

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MIANYANG BOE OPTOELECTRONICS TECHNOLOGY CO. LTD.,
WUHAN CHINA STAR OPTOELECTRONICS SEMICONDUCTOR
DISPLAY TECHNOLOGY CO., LTD., TIANMA MICROELECTRONICS
CO. LTD., and VISIONOX TECHNOLOGY, INC.,
Petitioner,

v.

SAMSUNG DISPLAY CO., LTD.,
Patent Owner.

IPR2023-00941
Patent 7,414,599 B2

Record of Oral Hearing
Held: September 16, 2024

Before JAMESON LEE, TERRENCE W. MCMILLIN, and
JOHN A. HUDALLA, *Administrative Patent Judges*.

APPEARANCES:

ON BEHALF OF THE PETITIONER:

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The above-entitled matter came on for hearing on Monday, September 16, 2024, commencing at 10:00 a.m., via video conference.

P R O C E E D I N G S

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JUDGE LEE: Good morning, everyone. We apologize for the slight delay, but I think we're ready to go. Welcome to the Board. I'm Judge Jameson Lee. My colleagues on the Panel are Judge Terrence McMillin and Judge John Hudalla. This is the oral hearing for IPR2023-00941. The involved patent is Patent 7,414,599. I understand that Mr. Johannes Hsu will participate as a LEAP practitioner for Petitioner and we welcome that participation. And Petitioner is accorded an additional 15 minutes of oral argument time because of the participation of a LEAP practitioner.

Would counsel for each side please introduce themselves and let us know who will be presenting arguments today, starting with Petitioner, please?

MR. JENSEN: Yes, Your Honor. May it please the Board. This is Travis Jensen from the law firm Orrick, Herrington & Sutcliffe, and I am pleased to have with me today Mr. Johannes Hsu, who will also be presenting.

JUDGE LEE: Thank you. And Patent Owner, please?

MR. GARR: Yes. Good morning, Your Honors. This is David Garr from Covington & Burling for Patent Owner Samsung Display Company. With me are co-counsel Scott Weidenfeller and Jared Frisch. I'm also joined by my colleague Jeff Lerner and some representatives from the Samsung Display team in Korea: Charles Kim, Jong-Sung Kim, Hyun-Chang, and Yoon-Mi Choi.

JUDGE LEE: Thank you and welcome. There are confidential information in this case and there is a protective order to protect that

1 confidentiality. The hearing, I want to remind you all, is open to the public
2 and there is a public access line. So please be sure that when you present
3 your case do not reveal any confidential information.

4 Petitioner has a total of 75 minutes of oral argument time and Patent
5 Owner has 60 minutes. The Petitioner will go first and may reserve time for
6 rebuttal. Then the Patent Owner presents and may reserve time for
7 surrebuttal. And then the Petitioner returns to present its rebuttal. And then
8 finally we finish with Patent Owner's surrebuttal.

9 If at any time during the proceeding you encounter technical
10 difficulties that fundamentally undermine your ability to adequately
11 represent your client, please let us know immediately, for example, by
12 contacting the team member who provided you with the connection
13 information.

14 And please identify yourself when you begin your argument and
15 speak clearly into your microphone. Please do not speak when others, such
16 as the judges, are speaking. We have the entire record, including
17 demonstratives. When referring to demonstratives, papers, or exhibits,
18 please do so clearly and explicitly by slide or paper number. And please
19 also pause a few seconds after identifying it so that we will have time to find
20 it. And then please activate mute when you're not speaking.

21 And please bear in mind the purpose of the oral hearing is to present
22 your case based on the arguments and evidence of record, and you may not
23 introduce new evidence or arguments.

24 And with that, Petitioner, when you're ready, you may begin.

1 MR. JENSEN: Thank you, Your Honor. And before jumping into the
2 substance, I did want to raise maybe just one or two housekeeping items, if
3 that's okay.

4 JUDGE LEE: Certainly. Sure.

5 MR. JENSEN: The first is that the parties did agree that this would be
6 a public hearing. And I should note that Petitioner does have a number of
7 client representatives joining on the public line as well. There are a variety
8 of them, and they're located in China, so it's late their time. But I did want
9 to make sure that Patent Owner knew that they were on in terms of the
10 confidentiality issues.

11 And then the one other, I guess, question I had was, I noticed that in
12 the Patent Owner's slides that there are not any slides dealing with the topic
13 of a POSITA. And so I wasn't sure if they were planning to address that or
14 if the Board wanted to hear argument on that and just wanted to seek the
15 Board's guidance on that one specific issue, since I didn't see it addressed in
16 Patent Owner's slides.

17 JUDGE LEE: Well, we will be asking all kinds of questions. So if
18 we ask questions on the level of skill of a POSITA, we would appreciate
19 whoever we ask to be answering them even if they don't appear on the party
20 slides., So, we're not tied to whatever are included in the slides as far as our
21 questions go.

22 MR. JENSEN: Well, we're presented to or prepared to present on that
23 topic, so I appreciate that.

24 We would like to reserve 30 minutes for rebuttal. And do you provide
25 us with a warning or a notice, or should I track the time myself?

1 JUDGE LEE: I will check for you. Assuming I'm correct, it's 10:22
2 and you're reserving 30 minutes from your 75 minutes. So you can go for
3 45 minutes from 10:22 right now.

4 MR. JENSEN: Yes. And we may run over that a little bit and eat into
5 our rebuttal, but I appreciate the heads-up at the 45-minute mark.

6 JUDGE LEE: Yeah. So that will -- 45 minutes will end at 11:07.

7 MR. JENSEN: Okay, very good. Let me share my screen and just
8 make sure that that is visible and we'll get underway.

9 JUDGE LEE: Thank you.

10 MR. JENSEN: So may it please the Board. Patent Owner has
11 segmented its presentation into six modules that are listed on slide number 2.
12 Mr. Hsu will be presenting on the all-PMOS topic and the secondary
13 considerations topic, and I will be presenting on the balance of the topics,
14 beginning with a short background or introduction module to orient this a
15 little bit and provide some context for the subsequent topics.

16 As noted, the challenged patent here is the '599 patent. It has a
17 priority date of 2003, so that's the timeframe that we're talking about. The
18 patent is directed to what's called a pixel circuit, and we're going to get into
19 that in a lot more detail, but at a high level, that's what the patent is talking
20 about. And the '599 patent includes 18 claims, all of which are challenged
21 in the Petition, and that includes five independent claims that are identified
22 on slide 4. And I'll just note that claim 1 has a unique numbering scheme
23 for the claimed transistor relative to all of the other independent claims.
24 And so in the Petition and in the argument here, we use claim 7 as the base
25 claim. It's the broadest claim, and it has a number --

1 JUDGE LEE: Excuse me, Mr. Jensen, I just want to give you -- it
2 appears your notes might be visible on the camera, so you might want to --

3 MR. JENSEN: Oh, I appreciate that. Let me reshare the screen here
4 and see if I can remedy that. Are you able to see the presentation now?

5 JUDGE LEE: I think so, yeah.

6 MR. JENSEN: And just the presentation?

7 JUDGE LEE: Yeah. But if I may ask some questions first. You
8 know, we're familiar with the basic materials. Like, I know claim 1 has the
9 naming issue is off. The basic information we know. But I want to ask --
10 really ask you, but I'm confused about which claims require all-PMOS and
11 which claims do not. In reviewing the Petition, I see that you do say
12 somehow that claims 15 and 17 require all-PMOS because of the internal
13 connections that are recited therein. But does that mean the other
14 independent claims do not have an all-PMOS transistor? I mean, you don't
15 actually explicitly say that.

16 MR. JENSEN: Yes, Your Honor. And you're correct that not all of
17 the claims require all-PMOS transistors, although there are some that do.
18 There are other claims that require certain transistors to be PMOS
19 transistors, but not others. And I'll further note that sometimes the claims
20 don't expressly recite PMOS transistor, but by virtue of the recited
21 connections between the gate, source, and drain, et cetera, that necessarily
22 requires a PMOS transistor. And because of that Petitioner in the Petition
23 relied on an all-PMOS embodiment because that would cover all of the
24 claims, including the claims that --

25 JUDGE LEE: Yes, I'm sorry. We understand that. Can you be clear,
26 which ones do not and which ones do?

1 MR. JENSEN: Which claims do require all-PMOS transistors? I
2 believe it's claim --

3 JUDGE LEE: Which independent claims require all-PMOS
4 transistors and which independent claims do not require all-PMOS
5 transistors?

6 MR. JENSEN: I believe it's claims 15 and 17. But I will confirm that
7 before the end of the hearing.

8 JUDGE LEE: And then the other ones -- independent claims do not,
9 like 1, 7, and 14 do not? Is that what --see, I can't tell from your Petition.
10 And that's why --

11 MR. JENSEN: I'm sorry, I know the claim 7 does not require all-
12 PMOS.

13 JUDGE LEE: Right.

14 MR. JENSEN: I'll have to double-check on claims 1 and the other
15 independent claim 14. But I would emphasize that because there are some
16 claims that require all-PMOS transistors, we proceeded with an all-PMOS
17 embodiment --

18 JUDGE LEE: Yeah.

19 MR. JENSEN: -- for all of the claims.

20 JUDGE LEE: It causes a little problem. Because what if we're not
21 persuaded by your argument that a POSITA would have modified *Kimura's*
22 33 embodiment to all PMOS? Let's say, just hypothetically, let's say you
23 fail there, then what happens? Do you fail on everything, even on claims
24 that don't require all PMOS? Because that's how you presented your case.

25 MR. JENSEN: I don't think you would have to reach there because I
26 think we have a very easy case that -- regarding the substitutability of

1 NMOS and PMOS transistors and certain claims -- or certain transistors in
2 *Kimura* itself are already disclosed as being PMOS transistors. For example,
3 the driving transistor is a PMOS transistor in *Kimura* Figures 33 and 36. So
4 any claim that required that the driving transistor be PMOS would obviously
5 be met.

6 But to directly answer your question, if the Board were to conclude,
7 and I think this would be incorrect, but if the Board were to conclude that
8 you cannot substitute a PMOS transistor for an NMOS transistor, any claim
9 that required such a PMOS transistor would not be satisfied.

10 JUDGE LEE: No, that's my question. You know, let's say you don't
11 succeed in your efforts to tell us it would have been obvious to make the
12 conversion. Why wouldn't you just fail on all of your claims, even those
13 that do not require all PMOS? That's the question.

14 MR. JENSEN: Well, I think the Board sort of addressed that or
15 acknowledged that in its Institution Decision that the exemplary showing
16 that we made as to how the claims are satisfied used in all-PMOS
17 implementations, but that the all-PMOS implementation was not necessarily
18 required for all claims.

19 JUDGE LEE: I know we said that, but we might be wrong. That's
20 why we're at final hearing. We want to get to the right conclusion and not
21 just be stuck with our preliminary decision. So do you have an answer as to
22 why, you know, you having chosen this particular strategy? Why shouldn't
23 you be stuck with it if you're wrong on it?

24 MR. JENSEN: Your Honor, I think the Board would be within its
25 discretion to make such a conclusion. And we feel confident enough in our
26 all-PMOS presentation to say that I think with some confidence that the

1 Board should reach such a conclusion. But if the Board did, we
2 acknowledge that we proceeded on an all-PMOS implementation for all the
3 claims.

4 JUDGE LEE: Thank you. I have a follow-up, though. So basically,
5 you know, a big part of your argument for the conversion is that NMOS and
6 PMOS transistors versions are interchangeable, right, for so-called switching
7 transistors. But what exactly is, quote, “switching transistors” in the context
8 of your argument? I looked and I don’t find anywhere in the Petition where
9 you explain, well, this is a switching transistor.

10 MR. JENSEN: I believe that we do explain that. It may be in the
11 expert declaration, but I don’t think there’s any dispute. And my colleague,
12 Mr. Hsu, who’s going to address the PMOS issue, can probably speak to this
13 in more detail. But I do know, for example, that Patent Owner’s expert, Dr.
14 Wolfe, agreed with us that a switching transistor is simply a transistor that
15 performs an on/off function, a switching function. You can think of it as a
16 digital function as opposed to an analog transistor or an analog function, just
17 like a light switch. It’s either on or it’s off. You know, it’s up or it’s down.

18 JUDGE LEE: Yeah, I understand. But now you’re relying on his
19 expert. Where in your Petition is an explanation of the meaning of a
20 switching -- or where in your expert’s testimony is there an explanation of
21 what is a switching transistor?

22 MR. JENSEN: Let’s look at Dr. Foty’s declaration. This is the
23 original declaration and this is Paper 1003, paragraph 42. He talks about --
24 he’s explaining the basics of transistors and he says that, you know, M-O-S,
25 MOS transistors can be used as simple on/off switches. And he goes on to
26 explain that in some additional detail as well. But that was included in our

1 Petition, and that's something that's certainly within the, you know, the
2 knowledge of a person of skill in the art, what is a transistor that functions as
3 a switch? And it was confirmed again by their own expert. And it's a point
4 that I don't think is in dispute.

5 JUDGE LEE: Well, but every transistor is just a switch, isn't it? I
6 mean, it's either on or off. Right? So when I read that testimony, you know,
7 I'm not that satisfied. I still don't know. Every transistor turns on or off.
8 What makes every transistor in *Kimura*'s Figure 33 embodiment not a
9 switching transistor? Some are and some are not.

10 MR. JENSEN: So there is one transistor in *Kimura* and in the '599
11 patent that is not a switching transistor, and that has a specific name. It's
12 called the driving transistor. And that transistor performs the analog
13 function of determining how much current will flow through the LED. And
14 you can think of that like a water faucet, right? It's not -- you don't turn it --
15 you know, it's not either all the way on or all the way off. You can turn it
16 part way on. It could be halfway on or a third of the way on. And that's
17 because it's performing an analog function that very precisely controls the
18 amount of current that flows through the device. So there is --

19 JUDGE LEE: So the output depends on the precise value. You
20 know, the input is higher, then the output is higher. If the input is lower,
21 then the output is lower. So that's why it's not a simple switching transistor.
22 Is that right?

23 MR. JENSEN: That is correct. And that's in contrast to all of the
24 other transistors in the circuit, which simply turn on or off. And you can see
25 that, for example, if we were to look at the *Kimura* reference, and that is
26 Exhibit 1002, if we go to, for example, Figures 33 and 36, you can see here

1 that these are labeled. You know, the transistors, you know, are identified as
2 either being on or off the --

3 JUDGE LEE: Yeah, those I can see. What about transistor 3,
4 though? That looks very different from the other ones. I can see how the
5 other ones are simple on and off. But where's the explanation that transistor
6 3 works just like the other simple switching transistors and not like the
7 driving transistor? Where's the explanation on that? I mean, where do you
8 tell us that.

9 MR. JENSEN: Yeah, I think you can see that illustrated here in
10 Figure 33 itself. So the third transistor that we're talking about is this one
11 right here is 3309. And you can see that in every operational phase that's
12 either turned all the way on or turned all the way off. Just like --

13 JUDGE LEE: You want me to look at which figure -- which slide or
14 which figure of the reference?

15 MR. JENSEN: This is Figure 33B in the *Kimura* reference. It's
16 Exhibit 1002. It should be available on the screen.

17 JUDGE LEE: Okay.

18 MR. JENSEN: And the third transistor is this 3309.

19 JUDGE LEE: Yeah.

20 MR. JENSEN: And you can see that in all the operational phases
21 that's identified as either being, you know, all the way on or all the way off,
22 just like a digital switch. And that's in contrast, again, to that analog
23 transistor that, you know, has a very precise voltage, you know, this V_{data}
24 minus $V_{threshold}$ voltage program onto it.

1 JUDGE LEE: Okay. So I'll be asking the other side why that is not a
2 simple switching transistor, but basically you're saying this is, and they
3 don't dispute that 3309 is a simple switching transistor?

4 MR. JENSEN: If they did, I'd have to double-check maybe their Sur-
5 reply. But my recollection was that there seemed to be an agreement
6 between the parties that the analog transistor was the driving transistor and
7 that everything else functioned as a digital on/off switch.

8 And that's the function that the third transistor performs, by the way.
9 Right? As soon as the capacitor reaches a certain charge or certain voltage,
10 and that's identified here as $V_{data} - V_{th}$, as soon as that happens, that
11 transistor, the third transistor, switches from on to off. That's all it does.
12 There's no analog function about it at all whatsoever. It simply goes from
13 on to being off, and the capacitor stops charging at the appropriate level.

14 JUDGE LEE: Okay. In your Petition, you kind of refer to the other
15 embodiments of *Kimura*, like Figures 1, 3, 4, and 32. And you say the
16 description for them identify certain ones as switching transistors and,
17 therefore, you can configure them either as NMOS or PMOS, right?

18 MR. JENSEN: Correct.

19 JUDGE LEE: So my question is, why doesn't *Kimura* refer to all
20 switching transistors as switching transistors? He only picks out certain
21 ones and label them as -- talk about them as switching transistors when there
22 probably are other transistors in the diagrams that are also switching
23 transistors.

24 MR. JENSEN: I think that's because the concept of a switching
25 transistor was so well known in the art that it wasn't necessary to expressly
26 identify in every instance or every embodiment which transistors were

1 switching transistors and which ones were not. And by identifying the drive
2 transistor that performs the analog function, and it gives that a kind of a --
3 you know, it's a special name or a special category, you know, POSITA
4 knows that that transistor is different than all the others. The implication
5 and what is understood by POSITA is that the other transistors simply
6 function as on/off switches, just like as shown in Figures 33 and 36.

7 JUDGE LEE: I see. So you wouldn't make much out of the fact that
8 not all switching transistors are identified as switching transistors. Only
9 (inaudible).

10 MR. JENSEN: I don't think that's necessary at all. Just like they
11 don't identify every time, you know, a certain signal is a power source. If
12 they said it, you know, previously in one figure and it's a carryover and
13 extension of another figure, they often don't repeat these things over and
14 over and over again. The -- go ahead.

15 JUDGE LEE: So you mentioned earlier that they don't really dispute
16 that transistor three is a switching transistor. Then I'm trying to figure out
17 what the Patent Owner is actually arguing. They're actually saying, okay,
18 that's the switching transistors, but despite the general interchangeability for
19 switching transistors, you shouldn't do it in this case because of additional --
20 because of all the other reasons they offer, like the pitch, current, and the
21 size and the speed. So is that the issue? Even though it's a switching
22 transistor, which generally is interchangeable, but you shouldn't do it in this
23 case because of -- for these reasons?

24 MR. JENSEN: That's how I understand their argument, Your Honor,
25 is to focus on the three purported functional differences, I think size, speed,
26 and leakage. If there are specific questions about those, I'd be happy to

1 hand the baton to Mr. Hsu to address sort of the penumbra of all-PMOS
2 topics. If you have further questions on that, I'd like to make sure he has an
3 opportunity to participate.

4 JUDGE LEE: Yeah. Is there testimony from your expert, Mr. Foty,
5 that, you know, all these different characteristics, like the leakage and size
6 and speed, they really don't amount to anything consequential? I mean, the
7 circuit is still going to work, you know, just maybe one works a little better,
8 but it's not going to make material difference, like making anything
9 inoperative. Interchangeable is still interchangeable despite these
10 characteristics, differences.

11 MR. JENSEN: Absolutely, Your Honor. Dr. Foty provided an
12 extensive analysis of each of those three items that you mentioned in his
13 Supplemental Reply -- or in his Reply Declaration, which is Paper Exhibit
14 1029, beginning at -- let me get the paragraph for you here. Beginning
15 around -- well, there's some general discussion beginning at paragraph 18,
16 but really from paragraphs 33 to 54, Dr. Foty specifically rebuts each and
17 every point that they raise regarding, you know, mobility, which is sort of a
18 proxy for size. That's starting at paragraph 33 and continuing paragraph --
19 starting at paragraph 41, he addresses their size argument. Paragraph 44, he
20 rebuts their leakage contention.

21 But I would submit that, Your Honor, don't even have to reach those
22 specific issues, given the teachings of the '599 patent itself, *Kimura* itself,
23 the knowledge of a POSITA, and even some of Patent Owner's own
24 exhibits, their own textbook exhibit, I believe it's 2010, which all address
25 this notion that you can have all-PMOS pixel circuits. There's no -- you
26 know, the notions of size, speed, and leakage simply don't create a reason

1 not to use a PMOS transistor. In fact, PMOS transistors in many respects
2 are better than NMOS transistors for certain of those issues.

3 But Dr. Foty does address this in detail in his Reply Declaration
4 starting at paragraph 33.

5 JUDGE LEE: Thank you. How about your second rationale? At DI,
6 we had problems with the second rationale, which is, oh, it would be less
7 costly to make everything in the circuit out of one type of transistor. We had
8 that concern. And then it looks like you didn't follow up on it. You said
9 you're just going to focus on your first rationale.

10 So does that mean you're no longer pursuing that one? We should
11 just look at the first one, first rationale?

12 MR. JENSEN: Due to space limitations, we did not follow up, as you
13 said, on the second rationale. We did not withdraw it. We think it's sound.
14 But we certainly focused our argument and Reply on the first rationale,
15 which, you know, would be sufficient. You don't need both of them if you
16 have just one of them.

17 But, yeah, we do think that first rationale still holds. But I wouldn't
18 want to -- I think there's bigger fish to fry at the hearing here, and I would
19 rest on our papers as to the second theory.

20 JUDGE LEE: Okay, thank you. Thank you. Go ahead.

21 MR. JENSEN: So just one last point on -- a general point on the '599
22 patent in terms of kind of framing the issues, and that is if you're (inaudible)
23 patent at the core of it. Right? I'd say the sort of the primary focus or point
24 of novelty, if you will, purported point of novelty has to do with the second
25 and third transistors and the function that they perform by virtue of being
26 connected in a -- let's call it a diode connected configuration. And that is to

1 perform threshold voltage compensation, which is essentially a fancy way of
2 saying sort of self-calibration or calibrating one pixel to be similar in its light
3 emission to another pixel. And I mention that because it's repeated over and
4 over and over again in the '599 patent.

5 I think the Institution Decision recognized that in its description of the
6 patent, and that fundamental concept which appears in the claims is not
7 challenged at all by Patent Owner in this proceeding. It is very plainly
8 disclosed in *Kimura* in the prior art. Figures 33 and 36 have a diode-
9 connected transistor configuration that expressly performs threshold voltage
10 compensation. So what that leaves us with, and our own expert admits, hey,
11 was this, you know, self-compensating diode configuration known in the
12 prior art? It was known in the prior art.

13 And we'll hear a lot from Dr. Wolfe today. And I want to emphasize,
14 because you might think he was our expert given some of the things that he
15 said, but this is Patent Owner's own expert.

16 So what does that leave us with is really these three disputes having to
17 do with the all-PMOS substitution, the shared light signal limitation, and the
18 initialization or reset TFT, which is a, you know, thin film transistor, an
19 initialization transistor. So we'll be addressing each of those, and I'll hand
20 the baton to Mr. Hsu to make some additional points regarding the all-
21 PMOS substitution.

22 MR. HSU: Good morning, Your Honors. This is Johannes Hsu for
23 Petitioner. And this based on Your Honor's remarks, it sounds like I do
24 have a job to do to persuade the Board to the all-PMOS modification. And I
25 will try my best to adapt my remarks based on the comments that have
26 already been raised.

1 So as Your Honor just discussed, you recognize in Institution
2 Decision of these two theories. And since that's already covered, I will not
3 go into depth -- an in-depth discussion. But you know, we absolutely
4 believe the second theory is sound as well. And if Your Honors aren't
5 interested in that, I'd be prepared to address that as well. But as Your
6 Honors held, that either one of these two will be -- will suffice to render all-
7 PMOS modifications obvious.

8 And also, as Your Honor stated, that it is not necessary to show a
9 modification is the best option, only that it be a suitable option. And as we
10 will explain, all PMOS was suitable option.

11 Now, as Mr. Jensen already mentioned, the general interchangeability
12 of the PMOS and NMOS transistors is supported by a multitude of
13 references on the record. Now, the '599 patent supports it in two ways.
14 First, the pattern itself states that the pixel circuit may be either NMOS,
15 mixed NMOS-PMOS, or PMOS. This amounts to the admission that either
16 NMOS or PMOS works.

17 Second, the admitted prior art in Figure 1 comprises mostly PMOS
18 transistors. The '599 patent does not express any concern or criticism over
19 that composition.

20 JUDGE HUDALLA: Mr. Hsu?

21 MR. HSU: Yes?

22 JUDGE HUDALLA: Sorry to interrupt. It's Judge Hudalla. I just
23 wanted to mention for the record that you're on slide 13 of your
24 presentation. If you could just mention the slides, we'd appreciate it. Thank
25 you.

26 MR. HSU: Okay, will do.

1 JUDGE LEE: Thank you, Mr. Hsu. It's Judge Lee. What does that
2 sentence mean? Isn't the pixel circuit that whole thing, including five or six
3 transistors? Why does it say, "Moreover, the pixel circuit can be configured
4 of a NMOS transistor, or a CMOS transistor or the like, other than the
5 PMOS transistor." What exactly does that mean? I thought the pixel circuit
6 has all of those things and a capacitor and an electroluminescent element.

7 MR. HSU: Right. As Dr. Foty noted in his Reply Declaration in
8 Exhibit 1029 at page 8 footnote 3, that he explained that this is likely --
9 basically, a slight incorrect statement from the '599 patent because there's
10 no such thing as a CMOS transistor. So what is meant by that is most likely
11 that this pixel circuit can comprise all transistors, a mixture of PMOS and
12 NMOS transistors, which this sentence here refers to as a CMOS transistor,
13 even though, again, there's no such thing, or all-PMOS transistors.

14 JUDGE LEE: Well, that seems pretty critical if this is right in the
15 patent itself. I don't recall the Petition ever making a big deal out of this one
16 saying -- oh, this is from the patent, it's not from the reference. I
17 understand.

18 So the patent says you can make it all out of NMOS or you can make
19 it all out of? But it's the patent itself and we can't do hindsight, right?

20 MR. HSU: That's right. This is the patent itself.

21 JUDGE LEE: So why -- I mean, we certainly can't be applying
22 hindsight. So how does this help to persuade us it would have been obvious
23 to make the conversion? Thank you.

24 MR. HSU: This very brief sentence in passing amounts to admission
25 that either NMOS or PMOS works because the short sentence indicated that
26 this -- the inventors understood this was well within the skill and knowledge

1 of a (inaudible) and, therefore, they didn't need to explain how to change a
2 PMOS or -- NMOS to PMOS or vice versa. Otherwise, the plan will have a
3 112 problem for saying, okay, it could be NMOS, but it never shows an
4 environment NMOS or vice versa.

5 JUDGE LEE: I see. Thank you. And you brought this up in the
6 Reply because I didn't recall reading it in the Petition. So it's first presented
7 in the Reply, right?

8 MR. HSU: I think that was probably the case, I don't remember on
9 the spot for sure, but we likely raised it on reply because the Patent Owner
10 brings up -- essentially brings up the issue on its -- on his Patent Owner
11 Response.

12 JUDGE LEE: Okay, thank you.

13 MR. HSU: Moving on to slide 14. So *Kimura* itself -- well, *Kimura*
14 expressly and repeatedly teaches that switching transistors are maybe either
15 PMOS or NMOS. And as Your Honors and Mr. Jensen have already
16 discussed, a switching transistor simply functions as a simple on/off switch.

17 Now, I will submit that *Kimura* does expressly identify all of its
18 transistors as switching transistors in Figures 33B through 33E, as well as
19 36B through 36E. All of them are simple on/off transistors performing that
20 function except the drive transistor.

21 JUDGE LEE: Now where is that? What do you mean? *Kimura*
22 expressly calls all of them, except the driving one, as switching transistors?

23 MR. HSU: Because all of these figures that Mr. Jensen showed on the
24 screen a while ago expressly showed either an on or off state for all of the
25 transistors except the drive transistor. That amounts to calling them

1 switching transistors, even though that express identification isn't made in
2 the description itself.

3 JUDGE LEE: Okay, thank you.

4 MR. JENSEN: Can I interrupt for just one moment? I got a note
5 from my client saying there's a number of them trying to get into the
6 hearing, but they haven't been admitted. I don't know if there's a tech
7 person that needs to allow them to join.

8 JUDGE LEE: Yeah, we'll take a minute, see if our technical people
9 can resolve that. It's 10:52. We'll just suspend the time for a minute.

10 MR. JENSEN: I appreciate that.

11 CLERK: This is Hamid (phonetic) (inaudible). Yeah, well, I don't
12 see anybody trying to join the meeting.

13 MR. JENSEN: How about the public session? Is that --

14 CLERK: It's running and it has 21 people so far joining, so.

15 MR. JENSEN: Okay. Well, we can proceed then. We'll resend them
16 the link and see if that solves the problem.

17 JUDGE LEE: Okay. All right, let's go. We can proceed. Resume.
18 Go ahead.

19 MR. HSU: All right. So still on slide 14, and as we just discussed, all
20 the transistors in *Kimura*'s circuits in Figures 33 and 36 are, except the drive
21 transistor, are simple switching transistors. And Dr. Wolfe admitted that
22 *Kimura* hints toward all-PMOS modification where the drive transistor is
23 PMOS. And that's exactly what we have in Figures 33 and 36. In fact,
24 *Kimura* expected the POSITA to know how to make these changes and the
25 associated changes. For example --

1 JUDGE LEE: Oh, Mr. Hsu, you should mention that you were talking
2 about slide 15. That seems important.

3 MR. HSU: Yes, thank you.

4 JUDGE LEE: So it was slide 15 Mr. Hsu was talking about. You're
5 talking about the question. And so you agree with respect to at least some
6 embodiments, the reference teaches that you can make an all-PMOS pixels.

7 MR. HSU: Yeah.

8 JUDGE LEE: So that was slide 15.

9 MR. HSU: Thank you, Your Honor.

10 JUDGE LEE: If you don't mention it, we wouldn't be able to find it
11 when we read the transcript.

12 MR. HSU: I understand. Thank you. So Dr. Wolfe admitted that
13 *Kimura* hints toward a PMOS modification when the drive transistor
14 (inaudible).

15 JUDGE LEE: Well, where's the hint? You say, you know, hints
16 toward it. You know, where's the hint? What language does the hint?

17 MR. HSU: This was during his deposition discussing Figure 1A of
18 *Kimura*'s embodiment. But Dr. Wolfe's comments or remarks was not
19 strictly limited to Figure 1A and is equally applicable to, for example,
20 Figures 33 and 36.

21 JUDGE LEE: Oh, I see. You say it's equally applicable, right? But I
22 don't know the other side will agree. Is that right?

23 MR. HSU: We will wait to hear from the other side.

24 So, moving on to slide 16. So, like I said, *Kimura* expressly expected
25 a POSITA to understand how to make changes associated with swapping the
26 polarity of transistors. And, therefore, *Kimura* intentionally omitted a

1 detailed explanation. This again demonstrates changing to all PMOS would
2 have been obvious.

3 Going to slide 17. Not to belabor the point, but a POSITA's
4 knowledge is also reflected in *Kimura* '798, which teaches exactly the same
5 as *Kimura* teaches. Either NMOS or PMOS is fine.

6 And moving on to figure -- slide number 18, a POSITA's knowledge
7 is also reflected by Patent Owner's own exhibit textbook, which shows
8 multiple all-PMOS pixel circuits alongside all-NMOS pixel circuits, as well
9 as mix NMOS-PMOS circuits.

10 Now, I'll skip to slide 23 to address one of the questions that Judge
11 Lee raised earlier, specifically with regard to the third transistor. Now, the
12 Patent Owner raises this leakage issue and they single out this third
13 transistor which is connected to the capacitor under the theory that because
14 the capacitor is used to store the data signal, any leakage would be especially
15 concerning. But the Patent Owner's theory is wrong for two reasons. One,
16 as Dr. Foty discussed, leakage by -- you know, well, a decade before the
17 patent, leakage was -- of p-type, TFT was very, very small. But as to on this
18 slide 23, what we're showing is the same pixel circuits from Patent Owner's
19 exhibit textbook. There are highlighted paths here on all these all-PMOS
20 circuits coupling the capacitor to a p-type transistor that potentially would be
21 equal -- of equal leakage if leakage were really a concern as Patent Owner
22 alleges. So the fact that these were commonly deployed pixel circuits
23 showed that the Patent Owner's alleged argument about leakage was not a
24 real concern to a POSITA back in the day.

25 Now, if I may go back to quickly wrap up slide 19. As to motivation
26 to modify to all PMOS, as Your Honors recognize, interchangeability itself

1 provides the motivation and that should end the inquiry. But there's also
2 additional motivation which moots Patent Owner's arguments about the
3 functional differences of leakage, size, and speed. And also, each -- as Mr.
4 Jensen pointed out, Dr. Foty provides a robust rebuttal showing how each of
5 alleged functional differences are incorrect anyways.

6 And in the interest of time, I will now conclude this section and turn
7 the time back to Mr. Jensen unless there are further questions.

8 JUDGE LEE: Thank you, Mr. Hsu.

9 MR. JENSEN: So next I'll be addressing the shared light signal
10 limitation, and I'd like to begin very briefly with some things that are not
11 disputed, and that is which claims require a shared light signal and which
12 claims do not. Even though the claims use slightly different language and
13 don't have the precise term "shared light signal," the parties agree on what a
14 shared light-emitting signal is, and the first time this comes up is in the
15 context of dependent claim 13. That's where it's first addressed in the
16 petition and you can consider that as a representative claim for purposes of
17 the shared light signal.

18 And what a shared light signal is, and this is from our petition on slide
19 31 in the claim 13 analysis section --

20 JUDGE LEE: Mr. Jensen, it's Judge Lee. Yeah, I don't have a whole
21 bunch of time left. I do have a whole lot of questions. Again, I understand
22 the basics. Can I just tell you my concerns about this issue? I think I have
23 four of them and then you can then address them in whatever order you
24 think appropriate.

25 At DI, we said that the Petitioner attempted to modify the Figure 33
26 embodiment of *Kimura*, but the proposed modification is unworkable.

1 That's what we understood and said at DI. Right? But if I understand your
2 reply correctly, you're now saying, no, no, for this feature, you did not try to
3 modify *Kimura*'s Figure 33 embodiment. And then you said, well, if you
4 did that, it wouldn't work just like Board said. You said, that's not what you
5 tried to do. What you actually tried to do is to rely entirely on *Kimura*'s
6 Figure 36 embodiment, which already has an extra transistor, which makes
7 commonly driving the fourth and fifth transistor work.

8 So that's my understanding of your reply argument. Is that
9 understanding correct?

10 MR. JENSEN: So I think you summarized the initial -- the Institution
11 Decision correctly, but I would respectfully point Your Honor to this is slide
12 46 quoting our Petition, and, again, this is a Petition, not a Reply, the
13 Petition itself. And this is in the claim 13 analysis for the shared light signal,
14 we expressly say "the all-PMOS version of *Kimura* Figure 36," all right, not
15 *Kimura* Figure 33, "*Kimura* Figure 36, discussed below, renders claim 13
16 obvious."

17 JUDGE LEE: Yeah, I realize that.

18 MR. JENSEN: And the two figures are from 36. And so we pointed
19 to Figure 36 expressly in the petition as satisfying claim 13.

20 JUDGE LEE: I realize that, but that's also consistent with the DI's
21 understanding. You have to look at Figure 36 and you're going to modify
22 Figure 33 based on the teaching of Figure 36. So that sentence, by itself,
23 you know, you may say, well, that means you relied entirely on 36, but it
24 could also support the understanding, which is you started with Figure 33,
25 and here's all the things you need to do with it, and you got to look at the
26 teachings from 36 to make a modification to 33. So, I don't think that really

1 helps you a whole lot, particularly when you have a clear statement at the
2 beginning of all your analysis that reproduces 33 and the modified 33,
3 followed by a sentence, that Petitioner uses the modified all-PMOS version
4 of Figure 33 for the patentability analysis.

5 MR. JENSEN: Let me try to address that specific question, Your
6 Honor, because I think you need to look at the petition. And let me find a
7 slide right here. This is slide 45. If you look at -- and the first --

8 JUDGE LEE: I'm sorry, Mr. Jensen, let me -- I have like four
9 concerns. Can I just articulate all of them? And then you can answer them.
10 I don't --

11 MR. JENSEN: Okay.

12 JUDGE LEE: -- I don't want to forget one of them. And they all kind
13 of go hand-in-hand.

14 The first is that, like I said, it seems to me like you just relied on
15 Figure 33 and then try to modify it based on Figure 36 and not entirely base
16 your arguments on 36. That's the first concern.

17 The second one is that when we look at -- like you say, there are a
18 bunch of claims having this feature, and 13 is one of them, and then there's
19 one, there is 14, there's 15, and there's 17. Right? But it's all the same
20 feature and you address them commonly. There are, like, no different
21 arguments for each of those as far as this feature is concerned. So, when I
22 look at 15, what I see is you say, oh, Figure 33 shows this element. Figure
23 33 shows this element, one by one by one. So our minds are on Figure 33.
24 And then finally, when you get down to this common control figure, you say
25 what you say. Right? So that by itself is telling me you're not relying solely
26 on Figure 36 because I'm following your presentation. It's Figure 33, this,

1 Figure 33 that, Figure 33 then another, and then you come to this feature and
2 you account for it. So it seems to me it's not possible that you can say
3 you're relying entirely on Figure 33 -- 36 independently of Figure 33, simply
4 because of the way you accounted for the, all the limitations of claim 15.
5 And the same goes with claim 14 and claim 17. So that's my second
6 concern.

7 The third concern I have is this -- you have dependent claims 2, 8, 16,
8 and 18, right? And they call for a 6th initialization transistor that does
9 initialization. And the way you account for that is by looking at Figure 33
10 and say, oh, this is how it initializes. And there's a -- because it discharges
11 through the lighting element and gives you light when you don't want light.
12 So for that reason you wanted to go to the Figure 16/17 embodiment and
13 say, oh, there's a nice way to initialize. Let me incorporate that Figure 16
14 and 17 to the Figure 33 embodiment. So, if that's your accounting for it,
15 you simply have relied on Figure 36 alone for the independent claims from
16 which these -- claim 8 depends on because Figure 36 already has the sixth
17 transistor that eliminates the problem. Figure 36 doesn't have the
18 undesirable discharge through the electroluminescent element. So there's a
19 big inconsistency for you to be saying for the common control element you
20 relied on claim Figure 36 embodiment. It just doesn't work because of the
21 way you addressed the limitation of claim 8. That's third.

22 And the fourth one is we really didn't invite you to explain how the
23 Figure 36 embodiment accounts for all the limitations. We didn't. But yet
24 you spent a lot of pages and you have additional testimony to persuade us
25 that the Figure 36 embodiment meets all of the claim elements. But if that
26 was already in your Petition, you wouldn't need to add all of this. So it

1 really bothers me to see that you're adding all this material to persuade us of
2 something that you say you actually already did in your Petition.

3 So I have real problems with this second issue and I articulated all
4 four and I hope you can give us some clarification.

5 MR. JENSEN: Yeah, I'm happy to address each and every one of
6 those, Your Honor, and I agree they often overlap. So let me just walk
7 through this and I think this will answer all of your questions.

8 The parties agree Figure 33 does not by itself support a shared light-
9 emitting signal because the two transistors that need to share a signal during
10 the initialization phase have different states. So the parties agree upon that.
11 The petition expressly acknowledged that Figure 33 would not work with a
12 shared light-emitting signal in terms of, like, a bodily incorporation. We
13 said that, this is slide 34 quoting our petition. Figure 33 does not work. All
14 right.

15 So what did we do? We said, well, let's look at Figure 36, because
16 Figure 36 has all of the operational states, the transistors 4 and 5, and every
17 operational state have the same on and off values together, which would
18 allow for a shared light-emitting signal to be used. And then again, this is
19 slide 46, in the petition, we point to Figure 36. It never says, Your Honor, in
20 claim 13 analysis did imply Figure 33. You can look high and low, you will
21 not find it. It never says modify 33. It says 33 does not work. Therefore,
22 we are relying on Figure 36, and we point to the fourth and fifth transistors
23 in Figure 36 or the shared light-emitting signal.

24 JUDGE LEE: Yeah, I just want to let you know your initial time is up
25 and you are eating into your rebuttal time.

26 MR. JENSEN: Okay. We'll continue for a few minutes.

1 JUDGE LEE: Okay.

2 MR. JENSEN: *Kimura* itself teaches -- provides a motivation to use a
3 shared light signal for 36, and that is reducing the number of control lines to
4 improve the aperture ratio. I'll jump to another slide here.

5 And we can see again that Figure 36 here on the right all the
6 operational phases have transistors 4 and 5 that have the same values that
7 support the shared light signal. Their expert admits as much on slide 41 in
8 his deposition testimony.

9 He says on slide 42, that is, Dr. Wolfe admits the functionality would
10 be the same in that circuit if you used a common control signal for the fourth
11 and fifth transistors.

12 Similar testimony on slide 43. And I think this addresses one of your
13 questions here, because their expert has made these admissions regarding
14 Figure 36, and because of the statement in the Institution Decision about
15 potentially modifying Figure 33 to satisfy this requirement, Patent Owner
16 misframes Petitioner's argument in its Patent Owner response, saying, oh,
17 Petitioner's theory was to modify Figure 33 and that resulted in an
18 inoperable circuit. Again, we admitted in the petition that Figure 33 does
19 not work for this. That's why we pointed expressly to Figure 36. And I
20 would submit to Your Honors, that Patent Owner knew exactly this. And we
21 can see that by looking at what Patent Owner had to say on this topic before
22 the Institution Decision.

23 So if we look, for example, at the Patent Owner's preliminary reply at
24 page 50. So this is the POPR at page 50, we can see that they recognize that
25 we were talking about Figure 36, right? And Petitioner seeks to take an all-
26 PMOS version of Figure 36 and modify it to further come up with the shared

1 light signal. They knew we were talking about modifying Figure 36, not
2 Figure 33. They say something similar on page 24 of the POPR and they
3 say the exact same thing in their Preliminary Sur-reply, this is Paper 11, at
4 page 5. They recognized -- Patent Owner recognized the Petitioner's theory
5 was *Kimura* Figure 36 and modifying it. That is, "it" is Figure 36, not
6 Figure 33. And that is absolutely fundamental. They have no rebuttal, they
7 have no operability argument when it comes to Figure 36 for the shared light
8 signal.

9 JUDGE HUDALLA: Mr. Jensen?

10 MR. JENSEN: Yes.

11 JUDGE HUDALLA: It's Judge Hudalla. I just wanted to ask you:
12 You mentioned two papers that Patent Owner put it in the preliminary record
13 here. Did you argue these preliminary papers anywhere in, say, your Reply?

14 MR. JENSEN: I would have to double-check if we put these in our
15 reply or not. I don't recall right offhand, but there's certainly a record in the
16 case. And it simply shows that, you know, to the extent the Board was
17 concerned about some kind of prejudice or something, we did not switch
18 theories. We pointed to our Petition where we say Figure 36. We admit in
19 the Petition Figure 33 does not work with this unless you make some other
20 modifications, which we're not proposing for claim 13. And the -- sorry, I
21 lost my train of thought on that. But the point is that --

22 JUDGE LEE: Right. Mr. Jensen, see there -- it is -- you are making a
23 modification, right, because if you rely on Figure 36, there is no
24 modification to be made. Figure 36 would absolutely kind of have this
25 because they don't have a rebuttal. So I'm wondering if modification --

1 MR. JENSEN: (Inaudible) because we do still have to modify Figure
2 36 in one respect. And that is shown, if I can find the slide, here it is. This
3 is on slide 35. The modification that we still have to make to 36 is that you
4 have to connect the control signal for transistors 4 and 5, as shown by the
5 purple dotted line here. Figure 36 does not expressly show a shared light-
6 emitting signal. It shows that the fourth and fifth transistors are always --

7 JUDGE LEE: Oh, I see, I understand. Transistors are right for the
8 common connection, but it doesn't show the common connection, so you
9 just want to add the connection.

10 MR. JENSEN: So we had to modify it to add the common
11 connection, which *Kimura* teaches would reduce the number of control
12 signals and improve aperture ratio. So that's why we still had to modify
13 Figure 36 to use all-PMOS transistors. So those are the modifications to
14 Figure 36. But those are -- you know, that's not saying, hey, we start
15 independently with claim 33 and we're changing this and changing that and
16 doing this and the other. *Kimura* itself expressly makes the change to that
17 fifth transistor to be off during initialization so it matches the fourth
18 transistor, thereby enabling the shared light signal condition.

19 JUDGE LEE: Yeah, I can follow that. What about my concerns two
20 and three, though? Because when you address claim 15, it's Figure 33 this,
21 Figure 33 that, and the other. So how can you possibly say you're not
22 modifying Figure 33 and simply relying on Figure 36?

23 MR. JENSEN: Yeah, let me address that. So this is slide 45, Judge
24 Lee. And the first quote is from our petition itself, which says Figure 36 is
25 an extension of Figure 33 "and discussion of one applies equally to the other
26 unless noted." So the discussion, for example, for independent claim 7,

1 which just requires the five transistors and has no shared light signal or reset
2 signal, everything we said in that analysis about Figure 33 applies equally to
3 *Kimura* 6. And it's the same --

4 JUDGE LEE: But how do we know that? Figure 36 is a different
5 circuit. It has an extra transistor and the output states at certain points are
6 not the same. So just because you have this one sentence in a footnote, we
7 are to somehow say, oh, yeah, you are definitely relying on Figure 36 by
8 itself. I mean, how am I convinced that Figure 36 operates exactly like
9 Figure 33 when it clearly does not? It's got an extra transistor and has
10 different states at different points.

11 MR. JENSEN: So let's take a look at slide 39, Your Honor, to answer
12 that question. And what we have here is a side-by-side comparison of
13 Figures 33 and Figures 36. And you can see here that we're talking about
14 the shared light signal, transistors 4 and 5. Those are the same during the
15 programming phases of Figures 30C and D and 33C and D, and in the light-
16 emitting phase of 33E and 36E. The only difference between these two in
17 terms of transistors 4 and 5 is during the initialization stage of Figure 36B,
18 where Figure 36 makes the precise change, that one minor difference is the
19 exact thing that enables use of a shared light-emitting signal.

20 And you can see in our petition, if we go to page, for example, page
21 19 of the petition, and, again, this is in the petition itself, we have a
22 comparison here of Figure 33 to Figure 36, where you can see that the first,
23 second, third, fourth, and fifth transistors are all in the identical locations
24 with the identical connections in both figures. And for claim 7, that's all
25 we're talking about, is transistors 1, 2, 3, 4, and 5. So we showed that --

1 JUDGE LEE: But you got a sixth transistor. I'm not one skilled in
2 the art. You know, for you to just to say these two circuits operate the same
3 is, like, I don't know if I should just take your word for it. There's no
4 explanation in the Petition the way you're trying to explain now. I mean, on
5 its face, these are two different circuits.

6 MR. JENSEN: And I would submit to Your Honor that because the
7 claims are comprising claims, the fact that you have an additional transistor
8 in Figure 36, the claims neither require nor prohibit an extra transistor. In
9 Figure 36 itself --

10 JUDGE LEE: Yeah, I understand that. You're right. But how do I
11 know that the extra transistor didn't modify or change the way the other five
12 work in some way? So --

13 MR. JENSEN: Because you can see that --

14 JUDGE LEE: -- (inaudible) we also said at the -- we're not sure
15 whether this 36 would still meet the other limitations that you had expressly
16 relied on Figure 33 for. And that's why you came back in a reply to tell us,
17 well, yeah, it still meets everything. Isn't that a little too late?

18 MR. JENSEN: I don't think so, Your Honor. I think that it's
19 certainly -- I mean, given the statement that we said in the petition itself and
20 the opening expert declaration that Figure 36, unless we note, operates the
21 same. And that is borne out by looking at Figure 36 itself and comparing it
22 to Figure 33. Right? You can see here that 33C, D, and E, they're -- every
23 transistor, the state, the on/off state, the way the current is flowing, et cetera,
24 is literally identical. The only difference, and this is the difference that we
25 note and we discussed, is the change in transistor 5. And that's the very
26 thing that allows for use of a shared light signal. That's why we discuss it.

1 And that's why *Kimura*, when it describes Figure 36, does not go back and
2 re-explain everything about Figure 33. It only notes the things that are
3 different relative to Figure 33. And because --

4 JUDGE LEE: Well, I don't want to waste your time. I think I
5 understand what you're saying. What about the third concern I have, which
6 has to do with the dependent claim 8's limitation of initialization, you know,
7 the initialization requirement? You know, your whole reasoning to account
8 for that is there's something wrong with Figure 33's way of initializing. It
9 causes undesirable illumination. Well, if you just told me you rely on Figure
10 36, then it wouldn't be consistent with what you're saying to account for the
11 motivation to add the transistor from Figure 16 to Figure 33. Why is Figure
12 33 back into play now if you actually rely on Figure 36?

13 MR. JENSEN: So let me answer that question, Your Honor. I'm
14 going to kind of switch gears to the initialization transistor section here. But
15 you're right, there is some overlap between these two. And the first thing
16 that I would point out is that, and this is on slide 68, is that if you look at the
17 modified version of Figure 33 that has the reset transistor, right, that we took
18 from Figure 16 and 17 to solve the spurious light emission problem, that
19 circuit, right, every transistor, the placement, the connections, is identical to
20 Figure 36 if you were to take the transistor 3612 and simply place it directly
21 -- attach it directly to the capacitor. So it makes no difference when it comes
22 to the reset transistor whether you look at Figure 33 or Figure 36, because in
23 this respect, they operate identically. They both support -- right, we talked
24 about Figure 36. The addition of that 3612 transistor is what allowed for the
25 shared light-emitting signal to be used in the first instance. By the same
26 logic, by the same token, the reset transistor in Figure 33, as shown on the

1 right, on slide 68 from our petition, similarly, allows use of the shared light-
2 emitting signal. In fact, that's what creates the ability to use the shared
3 light-emitting signal.

4 JUDGE LEE: I don't think I doubt that. The problem is your
5 statement of motivation for going to Figure 16 and 17. The motivation is
6 there's a problem with Figure 33's way of discharging the capacitor because
7 it causes undesirable light emission. Right?

8 MR. JENSEN: Yes. That was one motivation.

9 JUDGE LEE: So because we're focusing on 33, then that's
10 inconsistent with what you're telling us now, that, well, actually you were
11 relying on Figure 36 for the common control. So these two things can't
12 happen at the same time. Either you relied on Figure 36 or you relied on a
13 modification of Figure 33 based on Figure 36. You can't be at the same
14 time telling us, oh, for the common control, I'm using all of Figure 36, no
15 modification, Figure 33. And then when you get to this dependent claim,
16 which adds another limitation, you go, oh, here, you know, I'm back to
17 Figure 33 again. It doesn't compute in my mind. You can't take me to 36
18 and say, that's all of it. And now take me back and say, well, now I'm
19 modifying Figure 33. You're clearly modifying Figure 33 now for this
20 initialization feature.

21 MR. JENSEN: For this initialization feature. And I would submit to
22 Your Honor that the very modification that we made to 33, that is the
23 addition of a reset or erase or an initialization transistor we know from
24 analyzing Figure 36 is the exact thing that enables use of a shared light
25 signal. So by virtue of modifying Figure 33 -- if you have unmodified 33,
26 you're right, you can't use a shared light signal. But the precise change that

1 we made to 33 by adding the reset transistor is equivalent to adding this reset
2 transistor in Figure 36 (inaudible) --

3 JUDGE LEE: Yeah, but you're missing the point, Mr. Jensen.

4 MR. JENSEN: -- is a shared light signal.

5 JUDGE LEE: You're missing the point. The point is your
6 motivation. See claim 2, claim 16, claim 18, all have this initialization
7 feature. They depend on claim 1, 15, and 17. So you can't tell me, for 1, 15,
8 and 17 it's all Figure 36. You never meant to modify Figure 33. Okay. If I
9 go with you there, and now when we get down to a claim that depends from
10 that, you go, well, I want you to take it back to Figure 33 now. Well, you
11 can't, because you just told me I need to look at Figure 36 by itself to
12 account for the common control. Once you take me there, I don't think you
13 can take me back and say, no, you want to modify Figure 33. It just doesn't
14 seem to match.

15 MR. JENSEN: Your Honor, I would respectfully disagree with that.
16 And again, I would emphasize that the modification to 33 is equivalent to
17 the same modification to Figure 36.

18 And with respect to motivation, you're right. Figure 33 had a
19 spurious light emission problem; 36 did not. So if your question is, well,
20 why would you do something to 36? Well, *Kimura* expressly teaches that
21 that transistor, which Dr. Wolfe admitted is 3612, right, so it teaches a
22 flexible placement for that. So you can put it anywhere you want, as long as
23 wherever you put it does not cut off -- or does not eliminate the ability to
24 turn off the LED.

25 JUDGE LEE: And so if I followed you, you actually have two
26 additional six transistors, because Figure 36 already have an additional sixth

1 transistor. If I go with you on that. So you already have six. And then
2 when you come down to the dependent claims, you say, well, add a sixth
3 transistor from Figure 16. If I did that, I'll end up with a seventh transistor.

4 MR. JENSEN: You know, I submit that, Your Honor, that's not what
5 we were saying. You can see that here on slide 68 that you would be
6 moving transistor 3612 to the same location as shown here in Figure 33. But
7 these two circuits are the same. You're not adding a seventh transistor.
8 *Kimura* teaches, look, you can place this, erase transistor wherever you
9 want, right, subject to certain limitations. But it teaches flexible placement
10 of that. And we know from Figures 16 and 17 that one place to put it, in
11 fact, a natural place, the most natural place, would be to connect the reset
12 transistor to the capacitor that's resetting. And so there are multiple
13 motivations. In *Kimura* itself, it teaches a flexible approach to the
14 placement of the reset transistor. And there's only, you know, a couple or
15 three at the most, I think it's two, and Dr. Foty explains this in more detail,
16 places where you could even put it. And one of those is expressly taught in
17 Figures 16 and 17. That solves the light emission problem. With respect to
18 Figure 36, *Kimura* teaches you can place this erase transistor, you know,
19 wherever. It doesn't have to be in the exact location as shown on the left.
20 Right? It could be --

21 JUDGE LEE: Right, right. I follow that. But why the switch back
22 and forth between Figures 36 and 33? If you relied on 36 for the common
23 control, then why don't you just say, okay, let me just change the location of
24 that -- you know, add the Figure 16 transistor to Figure 36 and just replace
25 3612 with that additional one from Figure 16? But why you didn't do that,
26 and you draw our attention --

1 MR. JENSEN: (Inaudible) the claims played out. The first time the
2 reset transistor limitation came into play was with respect to dependent
3 claim 8. And so claim 7, we had been pointing to Figure 33, so it made
4 sense for claim 8 to continue to use that Figure 33 and place the reset
5 transistor there, because claim 8 has no shared light-emitting signal
6 requirements. When you go to claim 1, that's the first time -- I think it's
7 actually claim 16 is an independent claim -- or it's a dependent claim, but
8 that's the first claim that has a requirement of both a shared light-emitting
9 signal and the reset transistor. So when you get to that claim, and you look
10 at it, by then, we've already how the shared light-emitting signal works,
11 right, and what it is about Figure 36 that enables the use of a shared light
12 signal, and it's the presence of an erase transistor. So when we get to --

13 JUDGE LEE: Thank you. I think I understand. I don't want to waste
14 more of your time, but if you can just quickly tell us, Dr. Foty, does he
15 actually have zero experience in electroluminescence and design of active
16 matrix display? Is there anything in his education that would make up for it?

17 MR. JENSEN: So, with the POSITA issue, right, Dr. Foty, yes, and
18 he talked about this in his declaration. He's worked with lasers and diodes,
19 that's electroluminescence. Right? He has certainly worked with the
20 circuitry and the type of circuits that are used in -- I mean, ad nauseam,
21 right? Threshold voltage, complicated --

22 JUDGE LEE: Well, lasers is interesting. Where or can you tell us
23 what to look at? You know, lasers is at least light, right? So has he
24 designed circuits that output or emit lasers? Where is that?

1 MR. JENSEN: Yes, I think we can see that in his declaration. It
2 might be in his CV. I know he was involved in that during his postdoc or his
3 postgraduate work, either his master's or his Ph.D.

4 JUDGE LEE: Can you give us a page number, exhibit number?

5 MR. JENSEN: Let me see if I can find -- this is his opening
6 declaration paragraph -- let me see if paragraph 17 shows that, one second.
7 We can go to his reply declaration paragraph 17 and see what we see there.
8 He has testimony here, "I was very familiar in 2003 with semiconductor
9 devices used in contemporary displays, which basically comprise transistors
10 and LEDs, how those functions work, the type of circuits used in light-
11 emitting display panels," et cetera. I was thinking of his original declaration
12 where he discusses in some detail the operation of lasers. But I wanted to
13 look at his CV to see if there's something there. So his CV is attached to his
14 --

15 JUDGE LEE: Well, you can tell us a little bit later maybe at the
16 conclusion to this. I don't want to waste your time, so that's fine if you
17 don't know exactly at this moment.

18 MR. JENSEN: Yeah, I'll have to come back on that. But the final
19 point that I think I would like to make on the POSITA issue is really what is
20 the definition of a POSITA? And that there should be -- there simply is no,
21 in our view, requirement that you have designed an active matrix display
22 before. Under that definition, I don't think -- you know, there's issues with
23 respect to both parties' experts.

24 But if you look at the '599 patent itself, and you can see this on slide
25 121, this is every figure from the patent. This is a circuits pack, right? It's
26 all about circuits, a pixel circuit. The fact that it happens to be a circuit

1 that's used in a display does not change the fundamental fact that this is a
2 pixel circuit. And if you agree with our definition of a POSITA, all of these
3 issues go away.

4 JUDGE LEE: Right. But Dr. Credelle's declaration, was that before
5 the ITC?

6 MR. JENSEN: I believe a similar declaration was submitted in the
7 ITC, but that was after the ALJ had already determined at the Markman
8 phase the level of skill in the art. And at the later phase, when ITC excluded
9 Dr. Foty's testimony, it expressly declined to revisit or consider, you know,
10 things that had happened since the Markman hearing, since the definition --

11 JUDGE LEE: So that decision was absent, something equivalent to
12 Dr. Credelle's --

13 MR. JENSEN: That's absolutely right. It's a completely different
14 record. Right? And Patent Owner has not responded at all to Mr. Credelle's
15 declaration, which I think, you know, really lays it out. Experience in active
16 matrix design is not necessary. And he's an active -- he's a true active
17 matrix guru, you know, 30-year (inaudible).

18 JUDGE LEE: Why is the -- something wrong with the filing date of
19 the Credelle declaration? It's a few weeks after your reply filing. Why is
20 that?

21 MR. JENSEN: So the reason for that is the Patent Owner raised an
22 objection to evidence after Institution where they said, hey look, we think
23 there's an issue with the level of skill in the art of Dr. Foty. So we submitted
24 -- we served, but did not file the Credelle declaration earlier within the
25 allotted time period for serving supplemental evidence in response to Patent
26 Owner's objections. And then we simply filed it later in the proceeding

1 because it was the same declaration we had served on Patent Owner earlier.
2 So that's the reason why the date of the declaration is before our reply,
3 because we'd actually served it on them as --

4 JUDGE LEE: No, it's actually after the filing. If you look at the
5 Credelle declaration filing date, it's after -- a few weeks after filing of your
6 reply.

7 MR. JENSEN: Oh, let me check. What -- let me -- what exhibit
8 number is that? Let me check. Because that could be a typo. Was it 1035?
9 Let me jump right there.

10 JUDGE LEE: Your reply doesn't refer to any paragraphs of it. You
11 probably --

12 MR. JENSEN: This was -- I believe it does, and I can find that if it's
13 important. But his declaration was signed January 2024, so I think that is
14 well before we filed our reply paper.

15 JUDGE LEE: I know, but if you look in our P-TACTS, it isn't filed
16 until weeks after.

17 MR. JENSEN: Oh, okay. I know what you're asking now, and the
18 answer for that is we had originally filed Dr. Credelle's declaration instead
19 of serving it in response to Patent Owner's objections to evidence, and they
20 pointed out that that was procedurally incorrect. So we got the Board's
21 permission to expunge Exhibit 1035 from the record, and then when we filed
22 our reply, we simply had forgotten that that paper had been expunged. And
23 so as soon as we realized that, we simply refiled it at that point. But there's
24 no prejudice. They've had this thing since January of (inaudible).

25 JUDGE LEE: Okay. Thank you. Sorry, I had a whole lot of
26 questions and you only have six minutes.

1 MR. JENSEN: We'll save it for rebuttal. Thank you.

2 JUDGE LEE: Okay. Thank you.

3 Any time you're ready, Patent Owner, you may begin. We're at
4 11:34 right now.

5 MR. GARR: Thank you very much. And we'd like to reserve 10
6 minutes for a potential surrebuttal.

7 JUDGE LEE: Great. So you can go for 50 minutes from now. It'll
8 take you to 12:24.

9 MR. GARR: Great. Let me try to share my screen window. Okay.
10 Can you see the Patent Owner demonstrative slide?

11 JUDGE LEE: Yes, I can.

12 MR. GARR: Okay, great. So I'd like to start off on the shared light-
13 emitting signal that was being discussed a few minutes ago. And I'm going
14 to go to our slide 9.

15 The first thing I would say is, Judge Lee, we very much agree with
16 each of your four concerns. We think they are correct and we don't think
17 that they have been properly addressed by the other side. But there's an
18 additional issue that I wanted to point out here, which is that this is a unique
19 case because following the Institution Decision, as the Board may recall,
20 Petitioner actually moves to file this supplemental declaration from Dr. Foty
21 to -- as supplemental information. And in that declaration, Dr. Foty
22 provided explicit testimony proposing additional modifications, including
23 relying on this transistor 3612 that they are trying to bring in.

24 But -- and this is -- I've got some excerpts here on slide 9 from the
25 Board's order denying that motion to supplement. The Board considered the
26 issues that were just being discussed back and forth right now and

1 concluded, and I'm looking here on the right side of slide 9, agreeing with
2 our argument that neither the petition nor Dr. Foty's original declaration
3 described any additional transistor in the proposed modification. And based
4 on that, the Board concluded, we believe correctly, that the opinions in his
5 proposed supplemental declaration, which sought to rely on this additional
6 transistor, among other things, are new, not in any way addressed or referred
7 to in the petition or his first declaration, and that, therefore, the proposed
8 supplemental declaration would change Petitioner's theory of obviousness.

9 There was no request for rehearing on this ruling. Instead, what we're
10 seeing here is a reply declaration from Dr. Foty that was submitted in which
11 they are trying to resurrect this same theory that was already put forward
12 before the Board, already adopted and already determined to be inconsistent
13 with what was provided in the actual petition. And once again, they have a
14 declaration from Dr. Foty that was submitted along with the reply. And that
15 testimony is almost verbatim with the -- looking in terms of his testimony on
16 this particular issue on the shared light-emitting signal, it's nearly word-for-
17 word identical to his earlier attempted supplement that the Board properly
18 rejected.

19 So this is not something new. There hasn't been any request for
20 rehearing, and instead we're just sort of seeing the same thing tried again in
21 reply based on this new --

22 JUDGE LEE: Mr. Garr?

23 MR. GARR: -- (inaudible) that it was invited.

24 JUDGE LEE: It's Judge Lee. I hear you, but I mean, we may not
25 necessarily be right every time we say something, so why wouldn't they be able
26 to essentially, you know, argue the point, even though they didn't ask for a

1 rehearing earlier? Why would they, like, necessarily be estopped from
2 saying, hey, Board, you were actually wrong when you concluded all of
3 that? They're just making that argument now, you know in their reply, so to
4 speak.

5 MR. GARR: We think that if they wanted to do that, it seems like
6 they should have requested that before. We're certainly happy to address the
7 issue now and make sure we address the questions. I just wanted to point
8 out that history here that we think is quite pertinent.

9 JUDGE LEE: Well, I noticed that the Sur-reply didn't really address
10 it, you know. Like, they go here's how the Figure 36 embodiment shows
11 everything, because the Board said, you know, it wasn't sure, so they
12 presented all of that. The Sur-reply doesn't really follow up on that. Is it
13 because you think that that wasn't their theory and they shouldn't be allowed
14 to switch and, therefore, you don't respond to it? Or -- I don't know, it's just
15 a little odd to see no response in the Sur-reply to all these extra arguments
16 and testimony in the Reply.

17 MR. GARR: Well, certainly our primary argument is that this is a
18 theory that was not presented in the petition and shouldn't be something that
19 could be presented in reply.

20 JUDGE LEE: How did you understand their petition as far as the
21 presentation of the common control of the fourth and fifth transistor? I
22 mean, when you read it --

23 MR. GARR: We had trouble understanding it. And I guess I want to
24 focus on the third concern that you mentioned about how the arguments for
25 the shared emission line bear or sort of can't be reconciled with the arguing
26 on initialization transistor. You're correct, I believe, that the rationale for

1 the modification was that Figure 33 has a problem that was solved by
2 *Kimura*, by Figure 36, but that the petition proposes to solve in a different
3 way. We pointed out in our preliminary reply the inconsistency here about
4 how we don't understand how you can square these arguments on the shared
5 emission line with the arguments on the initialization transistor
6 requirements. And one of the reasons for that is because they're addressed
7 separately in the petition. In other words, there's no single place where a
8 theory is put forward for how you can have something that satisfies both the
9 shared emission requirement and the initialization transistor requirement.
10 And that's because there was no suggestion in the petition of what we are
11 now seeing, which is a bit of a mashup.

12 There was a slide that was put up showing how you could modify 36
13 by taking its transistor and moving it over to the right. This suggestion of
14 taking Figure 36, which admittedly solves the problem of unwanted light
15 emission that was in Figure 33, and modifying it was something that was not
16 addressed. So we picked up on this confusion, and we did point that out
17 because we didn't understand how you could take these arguments that were
18 being made in isolation for different limitations and reconcile them.

19 JUDGE LEE: Now, looking back at everything, I will have to go
20 back to ask Petitioner some more, because I'm still confused. It seems
21 almost like they're saying they have two theories in parallel. Sometimes it's
22 Figure 36, but sometimes when it suits Petitioner's purpose, they'll go to a
23 modification of 33. So I'm not sure (inaudible) clarify by that. I mean, what
24 is your understanding now? Are they relying on 36 or are they relying on
25 modification of 33 based on 36? And would your responses be any different
26 depending on which one it is?

1 MR. GARR: I mean, I'm trying to understand how to answer that
2 question. They do have, and we pointed this out in our Sur-reply, a
3 suggestion in their reply that there's a modification that is now being put
4 forward for Figure 33 or Figure 36. And we pointed out that that was a
5 change in theory. And this suggestion of taking Figure 36 and modifying it
6 further is just something that we hadn't seen before.

7 JUDGE LEE: Thank you. I think we touched upon this. Unless
8 there's anything more you want to tell us about our four points of concern,
9 I'd like to ask you about your secondary considerations argument, because
10 I'm quite confused there.

11 MR. GARR: Okay. Let me switch to that. But just to make sure I
12 clearly answer the question. We think the theory that was put forward was
13 that the modification was being done to Figure 33, whether for the
14 initialization transistor requirements or the shared emission line
15 requirements. As you correctly pointed out, Judge Lee, Figure 33 was used
16 as the baseline circuit for all of the independent claim requirements.

17 JUDGE LEE: Okay, thank you.

18 MR. GARR: Particularly with claim 7.

19 JUDGE LEE: Before I get to secondary considerations, let me just
20 get this down. You don't dispute that transistor 3 is a switching transistor,
21 right? That's what they say.

22 MR. GARR: We do. We do dispute that transistor 3 is serving as a
23 simple switching transistor. We explain that in our Sur-reply, and we
24 pointed out that there's nowhere in *Kimura* in which this transistor or any of
25 its analogs in other embodiments is described as a simple switching

1 transistor. And it's never discussed in *Kimura* that this particular third
2 transistor may be modified or replaced with a PMOS (inaudible).

3 JUDGE LEE: Let's get rid of the word "simple," okay, because
4 what's at issue is whether it's a switching transistor. Their evidence was for
5 switching transistors it's interchangeable, and *Kimura* itself talks about
6 switching transistors. I'm afraid if we say "simple," that adds another layer
7 of complexity.

8 So based on what they say switching transistors are simply they're
9 and or off, and it doesn't matter how much it is on, how much it is off and
10 the output is the same. The output isn't higher if the input is higher, and
11 output isn't lower if the input is lower. That's like an amplifier situation.
12 Do you agree with that? Your expert seems to agree that's the definition of
13 a switching transistor.

14 MR. GARR: I would agree that on some level, the difference between
15 a switching transistor and an analog transistor is whether it's being used in a
16 pure digital way or in an analog way. But to make sure I answer the
17 question, I don't believe that *Kimura* anywhere describes the third transistor
18 as a switching transistor, period. I have not seen that.

19 JUDGE LEE: Yeah, it doesn't. It does not.

20 MR. GARR: Yeah.

21 JUDGE LEE: But the other side says that it is. And your expert
22 didn't say why it is not.

23 MR. GARR: A couple things. One, I think the argument that was put
24 forward as to why *Kimura* describes this or why we should interpret this
25 third transistor as a switching transistor that we heard a few minutes ago was
26 because the words "on and off" are used next to it in the figures. The on and

1 off is also described and used in *Kimura*'s figures for the drive transistor,
2 which everybody agrees is not serving as a switching transistor. So we don't
3 think they have identified any disclosure or teaching in *Kimura* that this
4 third transistor is serving as a switching transistor. And we have put forward
5 evidence and testimony from Dr. Wolfe explaining why this transistor is not
6 serving merely as a pure on/off switch, but rather --

7 JUDGE LEE: I hear you, but I don't think that's correct. Your expert
8 explains there are complications that leak, size, and speed does matter on
9 performance. But he never says that the output of the transistor goes up and
10 down depending on, you know, how big or small the input is. He never says
11 that. He just says these characteristics are important. If you change it, it's
12 going to, you know, affect stuff. These are essential characteristics. So I'm
13 understanding that as saying, yeah, to the extent this is a switching transistor,
14 okay, but you can't interchange here because of these special circumstances.
15 Is that the argument or are you saying this is not a switching transistor,
16 period? These are two separate arguments.

17 MR. GARR: I think we are making both arguments. We do not
18 believe it's a switching transistor, and I believe that the -- our testimony that
19 you just referenced explains why. In other words, when this transistor is
20 supposedly in an off state, if you are using a PMOS alternative, there is
21 going to be analog leakage current and, therefore, it will not be in a pure off
22 state. And because it has a connection directly to the capacitor on which the
23 analog brightness level is stored as a voltage, any leakage through that
24 transistor will impact brightness of the display and will impact uniformity of
25 the display.

1 So in that sense, it is not a pure on/off device, and you need to account
2 for the leakage characteristics of it when determining whether what
3 transistor may be appropriate for that location. So we believe that shows
4 that it's not a mere switching transistor. And we think that helps explain and
5 provide background as to why *Kimura* never teaches that this transistor is a
6 switching transistor or one for which one could replace it or consider a
7 PMOS transistor as an equivalent.

8 JUDGE LEE: I see, I understand. But whose burden is it to show us
9 that T3 is a switching transistor or not?

10 MR. GARR: If the rationale for the modification is that *Kimura*
11 teaches interchangeability of switching transistors, then I think one would
12 have to establish a teaching of this transistor serving as such.

13 JUDGE LEE: Okay, thank you.

14 MR. GARR: And the other point I'd like to make on this, let me pull
15 up the slide if that's okay.

16 MR. GARR: And Petitioner slide 19 I have up here, and this provides
17 a statement from the Board during Institution ruling that I think we saw
18 raised before in which the statement made is that interchangeability itself
19 provides the motivation to change, and recognition of a suitable option
20 provides sufficient motivation. We recognize that the Board found this
21 interchangeability, general interchangeability rationale sufficiently
22 persuasive at the Institution stage. But we don't think -- we don't read these
23 cases as supporting the particular theory that the Petitioner is advancing.
24 That is that the substitution of one type of transistor for another would have
25 been an obvious modification absent any technical rationale for doing so.

1 As we understand these cases, *Par Pharmaceutical* (phonetic), for
2 example, the principle that's being discussed is that a proposed modification
3 doesn't need to be the best way to address a particular technical concern, but
4 only that it be a known suitable option for doing so. So we understand these
5 cases to be articulating a principle, but when there are multiple known ways
6 to solve a problem, it may be obvious to use any one of them, even if it's not
7 the absolute best.

8 That's not what the Petitioner is putting forward here with his general
9 interchangeability rationale. There's no suggestion that the PMOS
10 modification is a solution to any particular problem, nor is there art that
11 taught using this PMOS modification in this circumstance. Rather, it's just
12 an argument that PMOS transistors could have been used, and we interpret
13 that and understand that to be essentially an argument that it was a simple
14 design choice. And this discussion about --

15 JUDGE LEE: So implicitly, you're saying there's a reason *Kimura*
16 didn't identify certain ones as switching transistors. You only identified,
17 you know, a couple of other ones, but not all the transistors in these
18 embodiments. And you're implying that that's for a reason.

19 MR. GARR: Correct. I'm saying I believe two things. One is
20 *Kimura* provides no teaching of interchangeability for this third transistor,
21 number one, and number two, that there is a relevant functional difference
22 between NMOS and PMOS transistors, in particular with respect to leakage
23 current that, shows that these are not technically equivalent. And because of
24 that, it would be improper to rely on a design choice rationale because we
25 have evidence of relevant functional differences that a POSA would
26 consider in assessing what type of transistor to be used here.

1 So it's not necessarily -- the question isn't necessarily would this
2 modification have been precluded? The question that we think is
3 appropriate for the Board to consider is whether there are relevant functional
4 differences between NMOS and PMOS transistors. Leakage current has
5 been identified as a concern, and the only dispute is about how significant of
6 a concern it may be and whether it would be -- how much of a problem it
7 would pose. And we think that sort of underscores the issue here, which is
8 that there is a relevant difference that should preclude resort to a simple and
9 obviousness -- or, excuse me, design choice theory. And because there's no
10 rationale being put forward for the modification, at least under the general
11 interchangeability theory, that they haven't met their burden on this.

12 And there was one other slide that was discussed, and I'm going to
13 turn to Petitioner slide 21, which was put forward that there is additional
14 motivation in *Kimura* that supposedly moots the argument we're making
15 about design choice. This seems to be a reference to slide 21, which comes
16 in right before this, where there's a statement that says "*Kimura* Supplies
17 Additional Motivation." This is referencing a motivation that is put forward
18 in the petition for the fifth transistor. And so this does not impact and can't
19 provide a motivation for changing the third transistor.

20 JUDGE LEE: Thank you. Can I ask you something about the level of
21 skill in the art? You don't specify any particular amount of experience.
22 Your definition just says "experience." So how do I know what that is? It
23 could be as little as a two-hour tutorial to 30 years of design experience.
24 And if I'm to -- we are to place ourselves in the shoe of a POSITA, we don't
25 know what size shoe we're stepping into. You know, simply because of that
26 vagueness, how can we adopt Patent Owner's articulation? Because if it's

1 just two hours, it's one result. If it's 30 years, it's another result. It seems
2 too nebulous to be meaningful.

3 MR. GARR: I'm going to pull up a slide from the Petitioner to try to
4 answer that question, and that is slide 119. On this slide, the Petitioner has
5 excerpted testimony from Dr. Foty's Reply Declaration in which he agrees
6 to that a POSITA in the context of this patent would need to understand a
7 number of issues that are directly pertinent to how the transistors in this
8 pixel circuit impact the display performance. And that includes the
9 operation, the driving transistor, threshold-voltage compensation,
10 relationship to image quality, and impact of shared lines on aperture ratio.

11 So we think that there is agreement from both sides, or at least
12 agreement in terms of the testimony that both sides' experts have put
13 forward, is that the POSITA here does need some experience with not just
14 the types of components that may be used in active matrix design, but in
15 understanding how these components relate to and bear on the performance
16 of the active matrix OLED display.

17 And so this lines up with the patent being directed at solving problems
18 that are specific to active matrix OLED displays, including image quality,
19 uniformity, and aperture ratio. And so we think a level of skill that has no
20 requirement of any experience in active matrix display design and
21 electroluminescence is insufficient.

22 JUDGE LEE: I understand, but we can't just do that. We got to put
23 something down, make a finding. And what you've offered is also
24 apparently not sufficiently clear. If we just adopt Patent Owner's, it would
25 be like, well, how much experience? Maybe, you know, 30 years of
26 experience is the ordinary level, but it's probably low. You're not saying

1 that. So if we can't adopt yours, and the other expert says, well, when he
2 says two to three years of circuit design experience, he already included
3 these considerations, why wouldn't theirs be a better choice?

4 MR. GARR: Theirs would not be a better choice because it's limited
5 to the experience with the components themselves and does not require any
6 experience in understanding how these circuits bear on operation of the
7 display.

8 JUDGE LEE: So we have -- there might be problems with both
9 parties' definitions, you know, the vagueness of Patent Owner's and the
10 supposed incompleteness of Petitioner's. So what --

11 MR. GARR: Sure. I think the point is there needs to be some
12 experience. If there's a desire from the Board to put a specific time on it, a
13 specific modest amount would be appropriate, such as a year or two. But
14 our point is that there needs to be some, and that is essential for
15 understanding these devices. And it's not just a question of understanding
16 how transistors and capacitors work.

17 And I know you had asked a moment ago about objective indicia.
18 We'll get to that in a moment. We think that the objective evidence sort of
19 underscores the fact that mere understanding of how components work in
20 this field is not sufficient in light of how many different groups were
21 working to develop appropriate and workable pixel circuits for active matrix
22 displays. And about how it wasn't until this design was put forward by
23 Samsung Display that the problem was solved.

24 JUDGE LEE: Yeah, it's a little sudden (phonetic) to be changing the
25 definition now, but so de minimis experience satisfies Patent Owner's
26 definition. And what if additional education compensates for experience?

1 And I asked Petitioner a little earlier if they can point out how the additional
2 education and the work with lasers would compensate for de minimis
3 experience with active matrix display. Why wouldn't that be sufficient for
4 the articulation?

5 MR. GARR: Because lasers are not displays. Because displays have
6 particular requirements and performance characteristics that aren't -- that --
7 for which the type of pixel circuit and how it performs and how it operates
8 and how it initializes and how it compensates are critically important. So
9 experience with lasers in the abstract would not constitute or would not
10 provide a background for understanding how these circuits and the way that
11 they are configured would bear on suitability and performance for an active
12 matrix display. And these claims are about pixel circuits. A pixel circuit --

13 JUDGE LEE: Thank you.

14 MR. GARR: Yeah.

15 JUDGE LEE: Yeah, that's fine. You can proceed on secondary
16 considerations.

17 MR. GARR: Okay.

18 JUDGE LEE: Actually --

19 JUDGE HUDALLA: I'd like to ask a question, please.

20 MR. GARR: Sure.

21 JUDGE HUDALLA: It's Judge Hudalla. Going further on this idea
22 about the level of ordinary skill, I wanted to ask a question about the
23 interplay of Petitioner's second motion to strike, which pertains to your
24 argument about Dr. Foty's failure to qualify as to the level of skill that
25 you've put forward, and then also your motion to exclude his testimony.
26 There's something a little unsatisfying to me about the fact that it seems that

1 you haven't argued this at all in the Patent Owner Response. Am I right that
2 you never did argue the failure to qualify in the Patent Owner Response?

3 MR. GARR: We did not talk about his qualification -- about lack of
4 qualifications in the Patent Owner Response. That's correct.

5 JUDGE HUDALLA: Okay. So given that, you know, that it only
6 shows up in the Patent Owner's Sur-reply, and given that, you know, it
7 really turns on an issue that's so integral to this case, which is the level of
8 ordinary skill, why is it okay for you to go ahead and just throw in a motion
9 to exclude at the end of the proceeding and say, okay, well, we want to just
10 throw out all of his testimony because he doesn't meet that level? And I will
11 acknowledge in asking my question that you have -- you've certainly
12 preserved that argument via your objections. It's just that it seems like an
13 issue that's so intertwined with the merits of the case, it seems pretty
14 unsatisfying to me that you didn't argue it in your Patent Owner Response.

15 MR. GARR: I appreciate the question. Our understanding in terms of
16 the procedural approach for raising this issue was that the appropriate thing
17 to do was to lodge the objection when the evidence was served and to
18 address that in a motion to exclude. The reason that we mentioned this in
19 our Sur-reply was not in an effort to raise a new argument. In fact, we were
20 planning on and did, in fact, go ahead and address this issue in the motion to
21 exclude phase, which is where we understood it to be appropriate to do so.

22 The reason we mentioned it in our Sur-reply was just to respond to a
23 point that was made in the reply about this dispute that has no bearing on, I
24 forget the term, but manufacturing dispute where one should not exist; and
25 to point out that this question as to the level of skill, which is a substantive
26 question, which we did address in the patent on a response to explain how

1 that beared on one more issue, which is Dr. Foty's qualifications, and then
2 we addressed that more expressly and fulsomely in our motion to exclude.

3 So that's why we were a bit sort of confused by the motion to strike,
4 because the only thing we understood ourselves to be doing in the Sur-reply
5 was explaining why the substantive dispute as to the level of ordinary skill
6 was important, and why it wasn't just a purely manufactured academic issue.
7 Our understanding was that the appropriate place to raise it would be in the
8 motion to exclude phase and that's where we tried to address this formally.

9 JUDGE HUDALLA: So, to clarify, even if we were to grant the
10 Petitioner's second motion to exclude, which would essentially take out the
11 ALJ's decision about Mr. -- or Dr. Foty and whatever argument is in the
12 Sur-reply on that, your position is that the motion to exclude still is properly
13 lodged, and it would be okay for us to actually exclude his testimony just
14 based solely on that?

15 MR. GARR: I believe that's correct. The motion to strike, as we
16 understand it, bears on whether it was appropriate for us to mention this
17 point in our Sur-reply. There also is the motion to strike the ALJ order
18 itself. And we do recognize there was also a motion to exclude filed on that.
19 We would say that irrespective of whether our Sur-reply mentions this issue
20 or not, we certainly think the Board should be able to consider the ALJ
21 ruling because we believe it's pertinent legal authority that the Board can
22 consider in its legal function of determining whether Dr. Foty qualifies as a
23 POSITA and evaluating the motion to exclude -- or, excuse me, the -- yes,
24 the motion to exclude his testimony for lack of expertise.

25 We submitted it as an exhibit for the Board's convenience, not
26 because we are citing it as evidence to prove a particular substantive issue.

1 JUDGE HUDALLA: Thank you.

2 MR. GARR: Okay. So I'm happy to address the Board's questions
3 on objective indicia now. I have some demonstratives on this, but I'm happy
4 to go through. But if there are questions at the outset, please let me know.

5 JUDGE LEE: Yeah, thank you. Mr. Garr, I'm concerned about the
6 claim charts. Although there are quite a few devices that allegedly copied,
7 there are only at most three claim charts. Is that right? Twenty -- Exhibit
8 2051, Exhibit 2052, and the district court complaint. Those are the only
9 evidence tending to show how the devices practiced the patent claims.
10 Right?

11 MR. GARR: So for copying what -- the first thing I would say is that
12 our Patent Owner response provided the pictures side by side showing I the
13 striking similarity to the Galaxy -- to the Samsung devices. And in terms of
14 copying, we do acknowledge that the relevant consideration isn't just
15 whether there's infringement, but whether there's direct evidence of direct
16 copying. And we believe that the best evidence for that is these images,
17 which, when you look at them and you consider Dr. Wolfe's testimony
18 about them, can only be explained, as we have explained in our papers, by
19 having access to the original designs and copying from them.

20 So we think the primary evidence and the key -- and the evidence
21 from which copying can be concluded is the pictures which were put
22 forward in the Patent Owner response. We provided claim charts for two
23 representative ones as supplemental evidence confirming that it operated in
24 the same way. But in terms of whether copying existed or whether there's
25 enough evidence to conclude that, we think the main evidence is the images

1 themselves and Dr. Wolfe's testimony that the similarities are so striking
2 that they can only be explained by deliberate copying.

3 JUDGE LEE: Well, my question is just looking at the layout, even if
4 we can say, yeah, the layout looked the same, but does that really mean the
5 circuits do the same thing? That's my problem with this. Something might
6 look the same on the outside, but I really don't know how the circuits work
7 on the inside. So if I were to look at the claim charts, you have only two
8 claim charts and they seem to be identical, and yet there are like more than
9 10 accused devices that's allegedly copied. Are the two claim charts exactly
10 the same, 2051 and 2052?

11 MR. GARR: I would not be surprised if they're very similar, but
12 they're going to be based on different visual evidence.

13 JUDGE LEE: What about the Petitioner's product? I mean, you have
14 no claim chart for that, right? You decide to rely on portions of the
15 complaint to say information, I believe the device, practice the invention,
16 and only for one claim. I wonder who generated the claim charts and on
17 what basis has any expert stood forward to say, yeah --

18 MR. GARR: Yes.

19 JUDGE LEE: -- I looked at what the equivalent circuit would look
20 like, how does he know just by looking at the layout about what the
21 underlying circuits are and what they do?

22 MR. GARR: These claim charts were put forward with Dr. Wolfe's
23 testimony, in which he explains that these are claim charts that he prepared
24 to support his conclusions.

25 JUDGE LEE: Mr. Garr, I didn't see that in the record where he
26 actually testified and made that link between his testimony and Exhibits

1 2051 and 2052. Could you let us know where that is? And if not now,
2 maybe on surrebuttal?

3 MR. GARR: Sure, I think I can address that now. You're correct that
4 that wasn't specifically mentioned in his Response Declaration.

5 In response to an objection about the fact that these claim charts
6 were not authenticated, he did provide a supplemental declaration clarifying
7 that point that was inadvertently not included in his original testimony. We
8 then filed that, I think it's going to be Exhibit, yes, 2055, because it's the one
9 -- the last one we filed just before these demonstratives. And so it's in that
10 separate declaration.

11 JUDGE LEE: What's the significance of that? I mean, it isn't tied
12 into your pleading, though. It's just like a standalone declaration of some
13 sort. I don't understand. How do we get to consider that as a supplement to
14 your Patent Owner Response?

15 MR. GARR: Because it addresses the objection that the document
16 was not authenticated.

17 JUDGE LEE: So -- but it's real evidence -- my understanding is
18 there's a difference between supplemental evidence and the real evidence.
19 The only good you get from supplemental evidence is you cure the original
20 evidence, which in this case is, okay, so it's authenticated, but that doesn't
21 mean more than that. You know, it's still not evidence in the case, I don't
22 think. The evidence in the case is his original declaration.

23 So there's no more an objection about authenticity or if you cured it,
24 so there's not a problem about authenticity. But then we just look at its
25 content, and its content doesn't account for how the equivalent circuit came
26 up. I mean, who stands behind it? I'm a little confused as to how you can

1 just say, well, there's now an additional declaration from Dr. Wolfe, just as
2 though you presented it in connection with the Patent Owner response.

3 MR. GARR: I would say that his declaration that was submitted with
4 the response did address these devices and explained why there was
5 copying, and explained why the similarities showed that there was copying.
6 We believe that these supplemental -- these claim charts provide
7 supplemental evidence supporting that. But we think that the primary
8 evidence that shows copying was addressed in his response and that the
9 claim charts provide further support, but that the copying is shown with the
10 pictures themselves.

11 JUDGE LEE: Okay. What about the Petitioner's device? Does Mr.
12 Wolfe's supplemental say yeah, all these assertions in the District Court
13 complaint, I stand by them, too? I prepared them. And this is why
14 Petitioner's device copied from Patent Owner. Did he say that about
15 Petitioner's?

16 MR. GARR: I believe that this is addressed in terms of the analysis
17 based on the images. There's not a claim chart on that, if that's the question.

18 JUDGE LEE: Okay. No claim chart on Petitioner's devices, just on
19 the similarity of the images. Okay.

20 MR. GARR: Yes. That every image at every display that has been
21 considered or that he's seen appears to be a direct copy due to the physical
22 similarities. And we provided two what we thought to be representative
23 claim charts, making it clear how they operate. Dr. Wolfe supported that.
24 We believe his supplemental declaration can be relied on the fact that this is
25 his own analysis. He was made available for deposition on this point. And
26 so we think we have enough evidence from which the Board can conclude

1 that not only was there copying, but that this device and this pixel circuit
2 design has been used ubiquitously ever since it was first commercialized;
3 that despite the fact that there were many other pixel circuits attempted and
4 noted in the prior art, that this is the only one, that there is evidence of being
5 used, and that there's -- I mean, and there's not a dispute in particular on --
6 no argument has been raised that there are any limitations that, for example,
7 the Galaxy S21 does not practice.

8 JUDGE LEE: Yeah, the issue is widespread copying. Right? So
9 aren't there a whole lot of other devices out there that's not addressed?
10 Petitioner said these are probably just distributors, so maybe there's just one
11 manufacturer who's made all of these multitude of products. If it's true,
12 then there's not widespread copying. What's the response to that?

13 MR. GARR: That strikes us as an implausible argument, given the
14 number of manufacturers, including the number of manufacturers who are
15 Petitioners in this case. There has been no argument put forward that, for
16 example, the BoE product is not, in fact, a BoE product, even though BoE is
17 a Petitioner in this case, and there have been no other devices put forward
18 from any of the Petitioner's showing here's an example of another one that's
19 actually used. So all of the ones that we were able to find, we submitted a
20 number of them that were torn down by Dr. Silzar's (phonetic). He attested
21 to the tear down photographs. And so every device that we have seen, that
22 we have submitted evidence about uses this display -- or, excuse me, uses
23 this pixel circuit design. And there's no evidence of anyone else
24 successfully using a different design in commercial operation.

1 JUDGE LEE: The labels for your comparisons, they don't really spell
2 out the real company name, right? It's just a shortened name of some sort. I
3 don't know, who are the manufacturers?

4 MR. GARR: These are replacement displays that were purchased,
5 that we had purchased. I don't know that they indicate who ultimately is the
6 manufacturer, but every one of them uses the same design. And we think
7 that's the most relevant piece of evidence that regardless of which
8 manufacturer made them -- and there are physical -- there are some physical
9 differences between them, suggesting that they're all not coming from the
10 same exact spot. But we think what's critical to the issue is the fact that
11 every display that we've been able to find is using the same design.

12 JUDGE LEE: Okay. I guess the most critical question for me is why
13 does common look tell me anything about how the circuits function?

14 MR. GARR: Well, Dr. Wolfe provided testimony explaining that the
15 similarities are evidence of copying, and provided the claim charts to show
16 supplementally to make it clear that they're functioning in the same way.

17 JUDGE LEE: Okay. So that's in his supplemental declaration then?

18 MR. GARR: His supplemental declaration authenticates the claim
19 charts.

20 JUDGE LEE: Well, authenticates is one thing, but substantively
21 explaining why common look means common underlying circuit operation is
22 another thing. You're saying that supplemental declaration explains all of
23 it?

24 MR. GARR: I guess the other point I would make is that these are
25 apparatus claims directed to arrangement of a pixel circuit, and that
26 arrangement can be seen in the images. But I believe Dr. Wolfe provided

1 testimony assessing and analyzing these images to show and to conclude that
2 they show the same pixel circuit arrangement.

3 JUDGE LEE: Okay. Thank you.

4 MR. GARR: And you may have more questions on objective indicia,
5 but I do want to put up our slide number 33, which comes from a book
6 chapter on mobile displays showing the number of real significant research
7 outfits that were working on this, including Sarnoff, IBM T.J. Watson
8 Research Center, Sony, and others. And so again, we think this is further
9 support that shows this is not just a display that happened to work. This is
10 something that a number of outfits were working on. And it wasn't until the
11 invention of the '599 patent circuit that a successful commercialized product
12 was put forward.

13 JUDGE LEE: Thank you. Mr. Garr, your time is up. You have 10
14 minutes reserved if you want to use it.

15 MR. GARR: Well, I will generally reserve it, but I will just say that if
16 the Board has a question on the initialization transistor claims, which I didn't
17 have a chance to address, I'm happy to address that now.

18 JUDGE LEE: If you want to. My only question on that is, it doesn't
19 really matter if -- well, isn't your point is it doesn't matter if there is some
20 conflation between erasure and initialization?

21 MR. GARR: Yeah.

22 JUDGE LEE: They're saying that because they pointed out how
23 initialization was done and then there was a problem with it, so that's -- they
24 went to the other one. So does it really matter whether they did conflate or
25 not conflate, erasure was initialization. That's the only --

1 MR. GARR: I would say two things. One is, I think it is still very
2 important that they are continuing to rely on this conflation of the two
3 concepts. And that is, for example, one of the key disclosures, or perhaps
4 the key disclosure, that on which their modification hinges, is *Kimura*
5 paragraph 658. This is excerpted here on the left of our slide 20. And the
6 teaching says, referring to Figure 33, that the erasure transistor can be placed
7 in a location, provided that it is a location at which electric current supplied
8 to the EL device can be cut off at an arbitrary timing.

9 And there are two things I want to point out here. One is this -- and
10 just to be clear, they continue to rely on 658. They have a couple slides
11 about it. It's cited in their Reply, and this cannot support the modification
12 for two primary reasons. One is that erasure doesn't mean the same thing as
13 initialization. And so even if there are instances in which some hardware is
14 shared between them, I don't think there's a dispute that in *Kimura* erasure
15 means forcibly placing the EL device in a non light-emitting state, and that
16 initialization means, in contrast, applying a reset voltage to a capacitor. So
17 because of that, we think that this conflation is -- or rather that this teaching
18 cannot bear on where an initialization transistor can be placed, because this
19 is a teaching about where an erasure transistor can be placed. An erasure
20 transistor is one that is used to put the device in a non-light-emitting state.
21 So we don't think this teaching is even pertinent to where a alleged
22 initialization transistor could be added to the Figure 33 embodiment. That's
23 the first point.

24 The second point that I want to make, and then I'll reserve the rest of
25 my time, is that even if you were to assume that this teaching may be
26 pertinent to where an initialization transistor can be placed in Figure 33.

1 And I'm turning to our slide number 24 here, the transistor that the
2 Petitioner proposes to add, which is here on the right, the yellow one labeled
3 number 6, this is from their petition, that transistor could not serve for the
4 purpose of causing electric current supplied to device to be cut off.

5 JUDGE LEE: Hey, thank you. It's 12:28, so you still have six
6 minutes.

7 MR. GARR: Thank you.

8 JUDGE LEE: And Petitioner, you have six minutes for your rebuttal.

9 MR. JENSEN: Thank you. Your Honor, I'd like to pick up where
10 Patent Owner left off on the eraser concept. I'm on slide 71 of Petitioner's
11 slides where we quote the Patent Owner response, and they argue that, "In
12 *Kimura*, 'erasure' means 'forcibly placing the LED in a non-light-emitting
13 state'. An 'erasure TFT' is a transistor that permits 'electric current supplied
14 to the LED to be cut off at an arbitrary timing.' *Kimura* does not use
15 'eraser' to refer to resetting the capacitor voltage to a default initialization
16 value." That is their argument. If they're wrong about that, the teaching in
17 *Kimura* paragraph 658 renders the claims obvious.

18 And we know that they're wrong about that because their own expert
19 admitted exactly as much. On slide 72, Dr. Wolfe admitted that transistor
20 3612, that's the transistor right here, is the erase transistor. That transistor is
21 not in the current flow path to the LED. That transistor performs the
22 claimed function of discharging the capacitor. That's exactly what the erase
23 transistor is.

24 More than that, *Kimura* expressly teaches that transistor 3615, which
25 is not the erase transistor because Dr. Wolfe already said 3612 is, but
26 transistor 3611, excuse me, it's connected to the LED, is what cuts off

1 current to the LED. And *Kimura* says exactly that. An electric current path
2 to the LED device 3615 is cut off by a TFT 3611, not erase transistor 3612.

3 That's confirmed in other teachings in *Kimura*, like Figure 21, and
4 this is on slide 74, where *Kimura* paragraph 404 expressly identifies
5 transistor 2106 as the "erasure TFT." Dr. Wolfe admitted that that transistor
6 2106 is described as an erasure TFT and, quote, "I believe that its role is to
7 discharge the capacitor." That is exactly what the claims require. Claim 8,
8 "a sixth transistor for discharging the data signal voltage stored on a
9 capacitor." Whatever else an eraser or an eraser transistor may or may not
10 be or may or may not do, we know from Dr. Wolfe himself and from the
11 *Kimura* reference that the erase transistor discharges the capacitor. And
12 *Kimura*'s teaching about the flexible placement location of the eraser
13 transistor renders the initialization obvious.

14 With respect to secondary considerations, I would point Your Honors
15 to our slide 97, where we quote the testimony of Dr. Wolfe where he
16 repeatedly testifies he does not know whether substantially all of the reverse-
17 engineered circuit designs that he looked at were made by a particular
18 manufacturer, where they came from, who designed them. He had no idea.
19 And he eventually even conceded that, quote, "It is possible that these are all
20 sourced from a small number or even a single manufacturer." We submit
21 that this is an issue on which the Patent Owner bears the burden, and that
22 this testimony does not meet their burden on that topic.

23 Turning to the POSITA issue, I would direct Your Honors to slide 114
24 of our presentation where we specifically asked Dr. Wolfe, well, how much
25 active matrix design experience must a POSITA have? And he testified, I
26 don't know that they necessarily need design experience. Could be a

1 combination of design or analysis experience, studying other people's
2 designs, analyzing circuits, studying circuits that have been designed. I
3 think that would be acceptable.

4 So I think Patent Owner's definition of a POSITA is problematic. It
5 omits any requirement whatsoever of circuit design experience, which is
6 plainly what the '599 patent is all about.

7 If we look at -- I would refer Your Honors to our slide 111. This is
8 the testimony from Mr. Credelle. And this is real-world stuff. It would be
9 harder to get a more down to Earth realized endorsement than this. "I would
10 assign the design of pixel circuits to good circuit designers, regardless of
11 their experience with displays, rather than an engineer with experience in
12 display technologies, but little experience of transistor circuits." And he
13 goes on, he talks about who we would hire to do this work, and it's exactly
14 the type of person that has a qualifications of Dr. Foty.

15 I would also refer Your Honors to Exhibit 2050, which is Dr. Foty's
16 deposition testimony, starting at page 100, line 6, through page 101, line 10,
17 that talks about his experience with LEDs, lasers, and electroluminescence
18 in general.

19 And then going back to where Patent Owner started, which is with the
20 question of the shared light signal. We would submit to Your Honors that
21 the Board's ruling on supplemental evidence as Exhibit 1027 really doesn't
22 bear on this, as Your Honors noted. And we do submit that Your Honors
23 got some things wrong in that decision. But there is certainly analysis in that
24 decision that recognizes that much of Dr. Foty's supplemental opinion,
25 which was not allowed at all, but much of it did not raise new evidence that

1 had not been -- or, excuse me, new theories or new issues that had not been
2 presented in the Petition.

3 But I would submit to Your Honors that even if that were the case,
4 that the Reply brief is intended to respond to positions owned by -- or
5 positions taken in the Patent Owner Response. And this question of
6 inoperability by virtue of the shared light signal was not raised prior to the
7 Institution Decision or really prior to the Patent Owner's Response. So even
8 if there is some additional discussion, we submit that that's a fair reply to
9 their argument that somehow there's this inoperability problem that occurred
10 by virtue of having a shared light signal. And in that regard, Patent Owner,
11 you know, they had the opportunity, and they took the opportunity to depose
12 Dr. Foty on his Reply Declaration. They got a Sur-reply. They were able to
13 fully address the issues about operability and Figure 33 and Figure 36.

14 JUDGE LEE: Thank you, Counsel. Your time is up.

15 MR. JENSEN: Thank Your Honors.

16 MR. GARR: When the Board is ready, I just believe I reshare my
17 screen.

18 JUDGE LEE: Thank you, Mr. Garr. You have six minutes. It's
19 12:36.

20 MR. GARR: Thank you. The key point that I'd like to make sure I
21 address here is this question of what is an erase transistor? This was raised
22 briefly in the surrebuttal right now about TFT 3611 or 3612, but I have here
23 shared Petitioner's slide 89 that excerpts testimony from Dr. Foty.

24 At the top of this testimony is the teaching from *Kimura* which says
25 the erase transistor can be placed anywhere in Figure 33, "provided that it is
26 a location at which current supply to the EL device can be cut off at an

1 arbitrary timing.” The argument that was just put forward and that Dr. Foty
2 is advancing here is that all this means is that the erasure transistor cannot be
3 placed at a location where it would stop erasure from happening via the
4 actions of other parts of the circuitry.

5 This doesn’t really pass the smell test in our view. The suggestion is
6 that it can still be an erase TFT even if it doesn’t cause erasure. No, the
7 function -- the erasure in *Kimura* is forcibly placing a device in a non-light-
8 emitting state. It would make no sense for an erasure TFT to qualify as an
9 erasure TFT, even though it has no role in erasure happening.

10 And beyond that sort of logical point, every transistor that *Kimura*
11 describes as an erase TFT or an erasure TFT does serve the function of
12 causing current flow to be cut off. I’m going to switch to slide 76 from,
13 again, Petitioner’s demonstratives in which they say the erase TFT need not
14 cut off current to the LED. That’s simply not consistent with *Kimura*’s
15 disclosures.

16 They cite here Figures 9 and Figures 21, in which what *Kimura*
17 describes as the erasure TFTs are highlighted in yellow, and they say that
18 they are not in the LED current path. That’s sort of aligning the key issue
19 here, which is that both 914 and 2106 are positioned so that they can direct
20 another transistor to turn off and, therefore, forcibly place the LED in a non-
21 light-emitting state.

22 So, for example -- let me zoom in here, excuse me. In Figure 9, for
23 example, 914’s operation directly impacts the gate of 907 and, therefore,
24 directly determines whether this purple line is flowing or not flowing. Same
25 in 21, 2106 directly impacts the voltage on the gate of 2105 and determines
26 whether to break this purple line. And this is supported in *Kimura* itself.

1 I'm switching to *Kimura* paragraph 410, talking about what we just
2 looked at, Figure 9, oops, sorry, in which it says, talking about what happens
3 in that circuit I just discussed that at a certain period, the erasure TFT 914
4 turns off. Therefore, 907 turns off and the device is forcibly placed in a non-
5 light-emitting state.

6 So every transistor that is discussed in *Kimura* as an erasure TFT
7 serves the function of causing erasure to happen. And there was testimony
8 put forward here on slide 72 in which they're discussing Dr. Wolfe, as they
9 say, confirming identity of the erase transistor, talking about 3612. This is a
10 bit confusing, but the erase transistor in this embodiment is 3611. If you go
11 back and look at *Kimura*, it describes 3611 as the erase transistor, and it
12 explains that 3611 is the one that cuts off current flow.

13 I see this testimony from Dr. Wolfe that they put up on this slide. I
14 believe it's a misstatement, confusing 3612 and 3611. In any event, if the
15 Board goes back and look at it, it's clear that *Kimura* describes 3611, not
16 3612, as the erase transistor, Number one, and number two, everything that
17 *Kimura* describes as an erase transistor must serve the function, or does
18 serve the function of causing erasure to happen. The transistor that they are
19 proposing to add to Figure 33 does not serve the function of causing erasure.
20 So even if you could use *Kimura*'s teachings about erasure as bearing on
21 where someone should place an initialization transistor, it would not support
22 the actual modification that the petition proposes because the added
23 transistor that they are seeking to add is not in a place where it can cause
24 cutoff of current flow.

25 JUDGE LEE: So you're saying that testimony is a misstatement?

26 MR. GARR: It appears to be.

1 JUDGE LEE: Thank you. And technically, your time is up. I don't
2 know if my colleagues have questions for you.

3 MR. JENSEN: Your Honor, if I might be heard for just a moment, I
4 did want to raise an objection to that last argument, which is a new
5 argument. It's nowhere in their Sur-reply. It's nowhere in this discussion of
6 Figure 9. It's simply not in their papers, and I would appreciate an
7 opportunity to be heard. If the Board's going to consider this new argument,
8 I would like to be heard for one minute on (inaudible).

9 JUDGE LEE: What argument are you talking about?

10 MR. JENSEN: The argument that in, for example, Figure 9 and
11 Figure 24 the eraser transistor somehow cuts off current flow to the LED
12 that is not anywhere in their papers. It stood unrebutted. And I can explain
13 why that's incorrect if I'm allowed to right now.

14 JUDGE LEE: Let me -- give me a second. I think so. Go ahead.
15 Don't take too long, though.

16 MR. JENSEN: I'll be brief, Your Honor. Let me share my screen,
17 and I'll go directly to the slide where this was discussed. This is Petitioner's
18 slide 76. And I just want to point out that in Figure 21 here, there's no
19 dispute that 2106 is the erase transistor. There's no dispute that that
20 transistor is not in the current flow path, which is illustrated by the purple
21 arrow. And there can be no dispute that the operation of 2106 has no ability
22 to turn off transistor 2105. If transistor 2106 is turned on, it's an NMOS
23 transistor, if it's turned on, it will provide a high voltage. Right? This is a
24 high voltage line where the current is flowing. It'll provide a high voltage to
25 transistor 2105, which is an NMOS transistor. A high voltage will turn on

1 transistor 2105 and cause current to flow, not stop the current flow. It does
2 the exact opposite of what you just heard attorney argument about.

3 And there is no testimony to support that attorney argument because
4 it's a new argument. It's not in their Sur-reply. There is no testimony from
5 Dr. Wolff other than his deposition testimony, which confirms the operation
6 that I just explained of Figure 21. The operation of Figure 21 is explained in
7 the reply declaration of Dr. Foty. I submit there can be no reasonable
8 dispute that the quote "erasure transistor 2106" is not in the current path and
9 has no ability to stop the current flow. And its only purpose, as testified by
10 Dr. Wolfe himself, is to discharge the capacitor. Thank you.

11 JUDGE LEE: Thank you. And that concludes our hearing.

12 MR. GARR: Your Honors, I just would like -- if I can make one
13 statement. Dr. Wolfe did provide testimony explaining the point that was
14 just discussed in his deposition, Exhibit 1028 on page 226, where he
15 explained that this transistor 2106, in addition to having a role that may be
16 involved in discharging the capacitor, also causes blanking, blanking being
17 the way he was describing forcibly turning off the device. So there is
18 testimony supporting that.

19 JUDGE LEE: Thank you. Thank you, both, and thank Johannes Hsu
20 for participating in the LEAP program. We asked, I understand, a whole lot
21 of questions, and we really appreciate the parties' best efforts in answering
22 them. We will take the case under advisement. And thank you all for
23 appearing.

24 Would you please stay on the line a little bit more to see if the court
25 reporter has some questions for you? The panel will sign off now.

26 (Whereupon, the proceedings at 12:46 p.m. were concluded.)

IPR2023-00941
Patent 7,414,599 B2

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