

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

Record of Oral Hearing
Held: May 14, 2026

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

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IPR2025-00430
Patent 7,716,217 B2

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P R O C E E D I N G S

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JUDGE HOANG: Okay. You may begin when you're ready.

MS. KAISER: Thank you, Your Honor. Good morning, and may it please the Board. If we can go to Slide 2. And I'll be referring to Petitioner's demonstrative slides, unless I specifically note Patent Owner's. So, Your Honors, in this IPR, Petitioner has raised three obviousness grounds. Each cover all of the challenged claims, and each ground shows that the challenged claims are unpatentable by a preponderance of the evidence.

The party's briefing, as well as the Board's institution decision, addressed Ground 2 first, followed by Ground 3, and then Ground 1. So, we'll be following that same order during the oral hearing today. I'll address the Rose-based grounds, and then Mr. Ohlert will address the Dumais Ground.

As to these grounds, the disputed issues that remain in this IPR are based on Patent Owner's misreadings of its own claims, the prior art, or both. So, if we go to Slide 3, just to frame what the disputes are, the disputes here focus only on Claim 1, and they focus really only on two limitations -- limitation 1D which relates to determining a first measure of relevance, based at least in part on one or more actions of the user on the piece of electronic content. And just because there's a couple of users in the claim, I'll generally refer to that user as the first user, just to avoid confusion.

The second limitation that's disputed is limitation 1F, that requires identifying at least one other user that is a recipient of the piece of electronic

1 content and that is cognate to the user. And then we've just highlighted 1H,
2 because it sort of goes hand-in-hand with the 1D dispute, because 1H
3 requires calculating the relevance score based on that first measure of
4 relevance in 1D.

5 I'm going to skip to Slide 5. So, I'm just going to briefly touch on
6 a couple of claim construction issues first, and then I'll turn to the Rose-
7 based grounds. If we go to Slide 7, the parties do have a dispute in this IPR
8 about whether certain module limitations are means plus function. I don't
9 believe this is necessary for the Board to resolve in its final written decision,
10 because there are no disputes about whether the prior art teaches the
11 corresponding structure that Petitioner identified. So, we would just
12 -- unless the Board has questions about that, we would just stand on our
13 papers in the petition.

14 If we go then to Slide 18, the next claim construction issue relates
15 to cognate to the user, and I know Your Honors are familiar with this term,
16 but in 1F, it recites identifying at least one other user who's cognate to the
17 user. And then in 1G, it actually recites a Markush group that only one of
18 the options is required, as Your Honors correctly found in the institution
19 decision, and is really undisputed. And in 1G it's only one of those options
20 that requires actions on the piece of electronic content by that other user.

21 If we go to Slide 19, in the Patent Owner response -- so, I'll just
22 take a step back. In the institution decision, the Board found that certain
23 limitations that Patent Owner had sought to add to this cognate term in the
24 preliminary response should not be added, and in the -- then in the Patent
25 Owner response, the Patent Owner sort of disavowed that it had ever sought

1 to add those limitations, so that's what you see in this left hand call-out, and
2 that's at POR 17 to 18.

3 But then in the sur-reply, the Patent Owner sort of changed course
4 again, and argued for what I would say is an even narrower requirement for
5 this cognate limitation. And that's that it requires identifying at least one
6 other user that shares similar past user actions and assessments as the first
7 user, or shares similar direct input as the first user. And their justification
8 for that is that the limitation requires that you have to be -- or that this other
9 user has to be cognate to be the first user, and we don't disagree that that's
10 what the claims recite, but the claims don't require these other limitations
11 about past user actions.

12 And so, if we go to -- let's see -- Slide 20, just on the right-hand
13 side here, we show from the institution decision that the Board already
14 recognized that in the specification, the ways of identifying a cognate user
15 are quite broad, and some of those ways are in the call-outs on the left hand
16 side. For example, Exhibit 1001, 43, lines 30 to 37, where things like a role
17 or group-based approach, which would have to do with, for example,
18 someone's role at a company, as opposed to their actual actions on content.
19 So, in addition to this argument and the surreply being untimely, we also
20 submit that it's not consistent with the intrinsic evidence. And then lastly on
21 claim construction, if we go to Slide 22 --

22 JUDGE EASTHOM: Counsel, just a quick question. Wasn't that
23 part on Slide 19 part of what the Board -- you said in the institution was part
24 of what cognate meant?

25 MS. KAISER: If you go back to Slide 19 --

1 JUDGE EASTHOM: On the right. I thought that looked familiar.
2 Could be misremembering that.

3 MS. KAISER: That's not my recollection, Your Honor.

4 JUDGE EASTHOM: Okay.

5 MS. KAISER: I can go back and look and respond to that in
6 rebuttal.

7 JUDGE EASTHOM: It might not be. I just was curious if that --

8 MS. KAISER: And we don't dispute, I don't think, that looking at
9 past user actions is one way to identify that users are cognate, it's just that's
10 not the only way to do it.

11 JUDGE EASTHOM: It's not limited to that. Okay. Got you.

12 MS. KAISER: Correct, Your Honor. Then if we go to Slide
13 -- let's see -- 22. Just lastly, for completeness, there's also a lot in the papers
14 about recipient and whether recipient -- and you may recall in 1F, the other
15 user is the recipient of the piece of electronic content. There's a lot in the
16 papers about whether the recipient has to have received content that's sent by
17 a sender.

18 Again, we think -- we disagree with this, but we also think this is
19 not an issue that the Board needs to resolve in its final written decision,
20 because both the Dumais reference and the Rose reference clearly disclose
21 their systems being used with emails, which is content that's sent from a
22 sender. So, if the Board has questions about the construction, I'm happy to
23 answer them, but I think I will leave claim construction there.

24 So, then I'm going to turn to the Rose-based grounds. So, if we
25 can go to Slide 26. So, Ground 2 is a single reference obviousness ground

1 that's based on the Rose reference, and just have here a call-out from the
2 institution decision. And when the Board was summarizing the Rose
3 reference at institution, the Board sort of correctly characterized Rose here,
4 where it talked about Rose considering two factors when predicting a user's
5 interest in a particular piece of information.

6 First, it's similarity between a documents vector and the user's
7 profile vector, and then the second is correlating indications provided by
8 other users. And if we go to Slide 27. So, there's no dispute that in Rose
9 when a user interacts with a document, provides a response to a document, it
10 rates a document, for example, with a thumbs up, the user's profile vector is
11 modified. So, essentially you, as a user, interact, say with an email, you give
12 it a thumbs up. That user profile vector that gets compared with the
13 document vectors, that gets updated, and so that's shown, for example, on
14 the bottom right here in Rose, column 6, lines 36 through 40. The dispute
15 really is that Patent Owner argues that once you, as the user, rate a
16 document, that Rose no longer ranks that document. That's how we
17 understand Patent Owner's argument.

18 And so, if we go to Slide 28. So, and these are just some call-outs
19 from the Patent Owner response, where Patent Owner is arguing, for
20 example, on the top left that when Rose talks about ranking each message,
21 it's before it's rated by the first user. And the primary basis, as I understand
22 it, for Patent Owner's argument, is that Rose uses terms like "predicted" and
23 "likely" when it's referring to the degree of relevance for a document.

24 If we go to Slide 31, I think when the Board looks at both, the
25 expert testimony in this case, as well as Rose's disclosures themselves, it's

1 clear that Rose -- a person of ordinary skill in the art would have understood
2 that once a user ranks a document -- or rates a document, that Rose
3 continues to rank it. And so, for example, on Slide 31, this is just an
4 example of Dr. Fox's testimony that a person of ordinary skill in the art
5 would have understood that the content gets a new relevance score when the
6 user responds to it.

7 If we go to Slide 35, just another example of Dr. Fox's testimony,
8 when he's talking about the example in Rose, that has to do with movie
9 recommendations. Again, you can imagine if you rate a movie, that you
10 would want to be able to find that movie again, for example, if you rated it
11 positively, and that's how a person of ordinary skill in the art would have
12 understood Rose.

13 JUDGE HAGY: Counsel, I have a question. Does it matter
14 -- because we're talking about the first and second relevance module, but
15 they don't have to be in that order. So, could it not work that the user sees
16 these and they've been ranked, and then the user interacts and thumbs up?
17 That could be the -- why does it have to be in, like, a -- it seems like Patent
18 Owner's argument is premised on the first module has to operate first, and
19 then the second module, but I don't see a required order. So, what if the
20 second module is already, and then the user confirms with a thumbs up?
21 Would that -- if Rose worked that way, would that not satisfy the claim?

22 MS. KAISER: So, Your Honor, I agree that I don't think there's
23 anything in the claim that requires an order. In 1H, it does require
24 combining the two --

25 JUDGE HAGY: Um-hum.

1 MS. KAISER: -- for a relevance score, but I agree with you that
2 there's no requirement for an order.

3 JUDGE HOANG: Counsel, does Rose at all have a -- let's call it
4 express or explicit description of after a user has thumbs up or thumbs down
5 rank -- or said they liked a document, after that process, then there is a
6 ranking of the documents, like you see in Figure 7 on screen.

7 MS. KAISER: So, Your Honor, I don't think there's an *in haec*
8 *verba* disclosure. There's not like a specific one -- a flow diagram where it
9 says, this happens, the user ranks it, and then it -- the user rates it. Sorry, I'm
10 getting ranks and rates confused.

11 JUDGE HOANG: Me too.

12 MS. KAISER: But the user rates it and then it re-rates it. I think
13 there are things -- and so, it's important to remember that this is an
14 obviousness ground. We didn't bring this as an anticipation ground, and
15 there are clear disclosures in Rose that at least suggest that this happens.
16 One example is, for example, in Rose's Claim 1, limitation E, it talks about
17 that its process happens for each piece of content. And so, for Patent
18 Owner's argument really to work, what Patent Owner is arguing is that once
19 you've rated a piece of content, that piece of content would no longer be
20 presented to you.

21 JUDGE HOANG: So, is it Petitioner's position that it's obvious to
22 re-rank it, or it's that a person of ordinary skill in the art would just
23 understand that this is how Rose works?

24 MS. KAISER: It's our -- the latter, Your Honor. So, it's our
25 position that a person of ordinary skill in the art, sort of exercising their own

1 experience, would understand that this is how Rose works, based on Rose's
2 own disclosures, where it talks about ranking each piece of content, where it
3 talks in Claim 1 about redoing its method for each piece of content. There's
4 just nothing in Rose that suggests that once a user ranks a document, that the
5 system stops operating on it, or would stop displaying it.

6 And if you think about it, just even not from a person of ordinary
7 skill in the art, but just from common sense, if you rank a document, say like
8 in this example with a list of movie recommendations -- if you rank a movie
9 positively -- and Dr. Fox talks about this -- you want to be able to go back
10 and find that movie again. You don't want the system to just sort of throw
11 your recommendation away and never show you that movie again.

12 JUDGE HOANG: Patent Owner brings up something of a
13 counterpoint to that in if you rank a movie negatively, or let's say thumbs
14 down, because that's what I've seen from Rose -- you thumbs down a movie.
15 Why would you then show this -- a movie you don't want in any kind of
16 order of things you might want to be recommended.

17 MS. KAISER: Sure, Your Honor. Because Rose talks about not
18 just user rating. It talks about dimensions of relevance, and so Rose talks
19 about, for example, that there can be hundreds or thousands of dimensions of
20 relevance, for which a user's own rating could be only one. And you think
21 about, like, movies -- and this is just a hypothetical example -- but say I
22 don't like movies that have Nicholas Cage in them. Well, I might go
23 through, and maybe you disagree, and you love movies with Nicholas Cage.

24 JUDGE HOANG: I do.

25 MS. KAISER: But I go through and I see, oh, here's, National

1 Treasure 2, thumbs down, but what I don't realize is that National Treasure 2
2 has other actors in it that I do like. And so, what Rose's system then would
3 be able to do is not just take my thumbs down, but look at all these other
4 measures of relevance. Things about my user profile that I do like, for
5 example, that might be plot points or things like that, and then other cognate
6 users and what they think of National Treasure 2.

7 And so, I might see, well, I gave this a thumbs down because I
8 don't like Nicholas Cage, but it's still being recommended for me. Maybe I
9 should look at this more closely, and that's what we talk about in our
10 briefing, for example, with Bieganski, is it talks about that's sort of the point
11 of recommendation engines, because it's the serendipity of giving you
12 recommendations that you might not otherwise find on your own. And so, I
13 think in the briefs the parties have this sort of hypothetical example of a cat
14 café. That's the same sort of idea, where you may not know everything
15 about that cafe, and that's these hundreds and thousands of different
16 dimensions of relevance.

17 Just one other point on 1D before I move on. If we go to Slide 32,
18 I mentioned before about the likely and predicted language, and I think both
19 experts agreed that that language generally is language that people use in
20 this field to describe a computer's approximation of relevance. So, it doesn't
21 indicate that it has to be content that a user has never interacted with before,
22 and that's consistent with how the challenge patent itself uses the word
23 "likely", and that's in the bottom left call-out at Exhibit 1001, column 5,
24 lines 53 through 55 and column 8, lines 3 through 12.

25 If there are no other questions about 1D, then I will transition to

1 1F. So, if we could go to Slide 39. So, for the Rose-based grounds, I
2 mentioned that 1F has both a recipient portion and a cognate portion. It's
3 only the cognate portion of 1F that's disputed for Rose. And as I understand
4 Patent Owners' argument, their argument is that Rose considers all other
5 users in looking at feedback, and so it doesn't identify cognate users.

6 And if we go to Slide 40, our initial response to that -- and this is
7 in our briefs -- is that well, the claim just requires identifying at least one
8 cognate user, and so, if you identify that user and all other users, at least one
9 encompasses all. So, that's sort of the starting point, but it's not necessary
10 for you all to -- for Your Honors to agree with that, because if you go to
11 Slide 42 --

12 JUDGE HAGY: I just want to make sure that I understood your
13 argument. You're saying because it identifies all other users, surely there's a
14 cognate in there somewhere? Is that your argument or --

15 MS. KAISER: No, I think it's slightly more nuanced than that,
16 Your Honor.

17 JUDGE HAGY: Okay.

18 MS. KAISER: So, their argument really is about considering
19 feedback of all other users, but if it considers feedback of all users, but it
20 also considers feedback -- and it's a little confusing, because in Rose, we do
21 rely on that last part of the Markush group that is about actions of other users
22 -- but it's okay, essentially, for Rose to consider feedback of all other users,
23 as long as, as part of that, it identifies at least one cognate user. And thank
24 you for clarifying.

25 And let's see, so if we go to Slide 42, Rose is clear that it does

1 identify cognate users. And so, if we look at the two call-outs on the right,
2 the one on the top is about that movie recommendation example, and it talks
3 about ranking that movie for viewing by other users whose interest in the
4 movie are similar or opposed. I actually think the clearer disclosure of this
5 is the bottom call-out that we have here, and this is in Rose, talking about
6 how it uses regression methods for its relevance rankings. And it says here
7 that regression methods are employed to identify the most salient -- or the
8 most important attributes that are used as predictors.

9 So, the first of those is salient terms in a document, and if you look
10 at Rose in context, that's really talking about what we mapped to 1D,
11 because when a user's profile is updated, it also updates the salient terms in a
12 document. So, that's about updating a user's profile. And then the second
13 part is users having similar feedback responses, and so, I don't think there's
14 any dispute that users having similar feedback responses are cognate users,
15 and here, Rose is using that as a predictor in its regression method.

16 And if we go to the next slide, which is Slide 43 this just shows
17 that Dr. Khan agreed at his deposition, that identifying users with similar
18 interests is identifying cognate users, and you see that both, in the excerpt on
19 the bottom right, where he said that cognate is based on whether -- or let me
20 start over at the top. You would agree that users with similar feedback
21 responses would be cognate users, and he answered correct. And then in the
22 bottom right, Dr. Khan is being asked about that regression method.

23 JUDGE HOANG: Counsel?

24 MS. KAISER: Yes.

25 JUDGE HOANG: Sorry. Can you tie these regression methods in

1 the call-out you did in Rose at the bottom right-hand corner of Slide 42
2 -- can you tie that to how the user profile is changed based on those
3 regression methods?

4 MS. KAISER: Your Honor, I think when you read Rose, and it's
5 not a particularly long reference, but when you read Rose in context and you
6 see how it operates when it updates the user profile vector, this is what it's
7 doing, is it's looking at the salient terms and documents and weighting them,
8 and so I don't think there's like language that directly ties that in Rose, but
9 when you look at it in context, I feel like it's pretty clear that it is tied to that.

10 JUDGE HOANG: For the call-out you do in the top right, so that's
11 column 5, line 57, is there any discussion that those users whose interests in
12 the movies are similar or opposed, that those users are also, I guess,
13 recipients of the content? Because in that example, it reads that users whose
14 interests -- who have similar interests in movies, not literally the same
15 movie. So, it seems as far as column 5, 57 to line 60 goes, I'm not sure
16 where the recipient has received the same content as the user.

17 MS. KAISER: I'm not sure -- I'll have to go back and look, Your
18 Honor. I'm not sure that it specifically calls out in that example that when it
19 talks about the other users -- I'm not sure that it's explicit in that regard, but I
20 note that -- I don't believe Patent Owner has argued that Rose doesn't
21 disclose the recipient of this -- of that part of limitation 1F. Yeah. So, I --

22 JUDGE HOANG: But I think it ties to their cognate argument,
23 because this user has to be both, the recipient and cognate.

24 MS. KAISER: Agree.

25 JUDGE HOANG: But I do think the column 6 citation you have

1 there, it gets closer, much closer.

2 MS. KAISER: And I do think there are -- and I can pull these and
3 give them to you on rebuttal as well, but I do think there are clear
4 disclosures in Rose that are about the users having received the same
5 content, and that's why -- the other users -- and that's why the Patent Owner
6 didn't dispute that.

7 JUDGE HOANG: Thank you.

8 MS. KAISER: All right, I want to make sure that we have some
9 time to talk about Dumais, but I'm going to turn -- and we've got time left
10 -- but I'm going to turn to Ground 3 quickly, which is the Rose-Bieganski
11 combination. And if we go to Slide 45, as I just discussed, Petitioner
12 believes that Rose on its own renders obvious the challenged claims, but
13 Petitioner anticipated that Patent Owner could make arguments about
14 limitation 1F, as we were just discussing, and so, the petition relies on a
15 combination of Rose with Bieganski for 1F.

16 And particularly, the petition explains it would have been obvious
17 to combine Rose with Bieganski's teachings that explain how to organize
18 users into neighborhoods, based on their shared interests. And Patent Owner
19 doesn't dispute that if a person of ordinary skill in the art would have
20 combined these references, that they, in fact, teach 1F. So, the main dispute,
21 obviously they stand on their argument about 1D for Rose, which we already
22 talked about, but beyond that, the main dispute is around motivation to
23 combine.

24 And if we go to Slide 46, Dr. Fox has extensive testimony about
25 the motivation to combine, why a person of ordinary skill in the art would

1 have applied Bieganski's teachings to Rose. And that's, for example, in
2 Exhibit 1003 paragraphs 233 to 236. If we go to Slide 50, in the Patent
3 Owner response, the Patent Owner sort of continued to press arguments
4 about this combination that the Board preliminarily rejected in the institution
5 decision, and so those main two arguments are that Bieganski is directed to a
6 different type of content, and they also focused on reasonable expectation of
7 success.

8 And on the first -- if we go to Slide 51. I just wanted to point out
9 that Dr. Khan, who's Patent Owner's expert, understood that the petition
10 relies on Rose for the type of content. And as we discussed earlier, Rose is
11 focused on emails, which are content sent from the center, and Dr. Fox also
12 explains that, and that's at Exhibit 1045, paragraph 40.

13 If we go to Slide 52, moving to reasonable expectation of success.
14 The record is really no different, or at least the Patent Owner hasn't
15 introduced any additional evidence to undermine the Board's preliminary
16 finding as to reasonable expectation of success. Patent Owner's entire
17 evidence is this one paragraph that we've reproduced on Slide 52 in its
18 entirety from Dr. Khan, which is at Exhibit 2029, paragraph 202. And it's
19 really just his say so that this wouldn't be a simple change, that the two
20 threshold selections are not trivial, and then he also says that the thresholds
21 can vary from one user to another, but he doesn't say that it would be outside
22 of a person of ordinary skill in the art's level of skill to figure out how to set
23 those for any particular user. And in fact --

24 JUDGE HOANG: Petitioner, does --

25 MS. KAISER: Go ahead.

1 JUDGE HOANG: Do you have evidence beyond your declarant's
2 testimony that there would be a reasonable expectation of success in
3 combining the two or modifying the neighborhood math?

4 MS. KAISER: So, Dr. Fox, in his declaration, explains the reasons
5 why this would be within a person of ordinary skill's level of skill, and he
6 bases that not just on his own say so, but also on Bieganski's teachings, and
7 that is, for example, at Exhibit 1045, paragraphs 41 through 45. So, unless
8 Your Honors have more questions about the Rose-based grounds, I will turn
9 it over to my colleague.

10 JUDGE HOANG: No questions.

11 MR. OHLERT: Good morning, Your Honors. May it please the
12 Board. Andrew Ohlert with Perkins Coie on behalf of Meta Platforms,
13 Incorporated. If we could turn to Slide 68, I will be prepared to discuss the
14 Dumais ground today, including issues of conception and Patent Owner's
15 purported diligent reduction of practice. And if Your Honors have any
16 questions as to secondary considerations, I'm also happy to discuss that, as
17 well.

18 So, turning to Slide 69. The substantive dispute involving Dumais
19 really focuses on one claim limitation, which is 1F and Patent Owner
20 disputes both the recipient portion of 1F, as well as the cognate portion of
21 1F, but as we will discuss, Dumais meets both of these limitations. If we
22 can go to the next slide, Slide 70. So, this is the support from Dumais that
23 the Board essentially discussed in its institution decision, and in the bottom
24 right, in paragraph 31 of Dumais, you can see that Dumais contemplates
25 being used with a number of different data items, including emails, which

1 would include content that is sent from a sender.

2 And then in paragraph 22, Dumais talks about the kind of actions
3 of users that it will monitor in order to determine the content of those data
4 items. And some of the actions include whether items are forwarded, replied
5 to, or sent to. Those are all actions that a person of skill in the art would
6 understand typically involve email content, that again, is sent from a sender.

7 And then if we go to paragraph 52 of Dumais, paragraph 52 talks
8 about how collaborative filtering can be used to develop profiles for users,
9 based on analysis of the similarities of those users, and we've called out
10 specifically that those similarity computations can be based on the content
11 and/or usage of items. And so, when Dumais talks about the usage of items,
12 it's specifically saying that users will be using the same items, and given that
13 Dumais contemplates being used with email, those items would be sent from
14 a sender in accordance with the requirements of the recipient limitation in
15 1F.

16 If we can go to Slide 71, this is just excerpts from the Board's
17 institution decision, where the Board preliminarily essentially concluded just
18 that. They noted that Patent Owner argued in their preliminary response that
19 Dumais does not provide a specific embodiment where email messages are
20 received by both a user and another user, and the Board preliminarily
21 disagreed with that, concluding that the record did not support that Dumais
22 was so limited, including because Dumais talks about being used with email
23 items. And then this is all on page 36 of the institution decision, but based
24 on the passages that we've been discussing, the Board preliminarily
25 concluded that Dumais at least suggest that users are grouped based on

1 receiving the same email, i.e. forwarding, replying to, and sending that
2 email.

3 If we can go to Slide 72, this slide is really meant to just provide
4 an illustration of how Dumais can determine the relevance of content, and so
5 in paragraph 40, Dumais provides an example where it's modifying query
6 results, and although it talks about being used in the context of searching, it
7 says that other forms of data manipulation are contemplated by the
8 invention. That's in paragraph 40. And specifically, Dumais in Figure 4
9 shows a user model highlighted in purple on Slide 72, that can communicate
10 with a global database of user statistics that's labeled green in number 490 of
11 Figure 4. And that global database of user statistics can facilitate updates to
12 the user model, which is then used to modify the query and also modify the
13 results of that query to customize those search results to a particular user.

14 And if you look at Figure 5, that provides an example of the kinds
15 of information that are included in that user model, and specifically, that
16 user model can include a profile of interests for the individual user, and it
17 can also include information from other users. And those are really the core
18 pieces of the claims of the '217 Patent.

19 If we can go to Slide 73, please. The Board preliminarily noted
20 that Patent Owner does not challenge that Dumais meets 1G, the Markush
21 group limitation, including because 1G confirms that the second measure of
22 relevance is not limited to determining relevance based on the actions of
23 cognate users. And as the Board explained, Dumais uses collaborative
24 filtering to determine the relevance of items, specifically via its user models
25 that can be used to determine the "relevance of data items based on other

1 users who have similar interactions with those data items." And that comes
2 from the Board's institution decision at page 37.

3 Can we turn to Slide 74? Patent Owner, in its surreply, argues that
4 at no point did Dumais identify a relationship between a first user and other
5 users, and Petitioner would posit that that ignores the express disclosures of
6 Dumais itself, which talks about organizing users into a desired social
7 network of interest, and Dumais does this by monitoring how users interact
8 with one another, where it can then infer how those users have relationships
9 with one another. And then again, in paragraph 52 of Dumais, it talks about
10 using collaborative filtering to develop profiles by the analysis of similarities
11 among individuals or groups of individuals, so Petitioner would posit that
12 Dumais, in fact, does disclose these relationships among users, which goes
13 to the core of the cognate limitation.

14 If we can turn to -- pardon me -- if we can just turn to Slide 75.
15 And the point of this slide is just to highlight that Patent Owner concedes
16 that Dumais can organize users into groups of individuals based on these
17 similarity computations, and that this group of individuals could be
18 considered a group of cognate users. And we think that is an important
19 admission when it comes to whether Dumais teaches this cognate
20 relationship in 1F, and Patent Owner continues on to argue that Dumais does
21 not discuss identifying whether an individual user is even part of a group,
22 but again, that ignores Dumais' discussion in paragraph 21 about organizing
23 users into desired social networks of interest.

24 So, unless Your Honors have any questions about the substance of
25 Dumais, I can move to the conception and reported diligent reduction to

1 practice arguments. If we can go to Slide 53, please. The Board should
2 conclude that Dumais is prior art, and while there are a number of arguments
3 for why that is the case, that I'm happy to address if Your Honors have
4 questions, I think there are two key reasons that the Board can focus on to
5 conclude that Dumais is prior art, very easily.

6 The first is that Patent Owner has failed to carry its burden of
7 challenging that Dumais is prior art, because all of its conception arguments
8 for how the conception evidence reportedly meets the limitations of the '217
9 patent were improperly incorporated by reference in Exhibit 2014. And
10 that's a 36-page claim chart that performs that mapping, that Petitioner posits
11 is inappropriate and not sufficient to carry Patent Owner's burden of
12 demonstrating conception.

13 And then the second reason, Your Honors, is that even if you were
14 to consider Patent Owner's arguments and agree that everything is disclosed
15 as far as conception, there are still more than 100 days of gaps in Patent
16 Owner's evidence that supports that Patent Owner did not diligently reduce
17 the invention to practice, and either of those arguments is an independent
18 reason to conclude that Dumais is prior art.

19 So, if we turn to Slide 58, please. This just provides an example of
20 how Patent Owner and its Patent Owner response at page 45 uses Exhibit
21 2014. The Patent Owner response says, conception documents, referring to
22 EX 2004 and EX 2006 -- the Patent Owner says, these conception
23 documents disclose each limitation of the challenged claims and they point
24 to their claim chart in Exhibit 2014. And then Slide 58 just has a call-out
25 here to an example of how that claim chart maps the evidence to the claims.

1 That is the kind of argument that should have been contained in Patent
2 Owner's briefing, not incorporated by reference in an exhibit attached to
3 their briefing.

4 And if you look at the testimony from one of the inventors, Mr.
5 Justin Marston -- this is found in Exhibit 1041 at page 311, lines 9 to 19
6 -- Justin Marston was asked about Exhibit 2014 including whether he
7 created it, and he said no, this is something that the attorneys created, and he
8 agreed that he did not prepare that document.

9 So, if we can go to Slide 59. Part of the reason Exhibit 2014 is
10 problematic is because it also has statements about how a person of skill in
11 the art would understand the claims, which it then uses to try to map the
12 evidence to the '217 patent itself. Now we anticipate the Patent Owner will
13 argue that Mr. Justin Marston reviewed and verified Exhibit 2014, but the
14 problem here is that even then, Mr. Justin Marston is not a person of skill in
15 the art. So, as the Federal Circuit has explained in Kyocera, witnesses
16 offering expert testimony from the perspective of a skilled artisan, must
17 possess ordinary skill in the art.

18 And at his deposition, Mr. Marston was asked about his
19 experience, as well as the experience of his father, the other inventor, Dr.
20 Paul Marston, and Mr. Marston conceded that he has a background in
21 chemistry. Dr. Paul Marston has a background in statistics. And he was
22 asked, so neither of you really had the software experience to be able to
23 develop this content relevance technology, is that fair, and he answered
24 simply, yes.

25 So, Mr. Justin Marston is not a person of skill in the art under any

1 of the definitions that were proffered by the parties in these proceedings.

2 And we would just note, Your Honors, that in the Board's institution
3 decision, it adopted Petitioner's definition of the level of ordinary skill in the
4 art, in part because that was a less restrictive definition than proposed by the
5 Patent Owner. And so, under any definition proposed by the parties, Mr.
6 Marston simply lacks the software development experience to be able to
7 provide those kinds of opinions, even if he were the person who offered
8 Exhibit 2014, which he is not.

9 JUDGE HOANG: Petitioner, you have a little less than four
10 minutes left.

11 MR. OHLERT: Yes. Thank you, Your Honor.

12 JUDGE HAGY: Yeah. I have a question on that. I mean,
13 sometimes when somebody has an invention -- but the coding of it is just
14 -- it's just the technical, right? I mean, they're not -- they're claiming how
15 this works, but they're not necessarily at that level of detail a technician
16 -- somebody following your instructions can implement your invention. So,
17 is it necessary that -- I mean, what is the definition? What did we agree was
18 the definition of what a skill in the art -- do they have to have a certain
19 amount of software experience, or was it something else?

20 MR. OHLERT: Yes, Your Honor. They had to have a specific
21 educational degree, either in computer science or computer engineering, or
22 something of that nature, as well as a certain level of work experience
23 related to software. And work experience could be substituted in, in place of
24 that degree, but the problem here is that Mr. Justin Marston admitted in his
25 deposition that he didn't actually do any software development work. He

1 was a CEO. Others did that work, so he doesn't have that experience that
2 could sub in for that lack of education under the definitions.

3 Can we please take it down? But the real point here is Exhibit
4 2014 still isn't authored by Mr. Justin Marston. He's not the person putting
5 that forward. That's just attorney argument. So, if we can go to Slide 57, the
6 Federal Circuit has just articulated the reasoning for why this is
7 inappropriate. In *General Access Solutions*, they affirmed a Board decision
8 that declined to consider conception arguments that were contained in a 29-
9 page claim chart attached as an exhibit, and they stated that this exercise of
10 playing archeologists with the record is precisely what the rule against
11 incorporation is meant to address.

12 So, if we could jump to Slide 56, I just want to briefly illustrate the
13 gaps in Petitioner's evidence. There was a 50-day gap between June 29th
14 and August 17th, and a 59-day gap between November 13th and the
15 application being filed on January 11th, 2006. The real critical issue here is
16 that the Federal Circuit has affirmed gaps of simply two months as being
17 insufficient to demonstrate conception. And here, where there's a gap of
18 more than 109 days, that's far more than that two-month period, and it's not
19 enough under a rule of reason analysis to conclude that the Patent Owners
20 were diligent. And there are other issues with that conception evidence that
21 I'm happy to address if Your Honors have questions, but I'd like to briefly
22 address secondary considerations with the remaining time I have, if that's
23 acceptable.

24 Slide 76, please. So, I'll just note that Patent Owner's arguments as
25 to secondary considerations are contained in simply three pages of its

1 briefing. In those pages, it attempts to argue commercial success, long-felt
2 but unresolved needs, failure by others, copying, praised by others, and
3 recognition of the problem being solved. The problem here is that Patent
4 Owner hasn't demonstrated a nexus between the evidence that it provided,
5 and the claims themselves.

6 If we go to Slide 78, here they simply point to Facebook, and the
7 fact that Facebook, according to them, may rank posts based on if the user
8 liked a post and how many of their friends liked the post, but notably absent
9 in this is any discussion of the claim construction disputes that are at issue in
10 this case, or any serious analysis of how those products meet the specific
11 content that is new in these claims that didn't exist before this patent.

12 And then I'll just briefly note that Patent Owner's arguments as to
13 copying are insufficient. Patent owner simply points to its allegation in the
14 district court litigation complaint that the product -- the Facebook products,
15 or the Instagram products infringe, but copying requires more. It requires
16 them showing access to the Patent Owner's invention, such that they could
17 have copied it, not just an allegation.

18 JUDGE HAGY: And Counsel, have there been any findings in the
19 district court litigation along the lines of infringement or copying, or is that
20 still going on?

21 MR. OHLERT: I see my time left, so I can briefly answer, Your
22 Honor.

23 JUDGE HAGY: Yes.

24 MR. OHLERT: There has been no findings of that nature in the
25 district court. The proceedings in the district court are stayed given this IPR,

1 and there was no claim construction or any finding by the court as to
2 copying or access or anything of that nature. Thank you, Your Honors.

3 JUDGE HOANG: Patent Owner, do you wish to reserve any
4 rebuttal time?

5 MR. PADMANABHAN: Yes, Your Honor. Ten minutes.

6 JUDGE HOANG: So, I'm going to put 50 minutes on the clock for
7 you.

8 MR. PADMANABHAN: It'll just take me one minute to set up.

9 JUDGE HOANG: Oh, yes. Take your time.

10 MR. PADMANABHAN: Sorry, Your Honors. I'm set.

11 JUDGE HOANG: Oh, no worries.

12 MR. PADMANABHAN: May it please the Board, Your Honors.
13 Good morning. Sterling's '217 patent is patentable over the art. Sorry, Your
14 Honor. I'm having -- my computer just flips off every once in a while, back
15 to the -- I don't know why it does that, but let me just give one more chance
16 to --

17 JUDGE HOANG: I'm going to pause your time while you --

18 JUDGE HAGY: Yeah.

19 MR. PADMANABHAN: It shows the right thing, and then it
20 won't.

21 JUDGE EASTHOM: It's updating your relevance score.

22 MR. PADMANABHAN: So, as I was saying -- I apologize. As I
23 was saying, the '217 patent is patentable over the art relied on by Petitioner,
24 Meta. Before I demonstrate the reasons why it is patentable, I'm going to go
25 over Claim 1 and just make sure we level set on the algorithm that's

1 protected by the claim to the '217 patent. The preamble of Claim 1 is a
2 computer-implemented system for determining a relevance score of a piece
3 of electronic content sent from a sender to a user, and the relevance score is
4 determined with respect to that user.

5 And so, what's key here, and the context that's set here, is really
6 that the '217 patent determines a relevance score, and it's determining a
7 relevance score with regard to a piece of electronic content that was sent
8 from a sender to a user, and then the relevance score of the piece of
9 electronic content is determined with respect to what Meta is also referring
10 to as the first user, i.e., the person that actually received a piece of electronic
11 content that was sent by the sender.

12 There are two computer elements that are required, both the
13 computer processor and the computer-readable storage medium to store the
14 modules. So, these are program modules that are configured to execute on
15 the computer processor, making it clear that it's software. There's a first
16 programming module, which is the monitoring module, and this is where the
17 claim introduces the idea of other users. So, the monitoring module is
18 configured to track the actions of a plurality of users associated with the
19 application. And so, there's a first user, which was in the preamble, who
20 sent the piece of electronic content for whom relevance is being determined,
21 and then there are other users.

22 The second computer program module is the first relevance
23 measurement module, and again, this is a piece of electronic -- the piece of
24 electronic content that was sent to the sender is being acted upon in this
25 module to get the first measurement of relevance. And this is an important

1 piece, because this is a piece that's missing from both the Rose-Bieganski
2 -- it's missing in both of those references. And here, the user is the recipient
3 of that content, and it's the user for whom the relevance is being determined,
4 and it's that person that's acting on -- it's that person's actions on the content
5 that's being measured.

6 There's a second relevance measurement module, and this is the
7 third computer programming module, and it does two things under this
8 claim. So, here, this is obviously a key requirement that we argue about.
9 And the first thing that the third computer programming module does, it's
10 configured to identify another user that is both, a recipient of the piece of
11 electronic content, and is cognate to the first user. So, the electronic -- the
12 piece of electronic content that's received by the recipient is the same piece
13 of electronic content for which relevance is being determined. And the
14 module identifies a second user that is cognate to the first user, the one who
15 assembles the content and for whom relevance is being determined.

16 Now, when it says at least one, it means it could be one or more of
17 those people, but the person that they identify has to be both, a recipient and
18 a cognate -- and be cognate to the first user. As the patent explains, there's a
19 role that the patent -- there's a reason that the patent --

20 JUDGE HOANG: Counsel, don't forget the slide numbers.

21 MR. PADMANABHAN: Oh, sorry. Thank you. I apologize.

22 JUDGE HOANG: No worries.

23 MR. PADMANABHAN: This is in Slide 8, Your Honor. The
24 patent explains the reason for identifying a recipient. The patent explains
25 that the actions of other recipients can help determine the relevance of

1 content in a given user's folders. The patent also explains that when
2 determining the relevance value seen by the recipient, the system considers
3 the actions of all other recipients, and the '217 patent teaches that, as to
4 communal filtering, this mechanism may use the behavior of other recipients
5 of a given piece of information -- piece of content to determine the content's
6 relevance to the user in question, communal relevance.

7 But the patent then goes on to identify the role that identification
8 plays for why you would identify a cognate -- someone that's cognate to that
9 first user. And here what the patent says is for each user, over time, the
10 system may identify a cognate group, and other users regarded as most
11 similar. And this is on Slide 9, Your Honor.

12 And it goes on to say, the actions of this particular group on an
13 electronic mail object will give more indication of its relevance to the user
14 than would a global reaction to the electronic mail. And Your Honor, this
15 teaching, this insight is one of the big differences, and it's just not in Rose,
16 it's not in Bieganski. The idea of having to reorganize say an email system,
17 an inbox, where you have email, and saying, let's reorganize that content so
18 that you're taking into account both the first user's actions and also identify
19 other people that are cognate to that first user, and take into account their
20 reaction to it, is something that just the art had not gotten to until this patent,
21 and so using that information, the patent discloses describing -- calculating
22 various route values, as you can see on Slide 10, such as the cognate
23 relevance value, the cognate importance value.

24 JUDGE EASTHOM: What is your construction of cognate?

25 MR. PADMANABHAN: So, Your Honor, our construction of

1 cognate is exactly what was in the patent itself, where it's defined as being
2 -- by similar past user actions or assessments, and or direct input by a user.
3 And I think when you look at the examples in the patent, that language
4 tracks and covers basically those types of activities. I don't think it's
5 narrower, as Counsel for Meta suggested. I think that is what cognate users
6 are.

7 JUDGE EASTHOM: Say that again. I'm sorry. Similar --

8 MR. PADMANABHAN: Oh, sorry. Similar past user actions and
9 assessments, and/or direct input by a user.

10 JUDGE HOANG: Counsel, you said that's from the patent itself.
11 Can you give me a specific citation?

12 MR. PADMANABHAN: Yeah, it's in the -- it's in column -- I
13 think it's column 14, Your Honor, lines about 59 or 60.

14 JUDGE EASTHOM: Why wouldn't a similar past action be
15 opening the same email?

16 MR. PADMANABHAN: Similar past action be -- they could open
17 -- I mean, if they open the same email, and it was monitored -- oh, it's 14,
18 line -- column 14, line 65. Similar past action could be using this same first
19 -- I mean, they -- I suppose they could -- you could go to that level, but the
20 main --

21 JUDGE EASTHOM: I mean, that's the end of it then because --

22 MR. PADMANABHAN: Yep.

23 JUDGE EASTHOM: -- if two users have the same email, then
24 they're cognate.

25 MR. PADMANABHAN: No, but you have to identify someone

1 that's cognate and use it as part of the analysis.

2 JUDGE EASTHOM: Oh, later, but before we get there, they're
3 cognate --

4 MR. PADMANABHAN: Oh yeah, they're cognate, if they have
5 similar -- I mean, if they have past user actions that they share, yeah, they're
6 cognate.

7 JUDGE EASTHOM: If you and I both get the same email and we
8 open it up, we're cognate.

9 MR. PADMANABHAN: At least at that --

10 JUDGE EASTHOM: Okay. And we're recipients.

11 MR. PADMANABHAN: Yep, yep. So, which --

12 JUDGE HOANG: Counsel, two questions. And I apologize if I
13 missed this in response, but where specifically in your response did you
14 assert this construction and second to that, and you can answer them
15 separately, how does that construction where such a group may be defined
16 by similar past user actions and assessments and/or directed by user, how
17 does that not read limitation 1g1 or 1g2 of global importance describing an
18 importance of the sender within an organization? How does that not read
19 that specific way to identify a cognate user out?

20 MR. PADMANABHAN: So which --

21 JUDGE HOANG: Sorry, so in limitation 1g --

22 MR. PADMANABHAN: Yep.

23 JUDGE HOANG: -- we've got a Markush claim or group, excuse
24 me, and the second item of that Markush group is a cognate user's defined
25 -- oh wait, it doesn't say cognate.

1 MR. PADMANABHAN: Global importance. Describing
2 importance of a sender within the organization. Some of those, Your Honor,
3 I think is covered in my view -- the way I was reading it is, it could be direct
4 input, meaning there's something where people have now defined and said
5 here are things you can look at to see if there's a reason to have a
6 relationship. And then others are based on past user actions, because that's
7 the way the patent kind of uses that phrasing, and that's why I use that
8 phrasing, and so those are the two ways, and I think those two ways
9 generally cover, in this context, in this technology context, how one would
10 go about implementing to try to identify a cognate user.

11 The key is -- in all of these is whether you're going to take the step
12 to identify for a particular given email for which you're finding relevance
13 under this claim, the key is defining both, the first user action, where the
14 users actually acted on it, and you're using that as the first measure of
15 relevance, and that's their combination, and secondly, identify a second
16 person that you technically have defined to be cognate that's also received
17 that same email. And that combination is just not in the art. That's a
18 combination within the claims for determining relevance in this context,
19 where it's just a set of emails or set of communications where you're
20 basically reorganizing it based on this relevancy.

21 JUDGE EASTHOM: Counsel, would you agree that at the very
22 least Rose's user profile vector considers the specific user's reaction and
23 some other user's reaction? I'm not going to say they have to be cognate or
24 recipient but just some other -- the user and some other user.

25 MR. PADMANABHAN: So, I would agree, and let me just add

1 one nuance to that. On the first point that you make, where you say Rose
2 uses the user's action, so whatever their profile is, Rose is very clear to say
3 that that profile is based on past documents, not the document that you're
4 trying to do relevance -- determine relevance to now. It's based on the user's
5 actions to previous documents, so it's taking the user's history from the past
6 and now applying that history and making guesses towards the future.
7 That's what Rose is doing in the first part.

8 And then the second part, you're right, Rose does identify other
9 recipients of that email. What they do is they take all recipients and they
10 don't make any effort to find someone that's cognate to the actual user for
11 whom you're determining relevance.

12 JUDGE EASTHOM: Well just by using the same email that the
13 two users got together, aren't they finding cognate -- finding they are both
14 cognate?

15 MR. PADMANABHAN: Nope. All they've done is say here are
16 all the users that are there, but there's nothing they're doing to identify,
17 saying these two people are cognate. Just simply -- I don't think just simply
18 opening the email alone makes them cognate. It just makes them -- I see
19 what you're saying. I understand what the argument you're making.

20 So, when we say -- you have to look at it in the context of past user
21 actions, and yeah, past user actions in the context of Rose would be whether
22 they said up or down, or they liked it, or they didn't like it, they looked at it
23 for a certain length of time. And I think that's what you're looking at when
24 you say, hey, is there a past user action that you're looking at to help
25 understand that these two people are similar, or direct input -- are they in the

1 same department So, you know of something, and you say, yep, A and B are
2 in the same department, and so I'm putting those together.

3 And so that's what Rose -- I mean, that's what the patent is doing,
4 and what Rose does that stops short of it is, in the first instance, they have a
5 user -- a profile vector where they're not using any input about the document
6 -- it has no input about the document that they're actually going to determine
7 relevance for. I'll get to the recalculation argument in a second, but if you
8 read Rose as is, there's no disclosure of recalculation, and what they're doing
9 is using that user profile vector on new documents that the user has not seen.
10 They're using his previous likes and dislikes for other documents. Also, then
11 separately, they're saying --

12 JUDGE EASTHOM: But as they do that, they change the user
13 vector, right? It shifts a little bit toward that other document maybe.

14 MR. PADMANABHAN: After they're done rating it, they'll redo
15 the user vector to account for this new one, but that new vector -- and I'm
16 saying there's no disclosure in Rose for recalculation, and I don't think one
17 would read it this way, and I'll explain that in a second -- but when they
18 recalculate the user vector, it's now used for the next new document that's
19 the incoming email in this, if it's an email. The next new incoming email is
20 what it's used for to assess the user's interest, that first part of Rose, but
21 there's never a time in Rose where, based on its disclosure -- where you're
22 saying the user has already given their views on the document for which
23 you're determining relevance, and you're using that. The user vector is
24 always behind -- t's a historical vector. It's a vector that addresses what the
25 user has done in the past, and it uses that information to look towards the

1 future and make a prediction, and that's what the attribute step does.

2 JUDGE HOANG: Counsel, besides -- is there anything explicit in
3 Rose -- and we're just jumping right into this.

4 MR. PADMANABHAN: Yep, yep. That's fine.

5 JUDGE HOANG: Is there anything explicit in Rose, which states
6 that once I've -- once it's calculated or once it's gotten a response from the
7 user about some received document, that that document's ranking or
8 relevance is fixed in time forever?

9 MR. PADMANABHAN: So, Your Honor, let me do this in three
10 different ways. Let me start with the background of the patent. I'll tell you
11 the slide in one sec. Okay, I'm on Slide 43. Okay, this is from the
12 background of the Rose patent. So, the problem that Rose addresses is in the
13 past some information access systems, particularly email systems, have
14 provided the user with the ability to have incoming information filtered so
15 that only items of interest would be presented to the user, and that would be
16 presented as a phrase that's forward-looking, it's future tense, and Rose then
17 identifies a problem with these basic filtering type technologies. It says,
18 there's always the danger in such an objective approach that potentially
19 relevant items of information can be missed.

20 So, then what does Rose propose? If you go to Slide 44, what
21 Rose then says is it is desirable, therefore, to employ a system for predicting
22 the likely relevance of items of information to a particular user so that items
23 of interest can be ranked, and it goes on. So, what Rose is doing is it's still
24 filtering unread items, incoming email, but Rose is proposing an algorithm
25 for filtering the unread emails that it uses being better.

1 Now, how else do you know that this is true? If you go to -- if you
2 look at the map in Rose, the map that's disclosed in Rose also confirms that
3 --

4 JUDGE HOANG: Counsel, what slide number are you on?

5 MR. PADMANABHAN: I'm sorry. I'm on Slide 29 that shows
6 the formula, and if you go to Slide 30 -- I'm sorry, that's not the one. So, let
7 me do the example first. So, if you look at the example that's in Rose in
8 Figure 6.

9 JUDGE HOANG: And what slide are you on?

10 MR. PADMANABHAN: Slide 32.

11 JUDGE HOANG: Okay.

12 MR. PADMANABHAN: So, if you look at that, they have users
13 A, B, C, and D. You can see user C has not yet ranked or viewed document
14 one, and the example is to show how to calculate the prediction score for
15 user C regarding document one. And the point of the example is that it uses
16 everybody else's -- all the other users' inputs as part of this formula, and
17 including if you look at user D and user C, they're actually -- based on their
18 actions, they're very opposite to each other in terms of feedback, and it's an
19 example that shows -- and it's what Rose is teaching -- is what Rose believes
20 is the important -- it's important to take into account everybody's feedback in
21 determining relevance. But in terms of this question of why it's just
22 incoming email and not recalculation -- that was the question, right?

23 JUDGE HOANG: Yeah.

24 MR. PADMANABHAN: Yeah, okay. The other key word, Your
25 Honor, is really --

1 JUDGE EASTHOM: Do you have a picture of the vectors
2 anywhere on --

3 MR. PADMANABHAN: I don't have --

4 JUDGE EASTHOM: -- the slides?

5 MR. PADMANABHAN: I don't have the picture of the vectors in
6 the slides, but I have the document in front of me.

7 JUDGE EASTHOM: Okay. Well, what I was thinking is that if
8 you have this vector --

9 JUDGE HOANG: And we're looking at Figure 5B of Rose.

10 JUDGE EASTHOM: Okay. Thank you. Yeah, that's right. I'll
11 wait until you get there.

12 MR. PADMANABHAN: Figure 5B of Rose. Yep.

13 JUDGE EASTHOM: So, the vector user A, it has a profile that's
14 either similar or dissimilar to document one. It looks like it's very similar to
15 document four, or the -- it says that the user's probably going to like
16 document four. Is that how you read that? Is --

17 MR. PADMANABHAN: Yep. User A, yeah, it looks similar to
18 document four. Yes.

19 JUDGE EASTHOM: So, it would probably like document four.
20 And then when you recalculate user A's profile based on other documents,
21 user A's vector is going to shift around, right?

22 MR. PADMANABHAN: User A's vector -- when you recalculate
23 it after he's opined on document four?

24 JUDGE EASTHOM: Right.

25 MR. PADMANABHAN: Yep.

1 JUDGE EASTHOM: And then after -- you've got another
2 document, like 5, 6, 7, whatever, user A is going to move either towards or
3 away from some -- the whole group of documents. That's how I imagine
4 this works.

5 MR. PADMANABHAN: Yep. Okay,

6 JUDGE EASTHOM: So, now you got a different relevance score
7 with respect to all the other documents.

8 MR. PADMANABHAN: So, the only part that is not true about
9 that is in Rose, there is no recalculation of the other documents and --

10 JUDGE EASTHOM: But even if there isn't -- I mean, if you look
11 at that other -- there has to be, because now the user is either closer or farther
12 away from those other documents,

13 MR. PADMANABHAN: But this is just a point in time, right?
14 So, once you have the user's profile vector, if you're now going to redraw it,
15 you're just going to redraw wherever the profile vector for the user is going
16 to be. The other documents aren't necessarily going to have to move.

17 JUDGE EASTHOM: Well, relative to user A, they move -- I
18 mean, they're closer to user A or they're farther --

19 MR. PADMANABHAN: But they're going to stay in their same
20 -- it could also be the -- I mean, the way it's disclosed, those documents
21 would freeze in time, and you just have the user A one moving because
22 you've now changed it, but they --you're not re-ranking. There's nothing in
23 Rose that suggests that you're re-ranking all the documents that they have
24 already seen. One is because of the background. Two is the way they
25 disclose the vector, they say it's from -- based on previously viewed

1 documents. There's nothing about Rose that says, let's go forward. And
2 then lastly, Rose --

3 JUDGE HOANG: So, Counsel, are you saying that once Rose
4 says document four is whatever amount of relevance it has calculated, and
5 the user ranks it, is it that the user will never see document four again, or
6 now document four is locked into a particular relevance ranking?

7 MR. PADMANABHAN: In my view, it would have to be just
8 locked into that particular relevance ranking, because the whole point of
9 Rose, Your Honor, is to deal with the incoming emails and reorganize those
10 for the user in a way that makes it so that the unread emails -- the more
11 relevant ones are at the top and the less relevant ones are at the bottom.

12 JUDGE HOANG: What about read emails? So, now you just
13 never see any read emails again?

14 MR. PADMANABHAN: No, that would still be in your inbox,
15 and it's populating your inbox, but the read emails are not going to -- in
16 Rose, because they're dealing with unread information, all they're trying to
17 do is help you manage your incoming emails. After that, the read emails are
18 just the read emails. You already know what they are, and however they
19 populate, they populate, but it's really the incoming emails, because if you
20 look at the sentences that were in the institution decision, all of the sentences
21 -- and I'll do more on this -- but they're all messages to be provided to the
22 user.

23 JUDGE HOANG: If that were the case, then there's no relativity
24 between the email that's been read and the email that's been unread, in the
25 sense of what if the unread email is more important in the future than the

1 read email was. However, because you've statically set the read email at
2 some level, and you said it's always going to be at that level, that seems to be
3 very strange -- a strange result.

4 MR. PADMANABHAN: So, it's not a strange result if it -- and
5 that's why I put the problem up. What they're really trying to do is propose a
6 second solution to what was already the objective filter that you had for
7 incoming emails. So, they had incoming emails, and before they had some
8 objective standard by which some emails were not provided, or whatever
9 they did. And so, to address that issue, they said, hey, here's a better way to
10 deal with presenting incoming emails, let's look at it so that when they come
11 in, the user has the more relevant ones on top and the rest -- less relevant
12 ones below.

13 JUDGE HOANG: So, are you suggesting that Rose has basically
14 two different interfaces? One for only unread emails and one for, I guess,
15 read or all emails?

16 MR. PADMANABHAN: Nope. I just think once it's in your
17 inbox, then it's in your inbox, and you can -- and you've looked at it, and you
18 can do whatever you do with your inbox to find relevant emails, just like we
19 do now. You can do it from "from", or you can do it by date, or however
20 you want to find your emails, because you already know what's in there.

21 Whereas in Rose, what they're really -- the problem they're
22 solving, and it's in -- that's why I went to the problem, is you have incoming
23 emails coming in, you have a lot of them, and they're saying, hey, hold on,
24 we don't want to use this objective approach to filter it, what we want to do
25 is try to filter it using our algorithm, and what they're doing is reading the

1 unviewed email, looking at the unviewed emails, and saying, let me now
2 predict it and put it in an order that's likely to be the order that the person
3 wants.

4 JUDGE HOANG: So, if you take a quick look at Figure 3 of Rose
5 -- I don't know if you have it in your slides or not --

6 MR. PADMANABHAN: Yep.

7 JUDGE HOANG: -- but if you have Rose in front of you, that
8 looks like a ranking of emails, right? So, you've got scores from a bunch of
9 different emails, and they're clearly ranked. The Winter Olympics update
10 email is ranked in position number two, and then the user, Figure 4, likes it
11 or doesn't like it, whatever. That Winter Olympics -- let's say that Winter
12 Olympics was originally ranked in position two, as we see in Figure 3. In
13 Figure 4, the user says, I don't like it. Does that mean that Winter Olympics
14 is always going to be in position two? Because by that theory, where once
15 it's locked, it's locked, then we've already set the Winter Olympics at ranking
16 position number two. So, now it's always going to be there, whether or not
17 I've liked it or didn't like.

18 MR. PADMANABHAN: No, I think what's going to happen is -- I
19 really do think it's only ranking the incoming emails. I don't think there's
20 anything in Rose that suggests a complete re-ranking, because all of the
21 sentences that we look at, it's once the user -- like the sentence I have on
22 Slide 49 that the Board relied upon, at least a portion of it, you can see the
23 sentence that leads into the portion that the Board relied upon, which is after
24 the "for example." You can see that once the user profile is retrieved, all
25 messages -- all of the messages to be provided to the user are ranked on the

1 basis of predicted degree of relevance to the user.

2 JUDGE HOANG: I guess what I'm having trouble with is if I get
3 new emails and I -- let's say after I rank it, this -- whatever this email box
4 looks like, Figure 3, the users ranked it, it's in position number two, and then
5 in the future, 20 more emails come in. And let's say they may be more
6 relevant to me than the Winter Olympics update email; however, it sounds
7 like what you're saying is that Winter Olympics update would just always be
8 in position number two.

9 MR. PADMANABHAN: I don't think it would necessarily always
10 be in position number two, because once you've scored it --

11 JUDGE HOANG: So, then how is that not a re-ranking?

12 MR. PADMANABHAN: No, no, no. So, what I'm saying is the
13 only thing that is being ranked are the incoming emails. I don't think then it
14 goes back and re-ranks all the other emails, because under that hypothetical,
15 say you found some email to be very relevant, and it's at the top for whatever
16 reason, and all the incoming emails are predicted to be less, you'd have less
17 chance of being able to -- maybe you might miss one.

18 And the whole point of Rose is to help you manage the incoming
19 emails that have come in, so that you look at the new emails and you're like,
20 oh, there's a lot of emails, I'm going to help with that by organizing it so that
21 the more relevant ones are at the top. After you've read it, Rose no longer
22 applies. That is not a -- the algorithm for Rose stops with just that initial
23 filtering that it's doing on incoming messages to help you deal with all new
24 messages that have come in.

25 JUDGE HOANG: Okay. I think I understand your point. Thank

1 you.

2 MR. PADMANABHAN: All right. And so -- and just while I'm
3 on this --

4 JUDGE EASTHOM: Say, like you said, the new emails come in,
5 and then the user profile likes some of these new emails, so the user vector is
6 going to roll around a little bit based on the new information coming up,
7 right?

8 MR. PADMANABHAN: Yep, yep.

9 JUDGE EASTHOM: And if A stays way down by the X axis and
10 the user profile is way up high, it's implicitly ranked as no longer relevant.

11 MR. PADMANABHAN: Nope. So, when you say implicitly
12 ranked, it's only applying the formula in Rose when --

13 JUDGE EASTHOM: It says on vector A at 10 degrees, and I used
14 to be vector A at 10 degrees, and the user profile used to be at 11 degrees.
15 Now, the user profile is at 90 degrees. So, vector A is now 80 degrees away
16 from the user profile, so it's no longer relevant.

17 MR. PADMANABHAN: Well, but Rose is not making that
18 determination on a recalculation. I mean, that's just -- after the fact, we're
19 looking at the diagrams and saying, yeah, hey, yep, it's different now when
20 you're away, but all Rose is doing is dealing with incoming emails.

21 JUDGE EASTHOM: I understand. Go ahead.

22 JUDGE HAGY: All right. I want to make sure that I understand,
23 too. So, when these -- in Figures 3 and 4, they're in there and they're ranked,
24 so they've been -- you've figured out a relevance score based on other users,
25 so that could be your second relevance module. And then the user gives a

1 thumbs up or a thumbs down. Are you saying that that is not also a
2 relevance score that the user has now done based on his or her interaction
3 with a document?

4 MR. PADMANABHAN: Yep, and so let me start with the
5 beginning of that question, too. So, when Rose uses all of the other users,
6 that's not quite the second relevance module, because it never identifies a
7 recipient that's also cognate. But leaving that aside, yep, there's a
8 measurement there. On the first relevance module after the user clicks it,
9 yep, there's now a user that's now given some input on it based on his action,
10 but here's the rub, is at that point, the only thing that Rose discloses that
11 happens next is the user's profile is updated with whatever the basis
12 -- whatever he ranked. That's going to update his profile.

13 But other than that, there is nothing else in Rose that now says,
14 yep, we're now going to add that to the original other user's number and
15 come up with a ranking and re-rank that document. Petitioner's entire
16 position on Rose only works if you are willing to infer that somehow re-
17 ranking is absolutely going to happen in Rose, and --

18 JUDGE EASTHOM: Re-ranking of past documents.

19 MR. PADMANABHAN: Re-ranking of past -- oh yeah. I mean,
20 yes, re-ranking of past documents. Otherwise, it's just a -- the fact of Rose
21 is, the problem it's dealing with is incoming email. What it does is it ranks
22 the incoming email based on the user's past actions in other documents and
23 everybody else's actions on that document, and that's simply not going to be
24 -- it's not going to meet either the cognate -- identifying somebody that's
25 cognate, and it's not going to have the user's first actions in there.

1 JUDGE HOANG: I do want to save time for the discussion of
2 Rose in limitation 1F, but just to touch on this -- something you just said.
3 You said that Petitioner's case kind of hinges on -- for these limitations
4 -- hinges on having to find that Rose teaches, suggests, discloses, describes
5 that these emails are re-ranked, and what is your best evidence? So, you
6 pointed to the formula as your evidence that it doesn't re-rank.

7 MR. PADMANABHAN: Yep.

8 JUDGE HOANG: Okay.

9 MR. PADMANABHAN: The formula -- Dr. Khan said the
10 formula, the weights applied in Rose uses everybody's feedback except the
11 first user. The example six, you can see that that person hasn't -- the person
12 that they're looking for, person C, hasn't looked at the document. That's
13 example six -- or Figure 6.

14 JUDGE HOANG: Figure 6.

15 MR. PADMANABHAN: Sorry, Figure 6. The third is, I have a
16 slide, and I'm not able to immediately find it, but the vector -- the way they
17 describe that vector for doing it, they say it's based on previous documents.
18 That's explicitly in Rose. I just don't know which slide it's in, Your Honor.

19 JUDGE HOANG: That's okay.

20 MS. DAWSON: 42.

21 MR. PADMANABHAN: Huh?

22 MS. DAWSON: 42.

23 MR. PADMANABHAN: 42. If we go to 42, you can see the top
24 bullet point, where it says, an attribute-based prediction uses a user's vector
25 profile to analyze the document. This profile is based on user indications of

1 all relative interest in previously retrieved documents, so there's not -- what
2 it's really doing in this context is looking at your prior history and applying
3 it.

4 JUDGE EASTHOM: What about this? What about the user says,
5 oh okay, I'm going to go back and look at my old documents' inbox and
6 then pulls up that document again? That's my first part of the question. And
7 then Claim 1, your friends say that they repeat those steps B, C, and D,
8 determining (INDISCERNIBLE) for item and information that's in step B as
9 Rose's Claim 1, column A and then Step E says it repeats that step again.
10 So it does re-rank all those item's information it seems like.

11 MR. PADMANABHAN: I'm sorry --

12 JUDGE EASTHOM: So, I was looking at the steps in Rose's
13 Claim 1.

14 MR. PADMANABHAN: Okay.

15 JUDGE EASTHOM: Last step E, it says that it repeats Steps B, C,
16 and D.

17 MR. PADMANABHAN: Yeah. So, it says --

18 JUDGE EASTHOM: And B says that it's going to
19 (INDISCERNIBLE) information, so if it repeats that is it going to redo it?

20 MR. PADMANABHAN: Nope. So, what E says is repeating
21 steps B, C, and D for each item of information to be presented.

22 JUDGE EASTHOM: Right. And my question was -- my first part
23 of the question was what if this user says, I'm going to re-look at this -- after
24 I've looked at a few documents, I want to go back and look at one of the
25 older documents that were already ranked --

1 MR. PADMANABHAN: So, the reason that doesn't work, Your
2 Honor, respectfully, is what Rose is doing -- when it says, "to be presented"
3 and it's consistent through -- and you can look at this -- even in the sentences
4 that I showed you where in the institution decision, the Board is relied on
5 -- in every instance, what they're talking about when they say, "to be
6 presented" is new emails that are coming in. There is no disclosure in Rose
7 saying, hey, go back and look at this, and now let me run that calculation
8 again. Because it really is a filter in the background to help organize content
9 that's come in for you.

10 JUDGE EASTHOM: Okay.

11 MR. PADMANABHAN: So, Your Honor, the only other one I
12 want to show is -- there are a lot of sentences in Rose on recalculation.
13 Both, the sentence that you relied on --

14 JUDGE HOANG: Counsel, your slide number, please.

15 MR. PADMANABHAN: Oh, sorry, Slide 49. So, this is one
16 sentence that the institution decision relies upon for suggesting there may be
17 recalculation, and in particular, the sentence that -- if you go back to Slide
18 48, the sentence that the decision relies upon is this -- all of the messages
19 addressed to the user are ranked. And that sentence would be true even if
20 Rose didn't rescore, because Rose is going to rank every incoming message,
21 and every item -- or every item addressed to the user is scored or ranked, but
22 before the user retrieves that item.

23 And you can see that in the preceding sentence to where -- what
24 the institution decision relied upon. You can see it says once the user profile
25 is retrieved, all of the messages to be provided to the user are ranked on the

1 basis of predicted degree of relevance to the user. So in Rose, the user
2 profile is retrieved to -- based on past history to evaluate new documents,
3 and the "to be provided", that is one thing that Petitioner never really takes
4 on, is that is forward looking future tense. If the document -- if the item had
5 already been provided to the user, they would no longer be "to be provided."
6 They've already provided it, and that's consistent with what I showed you in
7 the background, where they say these are items that they want to provide to
8 the user.

9 JUDGE EASTHOM: Now, I was looking at your claim, and I'm
10 still not clear why Rose has to re-rank the documents that were already
11 ranked, as you say. Why does it have to do that to meet the claim? Which
12 part of the claim?

13 MR. PADMANABHAN: So, for two reasons. One is Rose -- say
14 there's no re-ranking, which I don't think there is, but say there's no re-
15 ranking, then Rose never has a first user action. It never considers the first
16 user's action on the document for which it -- relevance is being considered,
17 because it only has the information from what the user did with past
18 documents. So, Rose doesn't have that first measure of relevance, and for
19 the second measure of --

20 JUDGE EASTHOM: I think the first measure of relevance just
21 has to do with -- I thought that would be good enough if the document
22 comes in, and then your claim -- you score that document coming in. Why
23 isn't that --

24 MR. PADMANABHAN: Nope. So, the document for which Rose
25 is determining relevance is an incoming document that the user has not seen.

1 JUDGE EASTHOM: Right.

2 MR. PADMANABHAN: So, in Rose --

3 JUDGE EASTHOM: In your claim, which part requires you to re-
4 rank things you haven't seen?

5 MR. PADMANABHAN: It's not re-ranking, but what are -- what
6 the algorithm and the claim requires is the first measure of relevance is a
7 first user's action on that document, and in Rose, you never have that first
8 user's action on the document because the document that you're actually
9 determining a relevance on, the user hasn't retrieved. And so, all you have is
10 the user's history with other documents, but you never have --

11 JUDGE EASTHOM: Oh, I see what you're saying.

12 MR. PADMANABHAN: Right.

13 JUDGE HAGY: So, the thumbs up or thumbs down by the user
14 doesn't count? Because you're saying that that only changes their vector for
15 future, and so that -- the system in Rose never takes into account that the
16 user also gives a thumbs up or thumbs down after it's already been ranked by
17 other --

18 MR. PADMANABHAN: Yep. When the user does the thumbs
19 up or thumbs down, then that vector gets updated, and that's used for the
20 next batch of new emails that are coming into the user's inbox. To rank
21 those, the updated vector will be used, so unless -- and Rose doesn't ever
22 disclose this recalculation, so unless you find somehow there's recalculation,
23 Rose simply doesn't do both of those key steps of the claim. One is
24 identifying that -- I mean, using the first user's action on the document for
25 which relevance is being determined, and Rose doesn't identify a cognate

1 user. Rose on the first one doesn't do anything, because it's only past actions
2 on other documents, and on the second one, Rose, based on that formula,
3 uses the actions of other users, all other users, not some subset that it
4 identifies that are more -- that are cognate to the first user.

5 JUDGE EASTHOM: All right.

6 MR. PADMANABHAN: Okay. So, with that, let me then jump
7 -- unless you have -- so the only other point, if you look at our Slides 52 and
8 53, this is evidence that we put in, in the response of evidence that shows
9 that Rose is really predicting the likely relevance to the user. So, again, all
10 of these sentences are very consistent with the argument I'm making and the
11 disclosure in Rose, which is it really is to unviewed emails, and it's to help
12 put those in an order for the user, so it's more easy for the user to go through
13 the unread emails.

14 And one example of that would be if you look at Slide 52, the
15 bottom right quote, the last bullet point on the right. One factor in the
16 prediction of the user's likely interest in a piece of -- particular piece of
17 information, can be based on the similarity between the documents vector
18 and the user's profile vector. Again, user's likely interest. And if you go to
19 Slide 53, the top one also points to the same thing -- a second factor in the
20 prediction of the user's interest in information is based upon the correlation
21 with indications provided by other users. Exactly kind of what I'm saying
22 for the two things.

23 What I thought I'd do is I'd spend a couple of minutes on the Rose-
24 Bieganski combination, and really, the main point I want to make is -- one,
25 Bieganski doesn't disclose the first user, but I want to explain, if I may.

1 JUDGE HOANG: Counsel, what slide are you on?

2 MR. PADMANABHAN: Slide 58.

3 JUDGE HOANG: Thank you.

4 MR. PADMANABHAN: So, one problem with this combination
5 is that Petitioner has not shown why a person of skill would be motivated to
6 use the Bieganski method, and the only reason the Petitioner cites in its
7 expert's conclusive premise that Bieganski "improves upon" Rose's
8 correlation of users.

9 And I want to explain that criticism and take two minutes to do it.
10 So, Bieganski, as you know, describes an improvement to an existing
11 recommendation system. The problem Bieganski is solving is that in prior
12 recommendation systems, they tended to suggest the most popular items,
13 and the problem with that was that the recommendations can be very
14 obvious.

15 So, the example that Bieganski gives for that type of a
16 recommendation system is one that suggests milk -- buying milk at a grocery
17 store. So, what Bieganski notes is that this type of recommendation lacks
18 the element of novelty that a serendipitous suggestions can offer. So,
19 Bieganski's solution is a recommendation system that has three parts to it.
20 It's got a recommendation engine, a serendipity control function applicator,
21 and a serendipity integration unit.

22 What Petitioner is doing is it's not using that full solution that
23 results in the serendipitous suggestions of products, but just a couple of steps
24 from the first part of the system. There's no explanation by Dr. Fox for why
25 a person of skill would just borrow just that portion of Bieganski, but in

1 doing so, and this is the part that's -- why we say it's conclusory -- in doing
2 so, Dr. Fox doesn't explain why it's "problematic" to consider input from
3 users who are not well suited. That is why the feedback of opposite users is
4 not useful, and why a smaller number of users contributes "more positively"
5 than a large number of users.

6 He also doesn't explain why a person of skill would view
7 collaborative filtering, which he says was known through this entire time, to
8 be improved, and this goes to my second bullet point on this.

9 JUDGE EASTHOM: Are you saying Bieganski does not describe
10 an improvement at all?

11 MR. PADMANABHAN: It does not, Your Honor, because in this
12 context, Bieganski is not an improvement at all, because the context is so
13 different. In Bieganski, what they're doing is -- if you start with Bieganski,
14 they start with, hey, I want to be able to recommend something this person
15 has never seen to be able to buy, and as part of that, I'm going to try to find
16 -- I'm going to look at what he bought before, find some other people that
17 bought some of the same things, and then after that, they go through an
18 entirely different analysis to be able to recommend some things and make it
19 interesting enough to send back to this person.

20 JUDGE EASTHOM: Is Bieganski so limited to only
21 recommending things to buy?

22 MR. PADMANABHAN: Bieganski is very limited to this
23 approach where what you're really doing is starting with things that -- the
24 thing that you start with, which is what the user bought, and that's the
25 primary example in Bieganski. I can't say it can't be used for something

1 else, but that's the primary example, that's the driver of Bieganski is you take
2 these particular things that you bought, you find other people that bought
3 similar items, and then you say, okay, well, amongst these, who do I think is
4 kind of like this purchaser. And then from there, it dives off into another full
5 set of algorithms to be able to finally predict a product that they want to
6 suggest to the user, and that's really what's going on in Bieganski.

7 And so, all of a sudden to say, I'm going to take a couple of steps
8 out of here, put it in, and the steps they pick directly contradictory to Rose.
9 Rose's teaching is use all users, and all of a sudden to say in this other
10 context, somebody did something, and with no explanation for why would
11 you limit it to two. Say you had 100 people exactly very similar that were
12 cognate and a recipient.

13 JUDGE EASTHOM: Yeah.

14 MR. PADMANABHAN: Why would that be worse than just
15 -- and limit that to two people? There's no explanation for that. The reason
16 they're doing it is simply because of the claim, but there is no one-to-one
17 between Bieganski and the problems that we're solving, either in the '217 or
18 in Rose, because that context that we say in our brief, when we say, "sent by
19 the sender", it's not just because it's in the claim. It actually defines the
20 problem, because here we're not looking for new information or anything
21 else. What we're saying is you've got this information and we're helping you
22 organize it.

23 And so, it's a very different problem, and a very different context
24 in which we're applying this very specific algorithm. Bieganski starts with,
25 yeah, a touch to what the person bought before, but after that, the rest of it

1 goes somewhere else, and what you finally return to him has nothing to do
2 with what he bought before. What it has to do with is things that he may
3 want to buy in the future, and so when you look at it that way, you can see
4 why we're saying, hey, you wouldn't look at this solution, and they don't
5 explain it enough --

6 JUDGE HOANG: Are you making a non-analogous art argument
7 or are you just saying there's no improvement?

8 MR. PADMANABHAN: I'm making -- well, in our papers, we
9 definitely made the non-analogous argument. We're also saying it's not an
10 improvement, because it's not an improvement -- he doesn't explain it's an
11 improvement, but it's not an improvement to anything in Rose or to that
12 patent, or the patented invention. It may be an improvement in
13 recommendation systems, but that -- it's so far away in terms of problem,
14 and kind of what you're trying to do, which is why they're just borrowing
15 certain things from it. No one is saying, I'm taking the algorithm of
16 Bieganski and putting it to Rose.

17 What they're saying is, Rose teaches using everybody, I know that
18 doesn't work for me on the claims, so I found something else in some other
19 part where they said don't use everybody, and I'm just putting it in with no
20 explanation for why it's all of a sudden better to have only two cognate
21 users, as opposed to say you had 100. And there's not a good reason for it,
22 because if you actually did have that many people that could be a cognate
23 user that you identified, your relevancy may be that much better. And so,
24 for that reason we'd say the combination of Rose and Bieganski also doesn't
25 work.

1 JUDGE HOANG: You're into your rebuttal.

2 MR. PADMANABHAN: Sorry. Thank you, Your Honor.

3 JUDGE HOANG: All right. So, you and Petitioner both went
4 over just a couple of seconds, so let's leave your rebuttal times at 15 minutes
5 and 10 minutes.

6 MS. KAISER: Thank you, Your Honor. I want to just touch on a
7 few things on rebuttal. The first is the construction of cognate and I believe
8 I heard Sterling's Counsel essentially agree that his proposed construction
9 now is what's in the surreply. I believe that's what he quoted to Judge
10 Easthom. And the basis for that, that I heard Patent Owner's Counsel give,
11 was the patent at column 14, line 65. And I just wanted to note briefly, well,
12 that the language of that is permissive, so it says, "may identify", and there
13 are certainly other places, as the Board recognized in its institution decision,
14 and as I discussed in my opening argument, that identify other ways that a
15 cognate user can be identified.

16 I also heard a number of times where Patent Owner's Counsel
17 talked about cognate user, not just in the context of identifying at least one
18 other cognate user, but then what happens with the cognate user's actions.
19 And this also seems to be -- and he said, not just you identify a cognate
20 users' reactions, but you take those reactions into account, or you use them
21 as part of the analysis. And again, that's Patent Owner's continued attempt
22 to make the last option of 1G requirement, which is the Board correctly
23 found it was one option. Going back to Rose then. Maybe we can go to
24 Slide 30, Petitioner's Slide 31.

25 JUDGE HOANG: And before you get into that, is Patent Owner

1 correct that you really do need Rose to have a -- I'll call it re-ranking of
2 emails or content after a user has provided their input as to that content?

3 MS. KAISER: So, can we pull up 1d? So, I believe what Claim 1
4 requires is in that first relevance module -- I wanted to pull up the claim so
5 I'd have the exact language right.

6 JUDGE EASTHOM: This is slide what? Sorry.

7 MS. KAISER: Slide 88 --

8 JUDGE EASTHOM: Okay.

9 MS. KAISER: -- is one place where we have 1d in our slides, but
10 you have to determine a first measure of relevance for the piece of electronic
11 content based at least in part on one or more actions of the user. And so, in
12 our petition, we do talk about how the user rating the content is an action of
13 the user, and that's taken into account in the relevance measurement by
14 updating, for example, the user profile. I don't think there's anything in
15 Claim 1 that actually requires it to be redisplayed or displayed in a certain
16 order or anything like that, so to the extent that's what Patent Owner's
17 arguing, I don't think so, but it would --

18 JUDGE HOANG: But it does have to be displayed after the user
19 has, let's say, given it some relevance indication?

20 MS. KAISER: It has to have this first measure of relevance
21 determined after the --

22 JUDGE HOANG: But doesn't limitation 1H then actually
23 calculate the relevance score after the user has -- so, I mean --

24 MS. KAISER: Yes.

25 JUDGE HOANG: -- I think we're using the showing of the

1 content as a shortcut for limitation 1H --

2 MS. KAISER: Okay.

3 JUDGE HOANG: -- so that's why I'm saying it that way, because
4 it's being shown in a ranked way, then we've calculated the relevance score.
5 So, the claim at least requires that there is some kind of relevance score, and
6 I'm going to say re-ranking, because I'm mixing them up, but after the user
7 has indicated that that content is relevant or not relevant to the user.

8 MS. KAISER: I believe that's correct, Your Honor.

9 JUDGE HOANG: Okay.

10 MS. KAISER: And if we go to maybe Slide 31, which has Rose
11 Figure 3 on it, Your Honors asked Patent Owner's Counsel a number of
12 questions about Figure 3 and sort of what happens after the user ranks
13 content. And I had sort of always understood that Patent Owner's argument
14 was that it would just not show that email anymore. I think Patent Owner's
15 Counsel directly said that that wasn't their argument, that it does continue to
16 show, for example, the Winter Olympics update email.

17 And so it was, I think, a new argument, at least one I hadn't
18 appreciated before, that they were saying that sort of in this ranking list, that
19 that email would be fixed forever in time, even after you as the user have
20 rated it. And I don't think Rose supports that its rankings are fixed forever in
21 time. And so, if we go -- I just want to give an example of this. If we go to
22 Patent Owner's Slide 15, and I know you all have it, as well, it talks about
23 one of the attributes that Rose predicts the relevance of the items based on is
24 event times, and Patent Owner specifically raised this in their
25 demonstratives.

1 And if you go and actually look at how Rose uses event times
2 -- this is in Rose, column 8, at about lines 12 through 17. It talks about how
3 it can look at the relevance, depending on whether an event time has
4 happened or not, and it changes the ranking based on where you are in the
5 event time. And so, that's not the same as what we're talking about in terms
6 of a user rating -- what happens when a user rates the document, but I think
7 it does show that Patent Owner is just wrong that Rose's rankings are static
8 over time. Rose does relook at rankings over time based on attributes, and it
9 just doesn't make sense in Rose. If we go back to that Slide 31, in Figure 3,
10 that after something notable happens, like a user ranking a document, that it
11 would keep, for example, that Winter Olympics update in the second slot.

12 As Judge Hoang noted, if you gave that document a thumbs down,
13 and the user profile updated to essentially show that document was less
14 relevant, you would expect -- and a person of ordinary skill in the art is not
15 an automaton. They have creativity, they have experience, they have
16 education. They would expect that use -- that that email would move down
17 in relevance, and I think that's just how a person of ordinary skill in the art
18 would understand Rose.

19 JUDGE HAGY: Counsel, did your expert opine on anything in
20 this regard to give us some evidence to support what you just said?

21 MS. KAISER: So, certainly, Dr. Fox talks about how a person of
22 ordinary skill in the art would understand Rose, and I believe that's on our
23 Slide 35 and others in 31 that I talked about in my opening argument. I don't
24 think Dr. Fox talked about this event times piece because I don't think we
25 understood --

1 JUDGE HAGY: Um-hum.

2 MS. KAISER: -- Patent Owner to be saying what they said in this
3 argument, but he does talk about how a person of ordinary skill in the art
4 would understand Rose, and that a person would understand that content
5 items are re-ranked once the user profile is updated.

6 And we also heard a lot from Patent Owner's Counsel, in his
7 argument, about how Rose only applies to new unread emails. I don't think
8 that's anywhere in Rose. I don't think Rose says it only applies to unread
9 emails. And I certainly know my email inbox right now, and I don't know
10 -- as the user, I don't know everything that's in the emails that I've read. So,
11 I certainly think a person of ordinary skill in the art would understand the
12 utility of continuing to provide a relevance ranking in Rose, even for emails
13 that the user has read and ranked. And -- yes, Your Honor?

14 JUDGE EASTHOM: Your friend said, for that first step, that you
15 have to have a ranking based on something that the user did, right? So, I
16 was thinking the way you said in the petition was, you got a thumbs up, you
17 got a thumbs down, and then you've got a ranking of the document, and also
18 from the relevance score, right? The first relevance score?

19 MS. KAISER: The first relevance score is based on the rating, so
20 the ranking is really just the user interface where you put the emails in order
21 based on that relevance score.

22 JUDGE EASTHOM: Okay, right, right. So, that's the relevance
23 score. And then -- so, are you agreeing that you need to re-rank these things
24 to meet your claim? Re-rank things the users already looked at?

25 MS. KAISER: You don't have to re-rank them, but you have to

1 rank them based on what the user has done. So, you can imagine a
2 circumstance where it's not necessarily that they're being re-ranked, but
3 maybe I open my emails and it ranks all the documents, including
4 documents that I've rated before. So, it wouldn't be necessary, in that
5 instance of me reopening my email, it wouldn't be re-ranking them, it would
6 be ranking them for presentation to me.

7 JUDGE EASTHOM: And then you say there's -- that's how you
8 would read this, and you don't -- you sort of have a negative. You said you
9 don't see anywhere where Rose restricts itself to that situation, but you have
10 the burden, so where do you think that it does show how to do that?

11 MS. KAISER: Well, Your Honor, I didn't mean that in the sense
12 of trying to shift the burden, but --

13 JUDGE EASTHOM: No, I understand. I was just in my own line
14 of trying to figure --

15 MS. KAISER: Yeah. So, Rose talks about email generally, and
16 so, if it was only directed to unread email or email that the user hadn't
17 interacted with before, then I think you would expect to see that somewhere
18 in Rose, and you don't.

19 JUDGE EASTHOM: Okay.

20 MS. KAISER: So, I'm just saying that in the context of how a
21 person of ordinary skill in the art would have understood Rose.

22 JUDGE EASTHOM: I understand.

23 JUDGE HAGY: And so, related to that, Patent Owner's Counsel
24 spent a lot of time on to be presented, as in emails to be presented had to
25 mean new emails that were going to come in, but what I'm hearing you say,

1 maybe, is that "to be presented" means put up on your screen.

2 MS. KAISER: It could be put up on your screen --

3 JUDGE HAGY: Um-hum.

4 MS. KAISER: -- just however it's presenting it to the user.

5 JUDGE HAGY: But it could mean -- so, to be presented can mean
6 emails that you've already seen?

7 MS. KAISER: Correct, Your Honor, and the Patent Owner
8 specifically, I think, had answered to one of Judge Hoang's questions, said it
9 doesn't stop displaying that email that you've read and rated, and so that
10 would still be an email to be presented, because it's still presenting it.

11 And if we go quickly to Slide 27, I just wanted to point out this
12 quote from Rose that is sort of the middle call-out there from column 4, lines
13 40 to 44, and this call-out doesn't use the "to be presented" language.
14 Instead, it says, for example, in an email system, all of the messages
15 addressed to that user are ranked. And so again, Rose is talking about all
16 messages addressed to the user, not just unread messages. And so, this goes
17 to our point again -- and again this is consistent with that claim one
18 limitation, where it repeats it for all messages. So --

19 JUDGE HOANG: Counsel, you've got a little over two minutes
20 left. If you want to get something pressing that you want to address, you're
21 welcome to, but I'd like to hear your response to Patent Owner's arguments
22 that Bieganski does not provide an improvement, at least as far as this
23 particular combination goes.

24 MS. KAISER: So, Your Honor, first of all, I just -- I heard -- so,
25 on Rose-Bieganski, one thing I think Patent Owner is clearly correct about is

1 I heard Patent Owner's Counsel say a number of times essentially that
2 Petitioner isn't relying on a bodily incorporation of Bieganski into Rose, that
3 we weren't sort of taking all of its algorithm or all of its modules and putting
4 it in Rose, and I think that's true. We're relying on a portion of Rose that has
5 to do with its neighborhood teachings.

6 And in terms of the improvement, we do talk about how -- and by
7 relying on evidence, talk about how modifying Rose based on those specific
8 teachings of Bieganski would be desirable, would be an improvement, and
9 that's discussed in our petition at pages 69 to 73, as well as in Dr. Fox's
10 original declaration at 232 to 237. And I would just point Your Honors to
11 those.

12 And just with my last 45 seconds, Judge Hoang, I'll note -- you had
13 asked, I think in my opening argument, about something that would link the
14 document terms piece of the regression analysis back to updating user
15 profile, and I would point you to Rose, column 6 at lines 36 to 43, where it
16 talks about changes to the user profile, including changes to the weights of
17 terms that are in a document. And lastly, I -- in my last 10 seconds -- Patent
18 Owner's Counsel mentioned that they did argue non-analogousness for
19 Bieganski in their briefs. I don't believe that's correct. We looked and we
20 didn't see it, so I just want to note that we believe that's a new argument.

21 JUDGE HOANG: Okay. Thank you.

22 MS. KAISER: Thank you.

23 MR. PADMANABHAN: I only have two or three points I want to
24 make. I'm going to start with Slide 49. I might have done this slide too
25 quickly. The Petitioner put up from the institution decision that the Court

1 -- the Board relied on the portion of this, what's up there, all of the messages
2 addressed to the -- to that user are ranked. And our points are several fold,
3 but one is that portion that's relied on in the institution decision is after the
4 "for example", and if you read the sentence before, you can see why we
5 believe all of the messages should be read to be the ones that are going to be
6 provided to the user, because the sentence before says once the user profile
7 is retrieved, all of the messages to be provided to the user are ranked on the
8 basis of predicted degree of relevance to the user. And then it says, for
9 example, and then that clause.

10 So, the example actually is about the sentence before. Also, if you
11 look at that sentence, it says -- in addition to saying it's to be provided to the
12 user, it's ranked on the basis of a predicted degree of relevance to the user.
13 Again suggesting that it hasn't been -- the user hasn't weighed in, and what
14 we're doing is actually ranking incoming emails. In terms of the --

15 JUDGE EASTHOM: Can I just say, so wouldn't the user in Rose
16 be able to give one of those new messages a thumb up or a thumb down?

17 MR. PADMANABHAN: By the time the user does the thumb up
18 or thumb down, the filtering is already -- the ranking has already happened,
19 and then what that does is at the point that the user does the thumb up or
20 thumb down, as disclosed in Rose, that user's user profile will be updated
21 based on that ranking, but that will be now used on the next set of incoming
22 emails to rank those.

23 JUDGE EASTHOM: Okay. Thank you.

24 MR. PADMANABHAN: And the other part -- and I just want to
25 -- just because I didn't want to misspeak. When I said, fixed in time, in the

1 -- what I really -- Rose doesn't specifically say, hey, what am I doing with it,
2 because it's so focused on incoming emails, and so, when I say, fixed in
3 time, I'm just saying it as what it's really ranking is the incoming emails, and
4 once it's in your inbox, it's in your inbox, and Rose doesn't then go through
5 and say whatever happens to the inbox after.

6 Because the focus of Rose is really this tool that's helping you
7 organize new emails into your inbox, so that you have a way to be able to
8 sift through the chaff and look at the more relevant documents right at the
9 top. And that's what's going on in Rose, and that's why it's so -- neither one
10 of those two main points that we make, user's first action on the document,
11 or the idea of using cognate users -- identifying cognate users, is just not part
12 of Rose. And that's why none of these combinations are going to work.
13 Lastly, in terms of the analogous art, we definitely say you don't -- you didn't
14 have to look at Rose, you shouldn't look at Rose, a person of skill wouldn't
15 look at Rose --

16 JUDGE HOANG: Where did you -- in your Patent Owner
17 response, can you give me a page number where you specifically discussed
18 non-analogous art and explained that you're using the second prong of that
19 test?

20 MR. PADMANABHAN: Yeah, and so I don't know if we use the
21 words non-analogous art. What we argued -- and I just remember this, and
22 she'll find the page -- what we argued was one of skill would not look to
23 Bieganski to make this combination.

24 MS. DAWSON: Page 43 of that response.

25 MR. PADMANABHAN: Page 43 of the response.

1 JUDGE HOANG: Okay.

2 MR. PADMANABHAN: Thank you.

3 JUDGE HOANG: Okay.

4 MR. PADMANABHAN: Unless you have any other questions for
5 me, Your Honor, that's all I have.

6 JUDGE HOANG: Okay. Thank you all. Thank you for appearing
7 today and answering our questions. Yep. We'll take this case under
8 advisement, and we'll issue our decision in due course. And it was nice to
9 see you all.

10 MR. PADMANABHAN: Thank you, Your Honor.

11 JUDGE HOANG: Thank you.

12 (Whereupon the above-entitled matter went off the record at 12:08
13 p.m.)

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