead, in the ‘217 Patent, “*content*” based relevancy is a “*second measure of relevance.*” EX1001, at Claims.

For all of these reasons, Rose does not disclose a “*first measure of relevance*” or “*determin[ing] the relevance score ... based at least in part on the first determined measure of relevance.*” Therefore, Petitioner has not established a case of *prima facie*

obviousness based upon the Rose reference, and the Board should decline to institute on the basis of Ground 2.

4. The Combination of Rose and Bieganski Does Not Teach, Disclose, or Render Obvious the “*identify...*” Limitation and, Therefore, Rose/Bieganski Does Not Render Obvious Any Claim.

Claims 1-3, 5-9, 13-15, 18-19, and 22 of the ‘217 patent are not obvious based on Rose and Bieganski. As discussed above, every claim of the ‘217 Patent requires “*determining 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.*” EX1001, at Claims (emphasis added). As set forth above, however, Rose does not disclose a “*first determined measure of relevance*” because Rose does not disclose “*determining 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**.*” Therefore, Rose also does not teach or disclose determining a relevance score “*based at least in part on the first determined measure of relevance.*”

Petitioner and its expert do not claim that Bieganski discloses “*determining 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**.*” Therefore, the combination of Rose and Bieganski does not disclose this limitation. In sum, neither Rose nor Bieganski discloses every limitation of the independent claims of the ‘217 Patent. Therefore, Petitioner has not established a case of *prima facie* obviousness based upon

the Rose and Bieganski references, and the Board should decline to institute on the basis of Ground 3.

5. A POSA Would Not Be Motivated to Combine Rose and Bieganski.

Petitioner and its expert assert that it would have been obvious to combine the Rose and Bieganski references, arguing that, as an alternative to Rose disclosing the following limitations, the Bieganski reference also supplies the “second relevance” limitations (as well as several dependent claims), including the “*second relevance measurement*” (1[e]/6[c]/7[d]); the “*identify...*” limitation (1[f]/6[d]/7[b]); and the specific measures that are the “second measure of relevance” (1[g]/6[e]/7[d]). *See* Pet. 72-77; EX1003, ¶¶ 232-237. Petitioner argues that a POSITA would have modified Rose to include certain limitations that Petitioner and its expert assert contend are taught by Bieganski. *Id.* As discussed above, however, Petitioner and its expert do not rely upon Bieganski to disclose the “*first measure of relevance.*”

Moreover, Petitioner and its expert's position with respect to combining Rose and Bieganski ignores the numerous reasons why a skilled artisan would not have been motivated to combine the references and would not have expected to be successful in doing so.

First, 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. Because Bieganski is focused on a different type of content. EX2001, ¶¶ 156-157; EX1001, 1:10-45. In particular, Bieganski addresses the problem of recommending a particular type of content: non-textual multimedia content such as movies and videos.

EX1007, 1:45-50. The Bieganski reference does not address “sent” electronic content, such as e-mails. *See generally* EX1007. In contrast, every claim of the ‘217 Patent addresses “*electronic content sent from a sender to a user.*” EX1001, at Claims (emphasis added). Second, combining Rose and Bieganski would not be as simple of a change as Petitioner and its expert suggest. EX2001,¶ 157. In particular, the two threshold selections in Bieganski – i.e., minimum neighbor similarity and maximum neighborhood size – are not trivial. *Id.* Furthermore, these thresholds may vary from one targeted user to another one. *Id.* For these reasons, it would not have been obvious to combine Rose and Bieganski to come up with the inventive solutions set forth in the ‘217 Patent.

For all of these reasons, Petitioner has failed to establish a reasonable likelihood that it will prevail in showing that the challenged claims are unpatentable as obvious based upon the Rose reference, alone or in combination with Bieganski. Therefore, Petitioner's request to institute on Grounds 2 and 3 should be denied.

VI. CONCLUSION

For the reasons set forth herein, Patent Owner respectfully submits that Petitioner has not met its burden of proving that there is a reasonable likelihood that the Petitioner would prevail with respect to at least one of the claims challenged in the petition and, therefore, respectfully requests that the petition to institute be denied in its entirety. Furthermore, the gaps in its evidence for a term that is in every claim establishes that Petitioner has failed to make a *prima facie* case of obviousness. Patent Owner respectfully requests the Board to deny Petitioner request to institute an *Inter Partes Review*.

Respectfully submitted,

Dated: June 11, 2025

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. 42.6(e), I certify that on this 11th day of June, 2025, a true and correct copy of the foregoing **Patent Owner's Preliminary Response Under 37 C.F.R. § 42.107** was served by electronic mail on Petitioner's lead and backup counsel at the following addresses:

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