

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LAM RESEARCH CORP.,
Petitioner,

v.

INPRIA CORP.,
Patent Owner.

IPR2024-00033
Patent 9,823,564 B2

Record of Oral Hearing
Held: January 30, 2025

Before GRACE KARAFFA OBERMANN, CHRISTOPHER M. KAISER,
and DEBRA L. DENNETT, *Administrative Patent Judges*.

APPEARANCES:

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P R O C E E D I N G S

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USHER: All rise.

JUDGE OBERMANN: All right. Please be seated. Thank you for being here today. Can you hear me?

VARIOUS: Yes.

JUDGE OBERMANN: Okay, great I understand that Petitioner, you got held up downstairs. I apologize for that delay there. Welcome to the PTAB, everyone. This is the final oral argument in Lam Research Corporation v. Inpria Corporation. It's IPR 2024-0003 and it involves Patent Number -- I'm sorry, 9,823,564 -- I'm sorry. Yeah, that's it. 9,823,564 B2. I'm Judge Grace Obermann and appearing with me today remotely, we have Judge Debra Dennett and Judge Christopher Kaiser. I'd also like to introduce, back there in the audience, we have a board patent attorney Kevin McHenry. We're very fortunate on the panel to have Kevin working with us on this case. And let's start with introduction on Petitioner's side. Who's here for Petitioner?

MR. BREGMAN: Good afternoon, Your Honor. Dion Bregman and Amanda Williamson.

JUDGE OBERMANN: Thank you. And who will be arguments today?

MR. BREGMAN: Both of us.

JUDGE OBERMANN: Okay, great. And who do we have for Patent Owner?

MR. WOLFE: Good afternoon, Your Honor. Michael Wolfe for Patent Owner and Inpria Corporation. I have Maksim Mints with me here

1 and Daniel Zeilberger. And folks in --

2 (Simultaneous speaking.)

3 MR. WOLFE: -- back here. And I will be --

4 JUDGE OBERMANN: Welcome.

5 MR. WOLFE: -- presenting, Your Honor.

6 JUDGE OBERMANN: Thank you, Mr. Wolfe, and welcome Patent
7 Owner.

8 MR. BREGMAN: Yes. Your Honor, I should say, we've got our
9 client representatives with us behind us so they hear from them.

10 JUDGE OBERMANN: Hi, welcome. Good to see you. Thank you.
11 Okay. I want to remind both sides that this hearing is open to the public. I
12 don't think we have any confidential information in the record, but just be
13 aware that there can be public people on the public telephone line and we
14 wouldn't necessarily know they're here. I also want counsel to know that
15 both of the judges and myself, the ones that are remote and myself, we have
16 access to the complete file here and all of the demonstrative exhibits so I can
17 pull them up on my screen. But because we're dealing with two judges that
18 are remote, please when you're presenting your arguments, the most -- if you
19 can remember to give slide numbers for your exhibits and to the extent
20 possible, refer to paper numbers so that they can bring them up at home as
21 well. Before we get started, I was just wondering what's the status of
22 Heather Stewart's deposition? Maybe Mr. Bregman?

23 MR. BREGMAN: I can talk to that. So we have asked the clerk in
24 Ann Arbor, I think is the court where she's located, to issue the subpoena.
25 We keep calling, and we still haven't got them to issue the subpoena.

26 JUDGE OBERMANN: Okay. So counsel wasn't willing to produce

1 her voluntarily?

2 MR. BREGMAN: No.

3 JUDGE OBERMANN: Okay. Well, keep us updated.

4 MR. BREGMAN: Okay.

5 JUDGE OBERMANN: And if there's a, you know, problem with
6 that, just -- we can deal with that after the hearing. Thank you for the
7 update. Before we get started, do we have anything else we need to address
8 as a preliminary matter? Petitioner, no? Mr. Wolfe?

9 MR. WOLFE: No, Your Honor.

10 JUDGE OBERMANN: All right. Thank you so much. Okay. We
11 have the hearing order. It came out on December 31st. It's paper 48. We've
12 given each side 75 minutes, and we've also established the order in which
13 you will speak. Because Petitioner bears the burden on both proving the
14 invalidity of the original claims and the proposed substitute claims, we're
15 going to start with Petitioner's counsel, and I'll ask Mr. Bregman do you plan
16 to reserve any time?

17 MR. BREGMAN: 15 minutes, Your Honor.

18 JUDGE OBERMANN: 15 minutes? Okay. I'm going to put 60
19 minutes on the clock and then you can get yourself ready. And when you
20 start speaking I'll have the clock run.

21 MR. BREGMAN: Okay.

22 JUDGE OBERMANN: Okay. Whenever you're ready.

23 MR. BREGMAN: Okay. Thank you. So thank you, Your Honor.
24 Again, my name is Dion Bregman. I think just based on the circumstances, I
25 would like to acknowledge the tragedy that happened here yesterday in the
26 area. Obviously, the utmost condolences from our team to the families and

1 victims. And we'll be obviously thinking about them and the whole D.C.,
2 Virginia area over the next coming days and weeks as that evolves. So
3 just -- I thought that was kind of a tough situation and it's worth mentioning.
4 Okay. With that, Your Honors, I'll jump in. Due to time limitations, we are
5 going to just try and hit some of the highlights. Of course, I'm here just to
6 answer your question. So if there's anything else you want to talk about and
7 I'm not touching it, please don't hesitate to interrupt me and we can talk
8 about whatever you would like. I'm going to start talking about -- if we go
9 through the slides, this is slide -- unfortunately the slide number is not
10 showing up on the TV properly, but that is slide number 2.

11 And that is just a summary of our arguments. We're going to be
12 talking about the original claims. I'm going to be dealing with that. And
13 Amanda is going to be talking about the proposed amended claims. Before
14 we get into that, Your Honors, I would just like to give a little bit of
15 background first. So the '564 patent was found patentable over a reference
16 during prosecution called Stowers. That's reference is called Stowers 2009
17 in this proceeding because there are two Stowers references. The '564 patent
18 describes a particular coating material using certain precursors, and it refers
19 to it at least in one of the figures as HafSOx is the name of the material.

20 And that's a term that's being -- that was coined by a lab at Oregon
21 State University. These two terms you'll hear about a lot today. One is
22 called HafSOx and one is ZircSOx. And they both are terms that were
23 coined by a group working in Dr. Keszler's lab. Stowers was one of the
24 Ph.D. students in that lab, and he is the author on a couple of the prior art
25 references -- actually, three of them. To secure allowance, Patent Owner
26 argued that the claimed 30-nanometer coating thickness was patentably

1 distinct from Stowers's 35 nanometers coating thickness, and that was how
2 they secured allowance. So they said that their invention was different, it
3 had different properties because it was -- had a thickness of 5 nanometers
4 difference. Never once did they argue that HafSOx or ZircSOx coatings in
5 Stowers 2009 was any different to what was described in the '564 patent
6 application.

7 But by the time that the patent owner filed the first application in the
8 '564 family, Stowers, himself, had already published his HafSOx and
9 ZircSOx recipe at least three times. Two of the times actually had this
10 claimed range in it, and the Stowers 2009 reference, which was overcome
11 during prosecution, that was the one that didn't.

12 But Stowers 2008, which we'll show you, and Keszler both have the
13 claimed range. So the patent should have never have been granted over
14 Stowers's own references. Now, Patent Owner has two main issues that
15 you're going to hear about today. Number one, the coating thickness that got
16 them allowance was never described in any application in the '564 patent
17 family, and therefore they're not entitled to the earliest filing date. They're
18 only entitled to the filing date when they filed the '564 patent, which was in
19 September of 2015. And if that's the case, an earlier publication in the same
20 family is prior art. It published almost four years earlier and that anticipates
21 all of the claims. The second issue they have is that Stowers's own
22 publications anticipate to render obvious the claims.

23 So how does a Patent Owner attempt to deal with this? And you'll
24 hear about this later. Firstly, they claim that the inventors didn't need to
25 describe the exact claimed range in their application because a person of
26 ordinary skill in the art would have known how to obtain this thickness.

1 That's not the law. We'll show you the law, and we'll walk through it when
2 we get to that section. Secondly, they claim that Stowers 2008 was
3 embargoed and doesn't qualify as prior art because it was embargoed for a
4 year after it was submitted. That's wrong for two reasons, and we'll walk
5 through those.

6 Firstly, they're only entitled to the 2015 filing date because of their
7 new claim thickness that they added. So it makes no difference in any event,
8 whether it was embargoed or not. And then secondly, the only objective
9 sworn testimony in this proceeding is that Stowers was publicly available in
10 October 2008 and is prior art. So with that, why don't we jump in to some of
11 the issues. And we'll start off on slide number 3 -- sorry, slide number 4 and
12 this is Ground 1. Ground 1 is that the patent is anticipated by its own
13 publication in the same family. As you'll see on slide 4, the claim thickness
14 ranges of 5 to 30 and 5 to 25 were never disclosed in any patent application
15 in this family. So the ranges weren't disclosed, the endpoints of 5 and 30
16 nanometers were not disclosed, and therefore they are not entitled to their
17 priority date.

18 If you look at slide number 5, you'll see a graphic from our petition.
19 And you can see there that the '888 publication in the family published three
20 years and ten months before those claims that thickness was first introduced
21 into these patent applications in the filing of the application that led to the
22 '564 patent. You can skip over slide 6, which is the claims. And we go to
23 slide 7. And slide 7, this is what the patent owner told the office to secure
24 allowance. So their claims at the time claimed about 5 nanometers to about
25 30 nanometers. That's what the claim said.

26 And this is what they argued. They said Stowers teaches a thickness

1 of 35mm -- sorry nanometers or greater. The examiners argued that 35
2 nanometers is within the range of about 30. Then they go on to say claim 1
3 has been amended to remove the term "about" in order to advance
4 prosecution. And here's the important part. They say the ranges do not
5 overlap, and they are not close enough that one would expect them to have
6 the same properties.

7 JUDGE OBERMANN: May I ask a basic question?

8 MR. BREGMAN: Yes.

9 JUDGE OBERMANN: This argument was made to overcome what
10 reference?

11 MR. BREGMAN: The Stowers 2009.

12 JUDGE OBERMANN: That's what I thought. Thank you.

13 MR. BREGMAN: Yeah, Stowers 2009.

14 JUDGE OBERMANN: Okay.

15 MR. BREGMAN: So the thickness of -- they -- in essence, they
16 argued that the thickness of 30 nanometers in the claim was patentable
17 distinct from 35 nanometers in Stowers, and therefore the claims were not
18 obvious. If we go to the next slide, which is slide 8, this is Patent Owner's
19 argument in their patent owner response. They say the specification
20 discloses many ranges: less than 1000 nanometers, less than 250
21 nanometers, 1 to 50, 1 to 40, 1 to 25. And each of those ranges encompasses
22 or overlaps the claimed range of 5 nanometers to 30 nanometers or 5
23 nanometers to 25 nanometers.

24 And then they point to a sentence in the patent that says, "A person of
25 ordinary skill in the art will recognize that additional ranges of thicknesses
26 within the explicit ranges above are contemplated and are within the present

1 disclosure." We jump to the next slide. This is the law on whether or not
2 the written description supports the claims. General Hospital 2018 case
3 says, "The disclosure of a broad range of values does not by itself provide a
4 written description support for a particular value within that range. Instead,
5 where a specification discloses a broad range of values and a value within
6 that range is claimed, the disclosure must allow one of skill in the art to
7 immediately discern the limitations at issue."

8 So a person of ordinary skill in the art must be able to look at the
9 specification and immediately discern that the inventor had possession of
10 that claimed range. If we go to the next slide, this case is most on point.
11 This is in the Indivior case, if I'm pronouncing that correctly. And what this
12 case -- this is from 2021 and this case said that the claims lacked written
13 description support because the specification did not recite either of the two
14 end values. So it was 40 and 60 percent weight, and the specification didn't
15 describe that. And just adding them in the claims would amount -- at the
16 end you could see cobbling together numbers after the fact. And that's not
17 how a written description works.

18 I'll skip the next slide, which is some more cases, and jump to slide
19 12. So we asked Patent Owner's expert, "What other nondisclosed thickness
20 ranges would a person of ordinary skill in the art immediately discern from
21 the specification?" If you look at the second question on the slide, we said,
22 "So would a person of ordinary skill in the art have understood that the
23 inventors had possession of a range from 21 to 38 nanometers?" some other
24 range that we made up that is not described in the specification. And what
25 did he say? "In a broad sense, I'd say yes, but I need more context." So what
26 he's saying is any and all ranges encompassed by broad claims would be fair

1 game to claim, and that's simply not what the law is.

2 If we jump to slide number 13, this is Patent Owner's statement. And
3 they say here, "Here a lower level of detail is required because the aspect at
4 issue, the thickness limitation, can be predictably varied. See RAI Strategic
5 Holdings." So RAI Strategic Holdings is a great case if Your Honors
6 haven't read it. Because it really does a survey of all the other cases that are
7 discussed in this proceeding.

8 JUDGE OBERMANN: We've relied on it heavily in the decision to
9 institute.

10 MR. BREGMAN: Okay, good. Thank you. I missed that. So what
11 did RAI Holdings say? It says -- first looks to see whether the range is
12 disclosed. Doesn't have to be disclosed, but it looks to see if the range is
13 disclosed. If the range is not disclosed it looks at the endpoints. Are the
14 endpoints disclosed? And then the third question that it looks at is it looks
15 to whether the invention claimed is the same invention as is described. And
16 you can see that here on slide number 14. It says, "When a broad described
17 range pertains to a different invention than the narrow and subsumed
18 claimant range, then the broader range does not describe the narrower
19 range." So the question is, does the narrower claimed thickness of the five
20 in the '564 patent pertain to the same invention as the broad range as
21 described in the specification? And as described in RAI Holdings, when
22 you're looking at whether it's the same invention, you will look if there are
23 any inconsistent statements. And that was from the Indivior case as well.

24 If you jump to slide 15, so now we're trying to determine if it's the
25 same invention - this is the slide we looked at earlier. Well, during
26 prosecution they said it's not the same invention. They said a 5-nanometer

1 difference has -- changes the properties, and that makes their invention
2 patently distinct over Stowers, the Stowers 2009 reference. So we know that
3 a small difference in thickness is a different invention. That's what they
4 said. That's an inconsistent statement that they made that goes to whether or
5 not it's the same invention.

6 JUDGE OBERMANN: Let me just ask you quickly.

7 MR. BREGMAN: Yeah.

8 JUDGE OBERMANN: Are you relying on some sort of
9 prosecution --

10 MR. BREGMAN: No.

11 JUDGE OBERMANN: -- history estoppel, or is this just evidence
12 that we can consider to determine whether or not, under the particular
13 circumstances we have here, that the broader range would have allowed the
14 artisans to immediately understand that they had possession?

15 MR. BREGMAN: The latter.

16 JUDGE OBERMANN: The latter, thank you.

17 MR. BREGMAN: Prosecution history estoppel generally goes to
18 claim construction and other things. This is an -- if I were to try and fix it
19 into a whole of what the RAI case says, RAI case talks about inconsistent
20 statements. Were there any inconsistent statements about the invention? I
21 would say yes this is an inconsistent statement.

22 JUDGE OBERMANN: So RAI instructs us that inconsistent
23 statements during prosecution are relevant, or --

24 MR. BREGMAN: I think it mostly talks about in the specification, to
25 be honest.

26 JUDGE OBERMANN: Okay. But the same thing.

1 MR. BREGMAN: That's not what the case says. But I think this is an
2 inconsistent statement during prosecution --

3 JUDGE OBERMANN: Yeah.

4 MR. BREGMAN: -- which is part of the intrinsic record, so.

5 JUDGE OBERMANN: Got you. Thank you.

6 MR. BREGMAN: I would argue that. Okay. So we can skip the next
7 slide, slide 16. And let's briefly look at the other cases the Patent Owner
8 relies on. And we can start with slide number 18. So these are a number of
9 cases. They're all discussed actually in RAI. The first one is the Wertheim
10 case. This was a appeal from prosecution, and this is the only case that
11 you'll find in the proceeding that's discussed anywhere with one of the
12 endpoints isn't disclosed. Every single one of the other cases, all of the
13 endpoints are disclosed.

14 JUDGE OBERMANN: Which case are you talking about, Wertheim?

15 MR. BREGMAN: The Wertheim case. And if you look on the slide,
16 on slide 18, you can see what it is. They described 25 to 60 percent. And
17 then they describe embodiments of 36 and 50 percent. And then the claims
18 with 35 to 60 percent. So they have the endpoints of 60 disclosed, but they
19 didn't have 35. They had 36.

20 JUDGE OBERMANN: But they had an example that was 36?

21 MR. BREGMAN: They had an example that was 36. And what the
22 Court said here that they consider -- the Court considered 35 to 60 to be part
23 of the applicant's invention. So it was the same invention. That's what the
24 Court found here. So this is the only case where the endpoint isn't disclosed.
25 The other ones, In Re Blaser, all the endpoints are disclosed. And I've got
26 them up on the screen. I don't need to read them to you. And they're exactly

1 the same for the Kolmes case. So the endpoints are a very important factor
2 to be looked at. So what have we got here? If we go to slide 21, the range
3 isn't disclosed. The endpoints aren't disclosed. It's a different invention, we
4 know that because of the inconsistent statement that they made, and
5 therefore they should get this later date. Not saying that they don't have a
6 patent, we're just saying that they get the later date. And that date is
7 September of 2015. If they get September 2015, there's no dispute that it's
8 anticipated.

9 So that's a case dispositive on this -- on the original claims and
10 obviously why they filed their amended -- their motion to amend the claims.
11 I'm going to skip the next two -- slide 22 sort of just walks through the '888
12 publication vs. the '564. And then we've got claim charts on the rest of the
13 slides in case Your Honors are interested. We don't need to go through
14 those in detail in the interest of time.

15 Let's now talk about the Grounds 2 to 4. So these grounds rely on
16 Stowers 2008. This is one of the most complicated IPRs I've ever worked
17 on. There's so many different moving parts to it. There's embargoes and
18 whether things are and about third-party discovery. So it is complicated.

19 And one of the main arguments that they raise for these grounds,
20 which are based on Stowers 2008, is whether or not Stowers is prior art,
21 whether or not it was publicly available. If we look at slide 30, the date that
22 we need to beat -- well, the critical date, the earliest priority date, assuming
23 that they don't -- they aren't stuck with the September -- if they stuck with
24 the date that they filed the '564 patent, then the embargo is irrelevant,
25 whether or not there's an embargo, right? Because they added the new
26 subject matter, the new thickness in the claims when they filed the '564. If

1 they're entitled to that date, then the embargo makes no difference because it
2 was published well before 2015.

3 JUDGE OBERMANN: So in other words, if we agree with you that
4 they're not entitled to a date that would remove the '888 application as prior
5 art? That also does away with the arguments about the embargo for Stowers
6 2008.

7 MR. BREGMAN: Right. And Trikeriotis.

8 JUDGE OBERMANN: Okay.

9 MR. BREGMAN: So just for the sake of argument and the way we
10 briefed it is -- well, let's assume for this purposes that they are entitled to
11 earliest date. Then is Stowers 2008 still prior art? And we will show you
12 that all the objective evidence shows that it was publicly available in
13 October 2008. And the only evidence that they have is subjective evidence
14 that they -- that Dr. Stowers requested an embargo. Just want to raise this
15 ProQuest thing again. I know we discussed it. We only raised the ProQuest
16 to corroborate the OSU publication. These are two completely different
17 publications. One was by OSU's library, Oregon State University library,
18 and the other was by ProQuest, a third-party publisher.

19 So the third party publisher, whether or not there was an embargo, you
20 know, they recanted their testimony -- sworn testimony that they've given to
21 us. We thank Your Honors for allowing us to try to get to the bottom of that
22 with additional discovery. But we don't need ProQuest at all. ProQuest was
23 just added to corroborate the earlier date that there was a different
24 publication that was also published within the time period.

25 JUDGE OBERMANN: So in other words, there's no argument from
26 Patent Owner that the OSU publication was under embargo?

1 MR. BREGMAN: No. I'll show you what they say about that. They
2 claim it was under embargo, but you'll see that there is no evidence that it
3 was ever under embargo. So those are two different embargoes. There was
4 an embargo, apparently, with ProQuest and a separate embargo apparently
5 with OSU.

6 JUDGE OBERMANN: And does Dr. Stowers talk about this OSU
7 embargo?

8 MR. BREGMAN: He does. That's all he talks about is the OSU
9 embargo.

10 JUDGE OBERMANN: Oh, I see.

11 MR. BREGMAN: Yeah. Yeah.

12 JUDGE OBERMANN: And then ProQuest goes to Ms. Stewart's
13 testimony.

14 MR. BREGMAN: Exactly.

15 JUDGE OBERMANN: Okay.

16 MR. BREGMAN: Exactly. So the only sworn testimony in this case
17 about there -- whether or not there actually was a publication and when it
18 was published is by Dr. Sylvia Hall-Ellis. She's a expert librarian, and she
19 said the following -- and this is on slide 31. She said there was a copy --
20 there were two different versions of this. One was a copy located in the
21 digital repository at Oregon State University. That's a publication number
22 one. That's the one we rely on. And there was another publication through
23 ProQuest, and that was -- that's the one you just talked about. So it was
24 available in two places.

25 If you look at slide 32, how does she -- what does she say about this?
26 She said she examined these records called MARC Records. These are

1 standardized records that all librarians and publishers use to say when their
2 documents are available, either when you can check them out of a library or
3 when you can download them. And she concluded, as you can see on the
4 slide, that the OSU publication was publicly available on October 21st,
5 2008. And she knows that because it says date entered, and date entered to
6 her means that it was publicly ready for download. That's what it means.
7 That's her sworn testimony.

8 If you go to slide 33, this is corroborated directly from OSU's own
9 manager at their library at OSU. Our librarian sent them an email saying,
10 "Hey, could you give us a declaration attesting to the date?" And this is
11 what he responded, he said, "Hello, Risa" - that's one of our librarians at our
12 firm - "I'm not aware of any declaration or certification that we provide for
13 our resources," so he's not -- they're not going to give us a declaration, "But
14 the date that the dissertation was published through our archive is coded into
15 the record."

16 JUDGE OBERMANN: Okay. Just a second.

17 MR. BREGMAN: Yeah.

18 JUDGE OBERMANN: So this is not sworn testimony?

19 MR. BREGMAN: Not sworn testimony.

20 JUDGE OBERMANN: What does Dr. Stower swear to about this?

21 MR. BREGMAN: Dr. Stower swears to -- I can jump to his slide.
22 Here it is right here. This is the next slide, slide 34. He said when he
23 submitted his thesis, he requested it to be embargoed. So he remembers 17
24 years ago that he -- and he's a nice guy. I've taken his deposition. I have no
25 reason to doubt that he recalls that he requested an embargo. It wasn't
26 embargoed though.

1 JUDGE OBERMANN: Is that complete extent of his testimony?
2 Does he have any corroborating evidence?

3 MR. BREGMAN: The corroborating evidence he has is an email that
4 he sent to his CEO saying the period that the embargo was is now lifted.
5 That's it.

6 JUDGE OBERMANN: He sent it to who?

7 MR. BREGMAN: He sent it -- he's now at Cambria.

8 JUDGE OBERMANN: Okay.

9 MR. BREGMAN: And he sent it to his CEO at the time saying the
10 embargo is now lifted. And here's a link to the documents. So he never
11 checked it. And during his deposition, we asked him, "Did you ever check
12 whether the publication was available?" And he said he didn't.

13 JUDGE OBERMANN: Okay. And he had no kind of documentary
14 evidence that --

15 MR. BREGMAN: No.

16 JUDGE OBERMANN: Okay.

17 MR. BREGMAN: No.

18 JUDGE OBERMANN: Thank you.

19 MR. BREGMAN: So the best we got from them is -- and again I have
20 no reason to doubt that he believes that he requested an embargo. We just
21 don't think there was an embargo --

22 (Simultaneous speaking.)

23 JUDGE OBERMANN: Okay. So what you've just showed me now
24 between what Ms. Ellis said, this email from Mr. Engelbert, and this
25 testimony that you've just referred to, is that the sum total of the evidence on
26 this issue?

1 MR. BREGMAN: No. There's one other email that one of the other
2 inventors on the patent wrote from Inpria to the library. I think it's 2012
3 maybe, Exhibit 2012. It said, "Can you confirm that these three dissertations
4 were embargoed?" The person in the OSU library wrote back saying, "I
5 don't know one way or the other. It doesn't necessarily mean that it wasn't
6 embargoed. Sorry, it's not the answer that you're looking for."

7 JUDGE OBERMANN: Thank you. And Mr. Wolfe, is that the
8 correct exhibit number?

9 MR. WOLFE: Yes, it's 2012, Your Honor.

10 JUDGE OBERMANN: Thank you very much. Okay.

11 JUDGE DENNETT: I'm sorry, can you -- I apologize. Could you
12 repeat the exhibit number, please? I just missed it.

13 MR. BREGMAN: 2012. 2012.

14 JUDGE DENNETT: Thank you very much.

15 JUDGE OBERMANN: So we have you attesting that that -- what
16 we've just discussed now is the full sum total on the issue of the OSU
17 embargo?

18 MR. BREGMAN: Yes, I believe that's it.

19 JUDGE OBERMANN: Great.

20 MR. BREGMAN: But I'm sure Mr. Wolfe will correct me when he
21 stands up.

22 JUDGE OBERMANN: Okay. Thank you.

23 MR. BREGMAN: Yes. So, sorry, there's one more thing, OSU's own
24 website. So rebalancing the evidence -- and as Your Honors know that it's a
25 preponderance of the evidence standard, yeah, so we're sort of balancing the
26 evidence. What's the outcome? In Petitioner's evidence, we've got the

1 MARC record. This is on slide 35. We got the Hall-Ellis declaration.
2 We've got OSU's website. That's Exhibit 2012. And we got OSU's email
3 that you just saw saying that that's the date it was published. What have they
4 got on their side? They got Dr. Stowers saying that he requested an
5 embargo. He's not sure whether there was. And you got this email saying,
6 "I can't tell you one way or another what the answer is. It may have been
7 embargoed. Sorry, it's not the answer you're looking for." So that's the total
8 of the evidence on the publication.

9 Next, I want to sort of jump to the sort of substance of the claims and
10 the substance of Stowers. It seems to be a lot of emphasis by Patent Owner
11 that we relied on inherency for everything. And that's just not the case. And
12 I thought this chart that we included on slide 37 really drives the point home.
13 You can see here that we didn't rely on inherency alone for anything at all
14 for these grounds. We added inherency as an additional disclosure. You can
15 see that in this chart very clearly in some instances. We also have an
16 express disclosure, and in some instances, we believe it's obvious. So
17 inherency was -- is an additional argument, but certainly not the only
18 argument for each of the claim elements. I just wanted to make that clear.

19 So what is the Patent Owner's primary argument for Stowers? And
20 this is on slide 38. They say Lam's assumption that the forms are the same,
21 however, is unsupported, and Lam fails to meet the strict requirements of
22 inherency. Again, we don't only rely on inherency, and the forms don't have
23 to be the same. There's no reason why the forms in Stowers 2008 have to be
24 exactly the same as the forms in the '564 patent. The claims are much
25 broader. You're going to hear from Amanda later just how broad those
26 claims are. All that we have to do is show that Stowers 2008 discloses the

1 elements of the claim, that the forms do not need to be identical. But in any
2 event, they are both HafSO_x forms. That's what they are. He describes
3 HafSO_x and ZircSO_x. He uses the same precursors, and then he's having to
4 use the exactly the same precursors mixed in the exact same order. It starts
5 with hafnium oxide chloride. They add some hydrogen peroxide, and then
6 they add some sulfuric acid. It's quite a simple formula.

7 And that's -- and then, secondly, the Patent Owner's attempt to inject
8 some confusion by doing this. They say -- and this is on slide -- sorry,
9 number 39. And they say there are significant differences here between the
10 forms in the concentrations and the processing conditions. Firstly, that
11 statement of significant differences is never supported by their expert, but
12 it's important to note that these are minor differences. And how do we know
13 that? And these are like some metal concentration, some rest time, some
14 pre-exposure bakes, some spin coating speeds, et cetera, and time. None of
15 that affects the ultimate coating. These things just go to optimization. How
16 do we know that? Well, first, let's see what their expert said. And this is on
17 slide 14. So --

18 JUDGE OBERMANN: Can I ask a question?

19 MR. BREGMAN: Yes. Yeah.

20 JUDGE OBERMANN: Because I'm not seeing on this slide 39
21 anything that's in the claim itself. So is their argument that they're trying to
22 show that whatever you say is inherent hasn't been made out because you
23 haven't shown an identity between what the article is in Stowers is 2008?

24 MR. BREGMAN: Right.

25 JUDGE OBERMANN: Okay. I got you.

26 MR. BREGMAN: That's exactly right. There is actually one thing

1 that is in the claims, Your Honor. The metal to peroxide shows up in one of
2 the dependent claims.

3 JUDGE OBERMANN: Thank you.

4 MR. BREGMAN: None of those other factors show up in any of the
5 claims. If they were so important to alter the form, you would think that
6 they would have claimed it. So what did Patent Owner's expert actually
7 compare with these differences? So this is what he said. This is his
8 testimony, "I've been asked --" and this is on slide 40, "I've been asked to
9 consider in the context of forms such as those discussed in the '564 patent
10 whether the differences in the ratio concentrations of materials, the
11 differences in the manner in which those materials are combined, can have
12 an impact." Could that have any impact? And he says, yes, they could have
13 an impact. You see it on that slide and you look on the next slide, "Allowing
14 the mixtures to rest for too long a time could allow for unwarranted
15 reactions." That's great. They could possibly have an impact. But he never
16 answers the question whether they do actually have an impact.

17 Who does answer the question? If you look on the next slides, slide
18 42, who actually compares them? Our expert Dr. Holland, she went through
19 every single one of these differences, and she said that they do not have a
20 material change in the properties of the form and the resulting form.

21 And that you can see on slide 42 and slide 43. So there's no material
22 impact on these small, little things that they reaching for that would change
23 the ultimate form. The form is really just got to functional limitations in it,
24 by the way. The ligands need to be radiation sensitive, and then when they
25 exposed to radiation, they need to chemically change so that you get
26 different dissolution rates. Well, we can talk about those if Your Honors are

1 interested, but that's -- the different dissolution rates being exposed to
2 radiation is how every single photoresist works. That's how -- without
3 question how photoresist work. You will expose them to radiation, there's a
4 chemical change, and then either the photoresist becomes more difficult to
5 remove or less difficult to remove. But the client told me is what positive --
6 is positive tone and negative tone. Positive tone is that the way of
7 remembering it is what shows goes. So whatever's exposed to it gets washed
8 away. And negative tone is the opposite. Whatever is exposed to radiation
9 is what stays.

10 So again, turning to slide 44, you know, when you read Patent
11 Owner's arguments, you think that the -- that we only rely on inherency.
12 That's not true. Complete side issue, we rely on express disclosure and then
13 of course point to inherency as a backup. And the inherency, if you look at
14 the inherently disclosed properties in the left-hand column here on slide 44,
15 these are material properties of the material, whether the ligands are
16 radiation sensitive, et cetera. And the case law that we've included here on
17 the slide says that the inventors' documents, including the patent itself, may
18 provide evidence of an inherent disclosure. So whether or not this material,
19 this HafSOx material, has got peroxide ligands that are radiation sensitive,
20 the author didn't even have to know that they would be radiation sensitive.
21 As long as the material's inherently radiation sensitive, and that's even
22 discovered later, that's fine.

23 The next case, the EMI group actually says that. It says, "Rules of
24 natural law that are recited in a case do not need to be recognized by one of
25 ordinary skill in the art for a finding of inherency." So they don't even have
26 to know. In this case, Dr. Stowers did know, by the way, that the peroxide

1 ligands were radiation sensitive, and we point to that in the evidence as an
2 express disclosure. We did the same thing with the slides 45, Your Honors,
3 through 50, which really is just summarizing the inherent and expressed
4 disclosures in Stowers 2008. And those are just in chart form for your
5 convenience. So if we end off the section on slide 51, Stowers is prior art.
6 If they're only entitled to their filing dates of the '564 patent application, of
7 course the embargo and everything else just makes no difference.

8 But even if they're entitled to the earlier date we've got -- we're the
9 only party that's got sworn evidence in this case that -- of public availability,
10 and the best that they've got is Dr. Stowers recalling that he requested an
11 embargo. So I just think that their -- the evidence is overwhelming. I'm
12 going to take things a little bit out of order here because I want to touch on
13 the proposed amended claims as well because they also go to the same
14 similar issue. So if we jump to slide 109 -- and I apologize for Your Honors
15 on video conference, you can't see my slides, but I'm jumping to slide 109.
16 It's quite far away. But I've got it up here on the screen. I don't know if you
17 can see our slides that we're displaying, but I've got it up on the screen here
18 for Judge Obermann.

19 So what they did in claim 13, and this is their claim -- their
20 independent amended claim, is they took out that range of thicknesses from
21 5 to 30 and they replace it with about 25 -- a thickness of about 25. Stowers
22 2008, as you can see on slide 109 in the left-hand corner, specifically says
23 that HafSOx and its zirconium analog, ZircSOx, can be deposited in forms
24 ranging in thickness from 2 to 500 nanometers. So it discloses this broad
25 range, and that's an express disclosure. It does give an example later - and
26 you could see it on the right in 2008 - that it does a working example where

1 it uses thicknesses of 30 to 35. So we believe it's both expressly disclosed,
2 but if you don't like that argument, we believe that it's obvious. It would be
3 obvious to a person of ordinary skill in the art because the range is disclosed.

4 And if we look at the next slide, sorry, slide number 111, our expert,
5 Dr. Holland, has explained how as feature sizes get smaller, so as you get
6 these line widths that get smaller in semiconductors, which is continuously
7 happening due to Moore's law, that your processes would get faster all the
8 time and your features would get smaller and you get more and more
9 transistors per chip. As you're getting smaller feature sizes, you necessarily
10 have to have thinner resist because if you don't, you get something called
11 patent collapse where the resist collapses in on itself and the walls collapse
12 in on itself. So you necessarily have to have thinner and thinner resist as
13 your feature sizes get smaller. That's actually mentioned in the Trikeriotis
14 reference in the very first -- I think it's, again, the first line of the reference.

15 JUDGE OBERMANN: I don't think the burden ever shifts to the
16 Patent Owner here.

17 MR. BREGMAN: I -- encompassing range shift the burden to the
18 applicant. I can't remember what that is to be honest, Your Honor. So
19 please ignore that top part because I don't know -- I can't remember if that is.
20 Encompassing range shifts the burden. I can't remember what that is. Next,
21 we're going to go back to the regular sequence, and this is Trikeriotis.
22 Trikeriotis, we saw it in the slide number 53. So the arguments in
23 Trikeriotis they make is that Trikeriotis also isn't prior art. And this patent
24 owner tries to make a big deal out of this. But there is no question
25 whatsoever that Trikeriotis was published electronically in March of 2010,
26 and then we included both the print and the electronic version with the

1 petition. How do we know that? This is slide 54. We've got -- again, Dr.
2 Hall-Ellis says that it was electronically available as of March 25th, 2010,
3 and we've got a deponent from Speed who's the third-party publisher - this is
4 on slide 55 -- saying that it was also available in electronic version as of
5 March 25th, 2010. He said it was also published in print version. Now we
6 relied on both. Your Honors can look at our petition on page number 23.
7 When we list that March 25th date, 2010, we say, "See the electronic
8 version." And we attach the electronic version. I forget the exact exhibit
9 number. Maybe, Amanda, you can find it for me. But the attached -- I think
10 it may be 1016?

11 MS. WILLIAMSON: It's 1030 and 1024.

12 MR. BREGMAN: 1030 and 1024. 1024 is the printed -- the printer
13 copy and the other one is the electronic version. You're going to see Patent
14 Owner argue that we only cited to 1024. They're the identical document.
15 We provided both documents. There can be no dispute that the electronic
16 version was available, and that's the date we relied on when the electronic
17 version was made available.

18 In the interest of time, I'm going to skip through most of this other
19 material here and just jump to Trikeriotis with respect to the amended
20 claims. And that's going to be slide number 112. Is this it here? Yes, slide
21 number 112. And for Trikeriotis, Trikeriotis, as you can see, and this is
22 from Dr. Holland's declaration, discloses form thicknesses ranging from 30
23 to 200 nanometers. So it doesn't say 25 nanometers. We believe that it
24 would be obvious to go to 25 nanometers. Why do we believe that?
25 Because the very first sentence of Trikeriotis, is the following, right here.
26 She has it in the second highlighted portion. She says, "The trend of ever-

1 decreasing feature sizes and subsequent lithography generations is paralleled
2 by the need to reduce resistance to prevent patent collapse."

3 JUDGE OBERMANN: I have a question, Counsel. Doesn't this run
4 counter to your argument that a difference of 5 nanometers changes the
5 properties so that it's, you know --

6 MR. BREGMAN: So we don't think that the thickness is a big deal.
7 They think it's a big deal. That's what they argue to the patent office to
8 secure allowance. So it's an inconsistent statement made by Patent Owner to
9 get allowance.

10 JUDGE OBERMANN: Do you have any evidence in the record that
11 the properties would be the same going from 30 nanometers to 25
12 nanometers?

13 MR. BREGMAN: We don't. I don't think we're arguing necessarily
14 that the properties would be the same, Your Honor. We're just saying that
15 the trend -- as it says here, the trend as you get smaller feature sizes,
16 someone skilled in the art would be motivated to try it with smaller. Might
17 be different properties, frankly. I don't even care if it's different properties.
18 I'm just saying a person of ordinary skill in the art would be motivated to go
19 thinner because the feature sizes are getting smaller.

20 So it might completely have different properties. They may be
21 completely right. That's not the argument we're making. The argument
22 we're making is, of course, as your feature sizes gets smaller, you're going to
23 have to go thinner and thinner resist. There's nothing that's completely
24 obvious to a person of ordinary skill in the art that resists over time are going
25 to get thinner and thinner. Next year they're going to be thinner. A year
26 afterwards, they're going to get thinner. That's just the trend that's

1 happening as your feature sizes get smaller. And that's what Dr. Holland is
2 assessing to. So it might completely have different properties, Your Honor.
3 Okay. One thing I just want to point out here before Amanda takes over is I
4 just want to point out something that I think maybe you misconstrued and
5 you had in your preliminary guidance. So Your Honor said in the
6 preliminary guidance, the petitioners rely on inherency for Stowers and
7 inherency for Trikeriotis.

8 JUDGE OBERMANN: I'm sorry, which slide are we on?

9 MR. BREGMAN: This -- sorry, this is slide number 113. Just want
10 to point out -- and we did put this in our sur-reply, Your Honor, so you will
11 have it in a brief, that we relied on Stowers expressly not inherently
12 anticipating the claims in this and/or rendering it obvious. And we did the
13 same thing for Trikeriotis. So not to tell Your Honors that you did anything
14 wrong, I just wanted to just raise that point.

15 JUDGE OBERMANN: So that the misunderstanding or error would
16 be that you actually have evidence that it was expressly --

17 MR. BREGMAN: Correct.

18 JUDGE OBERMANN: Okay.

19 MR. BREGMAN: Correct. And with that, I'm going to hand it over
20 to Amanda.

21 MS. WILLIAMSON: Good afternoon, Your Honors. Amanda
22 Williamson on behalf of Lam. And as Dion said, I'll be addressing
23 Petitioner's opposition to Patent Owner's motion to amend the claim. And
24 like Dion, I'll try to hit the high points and answer your questions. I expect
25 today we'll spend some significant time on written description and
26 enablement. These claims are what's called functional genus claims, and

1 that law has been evolving quite a bit over time and received a lot of
2 attention from the Federal Circuit and the Supreme Court. It's something
3 that I follow quite closely. So I think you're going to be happy to have some
4 time limits, or I might drone on and on, and you, of course, want to go home
5 soon. Before we get to that -- actually, I'll skip over. Let's see. What -- as
6 we -- as Your Honors know, Patent Owners are suggesting to amend two
7 claims.

8 JUDGE OBERMANN: I'm sorry, what slide is this?

9 MS. WILLIAMSON: Oh, I'm sorry.

10 JUDGE OBERMANN: Thank you.

11 MS. WILLIAMSON: Slide 72.

12 JUDGE OBERMANN: Thank you.

13 MS. WILLIAMSON: These two amendments to the claims won't
14 save them. The claims, as amended, still suffer from lack of written
15 description and lack of enablement. They include terms that are indefinite.
16 They are rendered obvious, but by the same art that Dion has discussed, the
17 Stowers 2008 and the Trikeriotis references, they are also anticipated and/or
18 obvious in view of another reference called Keszler. So starting with, let me
19 see, slide 74 and written description. We're going to show Your Honors
20 three things that the substitute claims claim a very large genus with a
21 functional requirement, that the field of the art in this area is very
22 unpredictable, and that the examples provided in the '564 specification are
23 limited to a tiny portion of this genus. Peroxide ligands combined with
24 hafnium and zirconium forming HafSO_x and ZircSO_x semiconductor film
25 coatings. The specification teaches nothing more than that.

26 Turning to slide 75. So what do we mean when we say functional

1 genus claim? Here it's shown on the slide. The claimed coating material is
2 not limited by a precise chemical structure, rather it is a group or a genus of
3 metal ligand compounds that is limited by a function, and that function is
4 radiation sensitivity when exposed to light such that it alters the coating's
5 physical properties. Here, as shown on slide 75, when a patent claims the
6 genus using functional language, the patent owner must show that he has
7 made a generic invention that achieves a claimed result. Here, that means a
8 broad genus of coating materials that are radiation sensitive.

9 As discussed in slide 76, the Federal Circuit allows patent owners to
10 show written description for functionally claimed genres in two ways.
11 First, the patent owner can describe a representative number of species that
12 covers species across the entire scope of the genus, or patent owner can
13 demonstrate that the specification discloses a structure-function relationship
14 or correlation that allows a POSA to immediately envision all the
15 compounds that would have the claimed function. When the field of art is
16 unpredictable, as shown in the cases on the slide -- on the next slide, 77,
17 more must be shown, and structure-function correlation can be more difficult
18 to establish.

19 So as we turn to slide 78, what does the evidence say about
20 predictability of coating films that are radiation sensitive? Well, it is well
21 known that the chemical arts are unpredictable, and Petitioner's expert, Dr.
22 Holland, testified that the technology at issue in this case is also highly
23 unpredictable. Patent Owner's expert does not offer any testimony rebutting
24 the unpredictability of this field, and Patent Owner is silent on the issue. As
25 Your Honors will see, this is a pattern in Patent Owner's case.

26 Next, what is the evidence say about the size of the genus? As shown

1 here in slide 79, Petitioner's expert, Dr. Holland, testified that the substitute
2 claims encompass a nearly infinite genus. According to Dr. Holland, the
3 genus is nearly infinite because it includes combinations of a nearly infinite
4 number of ligands, and this is just a product of simple math and would be
5 apparent to anyone skilled in the chemical arts. A ligand, as Your Honors
6 know and as shown here in Dr. Holland's testimony, is any atom or molecule
7 with a functional group that binds to a central atom, here a metal in a
8 coordination complex. As with unpredictability, Patent Owner does not
9 offer testimony from its expert or any other test evidence rebutting Dr.
10 Holland's definition of a ligand. It is pure attorney argument. At the very
11 least, this is a large genus. Under the standard set forth in Idenix. In Idenix,
12 the genus numbered in the thousands, and the Federal Circuit found that
13 there, the genus was broad, and it ultimately disallowed the claims for lack
14 of written description. Next, what does the evidence tell us about the
15 representative species?

16 JUDGE OBERMANN: I'm sorry, you mentioned a case. Is it on one
17 of the slides? Idenix.

18 MS. WILLIAMSON: It is Idenix here, shown on 79 at the bottom.

19 JUDGE OBERMANN: Thank you.

20 MS. WILLIAMSON: Next, what does the evidence tell us about
21 representative species in the '564 patent specification? As shown here on
22 slide 80, Petitioner's expert, Dr. Holland, testified that the specification of
23 the '564 patent identified only one species and that species are ligands with
24 peroxide groups. As shown in slide 81, Dr. Holland also testified that the
25 '564 patent identifies only two examples. I'm sorry, on the next slide, which
26 is slide 81, Dr. Holland testified that the specification shows only two metal

1 ions here, hafnium and zirconium ions. And then going back to slide 80, we
2 continue to see the same pattern from Patent Owner. They offer no
3 testimony from their experts about the size of the genus or the representative
4 species.

5 JUDGE OBERMANN: Have you presented evidence about the size
6 of the genus?

7 MS. WILLIAMSON: Yes, from Dr. Holland.

8 JUDGE OBERMANN: And is that on one of these slides?

9 MS. WILLIAMSON: Yes. She testified -- if we go back on slide 79.
10 The -- because -- her genus is based on a combination of the ligands with
11 potential metal, no ions.

12 JUDGE OBERMANN: Oh, so she says nearly infinite number?

13 MS. WILLIAMSON: Yes.

14 JUDGE OBERMANN: And that's unopposed?

15 MS. WILLIAMSON: That's unopposed by expert testimony.

16 JUDGE OBERMANN: Was it explored during cross-examination?

17 MS. WILLIAMSON: No, it was not because their expert did not offer
18 a declaration in support of their motion to amend. So we did not have an
19 opportunity to depose him on this issue.

20 JUDGE OBERMANN: I mean, did they depose Dr. Holland on this
21 point?

22 MS. WILLIAMSON: They did.

23 JUDGE OBERMANN: And did she stick with it, or was there
24 anything that came out of that cross-examination?

25 MS. WILLIAMSON: I believe she stuck with this answer.

26 JUDGE OBERMANN: Okay. And did they put in any evidence

1 other than -- you know, I understand that there's no declaration evidence?
2 What did they put in?

3 MS. WILLIAMSON: No, none other than -- no other response than
4 Dr. Holland hadn't proven the genus was this large.

5 JUDGE OBERMANN: Okay. Thank you.

6 MS. WILLIAMSON: And so the only representative species we have
7 in this group is the peroxide zirconium hafnium set of species. And I think
8 that Patent Owner would agree to that. However, that's only a tiny part of
9 the genus. The claim is not limited just to peroxide ligands. It's much, much
10 broader, and there's no example of anything else, such that the one -- the
11 peroxide species does not represent the broad genus that actually exists
12 within this claim.

13 JUDGE OBERMANN: Would there be -- do we need to construe this
14 genus as a ligand because it's really a radiation-sensitive ligand? And do we
15 have any evidence on that?

16 MS. WILLIAMSON: Yes, it absolutely must be radiation sensitive
17 because that's its function is to have the function of being radiation sensitive,
18 so.

19 JUDGE OBERMANN: And do we know that the testimony that your
20 expert gave about this infinite number is tethered to radiation-sensitive
21 ligands?

22 MS. WILLIAMSON: It is, Your Honor. And that's one of the
23 problems with having such a big genus. And we'll see that as particularly
24 with enablement, that we don't know which ligand metal complexes will be
25 light sensitive or radiation sensitive until we test them. So you have to take
26 this very large group, put them together, and then test each one to see if it

1 has the functional quality or the functional requirement of the claims. We
2 know -- or we understand that the peroxide ligand, combined with the
3 hafnium and the zirconium, will have the claimed function.

4 JUDGE OBERMANN: Do we have any evidence of a single
5 radiation-sensitive ligand that is not the particular species that's been
6 disclosed here? Do you have any evidence of any --

7 MS. WILLIAMSON: No.

8 JUDGE OBERMANN: So she's saying that there's an infinite
9 number, but you can't point to even one other than this one?

10 MS. WILLIAMSON: Well --

11 MR. BREGMAN: Trikeriotis.

12 MS. WILLIAMSON: -- in Trikeriotis in that reference, there are. I
13 can look up examples of different ligand metal compounds in those.

14 JUDGE OBERMANN: Well, aren't we really looking to see whether
15 or not the written description requirement is met here with respect to their
16 invention? And they have given us a species that's based on a particular
17 ligand, and your expert has come in and said, well, there's an infinite number
18 of possibilities. Do we have any examples on your end, since you bear the
19 burden here, of something other than the species that's been described?

20 MS. WILLIAMSON: Not within the four corners of the patent, Your
21 Honor.

22 JUDGE OBERMANN: Well, what about any evidence that you've
23 come forward to, you know, bolster the idea that there's an infinite number?

24 MS. WILLIAMSON: Well, there would be several different kinds of
25 ligands that would be radiation sensitive, Your Honor.

26 JUDGE OBERMANN: How do you know? Because you just told

1 me that you have to test each one.

2 MS. WILLIAMSON: Because we know that there are other
3 semiconductor coatings and other film coatings that are photo -- that are
4 radiation sensitive.

5 JUDGE OBERMANN: And is that in the record somewhere?

6 MS. WILLIAMSON: And so I'd have to look to Trikeriotis. It does
7 have ligands that are not peroxide and that are photo --

8 JUDGE OBERMANN: Okay. And was that briefed?

9 MS. WILLIAMSON: The references included, I don't believe we
10 have particularly called out which.

11 JUDGE OBERMANN: Okay. So what I'm really looking for --
12 because it's too late to do it right here, and I don't want to, you know, trip
13 you up. But I'm just trying to get a sense of the evidence that we have to
14 bolster the idea that was -- your expert testified that there's an infinite
15 number of radiosensitive ligands out there, and that they've only described
16 one in that very large genus. And I just would like to get a sense of whether
17 you've directed us to others besides just this sort of amorphous statement
18 that there's an infinite number. Has she identified even one other one that's
19 not disclosed?

20 MS. WILLIAMSON: She has not in her declaration, no.

21 JUDGE OBERMANN: Okay. Thank you.

22 MS. WILLIAMSON: So going back, Your Honor, we would say that
23 this one is not representative of others that could be within the genus, and I
24 think that the Court's holding is shown on slide 82 is instructive on this
25 point. And I'll try to move through because we're a little bit behind on time.
26 But in that court -- in that case in Juno, and both in Juno and AbbVie, only

1 one type of species that were potentially within the genus was described.
2 The courts found that written description was lacking and that there was no
3 representative species because it didn't represent others that could be within
4 the genus.

5 JUDGE OBERMANN: Okay. This is where I'm having trouble.
6 And I don't want to, you know, just beat a dead horse, but, you know, the
7 cases that I'm familiar with -- and I have to focus like a laser beam on the
8 idea that this is your burden. It's not the Patent Owner's burden. We know
9 the one species was disclosed, and we have testimony that there's an infinite
10 number that could be in. And I'm just concerned that, you know, the other
11 cases you're pointing me to, they -- I have a feeling that they've shown the
12 courts there something about the breadth of that genus in terms of what else
13 could be in it and I'm not convinced that you've done that here.

14 MS. WILLIAMSON: Yes, Your Honor. So I would go back to
15 Trikeriotis. It was not listed as part of the written description analysis, but
16 there are -- our expert has discussed other radio -- radiation-sensitive ligands
17 in that context.

18 JUDGE OBERMANN: Okay. The same expert that told me there's
19 an infinite number?

20 MS. WILLIAMSON: Yes, Dr. Holland.

21 JUDGE OBERMANN: Okay. But it was in the context of a different
22 issue.

23 MS. WILLIAMSON: In the context of analyzing the Trikeriotis
24 reference.

25 JUDGE OBERMANN: Okay. Thank you.

26 MS. WILLIAMSON: And so I think, Your Honor, I'll talk briefly

1 about the Hynix Semiconductor, Rambus case, which is -- appears on slide
2 83. We do not believe that case that's cited by Patent Owners is applicable
3 because in that case, there really were only two species and it was an
4 unpredictable field. So the facts are just not squarely on point here where, as
5 Your Honors pointed out, there is unpredictability about what is
6 radiosensitive, radiation sensitive. So we really believe it's not on point.
7 And I think I'll skip forward, Your Honor, to enablement, because that may
8 be an easier point for this case, or maybe one that falls more squarely within
9 the analysis that you're looking for. For enablement, the Patent Owner must
10 show that the claims are fully enabled. That a person of skill in the art can
11 practice them without undue experimentation. And here, that is really
12 impossible because we only know about one type of metal ligand complex
13 or coating that falls within the scope of the claims. So I think, Your Honor,
14 would agree with me that there are many, many different molecules and
15 atoms that can be bound to metal ligands and that there's nothing structurally
16 within the claim that limits it beyond the atoms -- you know, beyond the
17 periodic table on molecules that could be made. There are just many, many,
18 many options to try out to see if you can find something that is radiation-
19 sensitive. So that's what we have in the context of enablement.

20 So if we turn to slide 89, we see that the evidence here talks about the
21 work necessary to determine to practice the remainder of the claim genus
22 outside the HafSOx and ZircSOx coatings. And as shown on slide 89,
23 Petitioner's expert, Dr. Holland, testified that practicing the full scope of the
24 invention would require making and testing each ligand and metal
25 combination to see if it were radiosensitive. And that testing, she opined,
26 was undue. This time, actually, if we go to the next slide, slide 90, Dr.

1 Banerjee agrees. Dr. Banerjee was asked what it would take to find which
2 ligand metal complex is for radiation sensitive, and he said a POSA could,
3 you know, mix up this precursor solution and then expose that resist, and
4 then measure the ash rate and the developer and compare them between the
5 exposed and not exposed parts, and that would be one experimental
6 technique that you could use. When asked about the time that this would
7 take, Dr. Banerjee further conceded that R&D takes time. This is the very
8 definition of iterative testing that the Federal Circuit has repeatedly found is
9 undue. There's simply no way to know without testing these metal ligand
10 complexes whether one will fall within the claims. And there are nearly
11 infinite number to be tested. So since Patent Owner -- and Patent Owner
12 actually never takes a position that that would be a reasonable amount of
13 testing that would be required to show -- to practice the full scope of the
14 genus.

15 JUDGE OBERMANN: I'm looking at the specification, like around
16 column 11, 35, 36, 37. It looks to me like there's a lot of different kinds of
17 cations, anions that are actually disclosed here. I'm not quite getting why
18 you're saying that there's only one species disclosed.

19 MS. WILLIAMSON: I'm sorry, could you --

20 JUDGE OBERMANN: Column 11, where they're talking about
21 examples of ions, titanium, zinc, calcium, indium, tin, antimony, bismuth
22 combinations.

23 MS. WILLIAMSON: Right, so -- sorry, Your Honor, didn't mean to
24 interrupt. Yes, there are many ions that are disclosed, and then each of these
25 ions would need to be tested with different ligands.

26 JUDGE OBERMANN: Okay. So you're saying that they didn't have

1 enough examples?

2 MS. WILLIAMSON: They only have an example of a peroxide -- of
3 a peroxide ligand complex to a metal. So any other ligand would have to be
4 tested from scratch to know whether it is going to be radiosensitive when
5 combined with -- combined with the metals that are listed here. So it's a
6 mix-and-match thing.

7 JUDGE OBERMANN: So in other words, they've obviously
8 suggested many different kinds of ligands here, but you're saying they
9 haven't tested enough? No.

10 MS. WILLIAMSON: No, I'm saying that they suggested many
11 different metal ions --

12 JUDGE OBERMANN: Okay.

13 MS. WILLIAMSON: -- which you're seeing here in column 11. So
14 the zirconium, the cerium, the tin, the tantalum, those are the metal ions.
15 Each one of those that need to be bound or complex to another molecule, a
16 ligand. And when you -- there is testimony from Dr. Holland, that when you
17 form that complex compound, you can change the sensitivity, the radiation
18 sensitivity. So you need to know whether the ligand figure that you're
19 complexing is radiosensitive -- radiation sensitive. Then whether the final
20 coating is radiation sensitive. So I'm saying that you start with these, and
21 then you basically multiply by an infinite number of ligands that you could
22 try. So you could try to see if they are radiation-sensitive films once you
23 complete the process. And there's nothing in the patent that tells you that if
24 you take any one of these and combine it with something other than a
25 peroxide ligand, whether it would be radiation sensitive, so you have to test.

26 MR. BREGMAN: Just to make the point that that's the light and that's

1 radiation sensitive in the claims. It's not the metal parts, so that -- the ligand
2 has to be radiation sensitive.

3 JUDGE OBERMANN: But doesn't it have to be a peroxide ligand?

4 MS. WILLIAMSON: No, there's no limitation as to the ligand. The
5 only disclosed ligand is the peroxide. So if Your Honor --

6 JUDGE OBERMANN: Okay, but claim 4 has the peroxide?

7 MS. WILLIAMSON: Yes.

8 JUDGE OBERMANN: But your -- so this is really to the broader
9 claims.

10 MS. WILLIAMSON: Yes.

11 JUDGE OBERMANN: Okay.

12 MS. WILLIAMSON: I'm sorry. That's my -- we are not challenging
13 the written description as to claim 4 --

14 JUDGE OBERMANN: Got you.

15 MS. WILLIAMSON: -- for the enablement --

16 JUDGE OBERMANN: Okay.

17 MS. WILLIAMSON: -- based on the ligand claim.

18 JUDGE OBERMANN: Okay.

19 MS. WILLIAMSON: So in the interest of time, I'd like to skip now to
20 slide 99 and Petitioner's argument with respect to the indefiniteness of the
21 term metal ion.

22 JUDGE OBERMANN: And I'm going to let you have a little more
23 time, since I asked a lot of questions, and I'll add some time to your friends,
24 too.

25 MS. WILLIAMSON: Okay.

26 JUDGE OBERMANN: So why don't we give you five minutes, and

1 it's not going to affect your rebuttal time.

2 MS. WILLIAMSON: Okay. So with respect to metal ions, here the
3 specification includes metalloids and non-metals and examples of metals but
4 provides no guidance on how to determine which of these metalloids or non-
5 metals actually fall within the term metal ion in the claims. This lack of
6 guidance leaves a POSA to determine -- or unable to determine the metes
7 and bounds of what is a metal ion. Now that -- you know, to a regular
8 POSA or chemist, you know, should be a fairly easy inquiry. We're familiar
9 with the periodic table, and we know that the periodic table identifies what is
10 a metal. So, you know, in the typical sense or in the ordinary course, you
11 would think that it would be easy to identify what is a metal ion. But here,
12 the disclosure in the patent specification makes that very difficult because as
13 we see in the patent, it includes in what it has identified in the specification
14 as a metal ion, things like boron, silicon, and antimony, which are
15 metalloids, they're not actually metals. But it doesn't identify all of them, so
16 it leaves the -- it leaves a person of skill to wonder why were some included,
17 some of these metalloids shown here in gray on the periodic table, and some
18 not included.

19 It also leads one to wonder why was phosphorus included.
20 Phosphorus is a non-metal, but the specification is classifying it or listing it,
21 suggesting that it is in fact a metal ion. And that's what's causing the
22 confusion here. What would be a simple term is expanded based on what it
23 appears to be a confusing and incomplete listing in the patent specification.
24 So I think Patent Owner will tell you that, well, occasionally in some one-off
25 reference, phosphorus has been called a metalloid, but that doesn't mean a
26 person of skill actually believes that phosphorus is a metal ion or a

1 metalloid. And then what about other non-metals like carbon and silicon,
2 are those also included as metal ions because they, in some unknown or
3 unspecified reference, have been called a metalloid by another party? We
4 just don't know. There's no natural boundary to what is a metal ion within
5 the term of the claim. And here at slide 99, we have Petitioner's expert who
6 testified that she could not determine what the scope of metal ion was and
7 claimed because of the confusing listing in the patent. Patent Owner has not
8 offered any testimony rebutting Dr. Holland's assertion that metal ion is
9 indefinite to one of skill in the art or has unknown boundaries to one of skill
10 in the art. Given the ambiguities and Patent Owner's lack of contrary
11 evidence, Your Honors, we believe the term is indefinite.

12 Finally, I'll touch briefly on the Keszler reference. If you want to turn
13 to slide 118, here, the Petitioner has not, as Patent Owner claims, cobbled
14 together separate embodiments but has rather evaluated the teachings of
15 Keszler and its examples as they are. Keszler anticipates or renders obvious
16 the substitute claims 13 through 23. To provide brief background, Keszler is
17 another reference from Stowers' lab. So it was him working as a graduate
18 student for another professor, and it discloses his work, including the
19 HafSO_x, ZircSO_x films that we see in the Stowers 2008 and 2009
20 references. If we turn to slide 120, we see that Keszler discloses one
21 embodiment, such as electronic devices having a thin film or laminate
22 structure comprising at least one hafnium or zirconium oxy hydroxy sulfate
23 compound. It further discloses masks or templates exposed through a photo
24 mask or via laser or electron beam to induce condensation and cross-linking
25 in the exposed area. This is plainly disclosing Stowers' HafSO_x, ZircSO_x
26 photoresist builds, the same coating that's disclosed in the '564 patent. Here,

1 when we look at examples 4 and example 7, example 4 is just disclosing the
2 substance, and then example 7 is showing one of skill in the art how to use
3 that substance. They're not separate embodiments as their listed here. I
4 think -- Your Honor, I'm running -- oh, ten more seconds. So as we see on
5 slide 122, Dr. Holland has testified that these are in fact the same film
6 coatings, have the same properties of all material ways, and that the
7 disclosure renders them obvious.

8 JUDGE OBERMANN: Thank you, Counsel. I really appreciate that.
9 Thank you. So we will retain 15 minutes for rebuttal from Petitioner. And
10 Mr. Wolfe, I'm going to add -- I'm sorry.

11 JUDGE DENNETT: I just have one quick question in this one.

12 JUDGE OBERMANN: Okay.

13 JUDGE DENNETT: On the cobbling together argument, it's my
14 recollection that there's at least some old case law that says picking and
15 choosing essentially is okay in a not instance rejection. Has Petitioner made
16 that argument? Is it somewhere in the briefing, or are you relying on the
17 idea that only -- that there has been no such picking and choosing?

18 MS. WILLIAMSON: We're relying on no such picking and choosing.
19 We argued --

20 JUDGE DENNETT: Thank you.

21 MS. WILLIAMSON: -- it is anticipated.

22 JUDGE DENNETT: Thank you.

23 JUDGE OBERMANN: I'm sorry, what was the last?

24 MS. WILLIAMSON: We argued the reference was anticipatory.

25 JUDGE OBERMANN: Okay. Well, then you have In re Arkley.
26 You're not allowed to pick and choose, right?

1 MS. WILLIAMSON: Yes. We did not pick and choose.

2 JUDGE OBERMANN: Okay, got you. All right. And Mr. Wolfe,
3 I'm going to add five minutes, so you have 80 minutes in total. Would you
4 like to reserve some time for surrebuttal?

5 MR. WOLFE: Yes, Your Honor. Can I reserve 15 minutes?

6 JUDGE OBERMANN: 15 minutes. Certainly. I will put 65 minutes
7 on the clock for you, and I will start the time when you're ready to speak.
8 Just let's get this going here.

9 MR. WOLFE: Good afternoon, Your Honors. May it please the
10 Board. Michael Wolfe for Patent Owner, Inpria Corporation. If we could
11 turn to slide 2, please. There's a lot of ground to cover today, Your Honors,
12 as you heard, five grounds of unpatentability pressed by Lam and many
13 more in the motion to amend. Given the large number of issues, we want to
14 let the Board know what Patent Owner thinks is the most straightforward
15 way to deal with this case. First, the thickness limitations are supported by
16 the '867 application. That would dispose of Ground 1. Second, Stowers
17 2008 is not prior art that would dispose of Grounds 2 through 5. Finally,
18 Your Honors should find that Trikeriotis does not disclose radiation-
19 sensitive ligands, and Petitioner has not proven that, which would dispose of
20 Ground 5. Alternatively, for Grounds 2 to 4, the Board can determine that
21 Patent Petitioner Lam failed to prove that the same films theory that it has
22 for the Stowers 2008 is the same as the '564 patent, and that the extinction
23 coefficient theory hasn't been proven.

24 JUDGE OBERMANN: Do you agree that the inherency arguments
25 were offered in the alternative?

26 MR. WOLFE: I absolutely agree with that, Your Honor. That's why

1 you need to reach both of the inherency of the films being the same and the
2 extinction coefficient theory. They were provided in the alternative, but
3 those were their two theories. I'd like to start with Ground 1, which
4 discussed the priority challenge, and then discuss Lam's grounds involving
5 Stowers 2008, starting with the prior art status and then particular merits
6 issues, and then finally touch the Trikeriotis ground before moving to the
7 MTA. If you could turn to slide 3, please. As opposing counsel mentioned,
8 the invention is directed to photoresists, and it has 12 claims. There are four
9 claims particularly at issue, but I think we'll move on in the interest of time
10 to slide 4. Starting with Ground 1, Lam asserts that a publication of a parent
11 application in the priority chain anticipates the claims because they
12 supposedly lack written description for the thickness limitations. If we turn
13 to slide 5, please. Just as an outline, I'll start with the written description
14 standard, discuss the specification as shared between the '564 patent and the
15 '867 application, and then discuss the prosecution history that Lam
16 highlights.

17 If you could turn to slide 6. Turn to slide 7, please. As Your Honors
18 are aware, the written description inquiry requires showing possession of the
19 claims, but importantly, it does not require express disclosure. And here the
20 complexity and predictability of the relevant technology also must be
21 considered. And finally, the written description inquiry is focused critically
22 on, "the four corners of the specification and to see whether it supports the
23 claims." Could we turn to slide 8, please? Turning to the '867 application
24 description. Turn to slide 9, please. The '564 patent was filed as a
25 continuation from the '867 patent, so the same disclosures are in both. If I
26 referred to a disclosure and the '564 patent, Your Honors, understand that it's

1 also in the '867 application. Turn to slide 10, please. The common
2 specification discloses the various ranges and examples of thicknesses,
3 nearly all of which encompass and all overlap with the claimed ranges of 5
4 to 30 and 5 to 25. Turn to slide 11, please. In addition to these various
5 ranges, the specification teaches a POSA would recognize ranges within the
6 explicit ranges are, "within the present disclosure."

7 Turn to slide 12, please. This statement about additional ranges
8 makes sense in light of various other teachings in the specification disclosing
9 how to vary and how to measure the thicknesses. Some of those variables,
10 such as solution, concentration, viscosity and spin speed, are shown here at
11 the top of that paragraph, but they're also shown in other places in the
12 specification as well. And all of this gives context to the statement that
13 additional ranges within the express ranges are within the present disclosure.
14 And these passages show that thickness is a variable that a POSA would
15 have known how to vary, and nothing in the specification itself indicates that
16 different thicknesses are different inventions. Turning to slide 13, please.
17 Furthermore, Lam agrees that changing thickness is predictable and makes
18 arguments such as the ease with which the film thickness can be varied.
19 Turn to slide 14, please. Dr. Holland also agrees, making similar arguments
20 and also confirming the variables such as viscosity, precursor solution, and
21 spin speed all go to how easy or difficult it would be to achieve certain
22 thicknesses. Turn to slide 15, please. This is enough under precedent, and
23 the Board need go no farther than RAI. Can we turn to slide 16? In RAI,
24 the Court considered the predictability of the relevant technology. They also
25 considered the lack of complexity of the particular claim limitation at issue,
26 and, there, concluded that a lower level of detail was required to satisfy the

1 written description inquiry.

2 JUDGE OBERMANN: I'd like to ask you something because I know
3 that your argument, you're citing Ariad for the idea that we can't look
4 beyond the four corners of the specification. And I understand that in RAI,
5 the evidence of sort of different properties was in the specification. So is
6 your position that the panel is precluded from considering the prosecution
7 statements when we make this assessment?

8 MR. WOLFE: I would say that Lam has provided no legal basis to
9 consider the prosecution statements in this context. In terms of whether
10 there's a case out there that might have that in it, I'm not positive for that
11 piece, but I do know that Lam hasn't presented one.

12 JUDGE OBERMANN: So even if we don't consider the evidence in
13 the prosecution history, can you -- have you cited a single case where the
14 endpoints are not disclosed and yet the Board or a court has found written
15 description support?

16 MR. WOLFE: Well, I think the one that was pointed to was
17 Wertheim, but also a Blaser's application of Wertheim, where -- In re Blaser
18 and I can find the site for you, Your Honors. But I think it was something
19 like 60 to 200. It did mention a point of 80, which was the lower point of
20 the claimed range. But I think that point matters that that wasn't part of a
21 range that was a disclosure, it just disclosed that as a single embodiment.

22 JUDGE OBERMANN: So in other words, the case that you're citing,
23 it was -- it was in Wertheim.

24 MR. WOLFE: I think it was discussing Wertheim.

25 JUDGE OBERMANN: And it's called In re Blaser?

26 MR. WOLFE: In re Blaser, yes.

1 JUDGE OBERMANN: And in that case, what was the claim?

2 MR. WOLFE: The claim was 80 to 200.

3 JUDGE OBERMANN: And what was the disclosure that supported
4 the claim?

5 MR. WOLFE: The disclosure was 60 to 200. But as Your Honors
6 might have seen on their slides, they also disclosed a preferred embodiment
7 of 80. So it did disclose the endpoint, which is not part of the range.

8 JUDGE OBERMANN: And you don't have that here. You have one
9 endpoint, and that's in claim 6.

10 MR. WOLFE: Yes, Your Honor, we do have no disclosure of 5 and
11 30, and that is true. But expressed disclosure is not required, and that's not
12 the law that it has to be expressly stated for written description to support it.

13 JUDGE OBERMANN: But we're looking at range cases. We're
14 looking to see whether the range cases that both you and your friend have
15 cited support the idea that a, you know, broad range is going to support a
16 narrower range here. And can you give me any case? What's the -- what's
17 your best case for -- you know, what do you think is the closest case that
18 goes your way?

19 MR. WOLFE: I would say RAI is the closest case that goes our way.
20 In terms of --

21 JUDGE OBERMANN: Okay. Thank you.

22 MR. WOLFE: Sorry about that.

23 JUDGE OBERMANN: Okay. And you can explain why.

24 MR. WOLFE: In terms of what is disclosed, and it has to be sort of a
25 fact-bound analysis that considers the complexity of the relevant technology.
26 There it was rather low. Here we agree. And there the range is --

1 JUDGE OBERMANN: Here you agree what? Is it -- is -- what's the
2 predictability --

3 MR. WOLFE: The predict --

4 JUDGE OBERMANN: -- here is much -- it's much less predictable
5 art than what was at issue in RAI, right?

6 MR. WOLFE: In terms of the thickness limitation, I wouldn't say
7 that.

8 JUDGE OBERMANN: I'm talking about the art because we're going
9 to look at the predictability of the art.

10 MR. WOLFE: Right, but you also look at the complexity of the
11 particular claim limitation at issue. And here --

12 JUDGE OBERMANN: What's your support for that?

13 MR. WOLFE: RAI. In the middle.

14 JUDGE OBERMANN: Okay. And what was -- explain to me in your
15 own words what the claimed range was in RAI and what the support was.

16 MR. WOLFE: The claim range that RAI -- and it's on the right here
17 in the pre-runners.

18 JUDGE OBERMANN: Okay. What slide are you on?

19 MR. WOLFE: I'm on slide 16.

20 JUDGE OBERMANN: Thank you.

21 MR. WOLFE: The claimed range was about 75 to about 85. And the
22 claimed range --

23 JUDGE OBERMANN: RAI has both of those endpoints.

24 MR. WOLFE: Yes, Your Honor. But one of the key issues that was
25 in RAI that was argued about was that the 85 was only the lower endpoint
26 for one of those ranges. And then there's much less overlap and less

1 disclosure of different ranges than there are in the '564 patent. And the
2 overlap is much less tight than it is for the '564 patent. And I agree that it
3 says 85, but it says that for about 85 to 115, which would be just barely
4 overlapping range. So in context, in terms of the specification as a whole
5 and what it's teaching to a POSA in terms of the particular claim limitation
6 at issue here, the thickness is not generally about chemistry, it's about how
7 it's applied to the substrate coating. So we think that a lower level of detail
8 is required, and that detail is met here by the '564 patent specification. And
9 if we can turn next to slide 17. So this is the response in terms of what Your
10 Honors were hearing. And in terms of expressed disclosure, as RAI states,
11 the specification need not express recited the claimed range to provide
12 written description support. And that's exactly what Dr. Holland was
13 demanding was expressed disclosure. If you see on the bottom left, "So the
14 specification itself would need to mention those particular endpoints for a
15 range to have written description support, right?" "As I understand it, yes."
16 And that's not the law.

17 If you can turn to slide 18, please. Turning to Lam's arguments about
18 the prosecution history. Turn to slide 19. Lam doesn't provide any proper
19 legal theory for applying the prosecution history, as it is used here to
20 contradict the specification. And as discussed in the next segment, the
21 statement is actually contradictory. First, in Lam's petition, it gave no basis
22 at all. Instead, saying Inpria should be estopped. Then, after the Board
23 understood Lam to be arguing prosecution history estoppel in its institution
24 decision and after Inpria understand them to be arguing collateral estoppel,
25 Lam disclaimed both theories. Instead, Lam promotes a broad free-floating
26 concept of public notice function and then cites a case regarding

1 indefiniteness and claim construction. But Lam doesn't argue that 5 to 30 or
2 5 to 25 or indefinite are unclear in any way that requires construction. Lam
3 simply fails to explain any legal theory that would support its reliance on
4 prosecution history to contradict the specification.

5 And if we could turn to slide 22, please. These are the two statements
6 that Lam cites. Both are distinguishing a claimed range from something
7 falling entirely outside of that range. In the first, Inpria's distinguishing
8 claimed range of between about 5 nanometers and about 30 nanometers from
9 a thickness of 35 nanometers or greater from Stowers 2009. As such, Inpria
10 was distinguishing the claimed range from an entirely non-overlapping
11 range, stating that those ranges do not overlap and they are not close enough
12 that one would expect them to have the same properties. The second
13 passage is similar. Also distinguishing over Stowers 2009. Notably, even
14 though these statements were front and center in the IPR, Lam states that is
15 not aware of any evidence, including in the prosecution history, that 5 to 30
16 nanometers is critical. Turn to slide 23, please.

17 JUDGE OBERMANN: But doesn't this go to your argument that this
18 particular limitation is predictable?

19 MR. WOLFE: In terms of this particular limitation being predictable,
20 I think that would counsel in our favor in terms of what a POSA would have
21 understand from the specification in possession of these ranges. Because it
22 was disclosed very many overlapping by very close amount ranges, and the
23 ability to predictably vary that thickness I think goes towards written
24 description support here.

25 JUDGE OBERMANN: But you're telling us in the prosecution
26 history that a -- and I think there was in a related prosecution history that a

1 difference of 1 nanometer could really make a difference.

2 MR. WOLFE: Well, I think in the -- if you can turn back -- let's turn
3 back a slide, please. Another one to the prosecution history -- sorry, two
4 forward, my apologies, to 22. Yeah. So I think this is the one that you're
5 talking about, Your Honor, on the right-hand side. So this was talking about
6 the difference of about 1 nanometers. What context was that in? That claim
7 was reciting about 5 to about 30. And so that was distinguishing the word
8 "about" and what the meaning of that was, not necessarily saying that there
9 were the differences in properties in that statement. That's not exactly how I
10 would read that. And that was a divisional that was much later also. So I
11 wouldn't read it in that particular way. If we can turn to slide 23, please. So
12 the comparison that was being made in the prosecution history was between
13 these two ranges, between 5 nanometers and 30 nanometers, and 35
14 nanometers or greater.

15 And then if you could turn to slide 23, please. That's the
16 comparison -- 24, please. That's the comparison that's being made on the
17 right-hand side. But the written description inquiry compares the entire
18 specification, including all of those overlapping and encompassing ranges on
19 the left-hand side, to the claim language. It's not comparing this completely
20 non-overlapping range. And so these are just two different inquiries, and
21 saying that Inpria's statement in one of them binds it to the other is not
22 equitable. And Lam hasn't provided any legal doctrine for binding the
23 Patent Owner in this manner. If we could turn to slide 25, please. This
24 prosecution history statement is even further away for claim 6. There, the
25 question was, "How close is 5 to 30 nanometers to 35 nanometers or
26 greater?" But here are the inquiries between the specification and the claim

1 language of 5 to 25 and about 1 to about 25. That's just a different inquiry.

2 And for these reasons, Your Honor, Patent Owner, believes that
3 written description supports the claim thicknesses, and Lam has failed to
4 prove otherwise. I would also like to note, Your Honors, for this Ground 1,
5 Lam's theory for claim 8 makes no sense. As Lam slide 26 shows their
6 claim chart, it actually -- the first sentence reads the specification does not
7 disclose this claim limitation. So the fact that they're saying the 888
8 publication anticipates doesn't seem to make a lot of sense.

9 JUDGE OBERMANN: I'm sorry, what are you -- where are we on
10 the slides? I'm not following.

11 MR. WOLFE: So if we turn to Lam's slides 26.

12 JUDGE OBERMANN: Oh, okay. Yeah.

13 MR. WOLFE: Lam slide 26 has put up a claim chart, and this is the,
14 as I understand it, sort of a compilation from their petition about what proofs
15 they were showing. The very first sentence says the specification of the '564
16 patent does not disclose claim language.

17 JUDGE OBERMANN: I'm sorry, the first sentence where?

18 MR. WOLFE: In claim 8, Your Honor.

19 JUDGE OBERMANN: Claim 8. Well, are they talking about the
20 misprint?

21 MR. WOLFE: So they're saying that that was a misprint, but
22 basically that would mean the 888 publication cannot anticipate because it's
23 the same specification involved.

24 JUDGE OBERMANN: What's your position on this? Is this a
25 mistake or what's going on here?

26 MR. WOLFE: I'm not exactly sure why it is that way, but we have in

1 our motion to amend -- flip the ranges.

2 JUDGE OBERMANN: I see that.

3 MR. WOLFE: Yeah. So I'm not sure why it was claimed the way it
4 was originally, but to the extent their argument is the 888 publication does
5 not disclose this, it cannot anticipate. So turn back to our slides, please.
6 And for that reason, I think that Your Honors would still need to address the
7 embargo issue for claim 8, which depends from claim 1. If we could turn to
8 slide 26, please? Next, I'd like to discuss the prior art grounds, starting with
9 Stowers 2008. For all of the prior art grounds, there were significant gaps in
10 the rationales and proofs from the petition. For this reason, you'll be hearing
11 a lot today about how Lam provides new rationales in its reply that should
12 be rejected. Turn to slide 27, please. Starting with Stowers 2008, if the
13 Board agrees with the first bullet point that Stowers 2008 is not prior art, it
14 can reject these grounds on that basis. And then, as I mentioned previously,
15 alternatively, if the Board agrees with Patent Owner on two points that they
16 have failed to prove that the films are the same and the extinction
17 coefficient, which are their alternative arguments, then it can reject these
18 grounds as well. And as Your Honors heard just now, we hadn't heard
19 anything about extinction coefficient, so I'm not sure if they're still pressing
20 that as a theory. But that's just something I would note.

21 If we could turn to slide 28, please. Regarding prior art status,
22 Stowers 2008 is a Ph.D. dissertation by Jason Stowers, named inventor on
23 the '564 patent. Dr. Stowers embargoed his thesis for a year to prevent it
24 from becoming public, so it makes sense that the priority application to the
25 '564 patent was filed after Dr. Stowers submitted his dissertation to the
26 library because he knew it would be embargoed for a year. It was Lam's

1 burden to prove that Stowers 2008 was publicly available, and they failed to
2 do so. Let me explain why. Turn to slide 29, please. In its petition, Lam
3 relied on the declaration of a librarian, Dr. Hall-Ellis, who --

4 JUDGE OBERMANN: And now we're talking about the OSU copy,
5 right?

6 MR. WOLFE: I don't -- this theory of two different publications is
7 sort of a new theory that's arose very late in the case.

8 JUDGE OBERMANN: When did it --

9 MR. WOLFE: In terms of --

10 JUDGE OBERMANN: -- when did they -- when did you become
11 aware of this theory?

12 MR. WOLFE: I would say sometime with, you know, their reply, at
13 least. Probably in the motion to amend briefing was when this really started
14 to hit the ground because the way that this shook out was in the petition they
15 relied on Dr. Hall-Ellis. Then in the reply, after they learned about the
16 embargo, they shifted gears, didn't mention Dr. Hall-Ellis even one time, and
17 then went to these two different documents. And one of those was the
18 ProQuest document, which is sort of shaky evidence at best. And then they
19 went back to Dr. Ellis and said, "Oh, no, no, there's actually two
20 publications," so.

21 JUDGE OBERMANN: And do we have two publications in the
22 record?

23 MR. WOLFE: No, Your Honors. I think that for Stowers 2008, they
24 actually have one that was obtained by Dr. Hall-Ellis from ProQuest itself.

25 JUDGE OBERMANN: Okay. So we don't have a copy. I want to
26 just -- I'm not going to count your time for a second.

1 MR. WOLFE: Sure.

2 JUDGE OBERMANN: The exhibit that you put into the record, Mr.
3 Dion --

4 MR. BREGMAN: Yeah.

5 JUDGE OBERMANN: -- Mr. Bregman, is that the ProQuest
6 document or is that the OSU document?

7 MR. BREGMAN: Let me check quickly.

8 MR. WOLFE: I believe it's in Exhibit 1006, Your Honor, paragraph
9 41 or 2, she says, "I obtained this from ProQuest." I have to look for it.

10 MR. BREGMAN: This exhibit is the OSU one. The ProQuest one is
11 about ProQuest, like 2nd or 3rd page. The sentence says it's published by
12 ProQuest. Exhibit Number 1008 is the OSU publication.

13 JUDGE OBERMANN: How do we know?

14 MR. WOLFE: So if you can pull up paragraph 44, please. This is
15 paragraph 44, and their librarian's declaration that says, "Attached hereto is
16 Exhibit 1008, blah, blah, blah. True and correct copy," and then, "that I
17 downloaded from the ProQuest dissertations and thesis database."

18 JUDGE OBERMANN: So that is --

19 MR. WOLFE: This is a ProQuest copy.

20 JUDGE OBERMANN: So that's a ProQuest copy.

21 MR. BREGMAN: It doesn't look like it on the thing. The ProQuest
22 one that I've seen has got the ProQuest copyright stamp on it. But it's the
23 same document, Your Honor. It's the identical document other than the
24 ProQuest.

25 MR. WOLFE: What page?

26 JUDGE OBERMANN: How do we know? Mr. Bregman, is this your

1 declarant right here saying that it's the ProQuest document that's 101 -- I
2 mean 1008?

3 MR. BREGMAN: I don't know where, what document that is --

4 MR. WOLFE: It says Exhibit 1006, Dr. Hall-Ellis.

5 MR. BREGMAN: Let me check that. I will -- if that's Dr. Hall-Ellis,
6 then that -- yes, that is now --

7 JUDGE OBERMANN: Okay. So what we have in the record -- and
8 I'm not counting this toward your time, Mr. Wolfe. What we have in the
9 record for Exhibit 1008, that's Stowers 2008, is the ProQuest document. We
10 don't -- as far as we can tell, we don't have the OSU --

11 MR. BREGMAN: OSU.

12 JUDGE OBERMANN: -- document in the record; is that correct? I
13 see Mr. Hall -- I'm sorry, Mr. Wolfe is shaking his head yes. Mr. Bregman,
14 this is an important point, so I want to know.

15 MR. BREGMAN: I'll have to get back to you on that statement.

16 JUDGE OBERMANN: Okay. Thank you. I'm going to start your
17 clock running again, Mr. Wolfe.

18 MR. WOLFE: Thank you, Your Honor. And I would also mention
19 for the record that in the Hall-Ellis declaration, also at paragraph 46 -- I
20 think that was highlighted by Lam earlier -- they had mentioned that there's
21 two versions. And this says, "The catalog record indicates that the copy of
22 the dissertation blah, blah, blah in the institution digital repository and
23 through the ProQuest database." But if you look down at paragraph 49, Dr.
24 Hall-Ellis mentions that catalog record and says it's available from two
25 institutions that the website included in field 856 and at the ProQuest
26 dissertations and thesis database. If Your Honors look at field 856 in

1 attachment 1(b), that's also ProQuest. So she's saying it's available from two
2 places and both of which are ProQuest. 856, please, down a little bit. Oh,
3 that one. The link, gateway to ProQuest.

4 JUDGE OBERMANN: Okay.

5 MR. WOLFE: So Your Honors, all that was relied on was the MARC
6 record, and all that was introduced was the ProQuest version of the
7 document. If we turn to slide 30, in Patent Owner's response, Inpria
8 explained that Dr. Stowers embargoed his dissertation and he wanted to keep
9 it unavailable from the public, and this was Dr. Stowers declaration. He also
10 filed a contemporaneous email that said, "Now my dissertation is past his
11 one-year embargo." And there was also another email that was mentioned,
12 Exhibit 2012 from OSU Digital Repository Librarian Cara Key, explaining
13 that availability timestamps on the website don't necessarily mean that
14 certain documents were, "fully public," and that's because the embargo
15 functionality was handled separately. If we turn to slide 31. As I
16 mentioned, Lam shifted gears in its reply never citing Dr. Hall-Ellis and
17 instead concluding that new Engelbert email and the Stewart Declaration. In
18 Mr. Engelbert's email, he said he had provided no records or really basis for
19 this conclusion that OSU Libraries made this dissertation publicly available
20 on 10/21 in 2008. But that's already contradicted by the Cara Key email
21 which was introduced before explaining that these available timestamps
22 don't necessarily mean they're fully public because embargo functionality is
23 handled separately.

24 JUDGE OBERMANN: Where is that in the record? I'm sorry. I'm
25 looking at Exhibit 31. And this is important because this is the evidence that
26 they're relying on to show that the OSU version would have been available,

1 right?

2 MR. WOLFE: Yes. This is Exhibit 1042, Your Honor. That's the
3 Engelbert email.

4 JUDGE OBERMANN: And you just said that the embargo was
5 handled by different people?

6 MR. WOLFE: I would say that the embargo was handled separately
7 from the process that creates a date available timestamp is what -- which is
8 what they're relying on.

9 JUDGE OBERMANN: How do we know that? What's the evidence?

10 MR. WOLFE: Cara Keys email, where it's right below that in 2012,
11 Exhibit 2012.

12 JUDGE OBERMANN: Okay.

13 MR. WOLFE: And this email was accompanied by records.
14 Actually, if you look at Exhibit 2012, Your Honor, the representative from
15 Inpria asked Cara Key what was going on with the website, and she
16 provided the records and provided as much information as she could, but she
17 couldn't opine about the embargo because that was handled separately.

18 JUDGE OBERMANN: Okay. Now I just want to understand. The
19 second email that I'm looking at here, Exhibit 2012, that's from somebody
20 else. That's not from Engelbert.

21 MR. WOLFE: Yes, that is from a digital repository library and Cara
22 Key. And that was introduced by us with our POR. Then after that, Lam
23 emailed separately -- or someone from Morgan Lewis separately emailed
24 OSU to Brad Engelbert, who I'm not entirely sure about, and said, "Oh, what
25 about this date available? Do you guys provide declarations?" And then he
26 came back with sort of this short and cursory response about available at

1 10/21.

2 JUDGE OBERMANN: Okay. And none of this is in declaration
3 form, this is just emails.

4 MR. WOLFE: That's correct, Your Honor.

5 JUDGE OBERMANN: Okay.

6 MR. WOLFE: So those are two emails against each other. That's
7 right. But I would say the Cara Keys email is a bit more explanatory if Your
8 Honors compare them side by side in terms of saying why she's saying what
9 she's saying vs. Brad Engelbert's, which doesn't give much response at all.
10 And if we turn to slide 33, please.

11 JUDGE OBERMANN: 30?

12 MR. WOLFE: 33, please.

13 JUDGE OBERMANN: Thank you.

14 MR. WOLFE: Thank you. So I just wanted to put up -- this is a
15 timeline of events that I just discussed regarding Stowers the pre-AIA 35
16 USC 102(b) critical date would be August 5th, 2009, and for all of these
17 reasons I just discussed, Lam hasn't proven to a preponderance of the
18 evidence that Stowers 2008 was available before August 5th, 2009, and thus
19 is not prior art. It was Lam's burden to show this, and they didn't. And for
20 this reason, if the Board agrees, it can reject all of Grounds 2 to 4. Turning
21 next to slide 34, please. For the three Stowers grounds, Lam also relies on
22 inherency theory that the films in Stowers 2008 are the exact same films as
23 the '564 patent. Lam relies on inherency here so it can point to teachings in
24 the '564 patent itself as if they were teachings in Stowers 2008. Otherwise,
25 that would be blatant hindsight. For instance, it relies on this same film's
26 theory for the radiation-sensitive ligands limitation for high absorption of

1 EUV for claim 7 for effectively patterned 100 millijoules per centimeter
2 squared for claim 12. But Lam just hasn't proven that the films are the same.
3 And let me explain why. Let's turn to slide 35, please. First, as Your
4 Honors are aware, inherency carries a high burden, requires the Petitioner to
5 show that the missing element is necessarily present and inevitably results
6 from the prior art.

7 JUDGE OBERMANN: Isn't this where they say they also have
8 express disclosures?

9 MR. WOLFE: They say they have express disclosures, but the only
10 two theories -- for example, for radiation-sensitive ligands, there's two
11 theories. They say -- they point to something called the extinction
12 coefficient and say that discloses it. And then they say the films are the
13 exact same because the components are the same. If they are jettisoning the
14 films are the same, components are the same, that's fine and I'll go to the
15 extinction coefficient.

16 JUDGE OBERMANN: Are the components the same?

17 MR. WOLFE: The components are the same. But saying something
18 is the exact same because the components are the same is like saying pizza is
19 spaghetti. You ignore all the processing conditions, and they're
20 downplaying them while trying to up play the complexity of the art in the
21 motion to amend stage.

22 JUDGE OBERMANN: So the processing conditions are different
23 across these two?

24 MR. WOLFE: The processing conditions between the '564 examples
25 are different than Stowers 2008, and they didn't explain those in their
26 petition, which means they fail off the beginning. And they tried to explain

1 them later in their reply, but those explanations are sort of wishy-washy
2 trying to explain away what these differences are when during deposition,
3 Dr. Holland actually admitted that they're actually quite important. And I
4 can go through those now. So if we turn to slide 36. Like I just said, Lam
5 didn't recognize the differences between Stowers 2008 and the '564 patent's
6 description. Instead, they just said the same components, and it's the identity
7 of components not necessarily the concentration of them either. Turn to
8 slide 37, please. After we pointed these out, Lam tried to backfill rationales
9 into its petition of why these differences supposedly would have not been
10 meaningful in its reply. But the Board should first reject their belated
11 reasoning and, second, reject it because it's conclusory. For instance,
12 regarding the different metal concentrations, Lam simply argues that "They
13 both form HafSOx materials. That's not the relevant question. The question
14 is whether the two films are identical, such that it would be appropriate for
15 Lam to rely on the teachings in the '564 patent itself, which is what is being
16 challenged here, as if they were teachings in Stowers 2008.

17 And if we turn to slide 38, please. Regarding the differences in rest
18 times, Dr. Holland tried to explain this away as saying it simply allows for
19 ligand exchange. But then on the right-hand side during her deposition, she
20 recognized that ligand exchange is important. It's highly important. If we
21 turn to slide 39, please. Next, regarding the initial spin that occurs in the
22 '564 patent that does not occur in Stowers 2008, Dr. Holland's declaration
23 again tries to downplay this difference as merely spreading the resist across
24 the wafer. But in her deposition on the right-hand side, she also
25 acknowledged that this initial spin would probably make a more uniform
26 coating. And then in the industry, they used to do just one spin, but then

1 they found out that doing this initial spin gives you a better coating. So the
2 '564 patent, which does this initial spin, would have a better coating than
3 Stowers 2008. They haven't proved that the films are the same. Turn to
4 slide 40. Now, in reply, Lam also presses a new theory that Dr. Stowers
5 supposedly admitted inherency, but this email actually shows the opposite.
6 So this email was introduced to support the fact that Dr. Stowers had
7 embargoed his dissertation, and Lam tries to use it for inerrancy. But in the
8 email, he says after his dissertation had passed its embargo date, he also says
9 that "The relevant magic sauce recipe is on page 68. Doug had me leave it
10 vague." Doug is Dr. Stowers' dissertation advisor. And the fact that it was
11 vague in his dissertation but "Covered by the patent application," up top
12 shows there's critical differences between the two documents, not that
13 they're the same. If we could turn to slide 41, please.

14 JUDGE OBERMANN: So the patent itself discloses the magic
15 sauce?

16 MR. WOLFE: The patent itself does disclose the magic sauce in
17 terms of --

18 JUDGE OBERMANN: Relevant magic sauce.

19 MR. WOLFE: So I think that if, Your Honor, is reading this, the
20 magic sauce recipe, it would be the parts of it that were left vague, and the
21 dissertation would have been in the patent application. In --

22 JUDGE OBERMANN: So where are they?

23 MR. WOLFE: I think those would be in the examples where it's
24 talking about the specific molar concentrations of things that are being
25 mixed in, whereas the Stowers 2008 doesn't have that, which is why they're
26 trying to rely on inherency to say, "These are exactly the same." But they

1 haven't proven that, that it doesn't teach that to oppose --

2 JUDGE OBERMANN: And maybe I'm wrong, but aren't you relying
3 on an earlier application that -- to support your priority date, and does that
4 have the magic sauce?

5 MR. WOLFE: Yes, Your Honor. The '867 application has the exact
6 same teachings as the '564 patent.

7 JUDGE OBERMANN: Including the magic sauce?

8 MR. WOLFE: Yes.

9 JUDGE OBERMANN: Okay.

10 MR. WOLFE: All right. Next, I'd like to turn to the alternative
11 argument, which they didn't talk about at all today, which is the extinction
12 coefficient. And these are the only -- just to be clear, Your Honors, these are
13 the only two arguments that they make in their petition for radiation-
14 sensitive ligands from Stowers 2008 is extinction coefficient and films are
15 identical because the precursor component identities are the same. So this
16 one for Stowers 2008 extinction coefficient -- turn to slide 42, please. Lam's
17 petition and Dr. Holland's declaration are conclusory as to this point. They
18 only point to one page of Stowers 2008 as shown here, page 69, and "That it
19 is expected that these extinction coefficients will be different with the
20 presence of peroxide in the as-deposited material." From that quote, Lam
21 and Dr. Holland conclude that Stowers 2008 meets the claim limitation. But
22 they don't connect the logic.

23 Turn to slide 43, please. When asked to explain this theory further at
24 deposition, Dr. Holland couldn't. She said, "I don't know. I just have what
25 I've got written here." Dr. Banerjee then explained why the theory doesn't
26 make sense, even accepting Dr. Holland's definition of extinction

1 coefficient. And then in slide 44, please. In its reply, Lam simply repeats its
2 argument that the extinction coefficient is different when peroxide is added.
3 Now, Dr. Holland adds a new reference to reply Exhibit 1035, but that can
4 be rejected as a newly-raised reply. And it doesn't make sense on the merits.
5 Can we turn to slide 45, please? Lam also includes other new arguments and
6 replies, citing different portions of Stowers 2008.

7 Those should also be rejected as Your Honors recall, in the petition,
8 although they cited to us, page 69. So that just shows they're trying to
9 stretch their theories and fill holes in the petition where they're applied. So
10 if the Board agrees that they fail to prove the films are the same and failed to
11 prove this extinction coefficient theory, the Board can reject Grounds 2 to 4
12 or if Stowers 2008 is prior -- not prior -- or either of those.

13 And could we turn to slide 48, please? Next, I'll discuss claim 7's
14 limitation that the coating material has high absorption of EUV radiation
15 compared to conventional radiation-based resists. Turn to slide 49, please.
16 Lam relies on the statement that density of HafSO_x and ZircSO_x materials
17 in Stowers 2008 is higher than conventional resists, and thus the absorption
18 should also be higher based on a trend line that Lam found. But even that
19 trend line shows that EUV absorption is not necessarily higher with higher
20 density. Turn to slide 50, please. As Dr. Banerjee showed on the right-hand
21 side, there are points with higher density and lower calculated linear
22 absorption coefficient than the PMMA example Lam relies on. And Dr.
23 Holland testified that certain elements in the coating material can also have
24 an outsized effect.

25 Turn to slide 51, please. Lam's reply theory is a completely
26 unsupported extrapolation of that trend line with Dr. Holland admitting that

1 she "just drew it that way." Turn to slide 52, please. Lam also tries to twist
2 an admission out of Dr. Banerjee in reply, but he also testified that he didn't
3 know whether the HafSOx and ZircSOx materials would be higher or lower
4 than the dots on that graph. Turn to slide 53. And finally, Lam also relies
5 on 2011 article to support this EUV absorption theory. But Lam doesn't
6 even try to connect Stowers 2008 to the "current generation of Inpria's EUV
7 resists" in that article. Instead, Lam, as it does today, tries to lump them all
8 together by calling them "Inpria HafSOx resists," for instance, at its reply at
9 page 17. But that doesn't take into account any of the differences in the
10 concentrations and the processing. Merely calling them both HafSOx don't
11 make them identical.

12 Turn to slide 54, please. Claim 12 requires the coating material to
13 have the capability of being effectively patterned with UV or EUV radiation
14 at a dose no more than 100 millijoules per centimeter squared. Turn to slide
15 55, please. In Lam's petition, they relied on an electron beam dose of
16 ZircSOx of 112 microcoulombs per centimeter squared. The claim doesn't
17 recite e-beam, and the units are e-beamed in electronically. And the units
18 are different for that type of lithography. And then in slide 56, in attempting
19 to translate this e-beam dose to a EUV dose, Lam used a correlation from a
20 2011 article for HafSOx and not ZircSOx.

21 Turn to slide 57, please. After Inpria pointed out this mismatch, Lam
22 tried to plug the holes in its petition by relying on new teachings in Stowers
23 2008 and new theory that dose "improves with ZircSOx." Neither of those
24 theories appear in the petition, and both of them should be rejected as being
25 impermissibly new.

26 Turn to slide 58 and discuss Trikeriotis. And, Your Honors,

1 Trikeriotis, we have labeled this Ground 5A and B because Lam dedicated
2 very, very little space to this in its petition and included arguments of
3 anticipation and/or obviousness without clearly delineating which was
4 which. As we turn to slide 59, there are a number of arguments regarding
5 Trikeriotis, but I'd like to focus on the third bullet point regarding Lam's
6 failure to prove radiation-sensitive ligands, as that's dispositive, and that
7 came up in regard to the motion to amend as well.

8 Turn to slide 69, please. For this limitation reciting, the coating
9 material comprises metal ions with radiation-sensitive ligands. This is the
10 entirety of Lam's petition and Dr. Holland's opening analysis for this
11 limitation. They only point to a generic statement of "organic ligands" and
12 rely on the same faulty absorption coefficient theory as they did with
13 Stowers 2008, which was the same as the extinction coefficient theory that
14 we talked about earlier. That was their alternative to inherency of being --
15 the same films being the same.

16 If we -- oh, one more thing. Although it wasn't clear in Lam's briefs,
17 Lam's Demonstrative 65 makes it clear that they're only relying on express
18 disclosure for this limitation. And I'll put that up on the screen now. So this
19 is the coating material comprises metal ions with radiation-sensitive ligands.
20 They say, "Expressly disclosed, yes. Inherently, nothing. Obvious,
21 nothing."

22 Turn to slide 70, please. When Dr. Holland was asked at deposition to
23 clarify what she viewed to be the late -- the radiation-sensitive ligands, Dr.
24 Holland couldn't remember even with her declaration and Trikeriotis in front
25 of her. In the end, she could only point to DPAP. But as shown on the right,
26 DPAP is described in both Trikeriotis and Ober as a photoinitiator or a

1 photoradical generator. And I'll actually discuss why that's important now.

2 Return to slide 71. Ober shows that the organic ligands that Lam
3 relied upon in its petition as the radiation-sensitive ligands are not the
4 radiation-sensitive part of Trikeriotis films. Lam relied on Ober in its
5 petition as referring to the films of Trikeriotis. So it's actually Lam that's
6 linking these two together. Turn to slide 72, please. Now, Ober shows that
7 it's the photoactive compounds, like DPAP, which Dr. Holland pointed to at
8 deposition, that are the radiation-sensitive part of Trikeriotis' films, not the
9 organic ligands that are shown in red in this figure on the right. And by red,
10 I mean on the right-hand side there's a green box, and the things that are
11 attached to that zirconium oxide core, that's what I'm talking about.

12 If you turn to slide 73, in reply, Lam argued that the blue ligands
13 satisfy the claims, attempting to rely on statements from Dr. Banerjee
14 explaining Ober. But Lam misunderstands those statements which said that
15 the photoactive compound -- and if Your Honors would take a look at the
16 top, in the middle of that figure, it's the left-hand side. That's the
17 photoactive compound that's interacting and becoming radiation sensitive
18 because it's interacting with h-nu, which is energy. That's the radiation-
19 sensitive part of Trikeriotis' and Ober's films. And then the byproducts of
20 that, that's what Dr. Banerjee testified to. The byproducts of that
21 photochemical reaction are displacing some of the attached pink ligands.
22 Lam doesn't prove that the broken-off portion itself, the right-hand side of
23 that top blue box, is actually a radiation-sensitive ligand as the claim
24 requires.

25 And turning to slide 74, please. Lam also introduces a new scientific
26 theory of decarboxylation based on a brand new reference, Exhibit 1036.

1 But this theory should be rejected as improperly new on reply. It's a heavily
2 scientific theory that came up for the very first time in reply based on a new
3 reference. Furthermore, the Board should reject this theory because
4 Trikeriotis never explains decarboxylation, and Lam has made clear in its
5 slide 65, that it's replying -- relying on expressed disclosure only, not
6 inherency. If the Board agrees that Lam failed to show Trikeriotis discloses
7 radiation-sensitive ligands, it can reject Lam's Ground 5 on this basis.

8 If you turn to slide 75, please. Next, because these arguments for
9 claim 6 overlap with the motion to amend, I'll save this for that portion in
10 slide 78.

11 Next is claim 7, reciting the coating material has high absorption of
12 EUV radiation relative to conventional radiation-based resists. For this
13 claim, turn to slide 79, please. Lam relies on the same faulty density theory
14 that it relies on a trend line. Then in reply, turn to slide 80, please. Lam
15 includes a new theory regarding atomic composition. But this theory, again,
16 should be rejected as improperly new and because it conflates the absorption
17 of atoms such as carbon or hafnium with EUV absorption of the coating
18 material as recited in the claim.

19 And if we can turn to slide 81. This is the last claim for Trikeriotis.
20 Claim 12 recites the coating material can be effectively patterned UV or
21 EUV dose of no more than 100 millijoules per centimeter squared. Turn to
22 slide 82, please. For this claim, Lam relied on Trikeriotis' figure 5A and an
23 unexplained statement that it shows a sensitivity of D 0.8, less than 25
24 millijoules per centimeter squared. Lam never explains why 5A shows that.
25 Okay. Turn to slide 83, please. Dr. Holland added a red annotation to figure
26 5A, but during the deposition she completely could not explain D 0.8 at all

1 and said it was a typo. Should have been 0.9 and that was on redirect. Turn
2 to slide 84, please. Lam's reply shifts grounds again and gives a new
3 explanation of what D 0.8 means, but its citations make no sense. If you
4 look, Your Honors, at the screen: Exhibit 1037 at 43, Exhibit 1046 at 1,
5 Exhibit 1047 at 186. And I'll show those next. Please go to slide 85. 1037
6 ends at 41. There is no page 43. 1046 on 1 is the cover. It says nothing
7 about D 0.8. 1047 at 186 is photocuring, nothing about D 0.8. So it's new
8 attempted -- I tried to fill in what D 0.8 is makes absolutely no sense. It
9 should be rejected as improperly new on reply.

10 And if we could, turn to slide 86, please. Next, I'd like to turn to the
11 continued motion to amend. So Inpria filed the contingent motion to amend,
12 introducing two straightforward amendments that were responsive to Lam's
13 unpatentability grounds. Lam, in response, filed a myriad of arguments
14 opposing the motion to amend based on numerous 112 arguments and
15 asserting three separate pieces of prior art: Stowers 2008, Trikeriotis, and
16 Keszler. Lam's choice to take a kitchen sink approach means that all of its
17 arguments were given short shrift, and they all failed to meet the burden to
18 prove the proposed amended claims are unpatentable.

19 First, to just remind Your Honors of the amendments, let's turn to
20 slide 88 -- oh, 89, please. For the independent claim, Inpria proposed
21 amendments that narrow the thickness of about -- to about 25. And then
22 dependent claim reversed the order of the ligand-to-metal ratio.

23 Turn to slide 90, please. Inpria met the statutory and regulatory
24 requirements for a motion to amend, and I don't think that that's at issue
25 anymore. So let's skip to slide 93. Now, as you can see here, Lam makes
26 seven different new 112 arguments. And even though Lam included a 112

1 argument with its petition regarding the thickness limitations, it chose to
2 leave out all of these arguments. Lam's choice to deprioritize these
3 arguments is telling. For this reason and because we feel that the original
4 claims are well supported, I'd like to start first with the about 25 limitations
5 that were added to the claims with this amendment and then focus on the
6 other arguments.

7 If we could start at 99, please. So 99, Lam argues that the newly
8 added claim limitation, "about 25," is indefinite. In its opposition, Lam cited
9 the wrong Packard standard and argued that '564 patent gives no guidance
10 whatsoever to a POSA in determining what "about" means. But Lam didn't
11 analyze the specification at all. And in the prosecution history, Lam relied
12 exclusively on the examiners' rejection, asserting that this was indefinite,
13 which Inpria disagreed with but ultimately removed the term "about" to
14 advance prosecution. Lam treats that as a binding concession, but that's just
15 not how prosecution works.

16 The Board's preliminary guidance then encouraged the parties to
17 address the "about 25" claim language. And then Inpria's reply pointed these
18 portions of the specification in the prosecution history that shed light on the
19 term "about." It tells you how to measure the thicknesses in terms of
20 different measurement techniques, and it points to the prosecution history
21 statement where the Patent Owner said "about" is a well-settled term of
22 approximation, and that it corresponds to the experimental error in the
23 measurements of continuous variables of the present type. So it corresponds
24 to the measurement types that are disclosed in the specification. All of that
25 shed light on what "about 25" would mean to a POSA. And then after
26 identifying these, Lam still did not respond to this at all in their sur-reply

1 that was filed a couple of weeks ago. Instead, they argued in conclusory
2 fashion that the prosecution history doesn't give sufficient guidance. But
3 terms of degree like this are commonplace in patent claims, and they're not
4 indefinite here.

5 And I'd like to turn to Lam's prior arguments before jumping to the
6 other ones. Turning to slide 103, please -- slide 104, please. For the 25-
7 nanometer limitation per Stowers 2008, Lam relies on a teaching from the
8 background of Stowers 2008. This discussion discusses prior uses of
9 HafSOx and ZircSOx materials as high-k dielectrics before they were - and
10 you can read this as a quote on the screen - "adapted as a high-quality
11 inorganic resist," for instance, by changing chemistries to a peroxide-based
12 system. And that's at page 143 of Stowers 2008. This is clear from the
13 passage stating that these are "a starting point for the development of a
14 directly patterned metal oxide." In other words, these are not the same
15 resists as those discussed in chapter 3, which is the ones that Dr. Stowers
16 developed with thicknesses of 30 to 35 nanometers thick. And it's here
17 Lam's arguments can be rejected for mixing and matching embodiments
18 without explaining why.

19 Over to slide 105, please. Turning to Lam's obviousness rationale
20 invoking pattern collapse, Lam gives no reasoning why a POSA would be
21 concerned about pattern collapse for films with thicknesses in the range of
22 30 to 35 nanometers, like Stowers 2008. Instead, Lam simply waves a
23 conclusory argument about pattern collapse around as a bogeyman that
24 supposedly would have motivated a POSA to reduce thickness no matter
25 what the starting point is, no matter what patterns they're trying to achieve.
26 But that type of generic and conclusory motivation is insufficient.

1 Turning to slide 106, please. Regarding the radiation-sensitive ligand-
2 to-metal ratio, Lam includes only conclusory arguments pointing to different
3 ratios than that were claimed and a stray sentence in the conclusion of
4 Stowers 2008, discussing changing chemistries to a peroxide-based system.
5 As the preliminary guidance correctly found, but this doesn't teach a POSA
6 that the ratio is actually a results-effective variable. And on -- as seen on the
7 right, Dr. Holland can't rely on hindsight of what Stowers later did for
8 motivation to combine for obviousness. That would be hindsight.

9 Turning to slide 107, and this is the Trikeriotis section that I
10 mentioned I would come back to. Turn to slide 108, please. Lam argues
11 that the claimed 25-nanometer limitation is "taught by Trikeriotis," but it
12 only identifies a range of 30 to 200 nanometers.

13 Turn to slide 109, please. Lam then accuses Inpria of cherry-picking
14 statements out of context that are discussing thicker films than Trikeriotis.
15 But that's the statement in the bottom, Your Honor. Looking at what that
16 statement says and where it is, that's the statement that comes immediately
17 after Trikeriotis discloses the thinnest films that it discloses, which are 30
18 nanometers thick. And then it says its optimization is to make them on
19 thicker films. So it's pointing in the opposite direction. Then to counter this
20 on-point reference, Lam cherry-picks a statement from the background of
21 Trikeriotis. Looking at that, it talks about a general trend in the industry for
22 thinner films and references pattern collapse. But again, Lam ignores the
23 context in which that statement is made. Afterwards, even addressing those
24 issues, Trikeriotis says that it would understand that 40- to 45-nanometer-
25 thick films would be commonplace. So this isn't any sort of a teaching that
26 would tell a POSA to reduce even further from what Trikeriotis had.

1 Turn to slide 110, please. In sur-reply, Lam crafts a new argument
2 regarding "future feature size needs." But the portion of Dr. Holland's
3 testimony that Lam points to says nothing about future feature sizes. This
4 new rationale should also be rejected.

5 Turning next to Keszler, paragraph 111 -- slide 111. Next, I'll discuss
6 the -- Lam's arguments regarding the new reference Keszler. And just as a
7 note for the Board, this reference was already considered and applied by the
8 examiner and prosecution. In the portion that Lam highlights for its written
9 description argument, Exhibit 1007 at 507 to 508, the examiner called this
10 reference "Meyers". I just thought I'd point that out for Your Honors.

11 Turn to slide 112. Lam's arguments based on Keszler are rooted in
12 anticipation as you see at the bottom, therefore anticipates most all of the
13 claims and only renders obvious claim 19. So they're relying on anticipation
14 and not obviousness, as they mentioned when they stood up here. If we turn
15 to slide 113, please. Lam's arguments based on Keszler apply a mix-and-
16 match approach. As shown here in their opposition, they rely on example 4,
17 example 7, and then a new lithographic patterning method in the middle
18 that's from page 28.

19 If we can turn to slide 14 -- 114. Looking at these passages
20 themselves, it's clear that they're distinct embodiments not referring to each
21 other. What do I mean by that? If Your Honors look at Keszler examples 3
22 and 2, they mention previous examples. So when they're interrelated
23 examples, they refer to each other. Here example 4 and example 7 do not do
24 that. For example, example 4 is about nanolaminate films being formed
25 from several layers. Example 7 is about photolithography from patterning a
26 single layer, and Lam is attempting to blend the composition disclosures

1 from example 4 with the photolithographic teachings of example 7. But this
2 would be an obviousness rationale that Lam hasn't presented. And turn to
3 slide 15. The same goes for the disclosure on page 28 about interdiffusion
4 of stack films and bilayer diffusion, referring to example 6.

5 Let's turn to slide 116. Now, in addition to this sort of mix-and-match
6 approach, Lam also relies on a faulty inherency theory like he did with
7 Stowers 2008. This is the same films inherency theory. And it says because
8 the identity of the starting components is the same, the films are the same as
9 the '564 patent. Turn to slide 117, please. But like with Stowers 2008, Lam
10 has not proven that the films are the same. If the Board agrees that Lam is
11 applying a mix-and-match approach, it hasn't proven the films are the same,
12 the Board can reject Keszler in its entirety.

13 Turn to slide 118, please. For dependent claim 18, regarding high
14 EUV absorption, Lam relies on a faulty same-films theory, a faulty density-
15 inherency theory, and relies on Exhibit 1022's "current generation of Inpria's
16 EUV resists," without linking that current generation to Keszler's films. So
17 for all of the reasons that we discussed for Stowers 2008, these rationales
18 fail for the same reason. Turn to slide 119, please. For dependent claim 19,
19 regarding the ligands-to-metal ratio, Lam relies on a bold argument of
20 optimization but hasn't shown that this ratio is a variable that a POSA would
21 have been motivated to optimize. Let's turn to slide 120, please. For
22 dependent claim 23, regarding effect of patterning, Lam relies on a teaching
23 showing no patterning at all. In its opposition, Lam relies on a dose of 2
24 microcoulombs per centimeter, and this is the top left. If you look below
25 that, this teaching is related to figure 16, and figure 16 is shown on the right.
26 This figure doesn't show any patterning whatsoever, and Lam doesn't

1 explain how this lack of patterning equates to effective patterning.

2 Now, if we can, turn back to some of the other 112 arguments that
3 Lam makes to the original claim limitations. Turn to slide 94. So, as Your
4 Honors noted, Lam argues that these claims are directed to a broad genus,
5 and the specification only discloses one species. But Lam fails to support
6 these conclusory arguments. First, Lam and Dr. Holland provide no
7 evidence for their statement that there is an infinite number of atoms or
8 molecules that could qualify as a ligand. This ignores the qualification
9 inherent in our own definition of ligand that must bind to a central atom in a
10 complex, as you heard earlier, typically a metal, and gives no rationale or
11 evidentiary basis why an infinite number of atoms or molecules would meet
12 that qualification. They just ask Your Honors to agree with them.
13 Furthermore, to the extent that Lam is arguing that the genus is ligands as it
14 appears to be doing in sur-reply, it's the wrong target, and accordingly, Lam
15 fails to prove the breadth of the claimed radiation-sensitive ligands. I would
16 make also one other note. Since Idenix -- the case had seemed to become a
17 principle case for Lam. That case isn't mentioned at all in their opposition
18 for written description. Now they're saying it's central and dispositive. The
19 Board should reject this new reasoning.

20 Turning to slide 95, please. Although Lam repeatedly argues that the
21 specification only discloses one species, that's incorrect. The specification
22 discloses a number of examples and includes figures showing a structure of
23 a radiation-sensitive ligand that's being broken and this bond that's being
24 broken. Lam gives no evidentiary basis for determining that this disclosure
25 is insufficient. For instance, as Your Honor noted, Lam does not include
26 any examples of ligands that would fall outside of the claimed genus. And

1 so they haven't proven how big the genus is, and they haven't proven the size
2 of disclosure from the '564 patent. So both parts of the analysis just haven't
3 been proven by Lam, and it's their burden to prove the -- prove this written
4 description argument. The same is true for the enablement inquiry.

5 If we turn to slide 98, please, Lam's enablement argument is just a
6 piggyback from its written description arguments just described above. As
7 you can see here, they're referring to their section above with written
8 description, and they also point to conclusory testimony from Dr. Holland
9 saying "testing would be lengthy and arduous." But she doesn't connect why
10 that equals undue experimentation, for instance, by any analysis of the
11 Wands factors. In addition to that, as Your Honor mentioned earlier, one of
12 the important things and sort of themes through these enablement cases is
13 that they have to just show an embodiment that would be inoperative as sort
14 of a threshold showing that, "oh, you wouldn't know which ones work and
15 which one wouldn't." They haven't shown that any wouldn't. They just
16 haven't met the fundamental part of their burden.

17 If we can turn to slide 96, please. Next, turning to Lam's argument
18 that the radiation-sensitive ligands might lack radiation sensitivity when
19 combined with other metal ions, Lam provides no evidentiary support for
20 this bold speculation from Dr. Holland. All that she testifies is that it could
21 affect the radiation sensitivity, and a ligand may not have the same radiation
22 sensitivity. But she gives no examples in support of this conjecture.

23 Return to slide 97, please. And in fact, her testimony in other parts of
24 her declaration contradict this speculation. In paragraph 54, where Dr.
25 Holland is opining whether Stowers 2008 discloses a radiation-sensitive
26 ligand, Dr. Holland points to the mechanism of action for a peroxide ligand

1 in peroxo-polytungstate. And that's regarding tungsten, a different element.
2 And they simply assumed that this description also applies to peroxide
3 applied to HafSO_x and ZircSO_x. So the only example that she gives of a
4 peroxide ligand being attached to a different metal - she made the leap that it
5 would be radiation sensitive - completely discounts this argument.

6 Turn to slide 100, please. Lam argues that the term "metal ions" is
7 indefinite because the written description includes terms that would include
8 both metals and metalloids. But this coincides with the plain and ordinary
9 meaning of the term that would include both metals and metalloids. And
10 Lam further argues that it's indefinite because, as you can see on the screen,
11 the highlighted one, phosphorus, it says that this one is a nonmetal. But
12 Lam also has recognized in the district court litigation that this has been
13 recognized as a metalloid for decades, although it calls it "rare instances"
14 and "random references" and things like that. But it recognizes, called a
15 metalloid too. So this term is also not indefinite. The specification, as you
16 can see here, has tons of examples. And phosphorus, as they recognize, was
17 a known metalloid. And the cite 1122 to 42 in Exhibit 1001, if you can pull
18 that up. The '564 patent is at 1001. Thank you, Max. 1121 to 42 states that
19 you pick the metal based on the absorption ability. Can you zoom in a little
20 bit? So the metal cations generally significantly influence the absorption of
21 radiation. "Therefore, metal cations can be selected based on the desired
22 radiation and absorption cross-section." So it's telling you how to select the
23 metal ions that you're choosing.

24 If we turn to slide 101, please. Next, Lam argues that certain terms of
25 degree are indefinite in claims 7 and 12. But Lam's expert, Dr. Holland,
26 clearly understood these terms when she was mapping them to the claim

1 limitations. And furthermore, both Lam and Dr. Holland completely ignore
2 the specification teachings that Patent Owner, Inpria, pointed to that would
3 have given light to all of these terms. Even after Inpria pointed to them in
4 the reply, they were still ignored in the sur-reply.

5 And finally, for page 102, please. Lam's IPXL argument fails simply
6 because Inpria's claims recite an apparatus with particular capabilities, not
7 mixed method and apparatus steps. In further heating steps, this would turn
8 every claim ever reciting heat-treated steel into an improperly mixed term
9 claim.

10 With that, Your Honors, we'd ask that the Board confirm the original
11 claims or enter the contingent amended claims. Thank you.

12 JUDGE OBERMANN: Thank you, Counsel. Let me see if my --
13 anyone has a question for you before I let you go.

14 MR. WOLFE: I can come back too.

15 JUDGE OBERMANN: No. I'm not seeing any questions. So thank
16 you so much. You have 15 minutes for sur-rebuttal.

17 MR. WOLFE: Thank you.

18 JUDGE OBERMANN: And I will put 15 minutes on the clock for
19 Petitioner's counsel. And when you're ready to begin, I'll start the time
20 running.

21 MR. BREGMAN: I'm ready, Your Honor.

22 JUDGE OBERMANN: Thank you.

23 MR. BREGMAN: All right. So thanks for the opportunity for the
24 rebuttal. We are going to talk about some of the things that Patent Owner
25 just discussed. And I'd like to start with RAI, which got a lot of discussion
26 already. And this is from their slide -- I don't know what number it is. Slide

1 number 7 of theirs, you'll see they say when quoting RAI, "When
2 predictable claim limitations are at issue, a lower level of detail is required
3 to satisfy the written description." Your Honors hit this -- the nail on the
4 head here, Judge Obermann, when you asked the question. Because if you
5 actually look at RAI -- and here is a quote from their slide 16, it says, "Given
6 the predictability of the electro-mechanical inventions," it's talking about the
7 art. And if you read at the end of the sentence, it says -- it's got a quote from
8 the Hologic case. It says, "A low level of detail is required to satisfy the
9 written description requirement for the unpredictable arts." So it's talking
10 about the unpredictability of the art not the unpredictability of the claimed
11 elements. Now, it does say --

12 JUDGE OBERMANN: Yeah. Just a --

13 MR. BREGMAN: -- a lack of complexity.

14 JUDGE OBERMANN: Yeah, okay.

15 MR. BREGMAN: Yeah.

16 JUDGE OBERMANN: So -- but in other words, it doesn't alter the --
17 because I always understood when we talk about predictability -- because
18 you talk about the chemical arts all the time. So RAI doesn't change that. It
19 doesn't require us to look at the predictability of the limitation at issue.

20 MR. BREGMAN: No. It does say that you can look at the
21 complexity of the issue. That isn't really the argument that they've made.
22 They've talked about predictability.

23 JUDGE OBERMANN: Right. Okay.

24 MR. BREGMAN: And whenever it talks about predictability --

25 JUDGE OBERMANN: Yeah.

26 MR. BREGMAN: -- it's talking about the --

1 JUDGE OBERMANN: Complexity is different from predictability --

2 MR. BREGMAN: Exactly.

3 JUDGE OBERMANN: -- especially a legal --

4 MR. BREGMAN: Exactly.

5 JUDGE OBERMANN: Okay.

6 MR. BREGMAN: Exactly.

7 JUDGE OBERMANN: Well, let me ask you since you are on that
8 slide --

9 MR. BREGMAN: Yeah.

10 JUDGE OBERMANN: -- their slide 7 --

11 MR. BREGMAN: Yeah.

12 JUDGE OBERMANN: -- what do you think -- because I don't like to
13 go out on a limb here. If RAI, you know, found the evidence of, you know,
14 different -- a change being no evidence within the specification, and RAI
15 indicated that the difference was critical, for lack of a better word -- here, the
16 evidence that you ask us to look at is not within the four corners of the
17 specification. It's in the prosecution history. Wouldn't I need to go one step
18 further than what RAI did in order to say that that's relevant to a written
19 description assessment?

20 MR. BREGMAN: And I don't even think you need to get there, Your
21 Honor, because it's a sort of a multi-factor test. You look at the
22 predictability of the arts. You look at whether the claimed range was there.
23 Wasn't. You look at whether the endpoints were there.

24 JUDGE OBERMANN: Right.

25 MR. BREGMAN: They weren't. And then the sort of last step is: is it
26 the same invention? And when you look at whether it's the same invention,

1 you don't even need to go to the prosecution history. You could say, "Is it
2 the same invention or not?" But our feeling is they said it's not the same
3 invention.

4 JUDGE OBERMANN: Okay.

5 MR. BREGMAN: That statement should be held against them.

6 JUDGE OBERMANN: Okay. But really, we have the -- what I call
7 those historical range cases in written description. And I asked your friend,
8 Mr. Wolfe, "What's your best case?" And he said it was RAI. Can you help
9 me distinguish the very -- the facts here, the ranges that we're dealing with --

10 MR. BREGMAN: Okay.

11 JUDGE OBERMANN: -- and why our constellation of facts don't --
12 why RAI's facts don't control here. And I, you know --

13 MR. BREGMAN: I can -- I like RAI, to be honest here, and I think it
14 actually supports us. It's got the --

15 JUDGE OBERMANN: Tell me why.

16 MR. BREGMAN: -- it's got the endpoints in it. It discloses the
17 endpoints.

18 JUDGE OBERMANN: But the -- well, is it 85 percent upper range --

19 MR. BREGMAN: Right. But it's saying it found 75 --

20 JUDGE OBERMANN: -- was described as a lower range? Does that
21 matter?

22 MR. BREGMAN: It doesn't matter. Because --

23 JUDGE OBERMANN: Why?

24 MR. BREGMAN: Because the court found that the endpoints were
25 there, so --

26 JUDGE OBERMANN: Did they have language in RAI that talks

1 about the endpoints being really important?

2 MR. BREGMAN: I'm almost certain they did, Your Honor.

3 JUDGE OBERMANN: Okay. Anything else about RAI that you
4 think supports you?

5 MR. BREGMAN: No. I -- but I do think it's worthwhile talking
6 about their predictability argument because that doesn't make any sense.
7 And that -- and then maybe we can look at their slide 12 which is this next
8 slide here. So they talk about predictability of how to vary and measure the
9 thickness. It's not a method claim. Who cares how you measure and vary
10 the thickness? It's an apparatus claim. It's a structure claim. The question
11 is: whether a person of ordinary skill in the art would immediately discern
12 that that range that's in the claims is disclosed? Whether or not you can -- a
13 person can easily change the thickness has got absolutely nothing to do with
14 it. So the predictability here is completely off the mark when it's talking
15 about predictability and its predictability of the arts, not about this one
16 element.

17 JUDGE OBERMANN: I'll let your friend comment when they get
18 their sur-rebuttal. But my understanding is that they were arguing about
19 how hard it would be to do this, not whether it would have been, basically,
20 predictable to compress the, you know, range down to the what's claimed.

21 MR. BREGMAN: Yeah. But that's not -- the test isn't how hard it's
22 going to be --

23 JUDGE OBERMANN: Right.

24 MR. BREGMAN: -- to meet the range. The test is whether a person
25 already skilled in the art when they read the specification would be put on
26 notice. That's the job of a patent application.

1 JUDGE OBERMANN: Right.

2 MR. BREGMAN: Would a person of ordinary skill in the art be put
3 on notice that they -- in their position of the invention? If they didn't,
4 imagine what you could do in prosecution. I could keep adding different
5 ranges whenever I want. I mean, that's not -- the purpose of the public
6 notice doctrine is that when I read that specification as a person of ordinary
7 skill in the art, I need to know what the inventor had possession of. And if
8 you've got some broad range and at any point in time I can go pick
9 whichever range I want in the middle of that, I mean, that would create a
10 complete means for prosecution. People would be -- do that all the time.
11 And that's why in prosecution, what you see people say, "I've got this range.
12 I've got a more preferred range that's narrower. I've got a more preferred
13 range." And they do that specifically to avoid this problem, right?

14 So turning to slide number 17 of them, they say, RAI to the right,
15 "The specification need not expressly recite the claimed range or provide
16 written description support." And somehow, Dr. Holland is disagreeing with
17 that. We completely agreed with that -- RAI. RAI says it doesn't need to. If
18 it had the range, then there -- we -- there wouldn't be any disputes about
19 these cases. It's when you don't have the range, "Do you have the
20 endpoints? Is it the same invention? Is there any inconsistent statement?"
21 What she said, for a layperson -- this is not a legal expert. She was asked,
22 "So the specification itself would need to mention these particular endpoints
23 for a range." Not the range, the endpoints for the range. She says, "As I
24 understand it, yes." I think that's quite -- you know, that's pretty good of --
25 for a technical expert to say, "I think the endpoints need to be in there." She
26 doesn't understand RAI. I mean, that's not her job. So that's it on the RAI

1 and on that part of the case.

2 So maybe here, just the public notice function -- this is slide 19. I
3 think we already discussed this. We do cite to this case, Teva v. Sandoz. It
4 does say, "The public notice function of a patent and its prosecution history
5 requires that the patentee be held to what he declares during prosecution of
6 this patent." Should have said, "He or she says." That's what the -- that's
7 what the case said.

8 Okay. The next thing I want to address, which is the question you
9 asked, was what about the Exhibit 1008? That's the Stowers 2008
10 declaration. And you're absolutely right. She did -- Dr. Hall-Ellis did
11 download the copy of the ProQuest. The slide is not getting there yet.
12 Sorry, Your Honor, if I misdirected you.

13 JUDGE OBERMANN: That's okay.

14 MR. BREGMAN: She did say, "I downloaded the ProQuest version
15 of it." But if you look at our slide number 31, she said the same dissertation
16 was available in two different places. It was -- a copy was at the Oregon
17 State Library's digital repository and through the ProQuest Dissertations.
18 No one has disputed that that is the same doc we --

19 JUDGE OBERMANN: I have a problem with this --

20 MR. BREGMAN: Okay.

21 JUDGE OBERMANN: -- because I think what I'm hearing you say is
22 that the copy that we're relying on in this proceeding - and there's only one
23 in here; it's Exhibit 1008 - that that's the copy that was downloaded from
24 ProQuest.

25 MR. BREGMAN: But it's the same. It's the same dissertation,
26 though. But yes, you're right.

1 JUDGE OBERMANN: But that's a really critical issue here is
2 whether or not -- you know, it's almost like a moving ball. Because we've
3 been -- I'm with Mr. Wolfe. I didn't understand until very recently that there
4 were potentially two different versions, one OSU and one ProQuest. And
5 what we have in the record is ProQuest. And your petition was filed with
6 the ProQuest version. And if you're now going to have to rely -- let's just --
7 in a -- an imaginary world --

8 MR. BREGMAN: Yeah.

9 JUDGE OBERMANN: -- let's say that you get Ms. Stewart in her
10 deposition, and she says, "Absolutely. I have dead-on proof that I was
11 wrong the first time; this thing was embargoed."

12 MR. BREGMAN: Yeah.

13 JUDGE OBERMANN: I'm going to have to look and I'm going to
14 have to, basically, almost modify your petition and say, "Well, it's as if the
15 OSU version is in there," and yet we don't have an OSU version in our
16 record. I'm not going to open the record now.

17 MR. BREGMAN: Yeah, I -- and --

18 JUDGE OBERMANN: So, you know, the Supreme Court has said
19 that this petition is driving the bus here. And now you want me to say,
20 "Well, that version that I put in as Exhibit 1008, that one came down from
21 ProQuest, and that one was under embargo. But we know that the same
22 thing was in the record," that we know the same document was published by
23 OSU. But I don't have that in the record. I don't have a version of that.

24 MR. BREGMAN: But we do know that the same document was,
25 Your Honor, and -- I know -- I --

26 JUDGE OBERMANN: How? Where's your evidence?

1 MR. BREGMAN: Because she says it's the same document.

2 JUDGE OBERMANN: She says that, but she doesn't refer me to
3 evidence that it's true. This is conclusory. And it's -- we -- I have a good
4 argument to make that she wasn't even thinking about this particular issue
5 when she said this, because did she know that there was an OSU version and
6 a ProQuest version?

7 MR. BREGMAN: Yes. She said it was available in two different
8 places.

9 JUDGE OBERMANN: She says it was available. Where -- how can
10 I take this and have this statement that you've directed me to carry your
11 entire case, that there was a version published by OSU that was not under
12 embargo, and that it's the same exact thing that's Exhibit 1008? You see the
13 trouble I'm having?

14 MR. BREGMAN: I mean, I do, but I also see her saying that it's the
15 same document. The other side has never disputed that it's the same
16 document.

17 JUDGE OBERMANN: Is this the best you have, this right here?
18 Okay.

19 MR. BREGMAN: Yeah.

20 JUDGE OBERMANN: I won't push it. But --

21 MR. BREGMAN: Okay.

22 JUDGE OBERMANN: -- you see the problem?

23 MR. BREGMAN: I do see the problem, Your Honor. But I will say
24 that it's the same document. The other side has never disputed it. In the '564
25 patent, they IDS this document as well, the same document. It's the same
26 document.

1 JUDGE OBERMANN: Which document?

2 MR. BREGMAN: Stowers 2008.

3 JUDGE OBERMANN: Is it the ProQuest version, or it's the OSU
4 version?

5 MR. BREGMAN: You can't tell because it's the same dissertation,
6 Your Honor.

7 JUDGE OBERMANN: Okay. Well, you're the one that has to show
8 me that this thing was available --

9 MR. BREGMAN: Yeah.

10 JUDGE OBERMANN: -- at the critical time. Okay.

11 MR. BREGMAN: Okay.

12 JUDGE OBERMANN: All right.

13 MR. BREGMAN: Yeah. Okay. Let's go back to their slides. So
14 slide 22 of theirs, this was the argument that they were arguing that it's --
15 that we think that the range is not critical with regard to -- sorry. This is
16 basically going back to whether or not there was disclosure of the range. As
17 I pointed out earlier, what we think is critical in the range is not important.
18 It's what they thought and what the patent thought was the invention. So
19 sorry for taking that out of order a little bit. We can skip this and skip this
20 and skip this and skip this. Okay. This is their slide number 38. Again,
21 they keep saying that we need to prove that the forms are identical. That's
22 part of their argument. We don't need to prove that the forms are identical.

23 JUDGE OBERMANN: I understood their argument to be that you're
24 relying on an inherency theory in order to show what this, you know,
25 reference disclosed.

26 MR. BREGMAN: Right. We rely on inherency in addition to what it

1 discloses. And maybe if I can find what we say. Here you go. This is the
2 disclosure. And let me see if Your Honors agree. So --

3 JUDGE OBERMANN: Which slide is this?

4 MR. BREGMAN: This is slide 42 of theirs.

5 JUDGE OBERMANN: Of theirs.

6 MR. BREGMAN: They say the petition is conclusory is what they
7 say. So here is what Stowers says. It is -- it says the following, and this is
8 from the petition on the left-hand side. It says -- Stowers 2008 -- and this is
9 where the radiation -- whether the peroxide ligands in Stowers are radiation
10 sensitive, that's the whole issue. Stowers 2008 says the following. "It is
11 expected that these extinction coefficients will be different." Now what is
12 an extinction coefficient? Let's look at the footnote there. An extinction
13 coefficient is a property that determines how strongly a material absorbs
14 radiation at a particular wavelength.

15 I think it's fair to say that that's how radiation sensitive it is, is what it
16 is. It says, "It is expected that these extinction coefficients will be different
17 with the presence of peroxide in the as-deposited material." It's expressly
18 saying that the peroxide, which is the ligand - there's no dispute that it's the
19 ligand - is radiation sensitive. It changes based on the peroxide being in the
20 material or not. That's an express statement. So when Dr. Holland says, "I
21 read this and that's how I understand it," it's not conclusory. That's what it
22 says. It says that the peroxide is radiation sensitive.

23 JUDGE OBERMANN: So maybe I'm mixing things up, but then why
24 do we have to test every one to see if it's radio -- whether it's radiation
25 sensitive?

26 MR. BREGMAN: So that's for the enablement argument, Your

1 Honor. So if I am a person, a reasonable person of skill in the art, and I'm
2 reading the claim, and the claim says it's radiation sensitive, they've
3 described peroxide, so that's fine. I know peroxide is radiation sensitive.
4 What else is covered by the claim? Okay. Let me take some other
5 molecule, some random molecule and I attach that to a metal. How do I
6 know it's radiation sensitive? I don't. I got to test it. According to their
7 expert, I've got to go put down a layer of it on a substrate. I got to expose it
8 to radiation. I got to develop it, wash it away. "Does it work?" "No, this one
9 doesn't work. It's not radiation sensitive." And I've got to do that for
10 thousands of possible combinations of ligands, thousands because that's
11 what the claim covers, anything that's radiation sensitive that connects to a
12 metal.

13 That's their claim language. That's functional claim language. They
14 don't say, "A peroxide group." They were more than welcome to claim a
15 peroxide group, which they did in a dependent claim. That's what they
16 invented. They could have said, "A metal ion connected to a peroxide
17 group," 100 percent, they would have support for that. They chose not to do
18 that. They got a little greedy, and they said, "Oh, what I'm going to try and
19 do is say a metal group." And they list a whole bunch of metals, also some
20 metalloids and some nonmetals, but they have a list. And then they say,
21 "And any radiation-sensitive ligand." A ligand, just the term ligand means
22 anything that basically attaches to something else. That on its own is
23 enormous. Now I've got to figure out which of those are radiation sensitive.
24 The only way I can do that is through testing, Their own expert said so.
25 That's an impossible task.

26 No one -- no person of ordinary skill in the art could say -- there's no

1 pamphlet that says, no textbook that says, "And here are all the ligands that
2 if you attach to a metal, are going to be radiation sensitive." That's not a
3 known thing. You've got to test them according to their own expert, and that
4 is undue experimentation to the extreme. So that's the -- you're right,
5 peroxides themselves are radiation sensitive. That's what they describe, 100
6 percent. But what about the breadth of their claim? That's another issue
7 altogether.

8 Okay. And the same thing, by the way, for -- I think on the right is
9 Trikeriotis; is it? No. That's also Stowers also talking about the extinction
10 coefficient. So we believe that it's expressly disclosed, and it is also an
11 inherent property of peroxide, when you attach it to a metal, it is radiation
12 sensitive. And the patent even says that. And you can look at the patent for
13 inherent properties.

14 So this is a slide of their slide 43. They say, look, Dr. Holland
15 couldn't explain why. She says, "I don't know why it's radiation sensitive.
16 I've just got what you got written here in the document, Stowers 2008. It
17 says it's radiation sensitivity when you add peroxide." She's just repeating
18 what's in there. She hasn't gone and tested peroxide. She's just interpreting
19 Stowers 2008 for what it says, and that's completely fair. It's not that she
20 couldn't explain the theory of why it's radiation sensitive. That's not her job.
21 She's just interpreting Stowers 2008.

22 So here on slide 45 of theirs, they argue that we -- making brand new
23 arguments about inherency. That's simply not true at all. If you look at our
24 petition, we absolutely include inherency as a theory. You can find that in
25 our petition on pages 37 and 38. We talk about necessarily contain. We talk
26 about inherency. We cite to a whole bunch of inherency cases. So I invite

1 Your Honors to look at those pages of the petition. Are these exhibits new?
2 Yes. These exhibits are new. Because they said that we didn't say
3 inherency, we provided some more cases that support our position, which I
4 think is fair for us to do in a reply.

5 What about this one? This is slide 47. So this is their argument that
6 the resists described in Stowers 2008 are not -- do not change the chemistry.
7 And if you look at the quotation here from Stowers 2008, it says, "Under
8 different processing conditions, the photoactive elements of the resist is
9 either increasing or decreasing the solubility of the exposed region relative
10 to the unexposed region," et cetera. That's how every single photoresist
11 works. You expose it to light. It changes the chemical structure which
12 changes whether or not it's soluble or not. Their only comeback to that is on
13 the right. This is Dr. Banerjee's testimony, and what does he say? No. It
14 not only can change the chemical, it can also change the physical properties.
15 And what's his support for that? Some random patent that he found the
16 background section of it, which says the following. "The chemical or
17 physical properties of a photoresist can be changed by being exposed to
18 light." We asked him during his deposition in that particular patent that he
19 found, was there chemical change or physical change? There were only
20 chemical changes in that patent. There could be physical changes only after
21 a chemical change. When you chemically change the structure by exposing
22 it to radiation, yes, you change its solubility. That's -- changing its solubility
23 could be a physical change. You might heat it up. If it's exposed to
24 radiation, that could be a physical change. But you -- you certainly change
25 its chemistry. Otherwise, it wouldn't be washing away or not washing away
26 depending on -- so --

1 JUDGE OBERMANN: I'm going to -- you're over.

2 MR. BREGMAN: Well, I'm over. Okay. I --

3 JUDGE OBERMANN: No. It's okay. I'm going to let you go until
4 the clock says five minutes, and I'll end.

5 MR. BREGMAN: I'm going to let Amanda --

6 JUDGE OBERMANN: Okay.

7 MR. BREGMAN: -- get up and talk about a few things. Thank you.

8 JUDGE OBERMANN: Okay. You have until the clock goes back to
9 five, so you have a minute.

10 MS. WILLIAMSON: So just very briefly, Your Honor, I want to
11 make sure there's not an argument that Patent Owners are making that we
12 are somehow precluded from bringing our 112 arguments with respect to the
13 motion to dismiss -- that would be -- a motion to amend. That would be
14 contrary to the Uniloc and Samsung cases that are cited in our brief. They
15 are very clear that this --

16 JUDGE OBERMANN: Can you explain what you mean? Are you
17 saying -- what -- explain that. I don't quite understand what you're saying.

18 MS. WILLIAMSON: Sure, yes. So Counsel made a comment that
19 we did not bring all of our 112 challenges in the original petition, and then
20 we brought many more with respect to our response to the motion to amend.

21 JUDGE OBERMANN: Okay.

22 MS. WILLIAMSON: That was -- we -- I just want to make sure that
23 the -- it's clear the Board has the authority and actually must review the 112
24 challenges at this time.

25 JUDGE OBERMANN: So in other words, their argument, as you
26 understood it, was that you could only bring arguments against the proposed

1 substantive claims that were stated in the petition?

2 MS. WILLIAMSON: I didn't understand their argument fully, but
3 that seemed to be the implication to me that --

4 JUDGE OBERMANN: Okay.

5 MS. WILLIAMSON: -- somehow we had waived them, or we were
6 not bringing them properly at this time.

7 JUDGE OBERMANN: Okay. Thank you. And so you did give us
8 some authority?

9 MS. WILLIAMSON: Yes.

10 JUDGE OBERMANN: And that's in --

11 MS. WILLIAMSON: Samsung and Uniloc, they based their
12 reasoning on 35 USC 318, which requires this panel to certify that newly
13 amended claims are, in fact, patentable. To do that, you would necessarily
14 have to determine they met the written description and enablement
15 requirements as to the substituted claims.

16 JUDGE OBERMANN: Okay. And those cases are where? Are they
17 in your --

18 MS. WILLIAMSON: They're on page 1 of our reply brief.

19 JUDGE OBERMANN: Great.

20 MS. WILLIAMSON: And then one more point. Oh --

21 JUDGE OBERMANN: No, that's okay. Go ahead.

22 MR. BREGMAN: It's sur-reply then?

23 MS. WILLIAMSON: I'm sorry. The sur-reply.

24 JUDGE OBERMANN: Sur-reply, okay.

25 MS. WILLIAMSON: Yes. And then with -- with respect to the
26 Wands factors, I think Counsel mentioned that for enablement, we somehow

1 failed to prove enablement because we did not analyze the Wands factors.
2 That's absolutely not necessary and inconsistent with the Supreme Court's
3 reasoning in the Amgen v. Sanofi case. You can look at that case and you
4 will see that the -- the reasoning was based on a holding that the amount of
5 testing necessary to determine whether a species functioned within the genus
6 or fell within the genus, they looked at whether the testing to do that across
7 the scope of the genus was reasonable. They never looked at the Wands
8 factors. The case is not mentioned.

9 JUDGE OBERMANN: Well, there's a -- I don't want to keep us up
10 here. We could talk about that case for another hour. Yeah, okay. I know --

11 MS. WILLIAMSON: Well, they just --

12 JUDGE OBERMANN: -- they don't mention Wands by name.

13 MS. WILLIAMSON: By name, but the real test is whether the
14 experimentation is undue. The Wands is one way to look at it to determine
15 if the experimentation is one -- is undue. But there's no absolute
16 requirement. And in many cases from the federal circuit, they have not
17 looked at the Wands factors, particularly in the cases that have come down
18 in the last five years.

19 JUDGE OBERMANN: Okay. Thank you very much. And I'm going
20 to add 7 minutes to your 15 minutes, so I'll give you 22 minutes if you think
21 you're going to use them.

22 MR. WOLFE: I don't think I'll need all that time.

23 JUDGE OBERMANN: Okay.

24 MR. WOLFE: But there are quite a few --

25 JUDGE OBERMANN: Let's put it on there just in case. When you're
26 ready --

1 MR. WOLFE: Okay.

2 JUDGE OBERMANN: -- I will start the clock.

3 MR. WOLFE: Thank you, Your Honors. I'll just take these in reverse
4 order just for recency's sake. Regarding the Wands factors, they're not
5 disputing that they didn't analyze the Wands factors, and instead, they're
6 relying on Dr. Holland's declaration that just says it was long and arduous,
7 and that equals undue experimentation. It's fairly conclusory from our
8 perspective. For 112, we aren't arguing that they are precluded from arguing
9 the 112 arguments against the original claim limitation. We're just saying
10 it's sort of telling that they could have and didn't. That's more of what we
11 were saying.

12 JUDGE OBERMANN: Well, this is an IPR.

13 MR. WOLFE: Yes.

14 JUDGE OBERMANN: All right.

15 MR. WOLFE: This is an IPR, but they also raised 112 arguments for
16 the thickness limitations to try to cut the chain of priority. They could have
17 done the exact same thing for this genus species argument that they're
18 making. They just thought it was a worse argument. Turning to altering the
19 chemical properties, we didn't even mention that in our slides or show that at
20 all. And we heard a lot of rebuttal just a second ago about that. I just think
21 it's a little odd that rebuttal came up when we skipped that from our slides.
22 Nothing to mention there. Turning to the inherency of peroxide as a ligand,
23 can we turn to petition 34? He mentioned that -- oh, this isn't a brand new
24 argument, that we had argued this all along. Look at our petition. Let's look
25 at the petition. Page 34, please. If you could keep -- keep it a little --

26 UNKNOWN MALE SPEAKER: Okay.

1 MR. WOLFE: 34. Oh, sorry. I'll get out of your way. So this is the
2 coating material comprises metal ions with radiation-sensitive ligands. The
3 argument that we were saying was a new argument.

4 JUDGE DENNETT: Could -- sorry. Could you identify the slide,
5 please?

6 MR. WOLFE: It's not a slide --

7 JUDGE DENNETT: Are you --

8 MR. WOLFE: -- Your Honor. It's a petition.

9 JUDGE DENNETT: Okay.

10 JUDGE OBERMANN: It's the petition --

11 JUDGE DENNETT: Thank you.

12 JUDGE OBERMANN: -- and it's page what of the petition?

13 MR. WOLFE: 34.

14 JUDGE OBERMANN: 34 of the petition.

15 MR. WOLFE: So if we go down --

16 JUDGE DENNETT: Okay.

17 MR. WOLFE: -- to, "Coating materials comprises metal ions with
18 radiation-sensitive ligands," where were the arguments for that? If you go
19 down, it's -- mentions the precursor chemicals, spin-coated. Go down some
20 more. Working solutions were created. A POSA understands these
21 peroxide groups to be radiation-sensitive ligands. And this is their
22 extinction coefficients theory. This is the one mentioning extinction
23 coefficients. It's one paragraph there and continue down. What's next?
24 "Wherever, as shown below, the precursor solution components are the
25 same." Here are the precursor solution components. Therefore, they have
26 the exact same properties, and we can rely on the '564 patent.

1 Those are their two theories. When Your Honors asked them about
2 their inherency theory, they sprinted it away from it, and then pointed to the
3 extinction coefficient. So I'm not exactly sure what's going on there, but
4 they didn't ever argue that peroxide itself inherently is radiation sensitive
5 like they're doing now on rebuttal. That's just not in there. There's two
6 theories. Extinction coefficient and components are the same. They didn't
7 argue that in the petition, and it kind of cuts against their argument that
8 radiation-sensitive activity can vary with the metal. How does that make
9 sense if it's inherent?

10 JUDGE OBERMANN: Okay. So your real argument is -- and I agree
11 that we have to look at the petition and see if they're changing the thrust of
12 their challenge. Is that your argument that they were relying on an express
13 disclosure here and that later they brought in inherency?

14 MR. WOLFE: Yes. Except with one caveat to that. They're relying
15 on express disclosure, and then they're relying on inherency of the same
16 films, not the peroxide itself. That is a new argument.

17 JUDGE OBERMANN: Oh, okay. So in the petition, they do talk
18 about inherency, pulling it out of the actual patent that's being challenged.

19 MR. WOLFE: Exactly.

20 JUDGE OBERMANN: But they don't argue in the petition that the
21 mere presence of peroxide would have inherently resulted in this limitation.

22 MR. WOLFE: Right. The peroxide itself being inherent.

23 JUDGE OBERMANN: Yeah.

24 MR. WOLFE: That's absolutely correct.

25 JUDGE OBERMANN: It's an inherent -- it's an inherency argument
26 about what peroxide does.

1 MR. WOLFE: Right. Right.

2 JUDGE OBERMANN: Okay.

3 MR. WOLFE: And then, just for the enablement argument, Your
4 Honor, there was a lot of discussion about undue experimentation and sort of
5 what would be undue. They just said long and arduous. But there is sort of
6 a critical threshold point that they needed to show a nonworking
7 embodiment to show that you needed to test them to tell the working ones
8 from the nonworking ones. And I think that's from the Alcon case, 745 F.3d
9 1180, and the end cite would be 1190, and that's not in the record, Your
10 Honor. We haven't cited that before, but that's in terms of their enablement
11 argument, which is sort of coming up now in the rebuttal. In terms of Dr.
12 Hall-Ellis's declaration - can we pull up Exhibit 1006, please - Counsel
13 keeps making a big deal about paragraph 46.

14 JUDGE OBERMANN: What -- which slide is this? I'm sorry.

15 MR. WOLFE: Sorry. This is Dr. Hall-Ellis's Declaration --

16 JUDGE OBERMANN: Oh, I see.

17 MR. WOLFE: -- Exhibit 1006 --

18 JUDGE OBERMANN: Okay. Got you.

19 MR. WOLFE: -- paragraph 46. They keep making a big deal about
20 this sentence or this paragraph. And if you look at the second sentence, it
21 says, "The catalog record indicates the copy of the dissertation is located at
22 these two locations," and it says two locations. But then if you look at the
23 catalog record, which I walked Your Honors through in my main
24 presentation, it shows two places are both ProQuest. So I think --

25 JUDGE OBERMANN: Ah.

26 MR. WOLFE: -- that Your Honors can take a look at that. It would

1 be very interesting. And then finally, for the written description --

2 JUDGE OBERMANN: Oh, can I ask you a question about that? I'm
3 beating a dead horse here.

4 MR. WOLFE: Please.

5 JUDGE OBERMANN: I want to know what was available,
6 obviously, during that embargo, the so-called embargo period. So what
7 you're telling me is that when she was talking about this being available in
8 two places during the critical time, if you went to OSU, they would have
9 referred you to the ProQuest site?

10 MR. WOLFE: I don't know what would have happened if you had
11 gone to OSU at the critical time. And the point I'm making about this
12 paragraph is it's not stating from the perspective of the relevant time. It's
13 saying "is." It's a present tense.

14 JUDGE OBERMANN: Oh, okay.

15 MR. WOLFE: And then the two places that it is available are both
16 ProQuest references. I think that's paragraph 49 --

17 JUDGE OBERMANN: So right now, it's available in both places, but
18 that's their point. They're saying that she knows that she compared them
19 word to word or something. I mean, I think that their point -- and I'll let you
20 correct me if I'm wrong, Mr. Bregman. But I think they're saying that by her
21 saying this, she's basically equating them that whatever was available at
22 OSU at the time is the same as what was available at ProQuest. We don't
23 know if she did a word-for-word assessment. We don't know -- the big thing
24 is we don't really know whether OSU complied with the request from Dr.
25 Stowers --

26 MR. WOLFE: Yeah.

1 JUDGE OBERMANN: -- to put it under an embargo.

2 MR. WOLFE: I think there's some critical evidence to that. That
3 goes to an email that came up earlier in terms of them saying that there's no
4 evidence of an OSU embargo and then requesting particular information in
5 discovery from OSU, getting the information, and then not revealing it to
6 Your Honors. So I think that it would be a very interesting piece of
7 information to show that was -- you did in fact receive this embargo request.
8 But I understand that --

9 JUDGE OBERMANN: But that's not in the record?

10 MR. WOLFE: I understand that, Your Honor. I understand that.

11 JUDGE OBERMANN: Okay. But you did show me something and
12 I -- this may be a different issue. I'm -- my brain is a little fried now, but
13 wasn't there something where you said -- there were the two emails. There
14 was the Engelbert email --

15 MR. WOLFE: Engelbert, yes.

16 JUDGE OBERMANN: -- and then somebody else said, "Well --

17 MR. WOLFE: Cara Key, yes.

18 JUDGE OBERMANN: Yeah. Somebody else said, "That doesn't
19 mean it was actually published." And that sort of cast doubt on what Mr. --

20 MR. WOLFE: Mr. Engelbert said. But what's weird about that is Ms.
21 Key, we introduced that email with our Patent Owner's response, and then
22 they went off on their own and emailed someone else.

23 JUDGE OBERMANN: So that came in after.

24 MR. WOLFE: And then they came in afterwards. And it's
25 contradictory to what was put in before. So it's odd that they wouldn't let
26 them know that this had already been said or anything about the embargo

1 and just sort of said, "When is this available?" Do you give -- you give --
2 what's the word?

3 JUDGE OBERMANN: Well, in any event, we don't have any sworn
4 testimony. We're talking about emails and who bears the burden of proof,
5 we know.

6 MR. WOLFE: Yes, Your Honor. And I think the telling point from a
7 lot of this was we don't know. Whose burden was it to make sure we know
8 that? It was their burden. Oh, and if we return to Stowers Declaration
9 Exhibit 2008, please. I think it's paragraph 7, perhaps. So paragraph 7, this
10 is Dr. Stowers' Declaration in Exhibit 2008. He said, "When I submitted my
11 thesis, I requested that it be embargoed, and I understood this to mean that it
12 would be unavailable to the public until October 2009." So this is his sworn
13 testimony about that. And he is also linking it down below. If you can go
14 down below, Max, please.

15 JUDGE OBERMANN: Do we have any kind of contemporaneous or
16 any proof at all for paragraph 7 other than --

17 MR. WOLFE: Paragraph 7 would be supported by paragraph 8 in
18 terms of him emailing his colleague about his dissertation --

19 JUDGE OBERMANN: Okay.

20 MR. WOLFE: -- and passing the one-year embargo. And in terms of
21 hard evidence that he submitted a request for embargo, that does exist, Your
22 Honor.

23 JUDGE OBERMANN: It does?

24 MR. WOLFE: That's the thing that we were emailing about, Your
25 Honor. That's the thing that Lam had requested from OSU, demanded from
26 us only a couple of weeks ago, saying it's of utmost importance to this

1 proceeding and the embargo. Then both parties received it. We were trying
2 to put it into the record so Your Honors could be aware of it, and then, you
3 know, the email happened, and the records closed.

4 JUDGE OBERMANN: Is that the thing that I said we're not going to
5 open the record?

6 MR. WOLFE: Yes, Your Honor.

7 JUDGE OBERMANN: Okay.

8 MR. WOLFE: Yes.

9 JUDGE OBERMANN: All right.

10 MR. BREGMAN: I can speak to that a little bit if you'd like, Your
11 Honor.

12 JUDGE OBERMANN: Sure.

13 MR. BREGMAN: Because I think that is going to get into the
14 record --

15 JUDGE OBERMANN: Okay.

16 MR. BREGMAN: -- because that was a -- that was a request for an
17 embargo to ProQuest. So we got a ProQuest deposition coming up.

18 JUDGE OBERMANN: Right.

19 MR. BREGMAN: We can ask the ProQuest person about it because
20 it's a request to ProQuest. I --

21 JUDGE OBERMANN: Okay.

22 MR. BREGMAN: I would --

23 JUDGE OBERMANN: So maybe in the February 19th briefing --

24 MR. BREGMAN: Yeah. So it might still get in, Your Honor,
25 through Exhibit 2.

26 JUDGE OBERMANN: Okay. I'll say this. Your -- you know, I don't

1 know if I said that no further -- I know I said no further declaration evidence
2 in those supplemental briefs. But I'm going to give you permission now to
3 enter that into the record when you file your supplemental briefs. And I'm
4 really hoping that you can get Ms. Stewart's declaration done before
5 February 5th, because it's going to start pushing. I know that --

6 MR. BREGMAN: Yeah.

7 JUDGE OBERMANN: -- you know, you -- I'm anticipating that
8 you're going to come to me and ask for more time. Just know that that is a
9 hard deadline to move because we have to have time to write the decision.
10 So I'll take it under advisement if you need more time to get her to appear.
11 But let's -- I don't want to take your time up with that.

12 MR. WOLFE: I absolutely understand that, Your Honor. And I think
13 we're both trying to get her deposed. But it's difficult when she's refusing to
14 sit for the deposition absent a subpoena. And in Eastern Michigan this year,
15 they haven't issued the subpoena.

16 JUDGE OBERMANN: Yeah. I understand that's --

17 MR. WOLFE: There's not much --

18 JUDGE OBERMANN: -- tough. All right.

19 MR. WOLFE: And then finally, in terms of the written description
20 arguments for RAI, I do still think that RAI is our best case. And as Your
21 Honors mentioned, you know, there's -- the endpoint is the lower endpoint
22 for another one. But I do think that it's close enough in terms of
23 predictability. Yes, it mentions electro-mechanical inventions and that is
24 predictability of the art. But it does mention the complexity of the relevant
25 technology at issue, which no one is disputing here, isn't particularly
26 complex for that. The other case that I mentioned, Your Honors, was In re

1 Blaser. I just want to give you a cite for that. That's 556 F.2d 534, so. Is
2 there anything else?

3 JUDGE OBERMANN: No --

4 UNKNOWN MALE SPEAKER: No. That's fine.

5 JUDGE OBERMANN: -- nothing for me. Do my co-panelists have
6 any questions?

7 JUDGE DENNETT: Nothing from me. Thank you.

8 MR. WOLFE: Thank you, Your Honors.

9 JUDGE OBERMANN: Thank you very much. Okay. I just want to
10 make really clear that when you file those supplemental briefs that I
11 authorized, I'm going to, you know, put on the record now that you are
12 authorized to submit a copy of that document we discussed. No more
13 declaration evidence, please. Yes?

14 MR. BREGMAN: I mean, we can -- during the deposition, we can
15 put documents in front of her, right --

16 JUDGE OBERMANN: Absolutely.

17 MR. BREGMAN: -- so we can catch whatever we put in front of
18 her --

19 JUDGE OBERMANN: Absolutely.

20 MR. BREGMAN: -- which -- this would just be one of those.

21 JUDGE OBERMANN: Yes. In fact, you can put new evidence in as
22 long as it's documentary. I don't want any new declaration evidence because
23 that triggers the routine discovery of that declarant.

24 MR. BREGMAN: Yeah. I understand.

25 JUDGE OBERMANN: And we just cannot keep this going on and on
26 and on. So I want to thank Counsel very much. I'm very, very grateful for

1 the level of preparedness that both sides had today. You both very ably
2 represented your clients. I found the presentation extremely helpful, and I
3 just want to really thank you. I think that we got to the issues today. And
4 obviously, one side is probably going to be upset, but I want you to know
5 that we're doing our best to really understand these issues. They're very
6 tough, and you did a great job presenting them today. Thank you. The case
7 is submitted, and thank you again, Counsel.

8 MR. WOLFE: Thank you.

9 JUDGE OBERMANN: Safe travels.

10 (Whereupon, the above-entitled matter went off the record at 4:00
11 p.m.)

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