Meta Platforms, Inc. v. Sterling Computers Corp., IPR2025-00430

May 14, 2026, Oral Hearing
Meta's Demonstratives

Meta

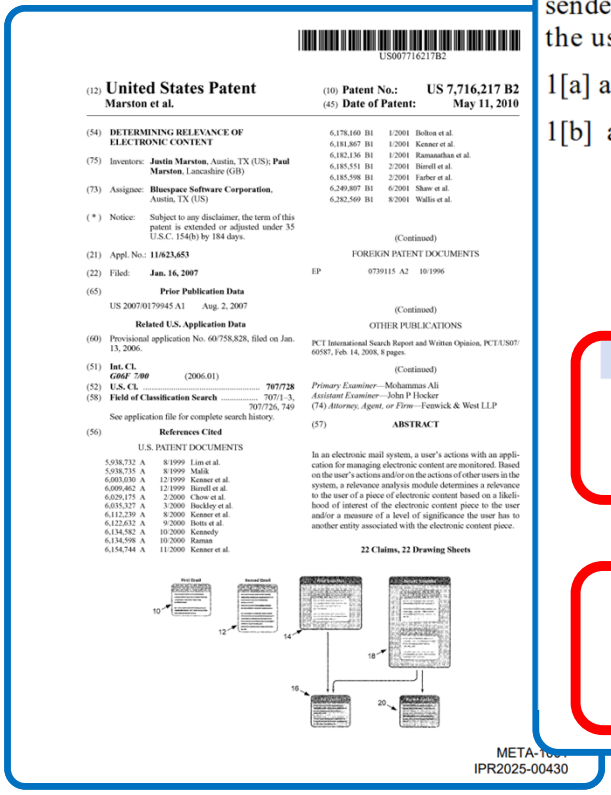
META-1047
Meta Platforms, Inc. v. Sterling Computs. Corp., IPR2025-00430

Grounds of Unpatentability

Ground (§ 103)	Claims	References
1	1-3, 5-9, 13-15, 18-19, 22	Dumais
2	1-3, 5-9, 13-15, 18-19, 22	Rose
3	1-3, 5-9, 13-15, 18-19, 22	Rose, Bieganski

’217 Patent – Contested limitations 1[d], 1[h], 1[f]

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



US007716217B2

(12) **United States Patent**
Marston et al.

(10) **Patent No.: US 7,716,217 B2**
(45) **Date of Patent: May 11, 2010**

(54) **DETERMINING RELEVANCE OF ELECTRONIC CONTENT**

(75) Inventors: **Justin Marston**, Austin, TX (US); **Paul Marston**, Lancashire (GB)

(73) Assignee: **Bluespace Software Corporation**, Austin, TX (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 184 days.

(21) Appl. No.: **11/623,653**

(22) Filed: **Jan. 16, 2007**

(65) **Prior Publication Data**

US 2007/0179945 A1 Aug. 2, 2007

Related U.S. Application Data

(60) Provisional application No. 60/758,828, filed on Jan. 13, 2006.

(51) **Int. Cl.**
G06F 7/00 (2006.01)

(52) **U.S. Cl.** **707/728**

(58) **Field of Classification Search** 707/1-3, 707/726, 749

See application file for complete search history.

(56) **References Cited**

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(Continued)

Primary Examiner—Mohammas Ali
Assistant Examiner—John P Hocker
(74) *Attorney, Agent, or Firm*—Fenwick & West LLP

(57) **ABSTRACT**

In an electronic mail system, a user's actions with an application for managing electronic content are monitored. Based on the user's actions and/or on the actions of other users in the system, a relevance analysis module determines a relevance to the user of a piece of electronic content based on a likelihood of interest of the electronic content piece to the user and/or a measure of a level of significance the user has to another entity associated with the electronic content piece.

22 Claims, 22 Drawing Sheets

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

1[a] a computer processor; and

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

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

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

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

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

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

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

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

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

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

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

’217 Patent – Contested limitations 1[d], 1[h], 1[f]

Claim limitation 1[d]

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

EX1001, 47:36-40

Claim limitation 1[h]

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

EX1001, 47:62-67

Claim limitation 1[f]

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

EX1001, 47:43-45

Roadmap

- **Claim Construction**
- **Ground 2:** Rose teaches (1[d]/1[h])
- **Ground 2:** Rose teaches 1[f]
- **Ground 3:** Rose-Bieganski
- **Ground 1:** Dumais is Prior Art
- **Ground 1:** Dumais teaches 1[f]
- **Secondary Considerations**

Roadmap

- **Claim Construction**
- **Ground 2:** Rose teaches (1[d]/1[h])
- **Ground 2:** Rose teaches 1[f]
- **Ground 3:** Rose-Bieganski
- **Ground 1:** Dumais is Prior Art
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- **Secondary Considerations**

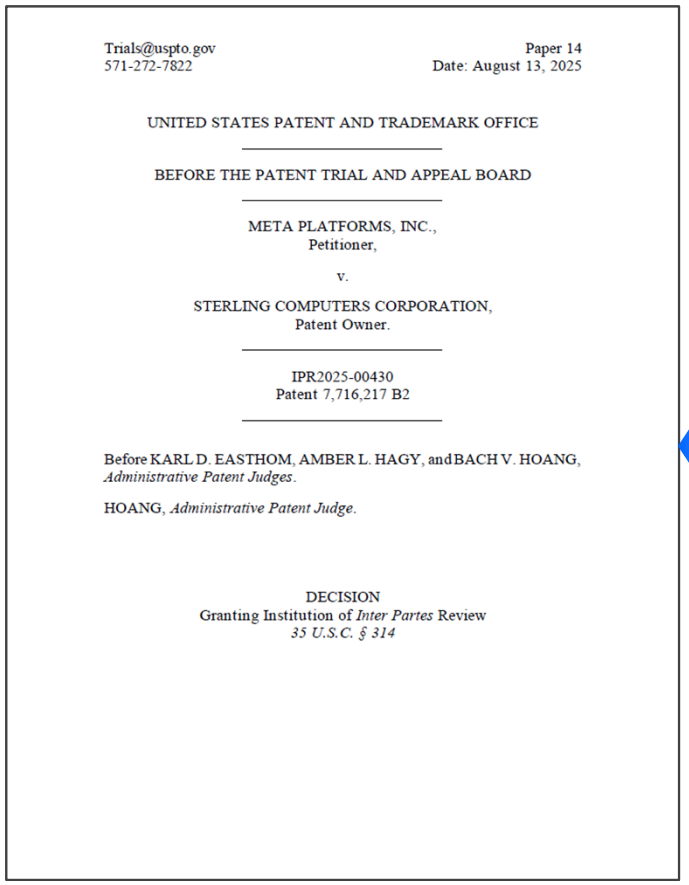
- **"Module" limitations**
- **"Cognate to a user"**
- **"Recipient" does not require content sent from a sender**

The “module” limitations are unpatentable regardless of MPF

system.” EX-1001, 6:36-38, 6:65-66. Petitioner argues the claims are unpatentable regardless of MPF; however, if the Board finds the claims are MPF, Petitioner identifies structure for each such limitation below. Fox, ¶¶72-82. Petitioner explains in each unpatentability ground how the prior art teaches that structure.

Pet., 11; *see also id.* 12-16; Fox ¶73, FoxSupp. ¶8

The prior art teaches the "module" limitations



Trials@uspto.gov
571-272-7822

Paper 14
Date: August 13, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,
Petitioner,

v.

STERLING COMPUTERS CORPORATION,
Patent Owner.

IPR2025-00430
Patent 7,716,217 B2

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

HOANG, *Administrative Patent Judge*.

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

i) Limitation 1[h]

Petitioner contends that Rose teaches "a relevance analysis module configured to determine the relevance score of the piece of electronic

f) Limitation 1[e]

Petitioner contends that Rose teaches "a second relevance measurement module coupled to the monitoring module." Pet. 56 (citing

e) Limitation 1[d]

Petitioner contends that Rose teaches "a first relevance measurement module coupled to the monitoring module and configured to determine a first measure of relevance of the piece of electronic content based at least in part on one or more actions of the user on the piece of electronic content."

d) Limitation 1[c]

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

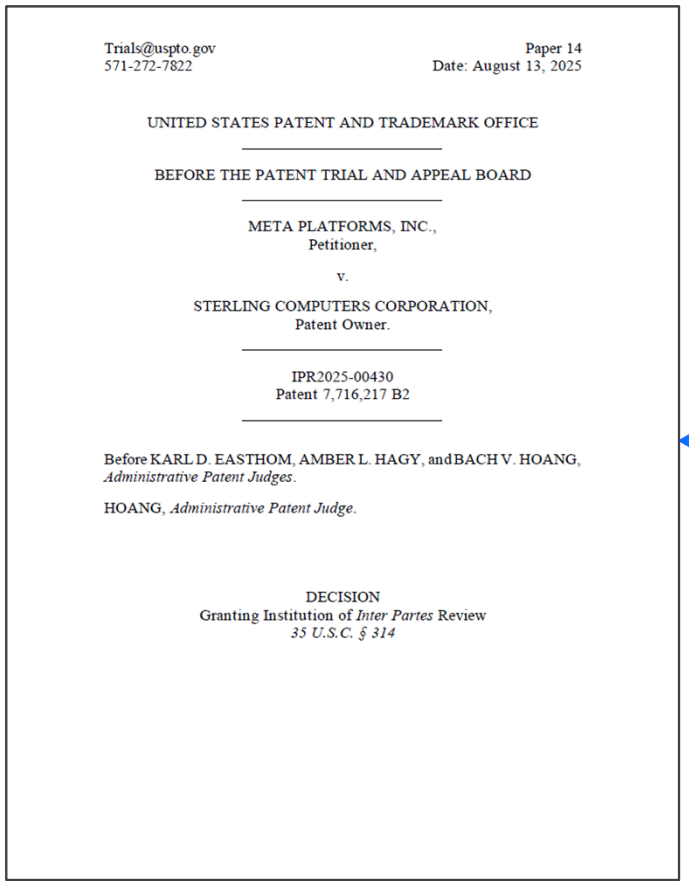
Pet., 10-16; Reply, 1-2

DI, 20-26

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DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

GROUND 2: Rose art teaches the "module" limitations



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Administrative Patent Judges.

HOANG, *Administrative Patent Judge*.

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

j) Conclusion as to Claim 1

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

DI, 26

Pet., 10-16; Reply, 1-2

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

"module" of independent claims 1, 6

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

EX1001, 47:33-35 (clm. 1), 48:22-24 (clm. 6)

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;

EX1001, 47:36-40 (clm. 1), 48:25-29 (clm. 6)

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

EX1001, 47:41-42 (clm. 1), 48:30-34 (clm. 6)

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, 47:62-67 (clm. 1), 48:50-55 (clm. 6)

Pet., 10-16; Reply, 1-2

“monitoring module”

Claims 1, 6

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

EX1001, 47:33-35 (clm. 1), 48:22-24 (clm. 6)

Function

track actions by a plurality of users associated with an application for managing electronic content

EX1001, 47:33-35 (clm. 1), 48:22-24 (clm. 6); Pet., 12

Exemplary Structure

Software and/or algorithms

(a) “client-side integration” relying on a “plug-in” that “monitor[s] end users actions on the mail content,” or

(b) a server-side implementation using a “relational electronic mail server” and/or “relational knowledge server” that “tag[s] content with ‘flags’” to track what happens to content during the life cycle of the content

EX1001, 1:49-52, 6:39-45, 7:16-19, 15:51-58, 16:31-57, 27:11-40; Pet., 12; Fox ¶¶74-75

"first relevance measurement module"

Claims 1, 6

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;

EX1001, 47:36-40 (clm. 1), 48:25-29 (clm. 6)

Function

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

EX1001, 47:36-40 (clm. 1), 48:25-29 (clm. 6); Pet., 12

Exemplary Structure

Software and/or algorithms

algorithms for estimating a user's "Individual Relevance Component" based on a "plurality of factors," including "dichotomous" (*i.e.*, binary, yes/no) and "cardinal" (*i.e.*, scaled) factors

EX1001, 6:39-48, 25:45-49, 27:12-19, 28:63-29:41; Pet., 12; Fox ¶¶76-77

“second relevance measurement module”

Claims 1, 6

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

EX1001, 47:41-42 (clm. 1), 48:30-34 (clm. 6)

Exemplary Structure

Routines, software and/or algorithms

Markush group including:

- *determinations of local importance*
- *global importance*
- *content*
- *actions by cognate users*

EX1001, 6:42-55, 14:45-15:11, 17:4-22, 25:45-49, 25:49-58, 25:65-26:10, 26:11-17, 26:24-30, 27:12-42, 29:50-31:13, 31:21-34:48, 32:42-57, 33:1-20, 33:21-33, 34:29-39, 41:7-25, 42:35-36, 43:30-37, 45:13-37; Pet. 12-14; Fox, ¶¶78-79

Function

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;

EX1001, 47:41-42 (clm. 1), 48:30-48 (clm. 6); Pet., 12-14

Pet., 10-16; Reply, 1-2

“relevance analysis module”

Claims 1, 6

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, 47:62-67 (clm. 1), 48:50-55 (clm. 6)

Function

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, 47:62-67 (clm. 1), 48:50-55 (clm. 6); Pet., 15

Exemplary Structure

Software and/or algorithms

algorithms used to determine the “local relevance value,” which is “a function of the user’s own IRC, the global and cognate relevance scores, and the combined importance relating to that mail.”

EX1001, 25:21-26:52, 27:12-19, 29:41-30:35, 35:62-36:6; Pet., 15; Fox ¶80

“module” of dependent claims 2, 3, 13, 14

a content presentation module 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, 48:1-5 (clm. 2), 50:1-4 (clm. 13)

a search module configured to search the electronic content in accordance with the determined relevance score.

EX1001, 48:6-8 (clm. 3), 50:7-8 (clm. 14)

Meta

Pet., 10-16; Reply, 1-2

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

“content presentation module”

Claims 2, 13

a content presentation module 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, 48:1-5 (clm. 2), 50:1-4 (clm. 13)

Function

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, 48:1-5 (clm. 2), 50:1-4 (clm. 13); Pet., 15

Exemplary Structure

Software and/or algorithms

The mail presentation module that can be used to generate the various web page interfaces depicted in Figures 9- 20.

EX1001, 2:41-3:9, 6:55-60, 7:28-50, 24:30-34, 24:60-62, Figs. 5, 19-20; Pet. 15; Fox, ¶81

"search module"

Claims 3, 14

a search module configured to search the electronic content in accordance with the determined relevance score.

EX1001, 48:6-8 (clm. 3), 50:7-8 (clm. 14)

Function

Search the electronic content in accordance with the determined relevance score

EX1001, 48:6-8 (clm. 3), 50:7-8 (clm. 14); Pet., 15-16

Exemplary Structure

Software and/or algorithms

- provide[s] a user with search capabilities in accordance with the relevance and importance scores determined by the relevance analysis engine 252
- Search criteria can include "keywords, dates, specific senders
- The claims specify searching electronic content "in accordance with the determined relevance score," so a POSITA would understand "help[ing] rank search results and indicate to the user how likely each piece of content is to be of interest" provides the corresponding structure for the "search module."

EX1001, 6:60-64, 7:32-34, 7:42-48, 8:9-12, 16:10-15; Pet., 15-16; Fox ¶82

"Cognate to a user"

Patent Owner's second requirement, that the other user's actions on that content must be tracked in order to determine the content's relevance relies on an optional feature recited in limitation 1[g]. Even assuming that option suggests a particular manner to identify a cognate other user, limitation 1[g] is an alternatively recited member of a Markush group and, therefore, is not necessarily required to meet the claim, as discussed above.

Institution Decision, 15-16

piece of electronic content." POR, 10. Sterling's argument imports 1[g]'s requirements into 1[f], despite acknowledging that 1[g]'s "step of tracking the actions of the second, cognate user is optional in the claims (i.e., part of a Markush group)." POR, 18. As I discuss in more detail below, both of Sterling's claim construction arguments should be rejected.

FoxSupp., ¶11

1[f]

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

1[g]

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

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

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

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

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

EX1001, 47:43-61 (clm. (1[f]-[g]); Pet., ix

"Cognate to a user"

PO's Response ***Disputed*** it added requirements to "cognate"

Second, the Board understood that Patent Owner required that the "*cognate to the user*" limitation requires that "the other user's actions on that content must be tracked in order to determine the content's relevance." Decision at 14-15. That is not, however, a requirement that Patent Owner imposed for the "*cognate*" limitation. The point that Patent Owner was making with respect to "*tracking*" limitation is that **one** of the reasons the system "*identif[ies]*" a second, "*cognate*" user is so the system can track that second user's actions on the piece of electronic content. The specification explains this at length. *See supra* at 8-10 (citing **EX2029**, ¶¶70-81 & **EX1001**). Although this step of tracking the actions of the second, cognate user is optional in the claims (i.e., part of a Markush group), it is one of the reasons **why** "*identify[ing]*" this second user is required. *Id.*

POR, 17-18

PO's Sur-Reply Then Raised A New "Cognate" Construction

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).

PO, Sur-Reply, 2

POR, 17-18; Sur-Reply, 2

"Cognate to a user"

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

In regard to recognizing "cognate" entities are referred to above, an electronic mail system in accordance with one or more embodiments may identify a "cognate group" for a user, based on historical actions. More particularly, for each user, over time, the system may identify a cognate group of the n other users regarded as most similar. Such a group may be defined by similar past user actions and assessments, and/or a direct input by a user. Further, it is noted that it may not be

EX1001, 14:59-66

to the global population. In regard to how such similarity or identification of the cognate group is determined, one or more of the following approaches may be used: role or group based; collaborative filtering; fingerprinting; cluster models; search-based methods; frequency analysis; and importance value correlation. Each of these different approaches, which may be used singly or in any combination, will now be described in turn.

EX1001, 43:30-37

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

Institution Decision, 16

Reply, 1-2; Sur-Reply, 2

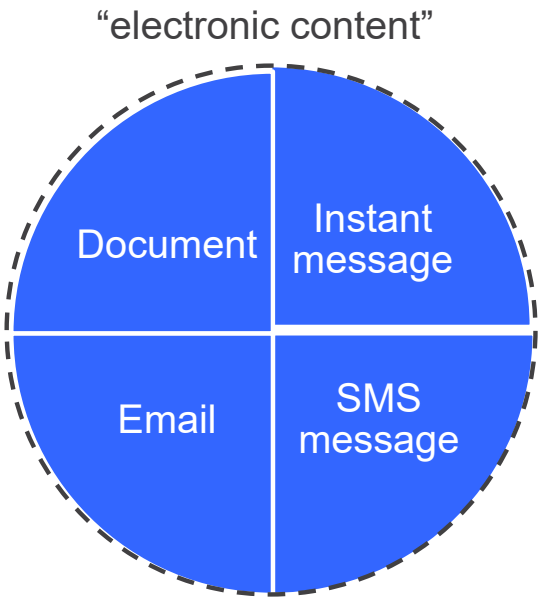
"Recipient" does not require content sent from a sender

electronic messages and content. For example, one or more embodiments may be used for determining relevance in document management applications. In another example, one or more embodiments may be used in conjunction with instant message (IM) communications and/or short message service (SMS) messages.

EX1001, 3:46-48, 3:54-56

In one or more embodiments, electronic mail content may be managed according to rules specified in a compliance model. Such a model may be used to determine, for example, how long content is kept for, who can access content, where content should reside, and other allowable actions to be carried out by users. FIG. 5 shows an example, in unified mod-

EX1001, 5:28-33



Dependent Claim 5

Reply, 1-3; FoxSupp., ¶¶12-16

“Recipient” does not require content sent from a sender

(1) “a recipient”

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

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

Institution Decision, 14

“A claim construction excluding a preferred embodiment is rarely, if ever correct.”

Sequoia Tech., LLC v. Dell, Inc., 66 F.4th 1317, 1327 (Fed. Cir. 2023)



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Reply, 2-3; FoxSupp., ¶¶12-16

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

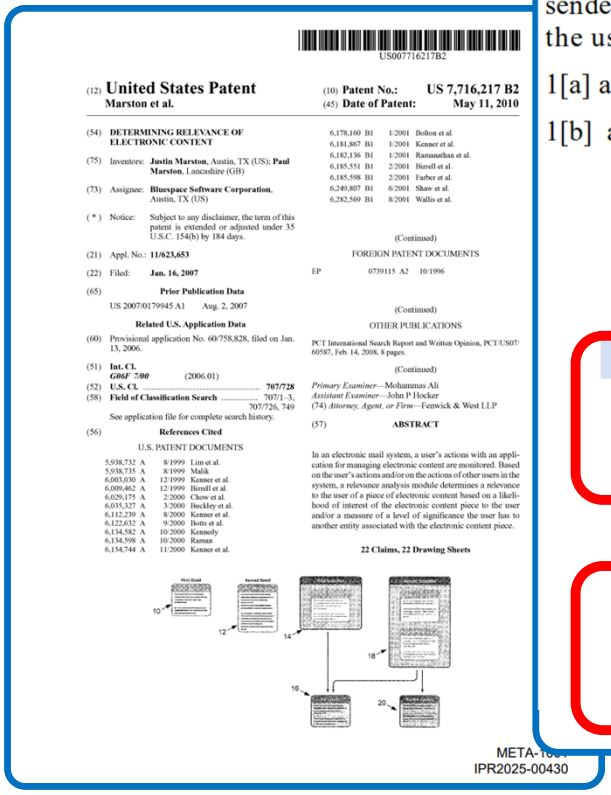
Roadmap

- **Claim Construction**
- **Ground 2:** Rose teaches (1[d]/1[h])
- **Ground 2:** Rose teaches 1[f]
- **Ground 3:** Rose-Bieganski
- **Ground 1:** Dumais is Prior Art
- **Ground 1:** Dumais teaches 1[f]
- **Secondary Considerations**

- Rose predicts a user's interest in electronic content
- PO incorrectly infers Rose's "predicted" and "likely" relevance cannot evaluate already user-rated content
- Dr. Fox's testimony explains a POSITA's understanding of Rose's benefits

Rose – Contested limitations 1[d], 1[f], 1[h]

U.S. Pat. Nu. 7,716,217



US007716217B2

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Marston et al.

(10) **Patent No.: US 7,716,217 B2**
(45) **Date of Patent: May 11, 2010**

(54) **DETERMINING RELEVANCE OF ELECTRONIC CONTENT**

(75) Inventors: **Justin Marston**, Austin, TX (US); **Paul Marston**, Lancashire (GB)

(73) Assignee: **Bluespace Software Corporation**, Austin, TX (US)

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(51) **Int. Cl.**
G06F 7/00 (2006.01)

(52) **U.S. Cl.** **707/728**

(58) **Field of Classification Search** 707/1-3, 707/726, 749

See application file for complete search history.

(56) **References Cited**

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6,003,030	A	12/1999	Kenner et al.
6,009,462	A	12/1999	Birrell et al.
6,029,175	A	2/2000	Chow et al.
6,035,327	A	3/2000	Buckley et al.
6,112,239	A	8/2000	Kenner et al.
6,122,632	A	9/2000	Botts et al.
6,134,582	A	10/2000	Kennedy
6,134,598	A	10/2000	Raman
6,154,744	A	11/2000	Kenner et al.
6,178,160	B1	1/2001	Bolton et al.
6,181,867	B1	1/2001	Kenner et al.
6,182,136	B1	1/2001	Ramanathan et al.
6,185,551	B1	2/2001	Birrell et al.
6,185,598	B1	2/2001	Farber et al.
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Primary Examiner—Mohammas Ali
Assistant Examiner—John P Hocker
(74) *Attorney, Agent, or Firm*—Fenwick & West LLP

(57) **ABSTRACT**

In an electronic mail system, a user's actions with an application for managing electronic content are monitored. Based on the user's actions and/or on the actions of other users in the system, a relevance analysis module determines a relevance to the user of a piece of electronic content based on a likelihood of interest of the electronic content piece to the user and/or a measure of a level of significance the user has to another entity associated with the electronic content piece.

22 Claims, 22 Drawing Sheets

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

1[a] a computer processor; and

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

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

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

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

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

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

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

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

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

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

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

Rose teaches limitations 1[d], 1[h]

Claim limitation 1[d]

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

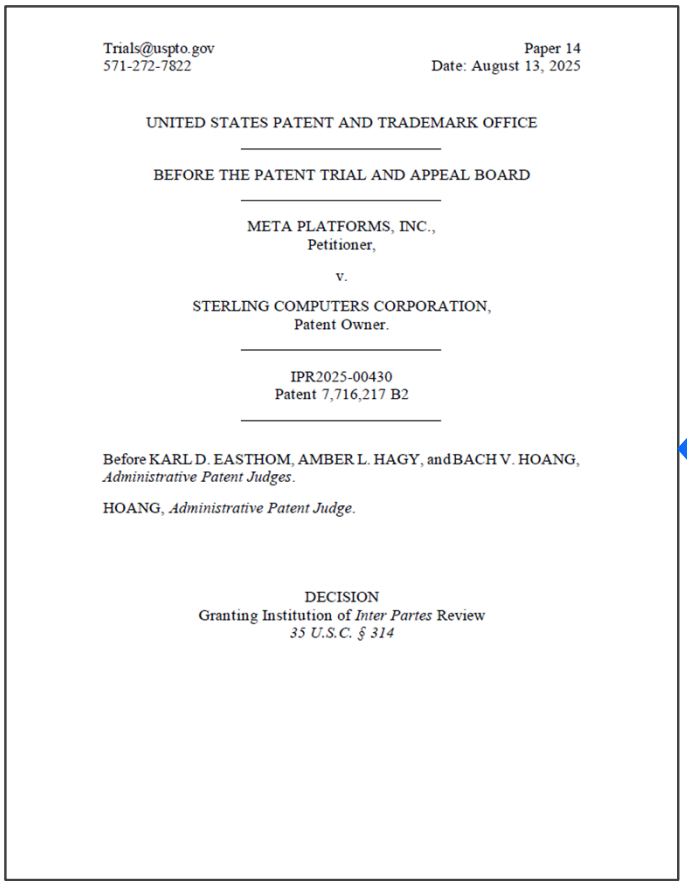
EX1001, 47:36-40

Claim limitation 1[h]

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

EX1001, 47:62-67

1[d]/1[h]: Rose determines relevance based on a user's actions



Trials@uspto.gov
571-272-7822

Paper 14
Date: August 13, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,
Petitioner,

v.

STERLING COMPUTERS CORPORATION,
Patent Owner.

IPR2025-00430
Patent 7,716,217 B2

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

HOANG, *Administrative Patent Judge*.

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

1. Summary of Rose (Ex. 1006)

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

DI, 17

Pet., 44-48; Reply, 3-4

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Rose determines relevance based on a user's actions

Rose scores documents based on a user's profile vector…

profile vector. For example, as shown in FIG. 5B, a score of a document's relevance can be indicated by the cosine of the angle between the document's vector and the user's profile vector. A document having a vector which is close to that of

EX1006, 6:54-57

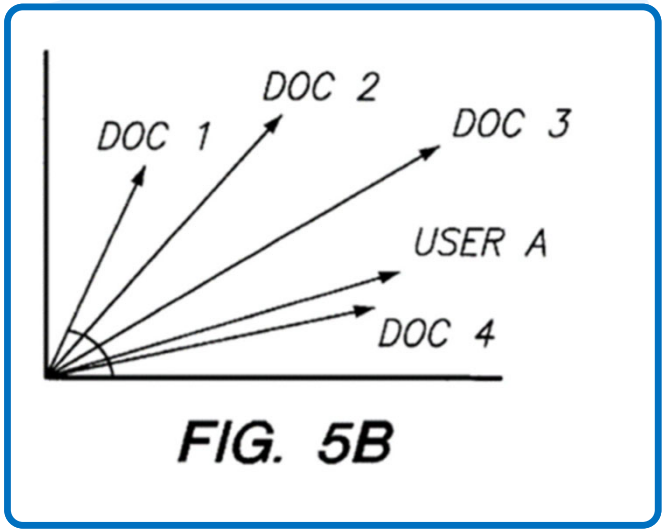


FIG. 5B

EX1006, Fig. 5B

. . . for every message.

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 the user's interests are highly ranked, whereas junk mail messages are given a low ranking.

EX1006, 4:40-44

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

EX1006, 6:36-40

Pet., 54-56, 60-61; Fox, ¶¶ 181-84, 194-96; Reply, 3-4; FoxSupp. ¶18, DI, 22

PO incorrectly infers Rose's "predicted" and "likely" relevance cannot evaluate already user-rated content

profile before it is updated to reflect the first user's actual rating of the item. The passage makes clear that, when Rose talks about ranking "all of the messages," it is referring to ranking each message before it is rated by the first user. This is because the passage states that each message is "ranked on the basis of a predicted degree of relevance to the user." In other words, each message is not ranked based upon

POR, 32

POR, 33

been presented to the first user. In addition, the passage discusses displaying messages "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.

POR 32-33; Reply, 4-5

PO incorrectly infers Rose's "predicted" and "likely" relevance cannot evaluate already user-rated content

it, that would lead to absurd results. Assume, for example, that the first user receives an e-mail inviting the first user to a cat cafe. Assume, as well, that every single one of the other users rated this cat café email as relevant (thumbs up). Assume, as well, that – before the first user rates the cat cafe message – the first user's profile is neutral as to cat cafes (e.g., no terms in the user profile indicate a preference for, or dislike of, either cats or cafes). Based upon the first user's neutral profile and the community

POR, 34

relevant, the message would not drop to the bottom of the first user's inbox. It makes no sense, however, to continue to consider community feedback – i.e., to re-calculate the relevance score – after the first user's actual rating is known. EX2029, ¶¶176-177. Doing so is contrary to Rose's aim to avoid dealing with "irrelevant information." EX1006, at 2:5-9. For all of these reasons, Rose does not re-rank an

POR, 35

Reply, 4-5

PO incorrectly infers Rose's "predicted" and "likely" relevance cannot evaluate already user-rated content

Dr. Khan said no benefit to re-rank content . . .

relevant, the message would not drop to the bottom of the first user's inbox. It makes no sense, however, to continue to consider community feedback – i.e., to re-calculate the relevance score – after the first user's actual rating is known. EX2029, ¶¶176-177. Doing so is contrary to Rose's aim to avoid dealing with "irrelevant information." EX1006, at 2:5-9. For all of these reasons, Rose does not re-rank an

POR, 35

after the first user reads (and rates) the message. *See generally* EX1006. As discussed above, given Rose's focus on predicting relevancy, it would not make sense to re-rank a message after the first user already rated the message.

EX2029, ¶177



. . . but himself identified a benefit

A. But -- okay. So -- but we will -- but user feedback we will recorded over time. That, we call it "historical actions." And then based on their actions we will revise this error and try to reduce the error and come up with a better algorithm where the error will be reduced.

So what I am saying -- and that's not correct to say that computer will not get the actual values. You -- eventually computer will come up with the -- or the algorithm will come up with a prediction, and then user will give some feedback. And that feedback -- based on that feedback, we will revise our error functions or the algorithm would be -- parameters of the algorithm would be adjusted in such a way that in future when doing the test time it should pass as good as when it does the prediction or come up with the ranking. It should be as close to that as user original intention or what the user wants.

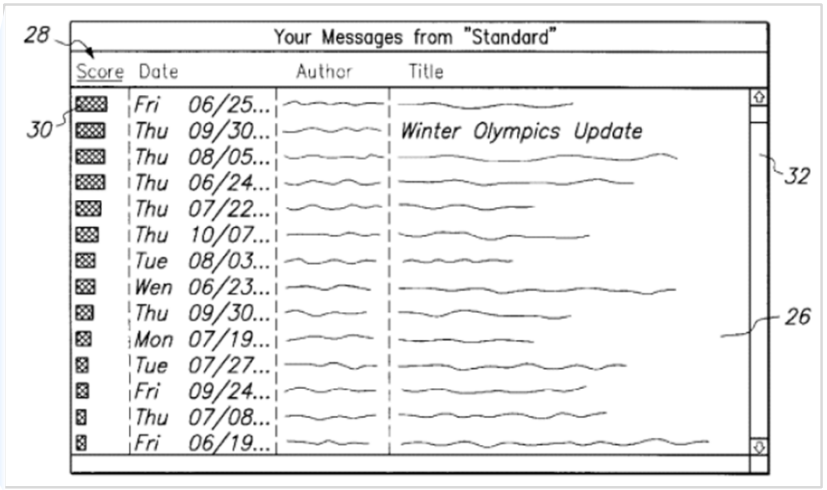
EX1040 (Khan Trans.), 119:2-120:5

Dr. Fox explains how a POSITA would understand Rose



24. First, Rose teaches that a user's profile vector is updated "[*e*]*ach* time a user provides a new response to a retrieved message"; because the content's relevance score is determined by looking to "the similarity between the document's vector and the user's profile vector," a POSITA would have understood that Rose teaches updating the content's relevance score (30) based on the user's responses to, e.g., a "Winter Olympics Update":

FoxSupp., ¶24 (combined)



EX1006, Fig. 3, 4:51-53

Meta

Reply, 5-6

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

“Predicted” and “Likely” Simply Describe A Computer’s Approximation of Relevance

Dr. Fox explained common usage of “predicted” and “likely”. . .



25. Second, in my opinion, a POSITA would have understood that terms like “predicted” and “likely,” which are common when discussing computer-based relevance scores, merely reflect calculating an approximation of that content’s relevance to the user—they do not suggest a system does not re-rank content, as

FoxSupp., ¶25

not actually ‘determining.’”). Further, the ’217 patent refers to “relevance” as “reflecting a user’s likely interest in the content.” Ex. 1001, 5:53-55, 8:3-12. Dr.

FoxDecl., ¶25

. . . and Dr. Khan agreed.

Q. Well, isn't the point just that when a computer is estimating relevance to a user, it's going to reflect a user's likely interest in that content because it's doing an estimation, right?

A. Right, um-hum.

Khan Trans., 118:19-23



Q. But the 217 Patent repeatedly refers to determining the user's likely interest, not a user's actual interest; isn't that correct?

A. Correct.

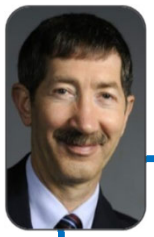
Q. And so you might say that the 217 Patent gets closer to estimating user's actual interest, but the way the 217 patent describes it, it's still estimating the user's likely interest; isn't that true?

A. Correct, yeah. It's a likely interest, correct.

Khan Trans., 121:1-10

Dr. Fox explains a POSITA's understanding of Rose's benefits

Dr. Fox found no contrary Rose disclosure. . .



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,

FoxSupp., ¶26

. . . and Dr. Khan agreed.

Rose never explicitly says it does not re-rank content if a user has already provided a rating on that content, correct?

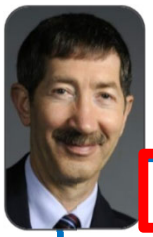
. . .

THE DEPONENT: Correct.



Khan Trans., 167:15-169:2 (excerpted and combined)

Dr. Fox explains a POSITA's understanding of Rose's benefits



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,

FoxSupp., ¶26

PO Sur-Reply

Rose determines a score for a piece of content by **predicting** whether the content is **likely** to be relevant to the first user. That score is determined **before** the first user views the content. This is **undisputed**. E.g.,EX1045,¶26 (acknowledging that items "have already been rated" before the user interacts with them).

PO Sur-Reply, 3

Users want to find content they have already rated positively



Ex. 1006, Cl. 1. A POSITA would understand that where a user positively ranks content, the user would often want to quickly (re)find that content again, such that a system recommending content (e.g., the movies Rose recommends) would be expected to continue presenting that content as a highly-ranked option rather than omitting it. For example, a POSITA would know that users may seek a past movie they liked but forgot by searching for it again; the user would send another query to Rose's recommendation database storing that previous, ranked movie recommendation list and re-populate it at a later time in an easily viewed interface:

FoxSupp., ¶26

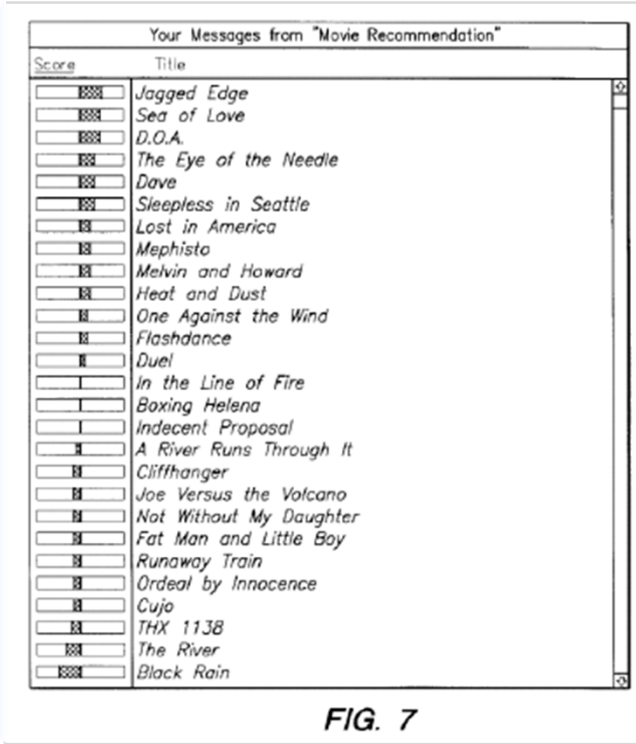
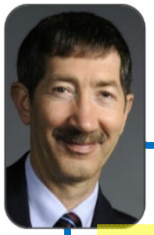


FIG. 7

EX1006, Fig. 7, 1:33-40, 3:10-11

Community feedback adds value to user's own rankings



27. Finally, a POSITA would have also understood that Rose teaches the advantages of re-ranking items, particularly when a system relies on community-based feedback. Sterling attempts to distinguish Rose's teachings by posing a

FoxSupp., ¶27

28. For instance, if a user initially rates a movie poorly, but then the user's future interactions and community feedback indicate that the user would likely enjoy that movie, an effective recommendation system may well recommend the movie anyway. Indeed, these techniques could be applied equally to movies or email

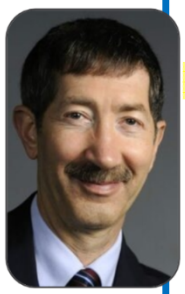
FoxSupp., ¶28

café," despite the user initially rating that content negatively (POR, 34-35). But this is far from what Sterling states is an "absurd result[]"—in fact, a POSITA would have understood this could be intentional, and that overcoming a user's initial rating based on community feedback is often desirable. Recommendation engines provide great value when overcoming a user's initial ratings to recommend content the user may not otherwise have found (e.g., if, unbeknownst to the user, the cat café also has puppies, which the user loves). *See* Ex. 1007 (Bieganski), 5:13-25 ("Serendipity occurs when a user makes a pleasant discovery that would not normally have been made."). Even Dr. Khan provided an example where a system would want to re-rank

FoxSupp., ¶27

Reply, 6-7

A user's rating may be incomplete



29. Furthermore, Rose contemplates that there can be "thousands of dimensions" as to how relevance is determined. Ex. 1006, 6:26-57. A user's rating will not necessarily capture the complete picture of the content's relevance, and the wealth of information available using community feedback means that a recommendation system continues evaluating a document's relevance even after a user's initial rating. Where a user positively ranks some electronic content, community feedback might still be helpful to further differentiate or classify the content (e.g., distinguishing good movies from great ones, or identifying the top 10 holiday classics).

30. Therefore, Sterling's appeals to "common sense" or claims of "absurd results" (POR, 34-35) ignore the many scenarios where Rose's system would want to continue evaluating content's relevance, even after a user has provided feedback. Petitioner has shown Rose meets 1[d].

FoxSupp., ¶¶29-30 (combined)

The example of FIG. **5A** illustrates a two-dimensional vector for each of two documents. In practice, of course, the vectors for information content would likely have hundreds or thousands of dimensions, depending upon the number of terms that are monitored. For further information regarding the computation of vector models for indexing text, reference is made to *Introduction To Modern Information Retrieval* by Gerald Salton and Michael J. McGill (McGraw-Hill 1983), which is incorporated herein by reference.

EX1006, 6:26-57

Pet. 55; Reply, 6-7

Roadmap

- **Claim Construction**
- **Ground 2:** Rose teaches (1[d]/1[h])
- **Ground 2:** Rose teaches 1[f]
- **Ground 3:** Rose-Bieganski
- **Ground 1:** Dumais is Prior Art
- **Ground 1:** Dumais teaches 1[f]
- **Secondary Considerations**

- Rose teaches “at least one” by linguistics and law
- PO concedes Rose teaches uses *other* user indications for *instant* user correlation-based predictions
- Dr. Khan agrees Rose teaches identifying cognate users

1[f]: Rose identifies a user that is recipient, cognate

Claim limitation 1[f]

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

EX1001, 47:43-45

Second, Rose does not teach, suggest, or render obvious "*identify[ing] at least one other of the plurality of users … that is cognate to the [first] user.*" EX2029, ¶¶180-193. Although Rose considers the feedback of other users in the system, Rose considers the feedback of **all other users**.

POR, 23

POR does not challenge that Rose meets "recipient" portion of 1[f]

Rose teaches “at least one” by linguistics and law



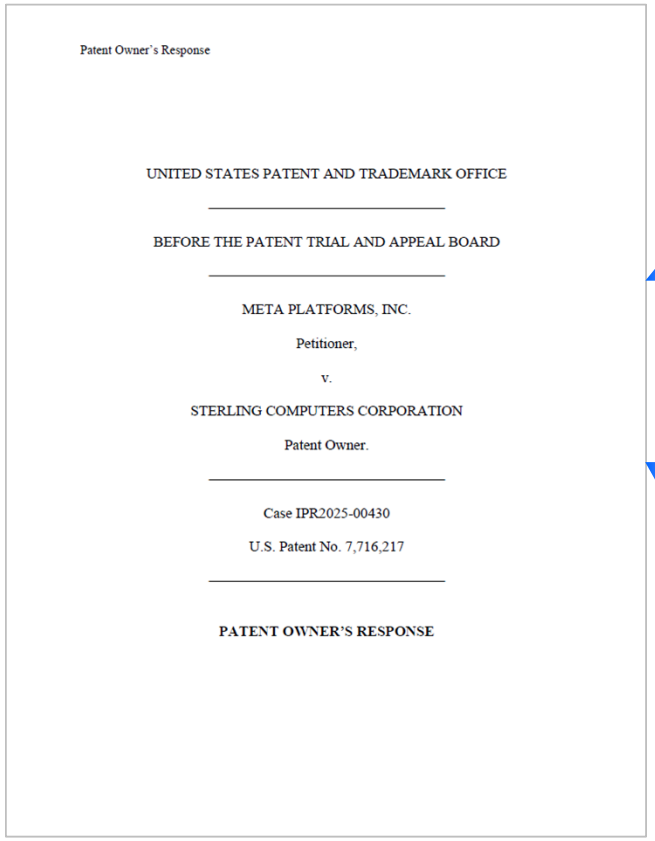
32. First, the Challenged Claims simply require identifying “*at least* one other…user[]…that is cognate.” Ex. 1001, cl. 1. Besides the fact that the claims only discuss monitoring actions of cognate users in 1[g], not 1[f], the claims do not preclude considering feedback from “all other users” that have rated the item because in normal linguistics “at least one” creates a boundless numerical plurality that would include any permutation of *one* to *all* other users. *Id.*

FoxSupp., ¶32

“‘At least one’ means that there could be only one or more than one.”

Rhine v. Casio, Inc., 183 F.3d 1342, 1345 (Fed. Cir. 1999)

PO concedes Rose uses *other* user indications for *instant* user correlation-based predictions



Patent Owner's Response

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 RESPONSE

keywords or date). EX1006, 7:35-37. Correlation-based predictions are based upon community feedback – i.e., "indications provided by **other** users." *E.g.*, EX1006,

POR, 28

the [first] user." Instead, Rose considers the feedback from **all other users** that have rated the item that is going to be presented to the first user (i.e., the item for which relevancy is being predicted). EX2029, ¶¶185-193.

POR, 37

Dr. Khan agrees Rose teaches identifying cognate users

Rose teaches . . .

. . . and Dr. Khan .

Second, Rose teaches identifying users with similar interests based on their feedback on content. EX-1006, 5:57-60 (using user feedback to "provide information to rank that movie for viewing by other *users whose interests in movies are similar or opposed*"), 6:61-7:1, 7:43-47 (using "regression" to identify "users having similar feedback responses"). PO argues these citations are "misleading"

Reply, 8; EX1006, 5:57-60, 6:61-7:1, 7:43-47

mendations to users. Each separate database can have its own profile for users who access that database. Thus, each time a user sees a movie, he or she can record his or her reaction to it, e.g., like or dislike. This information is used to update the user's profile for the movie database, as well as provide information to rank that movie for viewing by other users whose interests in movies are similar or opposed.

EX1006, 5:57-60

various factors. 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. Alternatively, principal components analysis can be used to identify underlying aspects of content-based and correlation-based data that predict a score.

EX1006, 6:61-7:1, 7:43-47

Petition, 57; Reply, 8

Dr. Khan agrees Rose teaches identifying cognate users

Rose teaches . . .

. . . and Dr. Khan .

Q. And a user's interactions with that content can be used to inform the relevance of other users whose interest in movies are similar or opposed, correct?

A. Um-hum, yes.

Q. And when it references other users whose interests in movies are similar, you understand that's referring to cognate users, correct?

A. (Reading to self.) Yeah, correct.

EX1004 (Khan Trans.), 187:7-14

EX1004 (Khan Trans.), 193:15-24

You will agree that regression can be used to identify the salient terms in a document; i.e., which of those terms that Rose should look to when determining the relevance of content, correct?

A. Correct.

Q. And in the same way, because it's part of the same sentence, Rose also uses regression to determine users having similar feedback responses that it should use when evaluating relevance, correct?

A. Correct.

EX1004 (Khan Trans.), 194:17-195:2

Q. You would agree that users with similar feedback responses would be cognate users?

A. Correct.

Q. Because cognate is based on whether users have similar interests, which is based on their feedback on content, right?

A. Correct.



Reply, 8-9

Roadmap

- **Claim Construction**
- **Ground 2:** Rose teaches (1[d]/1[h])
- **Ground 2:** Rose teaches 1[f]
- **Ground 3:** Rose-Bieganski
- **Ground 1:** Dumais is Prior Art
- **Ground 1:** Dumais teaches 1[f]
- **Secondary Considerations**

- PO bypasses Bieganski teachings and only attacks the Rose-Bieganski combination
- The Board preliminarily dismissed PO's non-obviousness points
- Dr. Khan's post-institution testimony bears no weight and should not change the Board's findings

Rose-Bieganski teaches limitation 1[f]

Claim limitation 1[f]

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

EX1001, 47:43-45

Dr. Fox explains Bieganski optimizes Rose

Motivation to Combine:

- Contemporaneous Prior Art
- Teach ranking content based on relevance
- Discuss examples using movies
- Describe use with search engines
- Base rankings on user actions
- Discuss considering input from "community" of users



a user based on other users' content preferences," where Bieganski would improve Rose's content ranking system by disclosing "an improved technique for selecting which other users' preferences are considered in a recommendation." DI, 28-30.

FoxSupp., ¶38

42. Indeed, I agree with the Board because "[t]he threshold selections in Bieganski are numerical parameters used to optimize recommendations…. [S]electing a number to optimize recommendations is within the ability of a skilled artisan." DI, 30; *see also* Ex. 1003, ¶¶232-37 (I explained that "[c]ombining Rose and Bieganski in this way would be a simple change"). Indeed, a POSITA would know that, if appropriate, there are simple ways to vary a threshold value between users, e.g., as a function of the number of messages associated with a user. Bieganski teaches and encourages manipulating thresholds, which by their very operative nature as a parameter that may be *set* further includes the characteristic that they may be *reset*, or changed. Ex. 1007, 7:9-16 ("It is important to ***limit membership***…to

FoxSupp., ¶42

Petition, 69-73; FoxDecl., ¶¶232-37

Petition, 69-75; Reply, 11-12

Dr. Fox explains Bieganski optimizes Rose

45. Furthermore, in its combination with Rose, a POSITA would have understood that Rose's "correlation scores" would inform Bieganski's minimum neighborhood similarity and maximum neighborhood size factors, to ensure users have a sufficient minimum neighbor similarity and to identify the top users for inclusion in that neighborhood. Pet., 72; Ex. 1003, ¶237. Therefore, it is my opinion

FoxSupp., ¶45

44. Applying Bieganski's teachings in a simple extension to the Figure 4 example, a POSITA would have understood that decreasing the number of similar users/size of the neighborhood requires either/both raising the minimum (e.g., *must* share a cross and a circle) and/or lowering the maximum (no more than three other users may be included). In that simple modification to Figure 4, only two members would occupy the user's neighborhood:

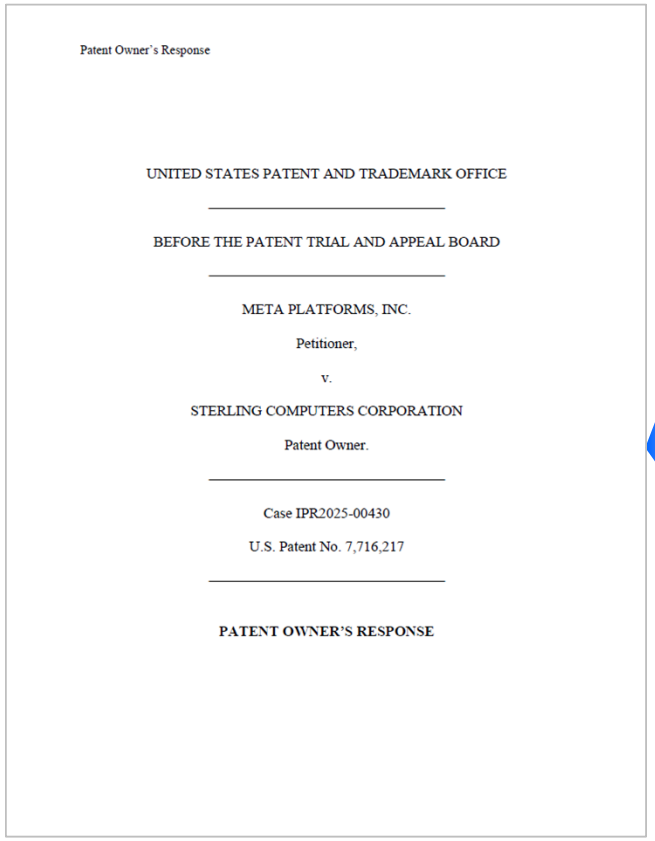
FoxSupp., ¶44



Ex1007, Fig. 4



PO bypasses Bieganski's teachings and only attacks the Motivation to Combine Rose-Bieganski



Patent Owner's Response

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Case IPR2025-00430

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

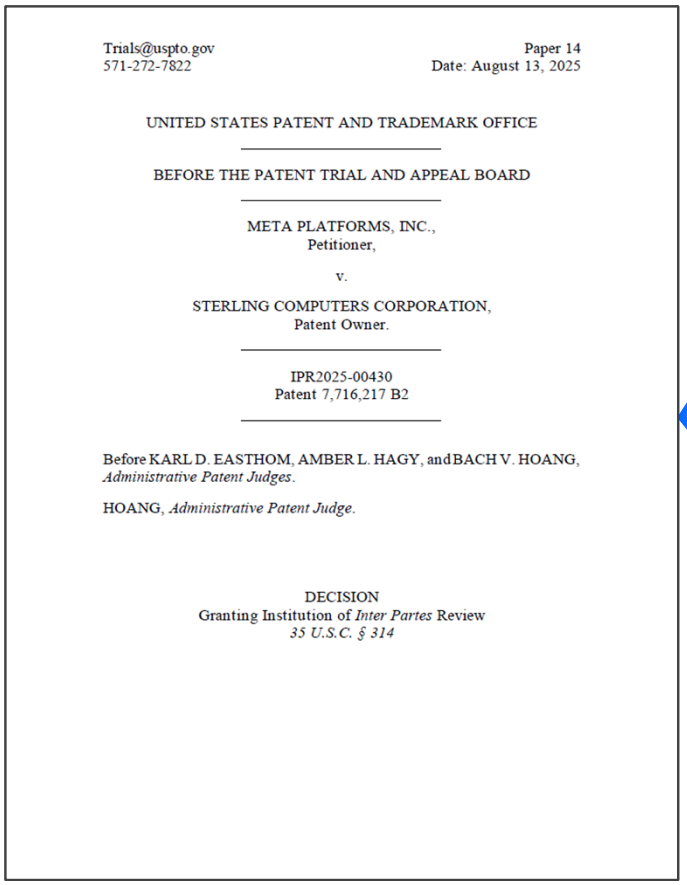
PATENT OWNER'S RESPONSE

Petitioner argues that, to the extent it is missing from Rose (which it is), Bieganski supplies the "*identify…*" limitation (as well as the "*second relevance measurement*"; the specific measures that are the "*second measure of relevance*"; and several dependent claims). Pet. 72-77; EX1003, ¶¶232-237. Petitioner's position, however, ignores the numerous reasons why a POSITA would **not** have been motivated to combine the references and would not have expected to be successful in doing so.

POR, 43

Reply, 9-10

Board preliminarily agreed Rose-Bieganski combination was obvious



Trials@uspto.gov
571-272-7822

Paper 14
Date: August 13, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,
Petitioner,

v.

STERLING COMPUTERS CORPORATION,
Patent Owner.

IPR2025-00430
Patent 7,716,217 B2

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

HOANG, *Administrative Patent Judge*.

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

On this record, Petitioner adequately shows that one of ordinary would have combined Rose and Bieganski. Rose and Bieganski are both concerned with recommending content to a user based on other users' content preferences. Ex. 1006, code (57); Ex. 1007, code (57). Petitioner, supported by Dr. Fox, adequately shows that Bieganski discloses an improved technique for selecting which other users' preferences are considered in a recommendation. Pet. 71 (citing Ex. 1003 ¶¶ 236), 75 (citing Ex. 1003 ¶¶ 247–248). We agree that improving Rose's content ranking system using Bieganski's content recommendation technique sufficiently motivates the combination. *See KSR Int'l*, 550 U.S. 417 (noting that where "a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious").

DI, 28-29 (combined)

Reply, 10

The Board preliminarily dismissed PO's non-obviousness points

PO's contested differences . . .

. . . were dismissed by the Board at Institution

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 directed to a different type of content.

POR, 43

(citations omitted). The factual premise of this argument appears flawed. Bieganski describes "[a]nother application area" for its recommendation system "is textual information sources" such as "Internet documents." Ex. 1007, 17:44–50. Further, Bieganski is analogous art to the '217 Patent

In addition to the fact that a skilled artisan would not look to Bieganski to solve the problems in the '217 Patent inventions, a skilled artisan would not expect to succeed in combining Rose and Bieganski. This is because combining Rose and Bieganski would not be as simple of a change as Petitioner and its expert suggest. EX2029, ¶202. In particular, the two threshold selections in Bieganski – i.e., minimum neighbor similarity and maximum neighborhood size – are not trivial. *Id.*

POR, 44

Resp. 50 (citing Ex. 2001 ¶ 157). The current record better supports Petitioner and Dr. Fox. The threshold selections in Bieganski are numerical parameters used to optimize recommendations, e.g., "a minimum number of items in common with the customer before being included in a neighborhood" or a "maximum neighborhood size." Ex. 1007, 7:16–27. We agree with Dr. Fox that selecting a number to optimize recommendations is within the ability of a skilled artisan. *See* Ex. 1003 ¶ 237.

Reply, 10-11

DI, 29-30

Dr. Khan's testimony erodes PO's non-obviousness points

PO's argument against Bieganski . . .

as e-mails or other messages. **In contrast,** every claim of the '217 Patent addresses "*electronic content sent from a sender to a user*." EX1001, at Claims (emphasis added). Thus, a skilled artisan would not look to Bieganski to solve problems relating to "sent" content.

POR, 44



. . . was dismissed by Dr. Khan.

Q. One of your arguments is that Bieganski is not discussing content that is sent from a sender, right?

A. Right.

Q. But you agree that Rose teaches that aspect of the claims, right?

A. Correct.

Khan Trans., 206:10-15

Q. So my question was, the Rose/Bieganski combination does not rely on Bieganski to identify content sent from a sender, correct?

A. Correct.

Reply, 11

Khan Trans., 208:11-14

Dr. Khan's post-institution testimony bears no weight and should not change the Board's findings



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.

EX2029, ¶ 202

"[T]he cited declaration testimony is conclusory and unsupported, adds little to the conclusory assertion for which it is offered to support, and is entitled to little weight."

Xerox Corp. v. Bytemark, Inc., IPR2022-00624, Paper 9, 15 (Aug. 24, 2022) (precedential)

Roadmap

- **Claim Construction**
- **Ground 2:** Rose teaches (1[d]/1[h])
- **Ground 2:** Rose teaches 1[f]
- **Ground 3:** Rose-Bieganski
- **Ground 1:** Dumais is Prior Art
- **Ground 1:** Dumais teaches 1[f]
- **Secondary Considerations**

- Dumais is §102(e) prior art
- PO conception evidence lacks corroboration
- Attorney argument cannot supplant inventor evidence
- Others contributed to ’217 invention conception
- PO’s evidence shows conception *after* Dumais
- PO’s early work involved *different* inventions
- PO’s metadata and documents prove inadequate diligence prior to Dumais

Dumais is §102(e) prior art

Critical Period

June 29, 2005 → January 13, 2006

(19) **United States**

(12) **Patent Application Publication**

Dumais et al.

(10) **Pub. No.: US 2007/0016553 A1**

(43) **Pub. Date: Jan. 18, 2007**

(54) **SENSING, STORING, INDEXING, AND RETRIEVING DATA LEVERAGING MEASURES OF USER ACTIVITY, ATTENTION, AND INTEREST**

(75) Inventors: **Susan T. Dumais**, Kirkland, WA (US); **Eric J. Horvitz**, Kirkland, WA (US)

Correspondence Address:
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CLEVELAND, OH 44114 (US)

(73) Assignee: **Microsoft Corporation**, Redmond, WA

(21) Appl. No.: **11/172,121**

(22) Filed: **Jun. 29, 2005**

Publication Classification

(51) **Int. Cl.**
G06F 17/30 (2006.01)
G06F 7/00 (2006.01)

(52) **U.S. Cl.** **707/2**

(57) **ABSTRACT**

Various components and processes are provided to enable data processing on multiple data types where aspects of the history of user activity, attention, interest, location, or other interaction with data is determined and employed to enhance information storage and access. In one particular aspect, a data manipulation system is provided. The system includes one or more data items that are associated with one or more tags and indicate at least one user's interaction or activity with the data items. A manipulation tool that processes the data items to determine a subset of data items based at least in part on the user's interaction with the data items. Methods are described for using the manipulation tool to weight terms in an index, to compress indexes, to influence the rank of items returned in a search, to generate additional queries for data items either automatically or with user direction, or for improved presentation of data items.

(12) **United States Patent**
Marston et al.

(10) **Patent No.: US 7,716,217 B2**

(45) **Date of Patent: May 11, 2010**

(54) **DETERMINING RELEVANCE OF ELECTRONIC CONTENT**

(75) Inventors: **Justin Marston**, Austin, TX (US); **Paul Marston**, Lancashire (GB)

(73) Assignee: **Bluespace Software Corporation**, Austin, TX (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 184 days.

(21) Appl. No.: **11/623,653**

(22) Filed: **Jan. 16, 2007**

(65) **Prior Publication Data**

US 2007/0179945 A1 Aug. 2, 2007

Related U.S. Application Data

(60) Provisional application No. 60/758,828, filed on Jan. 13, 2006.

6,178,160 B1 1/2001 Bolton et al.
6,181,867 B1 1/2001 Kenner et al.
6,182,136 B1 1/2001 Ramanathan et al.
6,185,551 B1 2/2001 Birrell et al.
6,185,598 B1 2/2001 Farber et al.
6,249,807 B1 6/2001 Shaw et al.
6,282,569 B1 8/2001 Wallis et al.

(Continued)

FOREIGN PATENT DOCUMENTS

EP 0739115 A2 10/1996

(Continued)

OTHER PUBLICATIONS

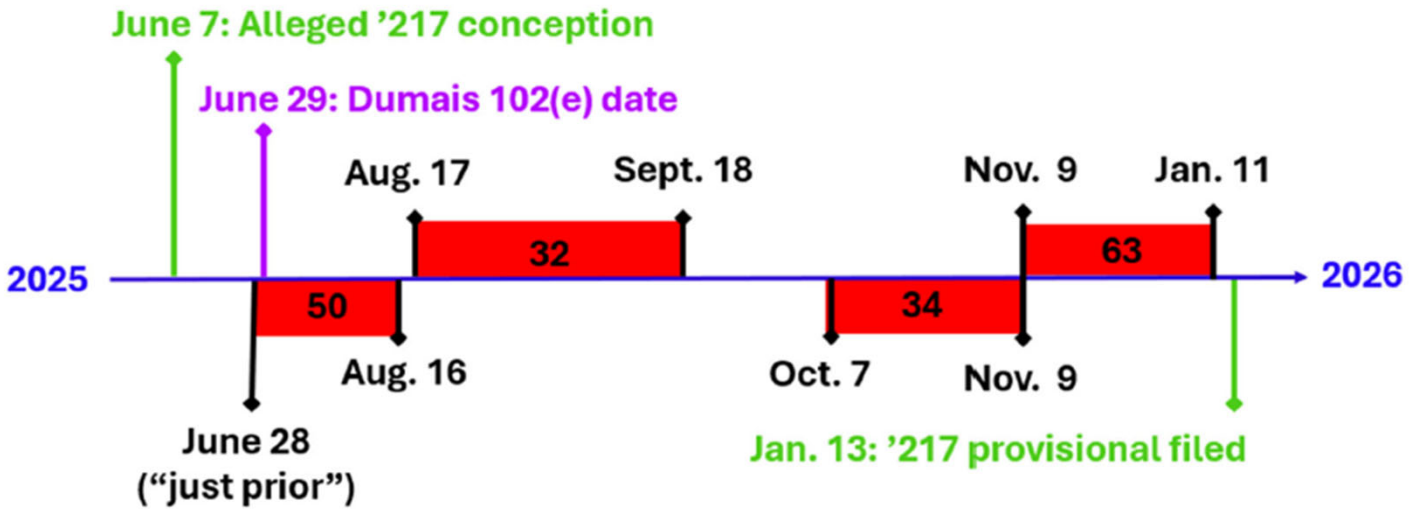
PCT International Search Report and Written Opinion, PCT/US07/60587, Feb. 14, 2008, 8 pages.

EX1001, Cover; EX1005, Cover; Reply, 12

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

PO's metadata proves inadequate diligence prior to Dumais

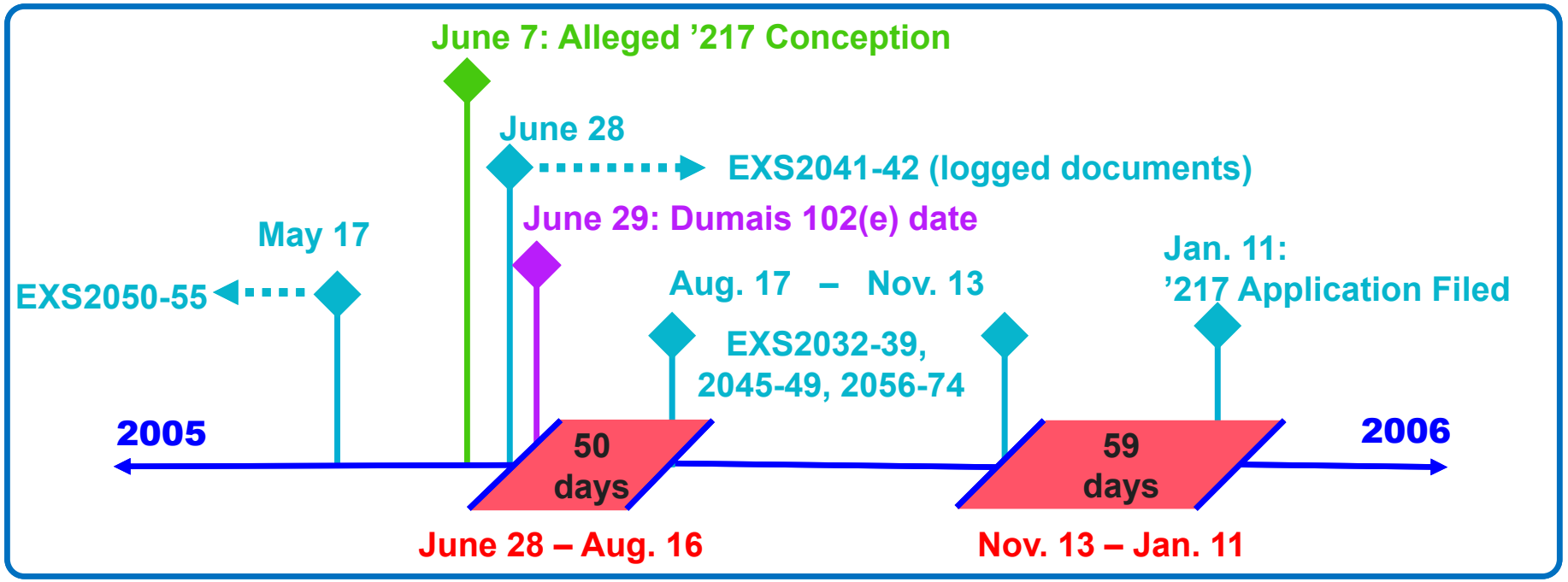
Original Conception Evidence



Gap	Days	Evidence
1	50[9]	EX2006, 61; EX2007, 77
2	32	EX2009, 78; EX2010, 95
3	34	EX2012, 95; EX2013, 3
4	63	EX2013, 3; EX2003, ¶12

PO's documents prove inadequate diligence prior to Dumais

Conception Evidence Still Has >109 Days Of Gaps



Petitioner Improperly Incorporated Conception Arguments By Reference

GAS had to present a case to establish prior conception of every claim limitation. GAS's **briefing** failed to meet this burden. …

To identify GAS's substantive arguments, the Board was forced to turn to a declaration by Struhsaker, and further to delve into a **twenty-nine-page claim chart attached as an exhibit**. This exercise of "playing archaeologist with the record" is precisely what the rule against incorporation by reference was intended to prevent, 77 Fed. Reg. 48,617, and the Board was within its discretion in excluding the arguments made in the claim chart.

Gen. Access Sols., Ltd. v. Sprint Spectrum L.P., 811 F. App'x 654, 658 (Fed. Cir. 2020)

Patent Owner's list of exhibits include approximately one hundred twelve (112) exhibits which purportedly relate to its allegation of prior invention relative to Schaefer. See Exs. 2011–2123. … Despite the volume of exhibits, we are not provided with a **definitive discussion** of why many are relevant to conception or reduction to practice.

Costar Realty Info., Inc. v. Clantech, Inc., No. IPR2022-00800, 2023 WL 7923899, at *11 (P.T.A.B. Nov. 16, 2023) (citing *Parus Holdings, Inc. v. Google LLC*, 70 F.4th 1365, 1371 (Fed. Cir. 2023))

Reply, 13, 20-21; Pet. Reply ISO MTE, 1-2

Petitioner Improperly Incorporated Conception Arguments By Reference

set forth in the first declaration of Justin Marston, EX2004 and EX2006 are draft documents prepared by the inventors on September 2, 2004, and June 7, 2005 (hereinafter, collectively, the "Conception Documents"). These Conception Documents disclose each limitation of the Challenged Claims. *See* EX2014.

POR, 45

Claim Chart for BlueSpace Mail Documents (EX2004 & EX2006)

'217 Patent Claims

'217 Patent Claim Limitation	Conception documents
1. A computer-implemented system for determining a relevance score of a piece of electronic content sent from a sender to a user,	The BlueSpace mail documents reflect that, by at least June 7, 2005, Justin and Paul Marston had conceived of a computer-implemented system for determining a relevance score of a piece of electronic content sent from a sender to a user. The documentation between September 4, 2004, and June 7, 2005, describes a "computer-implemented system": "SMTP treats each email as a string of text similar to a postcard or telegram that must be passed **between computers** until it reaches its desired recipients." EX2004, at 5 (emphasis added). The documentation between September 4, 2004, and June 7, 2005, describes "a piece of electronic content sent from a sender to a user." EX2004, at 14 (referring to "both **sent** and **received**" "content" (emphasis added)); *id.* at 21 (referring to "the **sender** and each **recipient** of the TransMail" (emphasis added)). The documentation between September 4, 2004, and June 7, 2005, describes determining a "relevance score of a piece of electronic content": • "BlueSpace uses a multi-dimensional **relevance** system, that **rates** the **importance** of each **piece of content** ...." EX2004, at 4. • "**Each piece of content** (submessage) can be presented to the user along with a slider that indicates its current **relevance score**." EX2004, at 17 (emphasis added).
the relevance score determined with respect to the user,	The BlueSpace mail documents reflect that, by at least June 7, 2005, Justin and Paul Marston had conceived of the relevance score being determined with respect to the user. The documentation between September 4, 2004, and June 7, 2005, describes that the relevance score is determined with respect to the user: • "**[T]he end user** [is] able to affect **relevance** directly **for their own inbox**." EX2004, at 17 (emphasis added). • "Importance ... is stored **with respect to each user**." *Id.* (emphasis added).

EX2014, Cover

Q. And this is labeled Exhibit 2014 from the IPR proceedings; correct?

A. Yes.

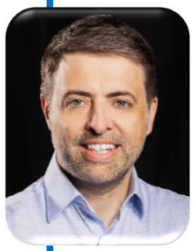
Q. What is this document?

A. That's a good question.

I think this is a -- I think this is a mapping created by the attorneys on the -- on the claims in the patent.

Q. And so you didn't prepare this document, did you?

A. No.



EX1041 (J. Marston Trans.), 311:9-19

Reply, 13-14

Justin Marston is not a POSITA

***Kyocera Senco Indus. Tools Inc. v. Int'l Trade Comm'n*, 22 F.4th 1369, 1376-77 (Fed. Cir. 2022)**
("Witnesses offering expert testimony from perspective of skilled artisan must possess 'ordinary skill in the art.'")

Q. Okay. And so I believe you testified you had a background in chemistry before you joined BlueSpace; fair?

A. Yeah. I did a few different things, but that was -- you know, chemistry is what I did my degree in, yeah.

Q. And Paul Marston's background was generally related to statistics; correct?

A. Yeah. I mean, he also did a few different things -- statistics. Did a PhD in Philosophy of Science but he -- you know, did quite a bit of statistics.

Q. So neither of you really had the software experience to be able to develop this content relevance technology; is that fair?

A. Yes.



EX1041 (J. Marston Trans.), 315:15-316:8

Reply, 13-14

PO conception evidence lacks corroboration



To prove conception, there must be corroborating evidence, "in addition to [the inventor's] own statements and documents."

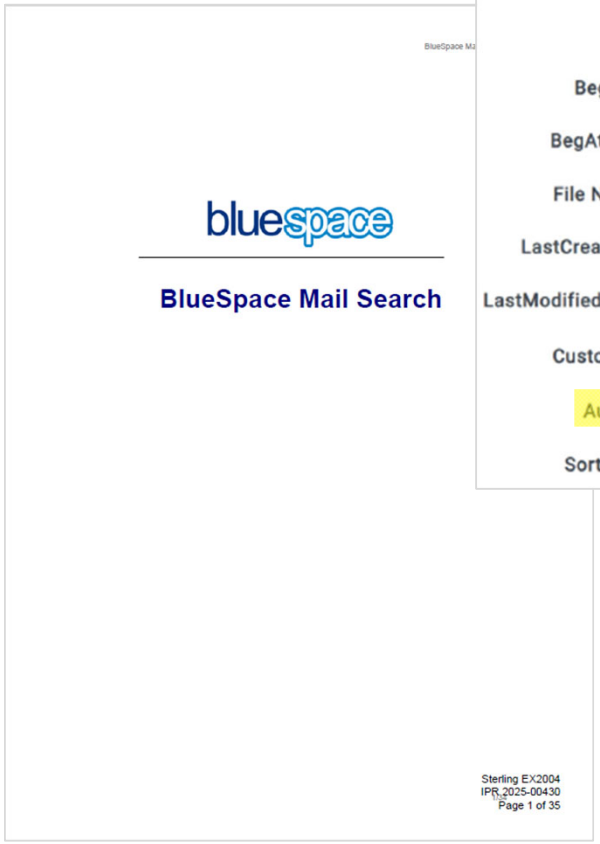
Apator Miitors ApS v. Kamstrup A/S, 887 F.3d 1293, 1295 (Fed. Cir. 2018) (internal quotation marks and citation omitted)

Meta

Reply, 13; Pet. Reply ISO MTE, 4

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

PO's conception evidence lacks corroboration



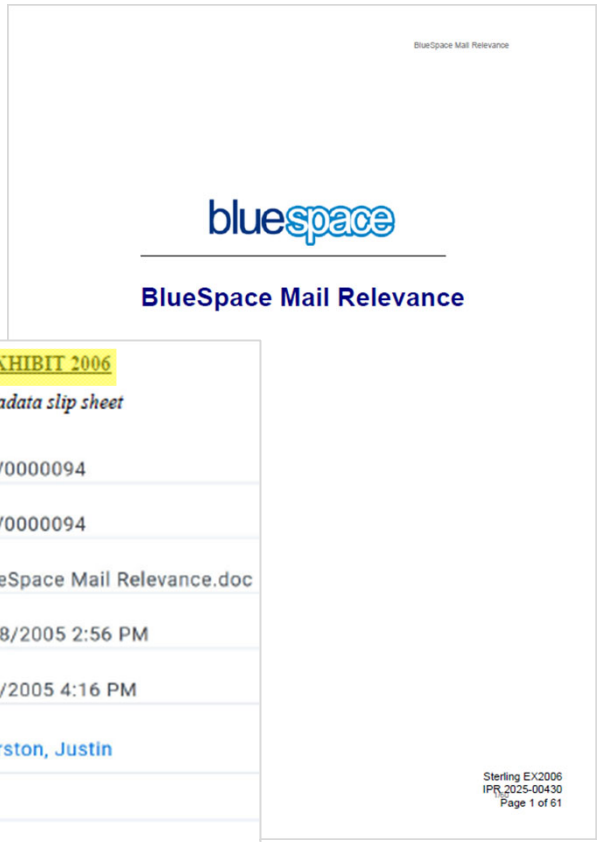
EX2004, Cover

EXHIBIT 2004

metadata slip sheet

BegDoc	REV0000100
BegAttach	REV0000100
File Name	BlueSpace Mail Search.doc
LastCreateOn	8/4/2004 1:48 PM
LastModifiedDate	9/2/2004 1:23 PM
Custodian	Marston, Justin
Author	.
SortDate	9/2/2004 1:23 PM

EX2004, 35



EX2006, Cover

EXHIBIT 2006

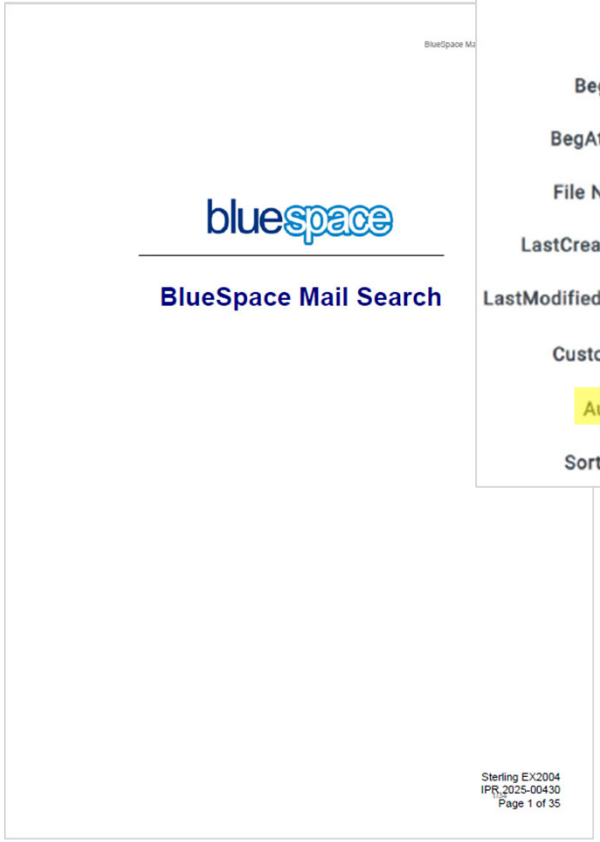
metadata slip sheet

BegDoc	REV0000094
BegAttach	REV0000094
File Name	BlueSpace Mail Relevance.doc
LastCreateOn	4/18/2005 2:56 PM
LastModifiedDate	6/7/2005 4:16 PM
Custodian	Marston, Justin
Author	.
SortDate	6/7/2005 4:16 PM

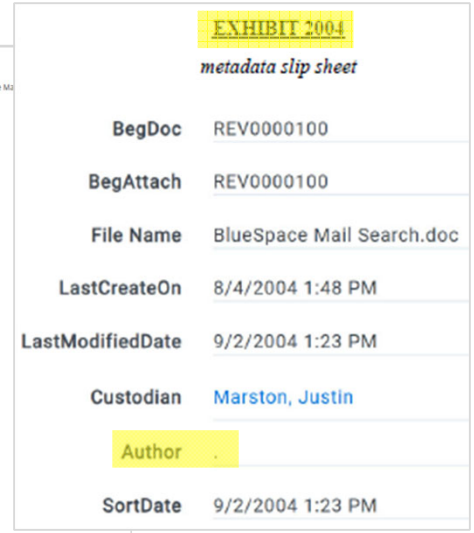
EX2006, 61

Reply, 13-14

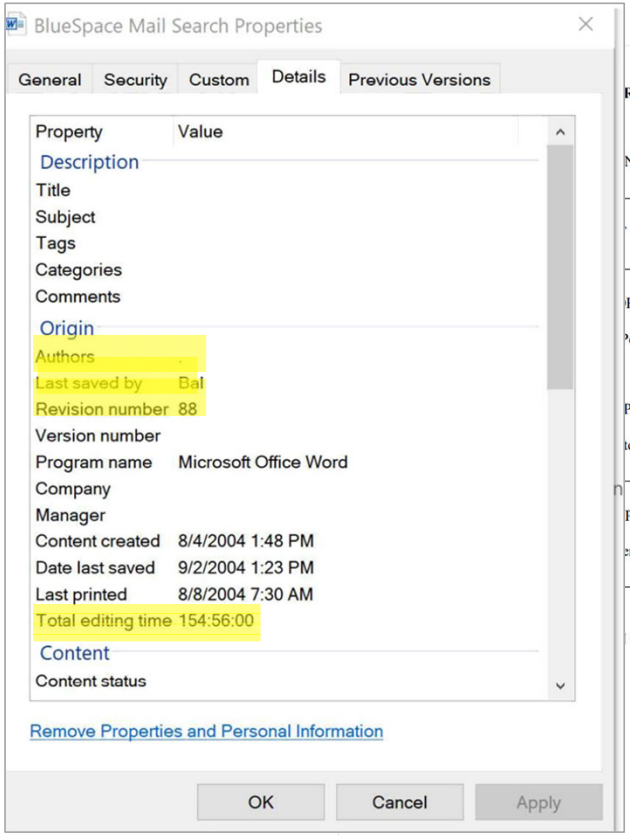
PO's conception evidence lacks corroboration



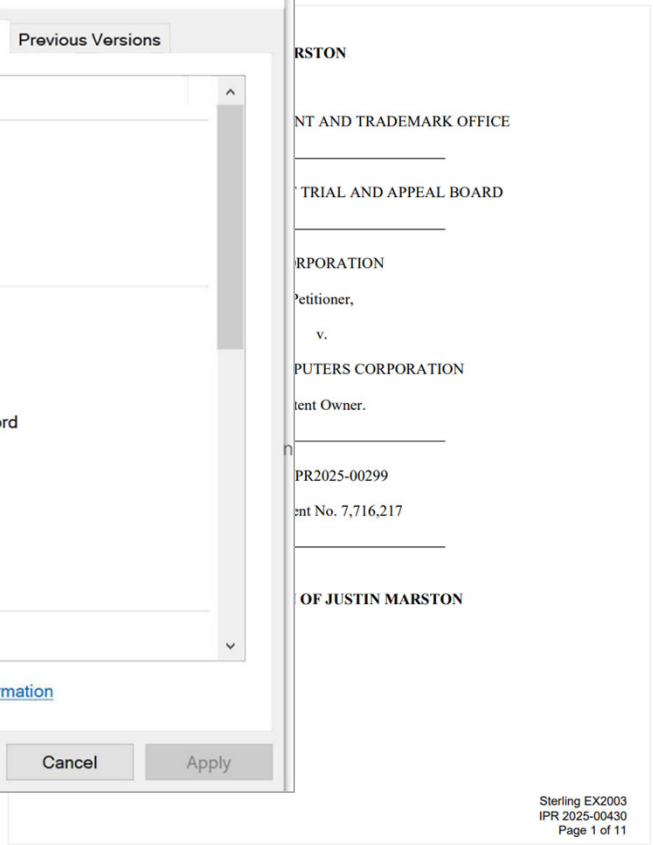
EX2004, Cover



EX2004, 35



EX2003, ¶6



EX2003, Cover

Reply, 13-14; Reply ISO MTE, 4-5

Others contributed to ’217 invention conception

Conception is complete “only when the idea is so clearly defined in ***the inventor’s*** mind that only ordinary skill would be necessary to reduce the invention to practice.”

Dawson v. Dawson, 710 F.3d 1347, 1352 (Fed. Cir. 2013) (emphasis added)



Others contributed to ’217 invention conception

Other Contributors to the Invention of the Issued ’217 patent					
Contributor / **Evidence**	**Jon Fernyhough**	**Tim Couper**	**Rick Turner**	**Tony Morton-Jones**	**“Yul and Debs”**
PO’s Evidence	EX2030, ¶29; EX2045, 72; EX2056-58; EX2057, 1-5; EX2071, 1-3	EX2050, 1-2	EX2048, 2, 4-5	EX1001, 32:54-67; EX2047, 4, 7	EX2065, 31, 100
J. Marston Testimony (EX1041)	315:8-14, 316:16-319:12	357:18-358:22	350:7-351:4		
P. Marston Testimony (EX1042)	37:22-38:13, 82:19-83:12, 101:11-102:2; 134:20-136:13	149:10-21, 82:19-83:12	149:10-21, 82:19-83:12	65:10-20	123:18-125:1

PO's conception documents show conception *after* Dumais

EX2004 (9/2/2004)

8 Algorithms

8.1 Brain Dump

8.2 Initial Maths

NOTE THAT THIS INITIAL MATHS HAS BEEN DRAFTED WITH A MATHEMATICIAN, BUT IS IN NEED OF SIGNIFICANT CHANGES. IT IS INCLUDED HERE FOR COMPLETION IN THIS CURRENT DRAFT.

EX2004, 28-29 (section 8 excerpts combined)

EX2006 (6/7/2005)

9 Algorithms

9.1 Brain Dump

9.2 Initial Maths

NOTE THAT THIS INITIAL MATHS HAS BEEN DRAFTED WITH A MATHEMATICIAN, BUT IS IN NEED OF SIGNIFICANT CHANGES. IT IS INCLUDED HERE FOR COMPLETION IN THIS CURRENT DRAFT.

EX2006, 52-53 (section 9 excerpts combined)

Dumais (6/29/2005)

EX2007 (8/16/2005)

9 Mathematical Algorithm Framework

9.1 Introduction

The delivery of the TransMail system of allocating relevance and importance requires the continuous development of a highly complex mathematically based system. Algorithms are required that continually update a set of inter related values, based on user action, so that everyone's actions affect everyone else. This has some complex implications:

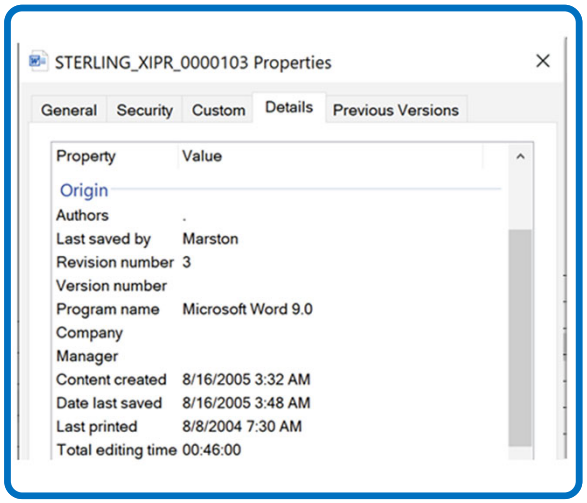
- Each user/post has a different individual set of importance and relevance criteria.
- TransMail also requires the input of user-set values for the relevance and importance criteria, which both correct the values for the user concerned and also offer a check on the effectiveness of the particular algorithms being used.

Note that for organizations with many posts attached to user teams, such as some defense agencies, BlueSpace can allow users and posts to be treated separately with varying levels of inter-correlation.

This present section sets out the basic mathematical framework within which the detailed mathematical model is being developed. The full working of this model is not presented in this white paper for brevity, due to the complexity and extensive tuning involved. Instead, a simplified exposé is given, which illustrates the nature and working of the core relevance algorithm.

9.2 Aim Of Relevance Formula

EX2007, 55



EX2022, 1

Reply, 16-17

PO's early work involved *different* inventions

EX2042

Log of privileged communications with BlueSpace counsel regarding BlueSpace work from June 28, 2005, until January 13, 2006

BegDoc	To	From	CC	Unified Subject	SentOn	Custodian	Privilege	Privilege Description
REV0000879	'Sara Ball' [sara.ball@bluespace.com];'Jackie Williams' [jackie.williams@bluespace.com];Justin Marston [justin.marston@bluespace.com]	Brian Hoffman [/O=FENWICK/OU=SF-EXCHANGE/CN=RECIPIENTS/CN=BHOFFMAN]		Confirmation of Filing Instructions	8/17/2005 12:24	Fenwick	Attorney-Client	Correspondence from counsel providing legal advice regarding patent application on Secure Messaging System
REV0000878	'Sara Ball' [sara.ball@bluespace.com]	Brian Hoffman [/O=FENWICK/OU=SF-EXCHANGE/CN=RECIPIENTS/CN=BHOFFMAN]		RE: Transmail	8/22/2005 15:43	Fenwick	Attorney-Client	Correspondence from counsel to S. Ball on behalf of J. Marston to faciliate the rendition of legal advice regarding filiings in connection with patent applications on on Tamper-Proof Electronic Messaging
REV0000878.0001				SF-#5147092-v1-10343_Declartion.DOC		Fenwick	Attorney-Client	Draft document prepared by counsel and communicated to BlueSpace regarding patent application on Tamper-Proof Electronic Messaging
REV0000878.0002				SF-#5147093-v1-10343_Assignment.DOC		Fenwick	Attorney-Client	Draft document prepared by counsel and communicated to BlueSpace regarding patent application on Tamper-Proof Electronic Messaging

EX2042, 1

SentOn	Custodian	Privilege	Privilege Description
8/17/2005 12:24	Fenwick	Attorney-Client	Correspondence from counsel providing legal advice regarding patent application on Secure Messaging System
8/22/2005 15:43	Fenwick	Attorney-Client	Correspondence from counsel to S. Ball on behalf of J. Marston to faciliate the rendition of legal advice regarding filiings in connection with patent applications on on Tamper-Proof Electronic Messaging

EX2042, 3

REV0000810	Brian Hoffman [BHoffman@Fenwick.com]	Justin Marston [justin.marston@bluespace.com]		New patent	1/11/2006 19:39	Fenwick	Attorney-Client	Correspondence to counsel to facilitate the rendition of legal advice regarding patent application on BlueSpace Mail Relevance

EX2042, 16

Reply, 17-18

PO's conception documents do not disclose 1[f]

PO's mapping . . .

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	The BlueSpace mail documents reflect that, by at least June 7, 2005, Justin and Paul Marston had conceived of 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 below. The documentation between September 4, 2004, and June 7, 2005, describes 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: • "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**." EX2004, at 15 (emphasis added). • "BlueSpace uses a multi-dimensional relevance system, that rates the importance of **each piece of content** based on the following criteria: …2. **User collaborative actions – what did other users do with the mail**? Again, their actions indicate their views on the content's importance." EX2004, at 4 (emphasis added). • "Mail actions collaborative relevance – scenarios involving other users' actions to determine content relevance." EX2004, at 13. • "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. • **"Actions** – users' actions determine both relevance and importance values. Both direct user's actions and **collaborative actions (actions of other users on the same content) are taken into account**." EX2006, at 58 (emphasis added). • "For example, one HR employee is generally likely to have similar importance to another one, especially if they are of similar position in a tree structure – e.g. they both work in employee appraisal form processing. There are clearly exceptions to this trend, but in most organizations it is likely to have a positive affect on the initial states of importance." EX2006, at 22. • "Note that if required, branched structures – such as knowledge taxonomies for contexts, directories for users and Jobcode hierarchies – can be used as a correlative basis for importance on an ongoing basis. Thus for example, an importance change for one user would have **a cascading 'ripple effect' for similar users**." EX2006, at 22 (emphasis added). The documentation between September 4, 2004, and June 7, 2005, describes algorithms for determining a measure of relevance. EX2004, at 28-32 ("8. Algorithms."); EX2006, at 52-56 ("9. Algorithms."). A skilled artisan would understand that these algorithms are implemented using software – i.e., "computer program modules" stored on "a

EX2014, 5



. . . was dismissed by Dr. Khan.

Q. Is column 14, lines 45 through 53, an example of identifying?

A. Yeah; this is one way you can do it, yes.

Q. Okay. And in this example, you can use a tree structure to identify?

A. Yes; some sort of role base, yeah.

Q. And so using a tree structure would satisfy both parts of the identifying limitation?

A. You said tree structure would satisfy?

Q. Both parts of the identifying limitation?

A. No. It satisfy only the collaborative by cognate user part. So -- but it doesn't satisfy whether the person will receive the same electronic message or not.

EX1044 (X Corp. Khan Trans.), 129:10-23

Roadmap

- **Claim Construction**
- **Ground 2:** Rose teaches (1[d]/1[h])
- **Ground 2:** Rose teaches 1[f]
- **Ground 3:** Rose-Bieganski
- **Ground 1:** Dumais is Prior Art
- **Ground 1:** Dumais teaches 1[f]
- **Secondary Considerations**

- PO has not changed the Board's finding:
  - Dumais teaches identifying a *recipient*
  - Dumais teaches identifying a recipient *cognate to* the user

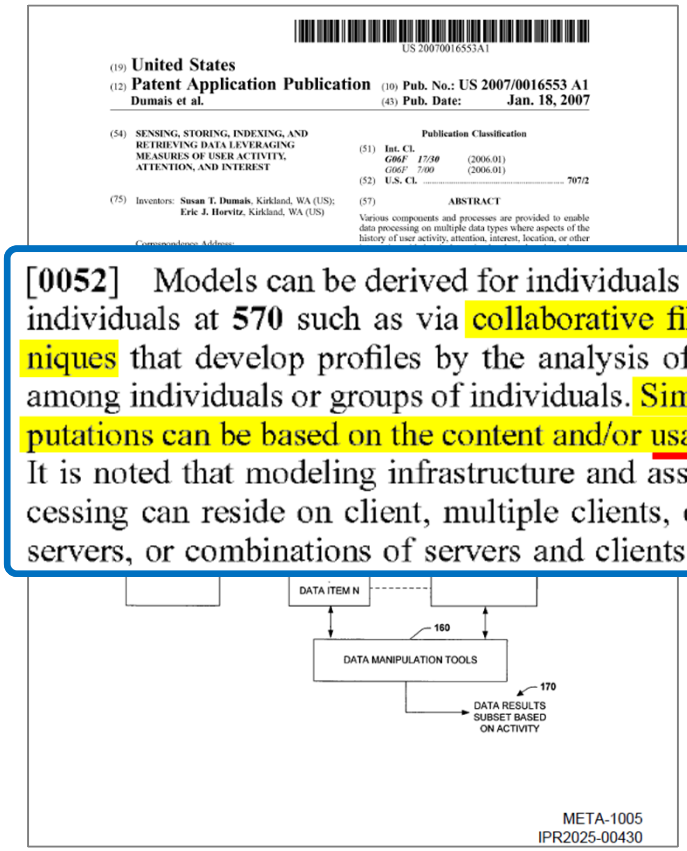
1[f]: Dumais identifies a user that is recipient, cognate

Claim limitation 1[f]

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

EX1001, 47:43-45

Dumais teaches identifying a *recipient*



US 20070016553A1

(19) **United States**
(12) **Patent Application Publication** (10) **Pub. No.: US 2007/0016553 A1**
Dumais et al. (43) **Pub. Date: Jan. 18, 2007**

(54) **SENSING, STORING, INDEXING, AND RETRIEVING DATA LEVERAGING MEASURES OF USER ACTIVITY, ATTENTION, AND INTEREST**

(75) Inventors: **Susan T. Dumais**, Kirkland, WA (US); **Eric J. Horvitz**, Kirkland, WA (US)

Publication Classification

(51) **Int. Cl.**
G06F 17/30 (2006.01)
G06F 7/00 (2006.01)

(52) **U.S. Cl.** 707/2

(57) **ABSTRACT**

Various components and processes are provided to enable data processing on multiple data types where aspects of the history of user activity, attention, interest, location, or other

[0052] Models can be derived for individuals or groups of individuals at **570** such as via collaborative filtering techniques that develop profiles by the analysis of similarities among individuals or groups of individuals. Similarity computations can be based on the content and/or usage of items. It is noted that modeling infrastructure and associated processing can reside on client, multiple clients, one or more servers, or combinations of servers and clients.

DATA ITEM N

160

DATA MANIPULATION TOOLS

170

DATA RESULTS SUBSET BASED ON ACTIVITY

META-1005
IPR2025-00430

EX1005, ¶52

one or more data items **130**. Monitoring can occur via a background and/or foreground component (not shown) and employed to determine when the data items **130** are interacted with by users. For instance, this can include observing when files are opened or closed, edited, added to or deleted from, read or written to, cut, pasted, last edited, forwarded, replied to, sent to, last viewed, the amount of time viewed, time interacted with over a time horizon, attentional annotations indicating how long the item **130** or different subcomponents of the item was the focus of attention, and so forth.

EX1005, ¶22

[0031] The systems and methods described herein support a plurality of data processing applications. This includes processing data items such as documents, files, email messages, calendar appointments, web pages, sub-sections within the data items' or cross-item abstractions, for example. Applying tags to the data items can represent a

EX1005, ¶31

Petition, 31-32; Reply, 23-24

PO has not changed the Board's finding: Dumais teaches identifying a *recipient*

current record favors Petitioner's position. Patent Owner's arguments generally fault Dumais for not providing a specific embodiment where email messages are received by both a user and another user. *See* Prelim. Resp. 33–36. But, the record does not support such a limited reading of Dumais's invention. Paragraph 31 of Dumais states that the "systems and methods described herein support a plurality of data processing applications. This includesprocessing data items such as . . . email messages," suggesting that its teachings are generally applicable to email. And, Petitioner has pointed

DI, 36

its teachings are generally applicable to email. And, Petitioner has pointed out that the users' interaction with data items in Dumais includes forwarding, replying to, and sending emails, i.e., electronic content that is sent from a sender and received by a user. Pet. 24–25 (citing Ex. 1006 ¶¶ 22, 31). As Dumais groups users based on similar usage of data items (Ex. 1006 ¶¶ 52, 55), it appears to follow that one of skill in the art would understand Dumais at least suggests that users are grouped based on receiving the same email, i.e., forwarding, replying to, and sending that email.

DI, 36

Accordingly, Petitioner adequately shows Dumais meets this limitation.

DI, 36

Reply, 23-24

Dumais ranks content based on inputs from similar users

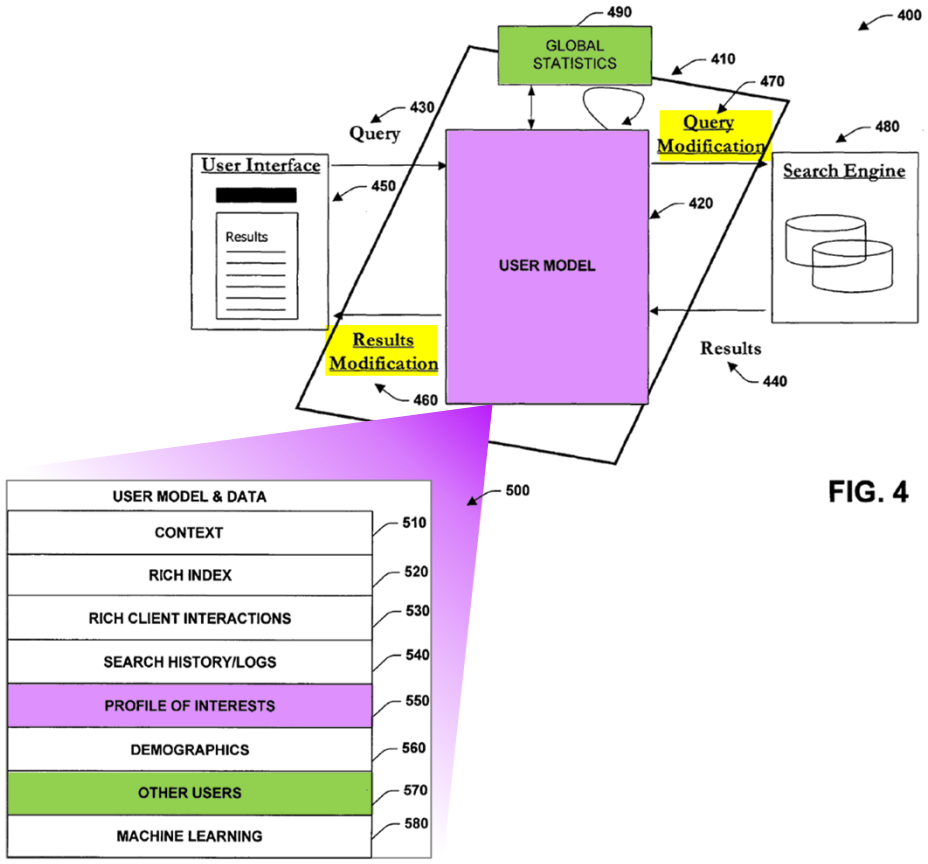


FIG. 4

FIG. 5

ization component **410**. As utilized herein, the term "query modification" refers to both an alteration with respect to terms in the query **430** and alterations in an algorithm that matches the query **430** to documents in order to obtain the personalized results **440**. Modified queries and/or results **440** are returned from one or more local and/or remote search engines **480**. A global database **490** of user statistics may be maintained to facilitate updates to the user model **420**. As can be appreciated, the user model **420** and/or global statistics **490** can be associated with user activity or interaction data as previously describe to facilitate data manipulation or processing.

EX1005, ¶40

Petition, 30-32, 35-38; Reply, 23-24

PO has not changed the Board's finding: Dumais teaches identifying a recipient *cognate to* the user

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

DI, 37

And, even if we were to adopt Patent Owner's construction, the current record appears to show that Dumais uses collaborative filtering to determine the relevance of an item. Petitioner points out that Dumais

DI, 37

Therefore, it appears that Dumais describes a user model used to determine the relevance of data items based on other users who have similar interactions with the data items.

Accordingly, Petitioner adequately shows Dumais meets this limitation.

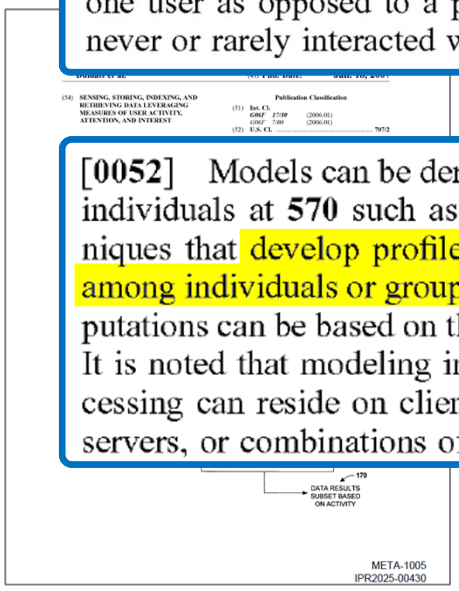
DI, 37

Reply, 24-26

PO's Sur-Reply Ignores Dumais' Express Teachings

drawing conclusions there from. For instance, by observing that one user interacts with a subset of other users over a network, it may be determined or inferred that this subset of users belongs to a desired social network of interest for the one user as opposed to a plurality of other users who are never or rarely interacted with.

EX1005, ¶21



[0052] Models can be derived for individuals or groups of individuals at **570** such as via collaborative filtering techniques that develop profiles by the analysis of similarities among individuals or groups of individuals. Similarity computations can be based on the content and/or usage of items. It is noted that modeling infrastructure and associated processing can reside on client, multiple clients, one or more servers, or combinations of servers and clients.

EX1005, ¶52

PO Sur-Reply

From the outset, it is noteworthy that Petitioner points to no disclosure in Dumais that teaches or suggests "*identify[ing]*" a **relationship** between **the first user** and some other "*user(s)*" in the system. This is a key piece of the '217 Patent because, in the '217 Patent, the other "*user(s)*" being "*identif[ied]*" (1) must be "*a recipient*" of **the same** piece of content that **the first user** received; and (2) must be "*cognate **to the [first] user***." Petitioner ignores this required relationship, repeatedly pointing to passages in Dumais that discuss grouping users, without regard to whether **the first user** is in the group.

PO Sur-reply, 18

Petition, 18, 31; PO Sur-Reply, 18

PO's Sur-Reply Ignores Dumais' Express Teachings

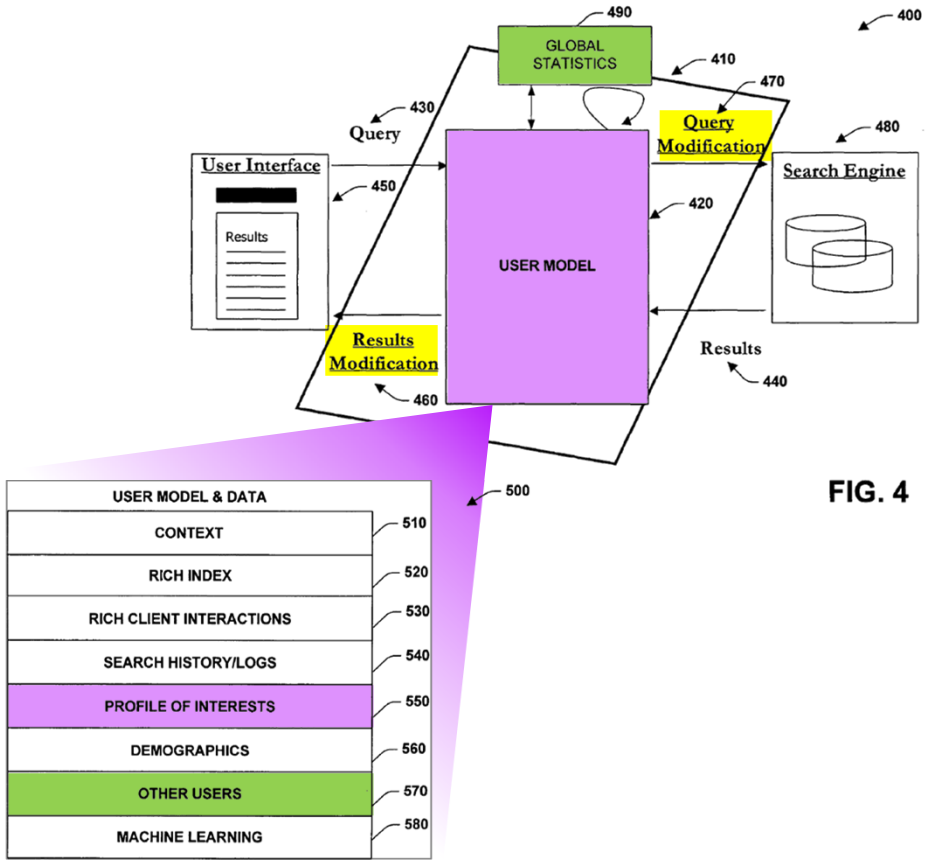


FIG. 4

FIG. 5

PO Sur-Reply

For the "*cognate*" limitation, Petitioner again relies upon collaborative filtering in Dumais. Reply,24-25. It is true that Dumais teaches using collaborative filtering to create "groups of individuals" based upon "similarity computations," which can consider similar "usage of items." EX1005,[0052]. This group of individuals could be considered a group of "*cognate*" users, as PO's expert acknowledged. *See* Reply,25-26 (citing EX1040,221:7-10). That does not mean, however, that Dumais "***identifies[***" another "*user*" that is "*cognate* ***to the [first] user***," as the '217 Patent requires. In particular, Dumais never "*identifies]*" whether users in a group are "*cognate* ***to the [first] user***" for which relevancy is being determined. For example, collaborative filtering in Dumais never considers whether **the first user** doing the searching is even a part of **any** group. *Supra*,18&19.

PO Sur-reply, 23

Petition, 18, 30-32, 35-38; PO Sur-Reply, 18

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Roadmap

- **Claim Construction**
- **Ground 2:** Rose teaches (1[d]/1[h])
- **Ground 2:** Rose teaches 1[f]
- **Ground 3:** Rose-Bieganski
- **Ground 1:** Dumais is Prior Art
- **Ground 1:** Dumais teaches 1[f]
- **Secondary Considerations**

- PO fails to show nexus between products and ’217 claims
- PO’s ’217 disclosure cannot show secondary considerations
- PO’s unauthenticated, irrelevant evidence of secondary considerations is inadmissible hearsay

PO fails to show nexus between products and ’217 claims



***Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1332 (Fed. Cir. 2019)**
(“[T]o be accorded substantial weight in the obviousness analysis, the evidence of secondary considerations must have a ‘nexus’ to the claims, *i.e.*, there must be “a legally and factually sufficient connection” between the evidence and the patented invention.”)

***Institut Pasteur & Université Pierre et Marie Curie v. Focarino*, 738 F.3d 1337, 1347–48 (Fed. Cir. 2013)**
(“Copying requires duplication of features of the patentee's work based on access to that work, lest all infringement be mistakenly treated as copying.”)

PO fails to show nexus between products and ’217 claims

First, the invention’s commercial success demonstrates non-obviousness. Meta uses the invention in its products known as Instagram & Facebook. *See* **EX2095**. For example, Facebook calculates a “relevance score” to rank posts on a user’s Feed based upon “signals” that include both on the first user’s own actions on the post (e.g., if the first user “liked this post”), as well as other signals, such as “Topic(s) that the post is about” or “how many of your friends liked the post.”

POR, 57

PO's '217 disclosure cannot show secondary considerations



***Xerox Corp. v. X Corp.*, No. 2023-1913, 2025 WL 1692962, *7 (Fed. Cir. June 17, 2025)**
("[O]bjective evidence of nonobviousness must be objective factual evidence, and not merely argument or conclusory statements of the applicant.").

***Novartis AG v. Torrent Pharms. Ltd.*, 853 F.3d 1316, 1331 (Fed. Cir. 2017)**
("In evaluating whether the requisite nexus exists, the identified objective indicia must be directed to what was not known in the prior art.").

PO's unauthenticated, irrelevant evidence of secondary considerations is inadmissible hearsay

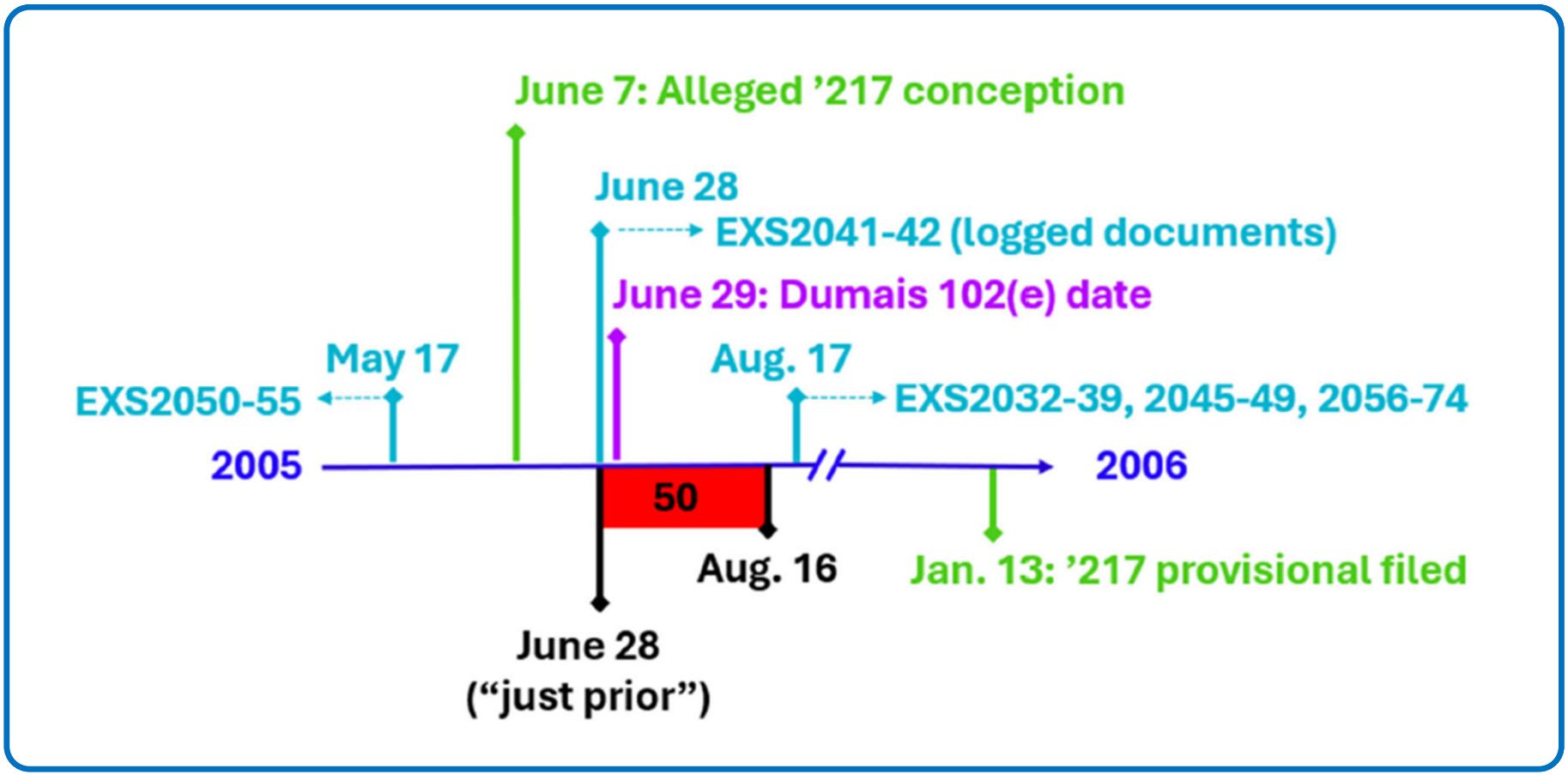


EX2079-EX2083 are webpages allegedly about products attributed to X and Petitioner, which PO cites to argue secondary considerations of non-obviousness. POR, 57-59. Because PO relies on these webpages to show the features of X and Petitioner products, they are out-of-court statements asserted for the truth of the matter asserted. Thus, they constitute inadmissible hearsay, without any exception that would render them admissible. FRE 801. Moreover, only EX2082 and EX2083 even purport to be about Petitioner, and PO has not established that any of these exhibits relate to the patented technology. Accordingly, they are irrelevant under FRE 401–403. These exhibits should also be excluded for lack of authentication—PO offers no witness citing them or vouching for their authenticity. FRE 901.

Paper 36, 12-13 (combined)

Backup Slides

PO's documents prove inadequate diligence prior to Dumais



Attorney argument cannot supplant inventor evidence

Witnesses offering expert testimony from perspective of skilled artisan must possess “ordinary skill in the art.”

Kyocera Senco Indus. Tools Inc. v. Int’l Trade Comm’n, 22 F.4th 1369, 1376-77 (Fed. Cir. 2022)



Claim 1

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, 47:25-67

Deleted per Certificate of Correction, EX1001, p. 50

Claim 6

6. A computer program product 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-program product having a computer-readable storage medium having computer program instructions encoded thereon 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 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, 48:15-55

Claim 7

7. A computer-implemented method 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 method comprising:

tracking actions by a plurality of users associated with an application for managing electronic content;

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,

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;

determining a second measure of relevance of the piece of electronic content 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

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, 48:56-49:20

Claim 5

5. The system of claim **1**, wherein the electronic content comprises at least one of an email, a document, an instant message, and an SMS message.

EX1001, 48:12-14

Claim 1[d]

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

EX1001, 47:36-40

Claim 1[f]

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

EX1001, 47:43-45