

Sterling's '217 Patent Is Patentable Over the Art

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Preamble

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:

- The '217 Patent claims “determine” “a relevance score.”
- It is “determining a relevance score” with regard to “a piece of electronic content.”
- The content for which relevance is being determined is “sent from a sender to a user.”
- The relevance score of the piece of electronic content is determined “with respect to the [first] user” – i.e., the person to whom the piece of electronic content was sent by a sender.

Resp. (Paper 18), at 6-8

1st two elements –
computer requirements
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:

- The claimed computer-implemented system requires a computer processor.
- And a computer-readable storage medium to store the program modules.
- These program modules are configured to execute on the computer processor – making it clear that these modules are computer code. EX2029, ¶¶21-42.

Resp. (Paper 18), at 6-8; EX2029, ¶¶21-42

1st computer program module

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

- The first computer program module claimed is the monitoring module.
- This module is configured to track the actions of a plurality of users associated with the application.
- So, there is the **first user** – who is sent the piece of electronic content and for who relevance is being determined – and **other users**.

Resp. (Paper 18), at 6-8 & 14-17; EX2029, ¶¶ 22-43 & 49-69

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2nd Computer Program Module

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**;

- The 2nd computer program module is a first relevance measurement module.
- The piece of electronic content was the one a sender sent.
- The user is a recipient of that content and is the user for whom the relevance for this piece of content is being determined.

Resp. (Paper 18), at 6-8 & 14-17; EX2029, ¶¶ 22-43 & 49-69

3rd Computer Program Module
a second relevance measurement module coupled to the monitoring module and configured to:

- The 3rd computer program module is a second relevance measurement module.
- It is configured to do two things under this claim.

Resp. (Paper 18), at 6-10 & 14-17; EX2029, ¶¶ 22-43 & 49-69

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3rd Computer Program Module

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

- The first thing the 3rd computer program module is configured to do is “identify” another user that is BOTH:
 - a recipient of the piece of electronic content; AND
 - is cognate to the first user.
- The electronic piece of content that is received by the recipient is the same piece of electronic content for which relevance is being determined.
- This module identifies a second user that is cognate to the first user – the one who was sent the content and for whom relevance of the content is being determined.

Resp. (Paper 18), at 6-10

Role of “Identify[ing]” Another “Recipient”

Reasons to identify another “recipient” of “the piece of electronic content”:

- The actions of other “recipients” can help determine “the relevance of content in a given user’s folders.” Ex. 1001, 12:27-30.
- When determining “the relevance value seen by the recipient,” the system considers “the actions of all other recipients.” Ex. 1001, 33-41; Ex. 2029, ¶83.
- The ‘217 Patent teaches that “[a]s to communal filtering, this mechanism may **use the behavior of other recipients** of a given piece of content to determine the content’s relevance to the user in question – communal relevance.” Ex. 1001, 43:61-64; Ex. 2029, ¶80.

Resp. (Paper 18), at 8-13.

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Role of “identify[ing]” another user that is “cognate” to the first user

“[F]or each user, over time, the system may identify a cognate group of the n other users regarded as most similar.

[T]he actions of this particular group on an electronic mail object will give more indication of its relevance to the user than would a global reaction to the electronic mail.”

Ex. 1001, 14:59-15:11; Ex. 2029, ¶74.

- The ‘217 Patent describes the math to implement this insight. Ex. 2029, ¶¶82-90.

Resp. (Paper 18), at 8-13

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Role of “identify[ing]” another user that is “cognate” to the first user

Information about users in the “cognate” group for a recipient is used to calculate values including:

- Cognate relevance value
- Cognate importance value
- Local relevance

Ex. 1001, 25:37-26:52; 29:59-30:15; 36:33-41; 42:64-44:3; 43:4-7. Ex. 2029, ¶¶ 70-90.

Resp. (Paper 18), at 8-13

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3rd Computer Program Module

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

- The second thing the 3rd computer program module is configured to do is determine a second measure of relevance.
- The various measures all tie to the piece of electronic content sent by a sender to the first user.
- One measure is specific to the second user that is a recipient of the piece of electronic content AND is cognate to the first user.

Resp. (Paper 18), at 6-8 & 14-17; EX2029, ¶¶ 22-43 & 49-69

4th Computer Program Module
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.

- The 4th computer program module is a relevance analysis module that determines the relevance score for the piece of electronic content “sent from the sender to the user.”
- It is calculated based on the 1st and 2nd measures of relevance.

Resp. (Paper 18), at 6-8 & 14-17; EX2029, ¶¶ 22-43 & 49-69

Prior Art Does Not Disclose or Suggest the Claimed System and Method for Determining Relevance

The prior art relied on by the Petitioner never tackled the problem of **both**

(1) determining a relevance score for a piece of sent electronic content based on the first user's actions; and

(2) identifying other users that are "recipient[s]" of the same content and are also "cognate" to the first user.

Resp. (Paper 18), at 2-6.

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Prior Art Does Not Disclose or Suggest the Claimed System and Method for Determining Relevance

- The '217 Patent discloses complex math and algorithms used to make the relevancy determinations disclosed in the claims.
- The claims determine relevance of content “sent by a sender.”
- Bieganski does not address relevance of content “sent by a sender.”
- Dumais’ focus is query modification in response to a search (e.g., on the Web), not determining the relevance of content “sent by a sender.”
- Rose shows improvement to technology for filtering incoming e-mails by using a ranking system. When Rose discusses content “sent by a sender,”
 - there is no disclosure of taking into account the actions of the user for whom relevance is being determined (first measure of relevance); and
 - there is no disclosure of identifying a cognate user. The state of the art, as reflected by Rose, was, at most, to look at all other users.

Resp. (Paper 18), at 10, 23-26, 27-41, 43-44, 51.

Prior Art Does Not Disclose or Suggest the Claimed System and Method for Determining Relevance

Rose's Algorithm

- Focus is on ranking items not yet viewed by the 1st user
- Rose predicts the relevance of items based on:
 - Attributes of the item (e.g., content, or event times); and
 - Community feedback

What's missing from Rose?

- Rose's algorithm does not use the first user's actions to determine relevancy.
- Rose does not teach identifying a user that both received the item for which relevancy is being determined for the first user and is "cognate" to the first user.
 - Rose considers the feedback of all other users.

Resp. (Paper 18), at 22-24 (citing EX2029, ¶¶99-113 & 167-193); Sur-Reply (Paper 31), at 3-9

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Prior Art Does Not Disclose or Suggest the Claimed System and Method for Determining Relevance

Bieganski's Algorithm

- Focus is on recommendation systems
- Uses a recommendation engine, a serendipity control function applicator, and a serendipity integration unit
- Collaborative filtering used to identify other users that have similarity based on shared items

What's missing from Bieganski?

- Petitioner does not contend Bieganski discloses determining relevance based upon the first user's own actions. Nor could it: Bieganski does not use the first user's action on the item for which relevance is being determined. EX1007, 8:1-5.
- A skilled artisan would not look to Bieganski to supply the missing "identify" limitation because Bieganski is not dealing with "sent" content. As such, the system does not identify another user that received the same content, to then determine whether the user is "cognate."

Resp. (Paper 18), at 24-26 & 42-44 & n. 5 (citing EX2029, ¶¶ 114-124 & 195-203); Sur-Reply (Paper 31), at 9-10.

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Prior Art Does Not Disclose or Suggest the Claimed System and Method for Determining Relevance

Dumais' Algorithm

- A search and retrieval system that uses:
 - a user model – based on user activity or interaction data – to
 - modify the query
 - used to do an initial search
 - used on results returned from the initial search.

Ex. 1006, Dumais, ¶ 40.

What's not disclosed in Dumais:

- Dumais is not in the context in which relevance is being determined on content that is “sent from a sender to a user.”
- Dumais does **not** identify a second user “cognate” to the first user that also received the electronic content for which relevance is being determined.
- Dumais' use of collaborative filtering to develop a user model: does **not** identify a second user “cognate” to the first user that also received the electronic content for which relevance is being determined.

Resp. (Paper 18), at 51-56; Sur-Reply (Paper 31), at 18-25

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“Computer Program Module” Terms

- The following claim terms do not invoke Section 112, ¶6:
 - “a monitoring module”
 - “a first relevance measurement module”
 - “a second relevance measurement module”
 - “a relevance analysis module”
 - “content presentation module”
 - “search module”
- The Board’s preliminary determination that these terms do not invoke Section 112, ¶6 is correct.
- As an initial matter – the “module” terms are presumed to not invoke Section 112, ¶6.
 - The claims do not recite “means for” language.

Resp. (Paper 18), at 14-17 (citing EX2029, ¶¶21-44); Sur-Reply (Paper 31), at 1

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“Computer Program Module” Terms

- The claims introduce the “module” terms with the following language, which connote structure (software instructions) to a POSA:
 - “a computer-readable storage medium storing computer program modules configured to execute on the computer processor, the computer program modules comprising:”
- Software instructions are stored on a computer-readable storage medium.
- Software instructions are “execute[d] on a computer processor.”

Resp. (Paper 18), at 14-17 (citing EX2029, ¶¶21-44)

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“Computer Program Module” Terms

- Specification defines “module” as “any program, circuitry, logic, and/or functionality implemented in either software and/or hardware.” Ex. 1001, 6:36-38.
 - Given the claim language,
 - “modules” per this definition are software instructions.
- “[T]he functionality . . . of the modules . . . may be . . . carried out in response to one or more processors executing software instructions stored on the computer-readable medium.” Ex. 1001, 7:2-12.

Resp. (Paper 18), at 16 & EX2029, ¶¶21-44

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“Computer Program Module” Terms

- Dyfan and Zeroclick establish that software instructions are structure:
 - Zeroclick - holding that words in a claim giving context to the disputed word can indicate the structure of the disputed word.
 - “graphical user interface” providing a basis for a POSA to understand it was structure – i.e., code.
 - *Zeroclick v. Apple*, 891 F.3d 1003, 1008 (Fed. Cir. 2018).
 - Dyfan - “Intrinsic evidence, such as the claims themselves and the prosecution history, can be informative in determining whether the disputed claim language recites sufficiently definite structure or was intended to invoke § 112 ¶ 6.”
 - *Dyfan v. Target*, 28 F.4th 1360, 1365-66 (Fed. Cir. 2022).

Resp. (Paper 18), at 14-17 (citing EX2029, ¶¶21-44)

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“cognate to the user”

- Contrary to the Board’s understanding, as reflected in the Institution Decision,
 - Patent Owner is **not** seeking to construe the term “cognate” to require that the other user “receive content which the user has also received.”
 - Patent Owner respectfully submits that this construction should be part of the “recipient” term.
 - Patent Owner is **not** seeking to construe the term “cognate” to require that “the other user’s actions on that content must be tracked in order to determine the content’s relevance.”
- Applying *Phillips*, the proper construction of “*identify[ing] at least one other of the plurality of the users ... that is cognate to the user*” is “identifying at least one other user that shares similar past user actions and assessments **as the first user** and/or shares similar direct input **as the first user**.”
 - Construction is needed because Petitioner ignores that the second user must be “cognate to” **a specific user** (“the user” from the preamble).
- The claims require identification of another user that is both a recipient of the same electronic information as the first user **and** is “cognate” to the first user.

Resp. (Paper 18), at 17-18; Sur-Reply (Paper 31), at 2

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“a recipient”

- Applying Phillips, the proper construction of “*a recipient of the piece of electronic content*” is:
 - “a user that has received the same piece of electronic content sent from a sender that the first user received.”
- The claim language supports this construction:
 - “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**”
 - “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”
 - EX1001, claim 1.

Resp. (Paper 18), at 18-19 (citing EX2029, ¶136); Sur-Reply (Paper 31), at 2-3.

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“a recipient”

Ex. 2029, ¶136.
Specification supports
the construction

136. It is apparent that Dr. Fox is defining “*recipient*” to be any user that “interact[ed]” with, or “used,” a data item. EX1003, ¶¶ 120. That definition is incorrect. 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. EX1001, at 2:26-28 (“an electronic mail object may be sent to external recipients”); EX1001, at 5:1-2 (same); EX1001, at 5:3-5 (“a user ... sends ... to recipients”); EX1001, at 5:12-14); EX1001, at 5:21-23); EX1001, at 10:15-18 (discussing whether a user was “one of fifty other recipients” or “the sole recipient”). Thus, a POSA would understand that, in the ‘217 Patent, a “*recipient*” is a user that received a sent piece of electronic content from a sender; not just any user that interacted with, or used, a piece of electronic content.

Resp. (Paper 18), at 18-19 (citing EX2029, ¶¶136); Sur-Reply (Paper 31), at 2-3.

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“a recipient”

- Petitioner’s construction of “a recipient”:
 - any “user” that “used” an item. Ex. 1003, ¶120.
- This construction is incorrect.
 - The claims and the specification make clear that the “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**.
- The mention of “a document” in Claim 5 does not support Petitioner’s position (i.e., that the content need not be “sent” content) because:
 - (1) a “document” may be “sent by a sender” (e.g., an attachment); and
 - (2) Claim 5 is dependent upon Claim 1, which states that the “content” is “sent from a sender.”
- The examples of document management applications also do not support Petitioner’s position, because document management applications may include content “sent from a sender” (e.g., emails). E.g., EX1001, Fig. 20.

Resp. (Paper 18), at 18-19 (citing EX2029, ¶136); Sur-Reply (Paper 31), at 2-3.

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Rose Fails to Render Obvious Any Claim

Rose

- The focus of Rose is to rank e-mail **not yet viewed** by the first user.
- Rose's algorithm is a "combination of attribute-based and correlation-based prediction." Ex. 1006, 7:35-37.
 - Attribute-based prediction is based on the content of the document. Ex. 1006, 6:5-9. Ex. 2029, ¶105.
 - A user profile that contains terms from documents the user has indicated interest; and
 - User ratings from all other users that provided feedback on the electronic content.

Elements Missing in Rose

- Rose does not disclose determining relevance based upon "a first measure of relevance of the piece of electronic content based on . . . [the] actions of the user on the piece of electronic content."
- Rose does not "identify" a user cognate to the first user that also is a recipient of the piece of electronic content the first user received.
 - That is, Rose does not disclose, teach, or suggest "identify[ing]" a **subset** of users – i.e., only those users that are "cognate to the [first] user."
 - Rose considers feedback of **all** other users.

Resp. (Paper 17), at 27-41 (citing EX2029, ¶¶ 158-166 & 167-193); Sur-Reply (Paper 31), 3-9

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Rose Does Not Teach the “identify[ing]” Limitation

- “In Rose, the second similarity measure employs correlations and ratings from **all users** across the system for the same item or electronic object.” Ex. 2029, ¶185.
- “Specifically, in Rose, a user’s interest in information is predicted based on correlations with preferences expressed by **all other users** who retrieved that same message.” Ex. 2029, ¶185.

Resp. (Paper 18), at 38

Rose Does Not Teach the “identifying” Limitation

“The user correlation data is obtained from feedback information provided by users when they retrieve items of information.” Ex. 1006, at Abstract; Ex. 2029, ¶185.

“[I]t is particularly desirable to provide an information relevance predicting technique which utilizes community feedback as one of the factors in the prediction.” Ex. 1006, 2:20-22; Ex. 2029, ¶185.

“A second factor in the prediction of a user's interest in information is based upon a correlation with the indications provided by other users.” Ex. 1006, 6: 59-62; Ex. 2029, ¶185.

Resp. (Paper 18), at 37-38

Rose Does Not Teach the “identifying” Limitation

- The math disclosed in Rose confirms that “a first user’s interest in information is predicted based on correlations with preferences expressed by **all other users** who retrieved that same message.” Ex. 2029, ¶186, Paper 18 (Resp.) at 38.

message. As stated in Rose (EX1006, 7:24), a prediction score P_{ij} for the i -th user regarding the j -th document can be computed as:

$$P_{ij} = \sum_{k \neq i, j} (R_{ik} \times V_{kj})$$

Resp. (Paper 18), at 38

Rose Does Not Teach the “identifying” Limitation

- Dr. Khan concludes that the formula considers “correlations for all users except the first user.” Ex. 2029, ¶186.

or feedback provided by user k on document j . Thus, when predicting the interest of the first user (i) in a particular electronic object (j), correlations from all users except the first user (i) are considered, and all users’ ratings on the same object are factored into the calculation.

- Ex. 2029, ¶186.

Resp. (Paper 18), at 38

Rose Does Not Teach the “identifying” Limitation

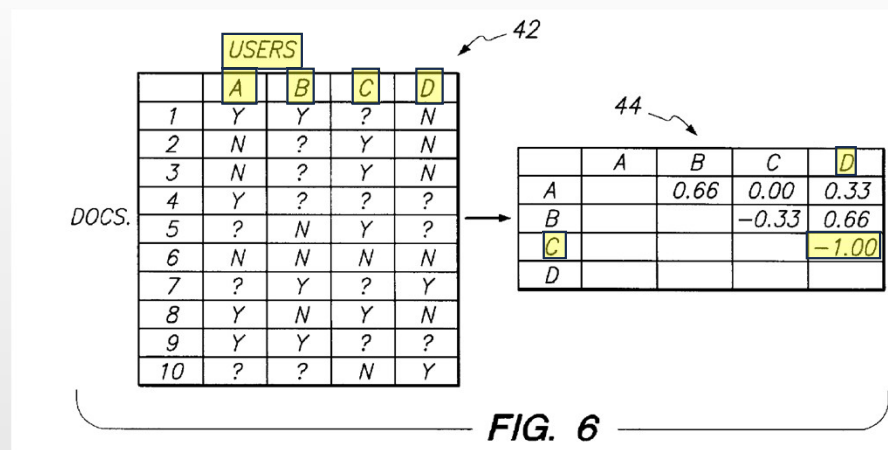
Rose describes an example with reference to Figure 6. The example confirms that

“Rose considers the feedback of every user that accessed the item, regardless of whether the other users are similar to (or historically provided similar feedback as) the first user.”

Ex. 2029, ¶188.

Resp. (Paper 18), at 38

Rose Does Not Teach the “identifying” Limitation



With reference to Fig. 6, Rose discloses how to calculate a “prediction scored for User C regarding Document 1.” Ex. 1006, 7:20-21.

“In doing so, the algorithm considers each one of the other users – i.e., A, B, and D in the example.” Ex. 2029, ¶188.

“The algorithm considers all of these other users’ feedback regardless of whether the other users had similar historical feedback as the first user.” Ex. 2029, ¶188.

“For example, in the example matrix, the feedback of all other users (here, Users, A, B, and D) is considered, even though, for example User D almost always provided opposite feedback as compared to User C (their feedback was opposite for five of the six commonly-rated documents).” Ex. 2029, ¶188.

Resp. (Paper 18), at 38

The '217 Patent Teaches “identifying” “cognate” users – not all users

- '217 Patent makes clear that the focus is on people with a similarity to the person for whom relevance is being determined:

the content. In another situation, if the vast majority of the users in a given department read a piece of content sent globally, then the content is likely to be relevant to another user in that department. In still another scenario, if the major-

Ex. 1001, 12:55-58.

- The focus for relevance is on **others in the same “department”** as the person for whom relevance is being determined.

Sur-Reply (Paper 31), at 7

Petitioner's Evidence Fails to Show “identify[ing] ... [another user] that is cognate to the [first] user”

- Petitioner stitches together passages from 3 separate sentences in Rose to argue that Rose discloses the “identify[ing]” limitation. The sentences establish that Petitioner’s reliance is misplaced.
- 1st excerpt relied upon by Petitioner:
 - “[One’s user rating] is used to update the user’s profile for the movie database, as well as provide the information to rank that movie for viewing by other users whose interests in movies are **similar or opposed**.”
 - Ex. 1006, 5:57-60 (emphasis added).
- The passage does not teach “identify[ing]” another user that is cognate to the first user – rather it teaches using this rating information to predict relevancy based on **all other users**.

Resp. (Paper 18), at 39; Sur-Reply (Paper 31), at 8)

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Petitioner's Evidence Fails to Show “identify[ing] ... [another user] that is cognate to the [first] user”

- 2nd excerpt relied on by Petitioner:
 - “From this table, a correlation matrix **R** can be generated, whose entries indicate the degree of correlation between the various users’ interests in commonly retrieved messages.”
 - Ex. 1006, 6:61-7:1 (emphasis added).
- This passage does not teach or suggest “identify[ing]” another “user” that is “cognate to the [first] user.”

Resp. (Paper 18), at 39-40

Petitioner's Evidence Fails to Show “identify[ing] ... [another user] that is cognate to the [first] user”

- 3rd excerpt relied on by Petitioner is from Ex. 1006, 7:39-51 (emphasis added):

“In this approach, regression methods are employed **to identify the most important attributes** that are used as predictors, e.g., salient terms in a document and users having similar feedback responses, and how much each one should be weighted.”

- This sentence uses the word “identify” in the context of “identify[ing]” “attributes” – not identifying “another” “cognate” user.

Resp. (Paper 18), at 40; Sur-Reply (Paper 31), at 8

Petitioner's Evidence Fails to Show “identify[ing] ... [another user] that is cognate to the [first] user”

- Also, the reference to “users having similar feedback responses” does
 - **not teach or suggest** “**identify[ing]**” such users (or treating such users any differently than any other user);
 - **not teach or suggest** “**identify[ing]**” “users having similar feedback responses” **as the first user** (i.e., “cognate to the [first] user”)
 - **not teach or suggest** “**identify[ing]**” “users having similar feedback responses” to the first user **that also “is a recipient** of the piece of electronic content” being scored.

Resp. (Paper 18), at 40

Petitioner's Evidence Fails to Show “identify[ing] ... [another user] that is cognate to the [first] user”

- Petitioner asserts that PO's own expert agreed that two of the above passages describe identifying cognate users, but the testimony does not support that conclusion.
 - The first (EX1040,187:7-13) states only that a group of “users whose interests in movies are similar” could refer to “cognate” users. It does not address “**identify[ing]**” another “user” that is “**cognate to the [first] user.**”
 - In the second (EX1040,193:15-24), he stated that regression could “determine users having similar feedback responses,” but he clarified that **Rose's analysis** “consider[s] all the other users” “regardless of the cognate or non-cognate.” EX1040,193:25-194:10; *accord id.*,237:11-23.
 - In the final piece of testimony (EX1040, 194:17-195:2), he agreed only that “users with similar feedback responses would be cognate users.” The testimony did not address whether Rose “**identif[ies]**” another “cognate” user, let alone another “user” that is “**cognate to the [first] user.**”

Sur-Reply (Paper 31), at 9

Petitioner's Evidence Fails to Show “identify[ing] ... [another user] that is cognate to the [first] user”

- Petitioner argues that, because the claims use the language “*at least one*” to describe the other “*user(s)*” being “*identif[ied]*,” the claim language does not preclude considering feedback from ‘**all** other users’ that have rated the item.” Reply, 8.
- That is incorrect.
 - A user’s “*cognate*” group is a **subset** of users that **share some similarity** with the first user (e.g., in the same department).
 - For example, “if the vast majority of the users in a given department read a piece of content sent globally, then the content is likely to be relevant to another user in that department.” E.g., EX1001, 12:55-58.
 - A group consisting of “everybody” (i.e., “**all** other users”) would not be users “*cognate to*” the first user.

Sur-Reply (Paper 31), at 7

Petitioner's Evidence Fails to Show “identify[ing] ... [another user] that is cognate to the [first] user”

- Petitioner contends that “grouping users by their ‘interests’ and/or ‘feedback responses’” is the same as “*identify[ing] at least one other...user[]...that is cognate to the [first] user.*” Reply,9.
- That is incorrect.
 - While a group of users with “similar” “interests” or “feedback responses” may be “cognate” to other members in the group, nothing in Rose teaches or suggests “*identif[ying]*” another user that is “*cognate to the [first] user.*” Rose also does not disclose the desirability of, or the math required, to do so.

Sur-Reply (Paper 31), at 9

Rose Doesn't Use A First User's Actions On the Document For Which Relevancy Is Being Predicted

- The Rose algorithm has two components – neither of which involves using the first user's actions on the document for which relevancy is being predicted.

In accordance with the invention, a combination of attribute-based and correlation-based prediction is employed to rank the relevance of each item of information. For

Ex. 1006, 7:35-37 (emphasis added).

Resp. (Paper 18), at 23-24 & 28

Rose Doesn't Use A First User's Actions On the Document For Which Relevancy Is Being Predicted

- Attribute-based prediction uses a user's vector profile to analyze the document – this a profile based on “user indications . . . [of] relative interest in previously retrieved documents.” Ex. 1006, 6:36-38.
 - As such, the user's vector profile is updated for future use with documents the user has not yet viewed.
- Correlation-based prediction uses feedback from “other users” – not the actions of the first user:

A second factor in the prediction of a user's interest in information is based upon a correlation with the indications provided by other users. Referring to FIG. 6, each time a

Ex. 1006, 6:59-61.

Resp. (Paper 18), at 23-24, 28, 30; EX2029, ¶¶172 & 175

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The Problem Addressed By Rose Shows the Algorithm Is Applied to Unread Items

- The problem addressed by Rose – too many irrelevant items:

In the past, some information access systems, particularly e-mail systems, have provided the user with the ability to have incoming information filtered, so that only items of interest would be presented to the user. The filtering was

Ex. 1006, 1:64-67.

be blocked. There is always the danger in such an objective approach that potentially relevant items of information can be missed. It is desirable, therefore, to employ a system for

Ex.1006, 2:3-5.

Resp. (Paper 18), at 23-24, 27 & 34-35 (citing EX2029, ¶¶99-113 & 167-178)

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The Problem Addressed By Rose Shows the Algorithm Is Applied to Unread Items

be missed. It is desirable, therefore, to employ a system for predicting the likely relevance of items of information to a particular user, so that the items of interest can be ranked and the need to deal with large amounts of irrelevant information can be avoided.

Ex. 1006, 2:5-9.

- So, Rose is still filtering unread items – but Rose is proposing an algorithm for filtering the unread items better.

Resp. (Paper 18), at 27

Rose Doesn't Use A First User's Actions On the Document For Which Relevancy Is Being Predicted

- Patent Owner's Expert establishes that Rose does not disclose “using the first user's own actions on the document as a measurement of relevancy.”

171. Because Rose is about predicting whether content will be relevant to the first user, Rose contains no disclosure of using the first user's own actions on the document as a measurement of relevancy used to “*determine[]*” “*the relevance score.*” 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. First, the first user's “*actions*”

Resp. (Paper 18), at 27-37; EX2029, ¶ 171

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Rose Doesn't Use A First User's Actions On the Document For Which Relevancy Is Being Predicted

- Petitioner's Expert agrees that "items ... have already been rated" **before** the first user interacts with them:

26. Third, Sterling cites Rose's reference to "items of information **to be presented** to the user" to argue Rose only evaluates the relevance of "messages that have **not yet been** presented to the first user." POR, 33 (emphases in original). But, again, Sterling provides no explanation why these phrases show Rose does not re-rank and present **items that have already been rated/presented.** Khan Transcript,

- At that stage, the rating is **not** based in any part on the first user's own actions on the piece of content.

Sur-Reply (Paper 31), at 3 (citing EX1045, ¶126)

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Rose Does Not Teach or Suggest Re-Calculation of an Item After the User Reads The Item

- Rose does not teach or suggest updating **the ranking score** for an item **after** the first user has read and rated it. Ex. 2029, ¶¶113, 175-178.
- Citing two passages, the Board preliminary agreed with the Petitioner that Rose must **re**-calculate a relevance score for an item after the first user rates the item (i.e., after the user profile is updated to reflect the first user's rating of the item).
- Respectfully, neither of the passages relied on in the Institution Decision supports finding that Rose **re**-scores an item.

Resp. (Paper 18), at 31-33

Rose Does Not Teach or Suggest Re-Calculation of an Item After the User Reads The Item

- First passage from the Institution Decision at p. 22:
 - “all of the messages addressed to the user are ranked.” Ex. 1006, 4:38-42.
- This statement is true even if Rose does not **re**-score an item.
- Every item addressed to the user is scored/ranked – but **before** the user retrieves the item.
- The sentence preceding the sentence cited in the Decision provides exactly this context and demonstrates why this passage should not be read as Rose teaching **re**-calculation of a read item.

Resp. (Paper 18), at 31-33

Rose Does Not Teach or Suggest Re-Calculation of an Item After the User Reads The Item

after. Once the user's profile is retrieved, all of the messages to be provided to the user are ranked on the basis of a predicted degree of relevance to the user. For example, in an e-mail system, all of the messages addressed to that user are ranked. Those messages which are particularly pertinent to

Ex. 1006, 4:38-42.
(includes the 1st passage relied on in the Institution Decision)

- User profile is retrieved – to rank “messages **TO BE** PROVIDED TO THE USER.” User profile is only updated after review, so the messages here are for messages not yet provided to the user.
- It ranks “all messages **TO BE** PROVIDED TO THE USER” – making it clear that it is unread items. The read items have already been provided to the user.
- “ranked on the basis of the **predicted** degree of relevance to the user” – ranking not based on actual feedback from user.
- The “example” is illustrating this prior sentence. As such, “all messages” is to the new messages “to be provided to the user.”

Resp. (Paper 18), at 31-33; EX2029, ¶¶ 178

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profile, items of information to be presented to the user, e.g., messages in an electronic mail network or documents within a particular bulletin board category, are ranked according to their likely degree of relevance and displayed with an indication of their relative ranking. For example, they can be displayed in order of rank.

Ex. 1006, 2:25-35
(includes the 2nd
Passage relied on
in the
Institution Decision)

- “e.g.,” – portion relied on in the Institution Decision is the phrase explaining the example
- “items of information **TO BE PRESENTED** to the user” - confirms this sentence cover messages that have not yet been presented to the user
- “ranked according to their **likely** degree of relevance” – i.e., according to their **predicted** degree of relevance; not according to the actual relevance as indicated by the first user’s rating of the item.
- The complete citation clarifies that it is only **un**read messages that are displayed in order of rank.

Resp. (Paper 18), at 31-33

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Rose Does Not Use the First User's Action On the Piece of Electronic Content

- Rose's algorithm does not use the first user's action on the piece of electronic content for which relevance is being determined, because Rose predicts the relevance for unread content.

170. As the following passages demonstrate, Rose is focused on **predicting** whether electronic content that the first user has not yet read **will be** relevant to that first user:

EX2029, ¶ 170; Resp. (Paper 17), at 23-24 & 27-37 (citing EX2029, ¶¶ 99-113 & 167-179); Sur-Reply (Paper 31), 3-7

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Evidence Showing Rose Predicts – so can't use first user's own actions on the piece of content

- “Information 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.” EX1001, at Abstract (emphasis added); *id.* at 2:25-28 (same).
- “The **prediction of relevance** is carried out by combining data pertaining to the content of each item of information with other data regarding correlations of interests between users.” EX1001, at Abstract (emphasis added).
- “to generate a **prediction of relevance**” EX1001, at Abstract (emphasis added); *id.* at 2:45 (same)
- “It is desirable, therefore, to employ a system for **predicting the likely relevance** of items of information to a particular user, so that the items of interest can be ranked and the need to deal with large amounts of irrelevant information can be avoided.” *Id.* at 2:5-9 (emphasis added).
- “In this regard, it is particularly desirable to provide an information **relevance predicting technique** which utilizes community feedback as one of the factors **in the prediction.**” *Id.* at 2:20-22 (emphasis added).
- “The **prediction of relevance** is carried out by combining data pertaining to one or more attributes of each item of information with other data regarding correlations of interests between users.” *Id.* at 2:35-38 (emphasis added).
- “The **relevance predicting technique** of the present invention is applicable to all different types of information access systems.” *Id.* at 2:51-53 (emphasis added).
- “Once the user's profile is retrieved, all of the messages **to be provided** to the user are ranked on the basis of **a predicted degree of relevance** to the user.” *Id.* at 4:38-41 (emphasis added).
- “the color, size and/or intensity of each displayed message can be varied in accordance with **its predicted relevance.**” *Id.* at 4:65-67 (emphasis added).
- “**One factor in the prediction of a user's likely interest** in a particular piece of information can be based on the similarity between the document's vector and the user's profile vector.” *Id.* at 6:51-54 (emphasis added).

Resp. (Paper 17), at 33-34 (citing EX2029, ¶¶ 170, 177); EX2029, ¶¶ 170, 177; Sur-Reply (Paper 31), 5-6

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Evidence Showing Rose Predicts – so can't use first user's own actions on the piece of content (cont.)

- “**A second factor in the prediction of a user's interest** in information is based upon a correlation with the indications provided by other users.” *Id.* at 6:59-61 (emphasis added).
- “Subsequently, when a user accesses the system, the feedback table **42** and the correlation matrix **44** are used as **another factor in the prediction of the likelihood that the user will be interested** in any given document.” *Id.* at 7:7-9 (emphasis added).
- “As one example of an algorithm that can be used for this purpose, **a prediction score**, P_{ij} for the i -th user regarding the j -th document, can be computed” *Id.* at 7:9-11 (emphasis added); *see also id.* at 7:20-21 (discussing “**prediction** score for User C regarding Document 1” (emphasis added)).
- “In accordance with the invention, **a combination of attribute-based and correlation-based prediction** is employed to rank the relevance of each item of information” *Id.* at 7:35-37 (emphasis added).
- “For example, a weighted sum of scores that are obtained **from each of the content and correlation predictors** can be used, to determine a final ranking score.” *Id.* at 7:37-40 (emphasis added).
- “In this [multiple regression analysis] approach, regression methods are employed to identify the most important **attributes that are used as predictors**” *Id.* at 7:43-47 (emphasis added).
- “Alternatively, principal components analysis can be used to identify **underlying aspects of content-based and correlation-based data that predict a score**.” *Id.* at 7:47-50 (emphasis added).
- “The result of this combination is a program that describes **the data which can best be used to predict a given user's likely degree of interest** in a message.” *Id.* at 2:59-61 (emphasis added).
- “For example, the particular attributes of a message which are to be utilized to define **the prediction formula** can be established ahead of time, and employed in the algorithms.” *Id.* at 8:5-8 (emphasis added).

Resp. (Paper 17), at 33-34 (citing EX2029, ¶¶ 170, 177); EX2029, ¶¶ 170, 177; Sur-Reply (Paper 31), 5-6

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Rose Doesn't Use A First User's Actions On the Document For Which Relevancy Is Being Predicted

- The updated user vector profile is used for the attribute-based prediction component for document not yet retrieved by the user:

Each user profile also comprises a vector, based upon the user's indications as to his or her relative interest in previously retrieved documents. 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. For example, if the user indicates interest in a document, all of the significant terms in that document can be given increased weight in the user's profile.

Ex. 1006, 6:36-43.

Resp. (Paper 18), at 29-30

Rose Doesn't Use A First User's Actions On the Document For Which Relevancy Is Being Predicted

- As the quote shows,
 - The vector is updated after the user has retrieved a document and acted on it.
 - This updated vector is then used to rank new documents that have not yet been viewed by the user.
 - Even the example makes clear that the user has indicated an interest in the document – a prerequisite to express interest is having retrieved the document.
 - Any updated vector is for use with new documents and as such does not disclose or teach determining a relevance score using the first user's actions on the document for which relevance is being determined.

Resp. (Paper 18), at 27-30; EX2029, ¶¶105 & 175

Rose Does Not Teach or Suggest Re-Calculation of an Item After the User Reads The Item

- Petitioner's other argument – i.e., that the vector comparison is another “first measure of relevance” – is wrong.
- This is another version requiring recalculation – which Rose does not do.

One factor in the prediction of a user's likely interest in a particular piece of information can be based on the similarity between the document's vector and the user's profile vector. For example, as shown in FIG. 5B, a score of

- Ex. 1006, 6:51-53. - Disclosure confirms vector comparison done **BEFORE** the first user rates the content.

Resp. (Paper 18), at 36-37

The Rose-Bieganski Combination Does Not Render Obvious Any Claim of the '217 Patent

- Petitioner contends that, even if Rose does not teach “identify[ing]” another user “cognate to the [first] user” (which it does not), then a POSITA would have been motivated to combine Rose with Bieganski.
 - Petitioner contends that Bieganski could then supply the missing limitation of “identify[ing]” another user “cognate to the [first] user.”
 - But there are numerous problems with this alleged combination.
- **First**, the combination still does not disclose determining relevance based upon the first user’s own actions on the piece of content being scored.
 - As discussed earlier, Rose does not disclose this limitation.
 - And, Petitioner does not contend that Bieganski discloses this limitation (and Bieganski does not).
 - Therefore, the combination does not render obvious any claim of the '217 Patent.

Pet. 69; Resp. (Paper 18), at 42 & 42 n. 5 (citing EX2029, ¶195-197 & EX1007, at 8:1-5); Sur-Reply, at 9

The Rose-Bieganski Combination Does Not Render Obvious Any Claim of the '217 Patent

- The **second** problem with the combination is that Petitioner has not shown **why** a POSITA would be motivated to use Bieganski's method.
 - The only reason Petitioner cites is its expert's conclusory premise that Bieganski "improves upon" Rose's correlation of users. EX1003, ¶ 236 & 247-248; Pet., at 71-72.
 - But that conclusory premise is incorrect: given Rose's teachings that feedback from **all** users is valuable, a POSITA would **not** understand Bieganski's approach to be an improvement over Rose.

Resp. (Paper 18), at 36-37; Sur-Reply, at 9-10

The Rose-Bieganski Combination Does Not Render Obvious Any Claim of the '217 Patent

- In contrast to Petitioner's expert's conclusory opinion, Patent Owner's expert submitted concrete evidence explaining why a skilled artisan would **not** consider Bieganski's technique an "improve[ment]":

EX1003, ¶ 236 & 247-248). I disagree that Bieganski's method is "improved," or better than, Rose's technique. As discussed above, Rose teaches that the feedback of **all other users** is relevant and is included in Rose's correlation-based algorithm. EX1006, at 6:21-34. For example, if the first user and User X consistently provide opposite feedback, Rose views information about User X's feedback (i.e., the feedback of the dissimilar user) on an item of information as just as valuable as information about another user that provides the same feedback as the first user. *Id.*

EX2029, ¶199

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The Rose-Bieganski Combination Does Not Render Obvious Any Claim of the '217 Patent

- The **third** problem with Petitioner's proposed Rose-Bieganski combination is that a skilled artisan would not look to Bieganski at all because Bieganski does not address "sent" content – i.e., the problem the '217 Patent was trying to solve.
 - In assessing "[w]hether a skilled artisan would be motivated to make a combination," there must be some reason why the skilled artisan "**would select particular references** in order to combine their elements."
 - *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1337 (Fed. Cir. 2016).
- Here, as the evidence on the next slide demonstrates, a skilled artisan would **not** have selected the Bieganski reference to begin with.

Resp. (Paper 18), at 43-44; Sur-Reply, at 10

The Rose-Bieganski Combination Does Not Render Obvious Any Claim of the '217 Patent

- The reason a skilled artisan would not look to Bieganski at all is because Bieganski does not address “sent” content – i.e., the problem the ‘217 Patent was trying to solve.
 - Every claim of the ‘217 Patent requires “electronic content sent from a sender to a user.” EX1001, at Claims.
 - The ‘217 Patent was trying to solve problems relating to “sent” content (e.g., email), including the volume of email and the fact that many of emails are irrelevant or “junk” or, at a minimum, less relevant to the recipient. EX2029, ¶201 (citing EX1001, 1:10-45).
 - Bieganski does not address “sent” content or address any of these problems.
 - Its focus is non-textual multimedia content such as movies and videos. EX1007, 1:45-50.
 - When Bieganski discusses “textual” information, it is non-sent items – i.e., books, magazines, publications, articles, and “Internet documents.” EX1007, 17:44-58 & 17:59-18:6.
 - Because Bieganski is focused on a different type of content, 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. EX2029, ¶201 (citing EX1001, 1:10-45).

Resp. (Paper 18), at 43-44 (citing EX2029, ¶¶ 200-201); Sur-Reply, at 9-10

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The Rose-Bieganski Combination Does Not Render Obvious Any Claim of the '217 Patent

- The **final** problem with Petitioner's proposed Rose-Bieganski combination is that a skilled artisan would not expect to succeed in combining Rose and Bieganski.
 - Petitioner argues that it "would be a simple modification." *Id.*
 - But the modification is not actually simple.

202. In addition, in my opinion, combining Rose and Bieganski would not be a simple change. The two threshold selections in Bieganski – i.e., minimum neighbor similarity and maximum neighborhood size – are not trivial. Furthermore, these thresholds may vary from one targeted user to another one.

- 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.

Resp. (Paper 18), at 44; EX2029, ¶202

Dumais Is NOT Prior Art

- Dumais' Priority Date is **June 29, 2005**.
- The Marstons conceived this invention before that date.

3. Paul Marston and I first conceived of the inventions in the '217 Patent at least as early as June 7, 2005.

- Ex. 2003, ¶3.
- Among other exhibits evidencing conception, Exs. 2004, 2005, 2006, and EX2049 show the work on the math and all of the claim elements. As such, the evidence demonstrates conception.

Resp. (Paper 18), at 45-46 (citing EX2003, EX2004-EX2014, EX2019-EX2028); Sur-Reply (Paper 31), at 10-14 (citing EX2005, EX2009, EX2047, EX2048, EX2049, EX2050, EX2051, EX2052, EX2053, EX2055, EX2003, EX2015, EX2030, EX2031)

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Conception Documents

- The documents submitted as evidence in this proceeding – along with their corroborating metadata – show that the Marstons conceived of every limitation of their invention by June 7, 2005 – i.e., prior to the date of Dumais.
 - *E.g.*, EX2004, EX2006, EX2047, EX2049.
 - *See also* EX2014 (chart summarizing voluminous evidence showing where each limitation is disclosed in EX2004 and EX2006).
- The Marstons also testified that they conceived of every limitation in their invention by June 7, 2005.
 - EX2003, ¶¶ 3-15 (citing, e.g., EX2004-EX2006 & EX2009);
 - EX2030, ¶ 5 (citing, e.g., EX2004 & EX2006);
 - EX2031, ¶¶ 12 & 19-23 (citing, e.g., EX2004, EX2047, EX2049).

Resp. (Paper 18), 45-46 & Sur-Reply (Paper 31), 10-14.

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Conception Documents Disclose All Elements

- Conception documents disclose the “identify[ing]” limitation. E.g.:
 - “In the following scenarios, other users’ actions can be used to help determine the relevance of content to a given user: ... If a user sends a TransMail to a group of users, and most reply to it, forward it or copy it to custom folders, it is more likely to be relevant than if they all delete it immediately.... If the vast majority of the users in a given department read a piece of content sent globally, then the content is likely to be relevant to another user in that department.”
 - EX2004, at 15-16.
- This shows identifying a cognate user that received the same piece of electronic content.

Resp. (Paper 18), at 45-46 (citing EX2003, EX2004-EX2014, EX2019-EX2028); Sur-Reply (Paper 31), at 13-14 (citing EX2014, at 5); *id.* at 22; EX2014, at 5 (citing EX2004, at 4, 13, 15, 15-16; EX2006, at 22 & 58)

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Conception of “identify...” limitation

- Despite all of the evidence showing conception before Dumais, Petitioner’s Reply asserts that the Conception Documents fail to disclose the “*identify...*” limitation.
 - Petitioner did not raise this argument when it first responded to Patent Owner’s conception evidence. *See generally* Pet. Prelim. Reply (Paper 12), at 1-4; Resp., at 46.
 - Petitioner submitted no expert testimony on this issue. It relies exclusively upon attorney argument.
- Lacking any of its own evidence, Petitioner contends that **Patent Owner’s** expert addressed the Conception Document evidence, but he did not.
 - He did not opine on conception. *See* EX2029.
 - He did not review any of the Conception Documents. *See* EX2029.
- Nevertheless, Petitioner contends that four of the passages from the ‘217 Patent that Petitioner asked Dr. Khan about during his deposition are “similar” to the seven passages Patent Owner relies upon from the Conception Documents. Reply, at 18-19.
 - But – aside from a single passage discussing a “tree structure” (Reply, at 19) – Petitioner does not compare the two sets of passages to show whether they are actually “similar.” *See* Reply, at 18-19 & Sur-Reply, at 13-14.
 - Pointing to just one citation (*see* Reply, at 19) that doesn’t specifically cite to recipient fails to look at the disclosure as a whole.

Resp. (Paper 18), at 46; Sur-Reply (Paper 31), at 13-14.

Conception of “identify...” limitation

- Petitioner contends (Paper 37, at 7) that one of the passages that Dr. Khan testified about is “word-for-word” the same as one of the passages from the Conception Documents, and Petitioner contends that Dr. Khan testified that the passage does not show the “identify” limitation.
 - Petitioner raises this argument for the first time in response to an evidentiary motion.
 - This is improper. *See Nichia Corp. v. Emcore Corp.*, No. IPR2012-00005, 2014 WL 574596, at *33 (P.T.A.B. Feb. 11, 2014) (a motion to exclude “is not an opportunity for submitting new arguments”).
 - In any event:
 - The testimony addressed only one sentence of all of the evidence in EX2004 and EX2006.
 - Dr. Khan did **not** testify that the passage has nothing to do with “*identify[ing] ... a recipient*”; he testified:
 - that the “paragraph talks about the content relevancy” and
 - that the “*identify*” limitation was not **the “focus”** of the example. EX1044, 126:21-128:12.
 - Dr. Khan was not asked, and did not comment upon, whether the sentence discloses “*a recipient*.”
 - As shown on the next slide, Dr. Khan testified that the passage **does** relate to the “identify” and “recipient” limitations.

Reply in Supp. PO Mt. to Exclude, at 2-4

Conception of “identify...” limitation

- One of the seven cited passages from the Conception Documents that discloses the “identify” limitation is EX2004, pages 15-16.
- This Section of EX2004 contains examples that are similar to the examples in the ‘217 Patent appearing at 12:28-13:4.
- Dr. Khan testified that these examples from the ‘217 Patent do relate to the requirement to “identify” a “recipient.” EX2029, ¶¶ 72-73 (“the ‘217 Patent explains that “*identify[ing]*” other “*recipients*” is important ...” (citing EX1001, 12:27-44).
- Therefore, the examples appearing in EX2004, at 15-16 also relate to the requirement to “identify” a “recipient.”

EX2004, at 15-16:

5.3.3 Mail actions collaborative relevance

Mail actions collaborative relevance relies on the actions of other users to determine the relevance of content in a given user's folders – both sent and received. In the following scenarios, other users' actions can be used to help determine the relevance of content to a given user:

- If a user sends a TransMail to someone, and they read it, it is more likely to be relevant than if they do not.
- If a user sends a TransMail to a group of users, and most reply to it, forward it or copy it to custom folders, it is more likely to be relevant than if they all delete it immediately.
- If most other users delete a given piece of mail content as soon as it arrives in their inbox, then the user in question will probably not find the content particularly relevant.
- If most other users copy a given TransMail to a custom folder once they have read it, then the user in question will probably find the content to be of significant relevance.
- If a given user is always copying another user on their mail content (e.g. an employee copying their boss) then the content is less likely to be of relevance to them.
- If a user sends a submessage to another user, but the recipient doesn't read it, then this may have an affect on the relevance of the content.
- If the vast majority of the users in a given department read a piece of content sent globally, then the content is likely to be relevant to another user in that department.
- If the majority of other users tend to read content linked to a particular Jobcode, then content attached to that Jobcode is more likely to be relevant to the user in question.
- If the majority of other users tend to read content linked to a particular context, then content attached to that context is more likely to be relevant to the user in question.
- If most users read content from a particular author (e.g. the CEO), then content from this author is typically of greater relevance than content from a different author that no-one ever reads.
- If most users reply to content from a particular author (e.g. the CEO), then content from this author is typically of greater relevance than content from a different author that no-one ever replies to.

EX1001, 12:28-13:4:

As described above, the actions of other users may also be used to determine the relevance of content in a given user's folders, both sent and received. Examples of such actions are now described. In one case, if a user sends an electronic mail object to someone, and that someone reads the electronic mail object, then that electronic mail object is more likely to be relevant (to both the receiver and sender) than if the recipient did not read it. In another situation, if a user sends an electronic mail object to a group of users, and most of the recipients reply to the electronic mail object, forward the electronic mail object, and/or copy the electronic mail object to custom folders, the electronic mail object is more likely to be generally or globally relevant than if the recipients immediately deleted the electronic mail object. In another scenario, if most other recipients of an electronic mail object delete it as soon as it arrives in their “inbox,” then the recipient in question will probably not find the content particularly relevant. In still another example, if most other recipients copy a given electronic mail object to a custom folder (or reply or forward it) once they have read it, then the recipient in question will probably find the content to be of significant relevance. In yet another case, if a given user is always copying another user on their mail content (e.g., an employee copying their supervisor), then the content is less likely to be of relevance to that other individual. In a further example, if a user sends a submessage to another user, but the recipient does not read the submessage, then this may have an affect on the relevance of the content. In another situation, if the vast majority of the users in a given department read a piece of content sent globally, then the content is likely to be relevant to another user in that department. In still another scenario, if the majority of other users tend to read content linked to a particular job code, then content attached to that job code is more likely to be relevant to the user in question. Further, for example, if the majority of other users tend to read content linked to a particular context, then content attached to that context is more likely to be relevant to the user in question. In another situation, if most users read content from a particular author (e.g., a supervisor), then content from this author is typically of greater relevance than content from a different author that is not widely read. In yet another case, if most users reply to content from a particular author (e.g., a supervisor), then content from this author is typically of greater relevance than content from a different author not widely replied to.

Reply in Supp. PO Mt. to Exclude, at 2-4

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DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Diligence

- From June 2005 until the filing of the provisional, the Marstons continued to work on aspects of the disclosure.
- Justin Marston continued to work on TransMail, which was the product into which he intended to integrate the invention. Without securing funding, he could not continue to work on TransMail or the Patent.
- Justin Marston worked on running BlueSpace.
- Under the rule of reason, the purpose is “to assure that, in light of the evidence as a whole, ‘the invention was not abandoned or unreasonably delayed.’”
 - Perfect Surgical Techniques, Inc. v. Olympus Am., Inc., 841 F.3d 1004, 1011 (Fed. Cir. 2016).

Resp. (Paper 18), at 47-50 (citing EX2030, EX2031, EX2032-EX2074, EX2076-EX2078); Sur-Reply (Paper 31), at 14-18 (citing EX2031, ¶¶ 7-10, 14, 17; EX2015, ¶¶ 9-11; EX2030, ¶¶ 7-53; EX2007-EX2008, EX2019-EX2013, EX2034-EX2039, EX2041-EX2045, EX2056-EX2074).

Diligence

- Here, the complete picture is that:
 - The two inventors continued to work on refining the disclosure (EX2003, EX2030, EX2031);
 - Justin Marston was working on the TransMail product itself (to which this invention was to be added) (e.g., EX2030, ¶¶7);
 - Justin Marston ran BlueSpace – the software company developing and marketing TransMail (e.g., EX2030, ¶¶7 & 9);
 - Justin Marston was obtaining financing for the BlueSpace (e.g., EX2030, ¶10 (citing EX2041, Nos. 27-28 (Letter to Admiral Inman), Sur-Reply, at 15);
 - Paul Marston was teaching full-time at a University in England (EX2031, ¶¶7,10,15);
 - Paul Marston was writing books (EX2031, ¶15)
- This evidence shows that the inventors worked diligently and did not abandon or unreasonably delay the filing of the provisional.

Resp. (Paper 18), at 47-50 (citing EX2030, EX2031, EX2032-EX2074, EX2076-EX2078); Sur-Reply (Paper 31), at 14-18 (citing EX2031, ¶¶7-10, 14, 17; EX2015, ¶¶9-11; EX2030, ¶¶7-53; EX2007-EX2008, EX2019-EX2013, EX2034-EX2039, EX2041-EX2045, EX2056-EX2074).

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Dumais Does Not Render Obvious Any Claim

- Dumais fails to disclose, teach, or suggest the “identify[ing]” limitation.
- Dumais is for searching and ranking search results. It does not disclose, teach, or suggest a “recipient” of a piece of electronic content “sent from a sender.”
- So, it does not disclose, teach, or suggest “identify[ing]” “a recipient” of the piece of electronic content.

Resp. (Paper 18), at 51-56 (citing EX2029, ¶¶133-156); EX2029, ¶¶ 133-156; Sur-Reply (Paper 31), at 18-25

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Dumais Does Not Render Obvious Any Claim

- Dumais describes use of collaborative filtering “for possible profiles for new users of the system.” Ex. 1006, ¶55.
 - Collaborative filtering is not being used to identify a cognate user that is also a recipient of the piece of electronic content for which relevance is being determined.
- Petitioner’s evidence fails to show that Dumais discloses, teaches, or suggests identifying a second user that is a **recipient** of the piece of electronic content who is also cognate the first user.
- Simply disclosing use of collaborative filtering for possible profiles does not disclose, teach, or suggest “identify[ing]” such person as part of a relevance algorithm.

Resp. (Paper 18), at 51-56 (citing EX2029, ¶¶133-156); EX2029, ¶¶ 133-156; Sur-Reply (Paper 31), at 18-25

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Dumais Does Not Render Obvious Any Claim

- Dumais is for query modification. It does not address the desirability of identifying another user that is cognate to the first user for a relevancy analysis.
 - There is no such discussion in Dumais.
 - There is no math shown for using such information to predict relevance in Dumais.

Resp. (Paper 18), at 51-56 (citing EX2029, ¶¶133-156); EX2029, ¶¶ 133-156; Sur-Reply (Paper 31), at 18-25

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