

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

OPTICIS CO., LTD.,
Petitioner,

v.

INNEOS LLC,
Patent Owner.

IPR2023-01256
Patent 7,198,416 B2

Record of Oral Hearing
Held: November 12, 2024

Before TERRY J. OWENS, JON B. TORNQUIST, and
DANIEL J. GALLIGAN, *Administrative Patent Judges*.

APPEARANCES:

ON BEHALF OF THE PETITIONER:

MICHAEL H. JONES, ESQ.
Rothwell, Figg, Ernst & Manbeck, P.C
901 New York Ave, NW
Suite 900 East
(202) 783-6040
mjones@rfem.com

ON BEHALF OF THE PATENT OWNER:

CHRISTIAN MAMMEN, ESQ.
Womble Bond Dickinson, LLP
50 California Street
Suite 2750
San Francisco, CA 94111
(404) 341-3067
chris.mammen@wbd-us.com

CARRIE RICHEY, ESQ.
carrie.richey@wbd-us.com

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P R O C E E D I N G S

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JUDGE TORNQUIST: Hey, good afternoon. This is a hearing for IPR2023-1256, Opticis Co. Ltd. v. Inneos LLC. The patent at issue is 7,198,416 B2. I am Judge Tornquist, and with me are Judges Owens and Galligan. Who do we have from Petitioner?

MR. JONES: Hello, Your Honors. This is Michael Jones, lead counsel for Petitioner, and I'm actually joined in the room here, even though they're not on camera, by back-up counsel Martin Zoltick and Mark Rawls.

JUDGE TORNQUIST: Okay, welcome. And Patent Owner?

MR. MAMMEN: Good afternoon, Your Honors. I'm back-up counsel Chris Mammen. And I'm joined in the room here by Carrie Richey, also back-up counsel. And on the call also is Barry Herman, lead counsel.

JUDGE TORNQUIST: Okay, thank you. Patent Owner, you're coming in a little bit soft on your volume, maybe, as we keep going here, maybe check on that.

MR. MAMMEN: (CROSSTALK) Your Honor.

JUDGE TORNQUIST: Okay. Per our oral hearing order, each side will have 60 minutes to present argument here today. Petitioner, bearing the ultimate burden of proof, you'll go first. You can reserve time for rebuttal. Then we'll hear from Patent Owner, who can also reserve a short period of time for sur-rebuttal. Then we'll hear the rebuttal and sur-rebuttal arguments.

We received objections from Patent Owner to Petitioner's demonstratives. In particular, Patent Owner has objected to slides -- to portions of slides 25 and 32 and the entirety of slide 62. We just note that

1 these demonstratives are not evidence and will not be treated as such. We
2 will rely on the papers and the like, but the objections are noted and we'll
3 take those into account as we review these slides.

4 One further preliminary matter we'd like to discuss before we
5 begin is Judge Galligan would like to briefly discuss the prehearing
6 conference that occurred last week. Judge Galligan?

7 JUDGE GALLIGAN: Thank you. This is Judge Galligan. On
8 November 6th, we had a prehearing conference with counsel for Petitioner
9 and Patent Owner. Judge Owens and I conducted that call and I just wanted
10 to put in the record. So, we discussed that with regard to outstanding
11 questions related to the Patent Owner's request to disregard certain
12 arguments and evidence. That there were some papers on that, papers 29
13 and 30.

14 We advised the parties that we have not yet decided the issue. We
15 had not yet decided the issue and we don't have any questions on it at the
16 time, and we advised the parties that both -- they may address this issue in
17 oral argument. And we also advised the parties as to certain merits
18 arguments that they would -- that we prefer they focus on. Thank you.

19 JUDGE TORNQUIST: Okay. With that, Petitioner, when you are
20 ready, and please let us know how much time you'd like to reserve for your
21 rebuttal arguments.

22 MR. JONES: Thank you, Your Honors. I hope to reserve the full
23 20 minutes if that works out. And I'm going to switch now to try to share
24 my screen to give my presentation. And that should be showing now on the
25 screen. Is everyone able to see that?

26 JUDGE TORNQUIST: Yes, we can see it.

1 MR. JONES: And then I've made it larger. Is that still showing?

2 JUDGE TORNQUIST: It's still legible and showing, yes.

3 MR. JONES: All right, excellent. All right. Thank you, Your
4 Honors, and good afternoon. As I said, my name is Michael Jones, lead
5 counsel for Petitioner, Opticis. Let's see. Because there's a lot of different
6 ways in which this patent is invalid, a lot of different issues, I thought it
7 made sense to start with a high-level overview of the topics I intend to focus
8 on today.

9 So first, Patent Owner relies on narrowing constructions to read in
10 limitations to distinguish the prior art. Without those distinctions, without
11 those extra limitations, there are very few disputes and in our view, no real
12 plausible disputes regarding validity. So, I'd like to start with claim
13 construction, bearing in mind Your Honors' guidance to look at the stopped
14 optical fiber issue. Additionally, we would like to discuss the application of
15 the prior art even under Patent Owner's constructions. In our view, those
16 constructions don't really change the validity analysis. There's nothing new
17 or non-obvious about basic concepts like integration, alignment, or
18 standardized connectors, which were well-known in the field at this time.

19 And then finally, again, per Your Honors' guidance at the
20 prehearing conference, we'd like to conclude by focusing on the swear-
21 behind. This is an important topic because Patent Owner does not have any
22 merits based arguments on Ground 5. That is, there is no dispute that
23 Bhandarkar teaches all the limitations of the claims. And of course, I'll go
24 into this in detail later, but to address your preliminary question about what
25 was going on during that critical time period, whether there has been any
26 new evidence since the institution decision, the answer is no. There is no

1 new relevant evidence regarding the swear-behind. So, we'll finish up there.

2 So, with that in mind, I'd like to turn to slide 4 and just give a
3 quick background on the '416 patent as it helps frame some of our
4 discussions around claim construction. So, on the screen here, we have
5 some of the earliest images of conception from the prosecution history,
6 Exhibit 1002 at pages 36, 79, and 126. And using the large image here in
7 the center of the screen, we can see the basic elements of this invention,
8 right? On the left, we have the light sources. They have the lambda 1
9 through lambda 4. That's the laser array. Those pass laser light into the
10 collimating lens array, which then provides collimating light, collimated
11 light to a coupling or focusing lens, right? And in that respect, the outputs
12 are combined and they're sent down to a fiber, right?

13 And this one feature of this particular setup that I want to note that
14 the inventor, Mr. Ray, noted is that when you have this setup, the light
15 source array, lens array, focusing array, you get the same pattern on the lens
16 that you have -- before you get the same pattern on the focusing lens that
17 you have in the collimating lens array. And this is what the claim will call
18 separate n sectors or quadrants, and I'll touch on that in a moment. But I just
19 wanted to highlight that that comes from this basic setup.

20 And I want to carry this theme through. Again, those same basic
21 elements we saw in the initial conception, those are the same basic elements
22 we see in the plain language of the claim. So again, we've got in yellow, we
23 have those laser output light sources. In blue, we have the n collimating
24 lenses. And I'm on slide 5 for the record. And then in red, we have that
25 focusing lens. And again, this concept shown in purple of the separate n
26 sectors. And again, we're building here, right? So, the original idea was

1 these basic elements, the language of the claim is these basic elements. And
2 that carries into the specification as well.

3 I'm on slide 6 now, and we have Figure 7 from the patent on the
4 screen. Again, the same basic elements. In yellow, we have the lasers, 211
5 through 214. Those are our light sources. Now, in this design, it's a little
6 different. This is the third embodiment. There's sort of these discrete
7 components mounted onto a substrate of some kind, 215, sort of arranged
8 around this center component. But again, same idea, we've got light sources.
9 And then we have the collimating lenses in blue, 221, 222, the focusing lens
10 in red. Again, these same basic elements are what we see thematically,
11 conception, claim, embodiments. Again, previewing the claim construction
12 issues, what we don't see here is any sort of molded housing, some high
13 level of integration, right? We don't see free alignment, right? What we see
14 are light sources that have been discretely mounted on a substrate, and we
15 don't see a connector of any kind. In fact, we don't see a connector, and we
16 don't see a fiber. In fact, we don't see the fiber in any of the figures, right?
17 The figure, the fiber, is never shown. The patent is permissive and flexible,
18 and this is reflected when we see all the different embodiments of the '416
19 patent.

20 And I'm on slide 7 now. So, if we look at the top left-hand corner,
21 we see Figure 1 in the first embodiment. This is the highly integrated pre-
22 aligned molded body embodiment, that as we know from the admissions was
23 taken from the prior art. This is sort of the standard setup, the standardized
24 connector that they borrowed from the Grann patents. That's the first
25 embodiment. Now, they didn't carry that over to other embodiments, right?
26 So, the second embodiment is a different design. That's what they called the

1 barrel design, right? More rounded in shape.

2 And then we get to the third embodiment, Figure 7, which we just
3 looked at. And now we've got a totally different design than what we saw in
4 Figures 1 and Figure 5, right? Here, the optical combiner 210, it doesn't
5 have a housing, it doesn't have a connector, but that makes sense in the
6 overall context, right? Because the combiner is those basic elements we've
7 seen, light sources, collimating lens, focusing lens, right? It's meant to
8 provide a signal to something, to a fiber. So, that's when we get to the third
9 embodiment. We don't have any of those particular connection elements or
10 configurations, housings, integrations, that sort of thing.

11 And then finally, we get to the fourth embodiment. And this is the
12 more extreme version. This is the Figure 10 discussed in column 4 of the
13 patent. Here, we don't have sort of any interconnections at all, right? We
14 don't see any structure. And in fact, the patent tells us that what we have are
15 separately molded components. That's column 4, lines 40 to 42. And that
16 the way in which this is all interconnected, the structure and all that, the
17 patent says, that is, quote, by means known to those skilled in the art, which
18 are deleted in the interest of brevity. That's column 4, lines 42 to 45.

19 So, what the inventors were telling us here is that as long as you've
20 got the basic components, put them together however you want. And that's
21 the optical combiner. And that makes sense too when we look at the
22 dependent claims, right? This is where we see the more narrow features,
23 those extra design elements in some embodiments, but not others, right?

24 So, in Dependent Claim 2, this is where we see the two by two
25 two-dimensional array. Or in Dependent Claim 3, right? When they wanted
26 to add extra features, they knew how to do it, right? They added a prism,

1 right? Another structural element. That's in Dependent Claim 3. Or when
2 they wanted to add a certain level of integration. They did it here in a
3 Dependent Claim 3, single monolithic molded block.

4 So, with that sort of introduction, I'd like to turn to the specific
5 claim construction issues at hand. So, I'm on slide 11. And here on the
6 slide, we have the parties' constructions side by side. And I wanted to start
7 with this for a reason. I'm going to get into the details of why we believe our
8 constructions are right and their constructions are wrong. But I think at just
9 a high level, seeing the constructions side by side is illuminating. We can
10 see the full extent to which Patent Owner is attempting to rewrite this claim,
11 taking a few words, maybe two words for optical combiner, and giving a
12 laundry list of additional structure and limitations. And what we know from
13 just basic canons of claim construction and Federal Circuit precedent,
14 something's amiss here, right? On the other hand, Petitioner's constructions,
15 they sort of align with the plain language, right? To the point, nothing
16 extraneous. And I just wanted to start here with that sort of high level point.

17 And with that, I'd like to turn to the optical combiner. Our
18 construction is a plain meaning of construction. In our view, and as
19 supported by the evidence, an optical combiner is exactly what it sounds
20 like. It combines optical signals. The way we've articulated that is a device
21 that combines multiple optical inputs into an output. And we think that this
22 sort of plain meaning construction is well aligned with the intrinsic
23 evidence. I have some examples here on the screen with slide 12. So, for
24 instance we can just look at the context in Claim 1 around the optical
25 combiner. And that supports our position, right? It says for multiplexing the
26 outputs of a plurality of end lasers, right? That's combining multiple optical

1 inputs. And then those signals are sent into and through a stopped optical
2 fiber, right?

3 So, it takes the combined optical inputs, sends them into an output,
4 the output here being the optical fiber. So, I think, you know, at a high level,
5 the intrinsic evidence here is well aligned with our construction, and we see
6 it in the spec as well. I've pointed to column 1, lines 46 to 51, column 3,
7 lines 19 to 21. And we see the same sort of language, the same sort of
8 description around an optical combiner, right? It's combining optical signals
9 into an optical fiber. It's combining individual light signals into an optical
10 path. So, we think there's good support here in the intrinsic evidence, as
11 well as the plain language.

12 But there's also extrinsic evidence that supports us, in addition to
13 buttress point. So, I'm on slide 13 now. Exhibit 2019 is a dictionary
14 definition from the Photonics Dictionary. And it reads that an optical
15 combiner, quote, refers to a device or component that combines multiple
16 optical signals or images into a single output. Again, well aligned with our
17 construction. And this is explained by Dr. Willner in his declaration 1016,
18 paragraph 14. As he said, this is consistent with what a POSITA would have
19 understood now and in the relevant field and at the time of the prior date of
20 the patent. And this is largely, I would say, uncontested, this plain meaning.
21 Patent Owner is not taking a plain meaning approach. They didn't really
22 submit evidence about what the plain meaning may or may not be.

23 So, there's no real dispute about this being the plain meaning of
24 optical combiner at the time. The only evidence came from us. Instead,
25 what Patent Owner is doing is they are relying on redefinition, disavowal,
26 disclaimer. And as we know, that's an extremely high burden, right? We've

1 explained this in the paper, as we know this from the Federal Circuit. And
2 they are not going to be able to meet that here in the '416 patent, right? And
3 that's because the patent uses permissive language, permissive examples.

4 We saw in the background section all the different ways in which
5 the inventors left it open on how this thing is designed. And we don't see
6 that clear definitional language you would need under Federal Circuit
7 precedent. The example here I have on slide 14 in red, no words or
8 expressions of manifest exclusion or restriction. We see similar language
9 from *Thorner* and other big cases. Instead, we have this permissive
10 language. Words like could or in most embodiments. While it presents,
11 sometimes you could have this single molded, highly integrated device,
12 alternatively, it could be multiple components that are later brought together.

13 So, we don't think they can find the necessary support for a
14 redefinition. They point to things like phrasing of the invention and the
15 spec. But as we pointed out in the papers, our reply page is 5 to 6, they're
16 sort of cherry-picking certain components, but not others in a way that we
17 think severely undercuts their position, right? They read the word invention,
18 grab one piece that comes after, but not the others. We just don't think
19 there's a lot there that could support redefining a simple term like optical
20 combiner in the way they suggested. So unless there are questions about
21 optical combiner, I'd like to turn to stopped per your guidance in the pre-
22 hearing conference.

23 Okay. As we did before, I think it makes sense to start with just
24 looking at the claim language and how far they're taking the construction.
25 So, we have a term, stopped single optical fiber. Stopped is an adjective
26 describing the fiber. In our view, it's fixed in place. It's held in place. All

1 right. But again, it's an adjective, it's stopped. But what Patent Owner has
2 done, and we can see this right here on slide 16, is they're taking that
3 adjective and they're adding a bunch of structure. They're adding a
4 connector. They're adding a particular kind of connector to a claim that
5 doesn't recite a connector, right.

6 So, this simple word, this adjective, stopped, and they want to add
7 all new structure. And we could look back at slide 5, right. There's no
8 connector here. In fact, the optical fiber isn't even part of the combiner,
9 right? The fiber is what receives the signal output from the combiner, right?
10 The combiner sends a signal into a fiber, right? It's for focusing onto a fiber.
11 So, not only are they taking a simple word, an adjective, and reading in a
12 bunch of structure, but they're adding in a whole new concept, a whole new
13 piece of structure that they could have put in the claim, right? We saw from
14 the dependent claims, the inventors knew how to add features and add
15 limitations, but they didn't do it here, right? I just wanted to flag just how
16 far afield we are from the plain language of the claimed with the stop
17 construction, the adjective stopped, okay?

18 And we think that in this sort of, in this context against that
19 backdrop, the institution decision got it exactly right. It's not limited in this
20 respect. We're not adding this kind of structure. One question you have
21 asked and asked for us to address is other methods for stopping the optical
22 fiber. And we address that here on slide 17. So, there are a lot of known
23 ways to stop an optical fiber at the time of the '416 patent. We have some
24 examples here on the screen. One way is the way shown in Figure 1 of the
25 patent, right? That's that standard, I think they called it standard or a
26 common connector approach that we saw from the Grann patents and the

1 admitted testimony, right, that the inventors said they fell back on for cost
2 reasons, right? So, there's that sort of known approach in Figure 1. Lemoff,
3 that's Exhibit 1006, Figure 2. That has a stop that fixes the optical fiber in
4 place the connector element 260 there. And then Bhandarkar has another
5 structure, which is shown in Exhibit 1013, Figure 5. So, those are different
6 ways.

7 And then there are entirely other ways that were known, and again,
8 I think this is largely undisputed, for fixing an optical fiber in place. And
9 this is described, for instance, by our expert, Dr. Willner, Exhibit 1016,
10 paragraphs 53 to 56. So, our expert, Dr. Willner, he calls these techniques
11 clamping and V-grooves. They're also acknowledged by Patent Owner's
12 expert, Dr. Lebby. He calls them, I think, fiber mount and etching.

13 Your Honors had asked about evidentiary cites. I would point you
14 to Exhibit 2049 at paragraphs 43, 45, and 62. That's where Patent Owner's
15 own expert, Dr. Lebby, acknowledges these other techniques for holding an
16 optical fiber in place that were known as in the '416 patent.

17 Now, Dr. Lebby says he doesn't like these other techniques as
18 much. He disparages them. But he doesn't know -- sorry, he doesn't dispute
19 that these were known ways to fix an optical fiber beyond the examples we
20 see in the patent, in Lemoff, and Bhandarkar. In fact, as you'll know from
21 reading the papers, Patent Owner's own expert goes to great lengths to talk
22 about other techniques for fixing, right? This is their whole argument about
23 Kurita, right? Their whole argument is that Kurita wouldn't use the
24 combiner of Figure 1. It would use some other technique, right? They say it
25 would use a fiber map, what we call a clamp.

26 So, I can read from their own expert, this is paragraph 62 of

1 Exhibit 2049. He says a POSITA would understand the fiber can be fixed in
2 place using a fiber mount as one example. So again, I wanted to address that
3 question from Your Honors. There were multiple known ways, both that
4 and shown explicitly in the patent, other evidence, and a pretty clear
5 agreement between the experts.

6 While we're talking about the experts in stop though, I want to
7 raise what we think is a very important point that really highlights the issue
8 with Patent Owner's construction. And I'm on slide 18 now. And we talked
9 about Dr. Lebby, Patent Owner's own expert, and what he's admitted. He
10 made two significant omissions during his cross-examination, which show
11 why Patent Owner's construction is wrong.

12 So, looking at Lemoff, which is shown here on the screen, Exhibit
13 1006, Figure 2, he said, receptacle 260 in Lemoff, and this is a quote, Figure
14 2 certainly has a stop. And again, that's the term we're construing, stop,
15 stopped optical fiber. And he went on, and he said, I would agree with you
16 that the fiber is stopped on 260. This is Exhibit 1018, page 260. He said, I
17 would agree with you that the fiber is stopped, right? And that's our claim,
18 stopped optical fiber. Yet, even admitting that the fiber is stopped, just like
19 the claim says, stopped, they're taking the position that Lemoff doesn't teach
20 a narrow enough definition of stopped, that it doesn't teach a specific enough
21 particular connector arranged in a certain way to meet their ultranarrow
22 construction. And that's from paper 18, page 49. And I'm just going to
23 reiterate this. The term is stopped. Their expert says that object is stopped,
24 is stopped on a stop, but that still doesn't meet our construction. This can't
25 be right. And the reason it's not right is because they're taking a basic term,
26 describing the state of the fiber and reading in a bunch of structure. Not just

1 any structure, ultranarrow structure that they brought in from the prior art.

2 As we mentioned in the papers just briefly, what matters is that the
3 fiber is held in place, right? And we can think about this. You've got the
4 optical combiner and it's providing a signal, right? The signal has to hit the
5 optical fiber. If the optical fiber is moving around, the signal is not going to
6 go into the optical fiber. It has to be fixed, right? So, that way the signal
7 can couple in. If it's off, if it's moved, you're going to get degradation,
8 maybe no performance at all, right?

9 So, with that in mind, what does stop mean? It means fixed. It
10 means fixed in place. We went into this in detail in the papers. Our expert,
11 Dr. Willner, supported it.

12 One final point I would make regarding our construction. Patent
13 Owner submitted a dictionary definition of stopped. It's Exhibit 2004. And
14 what they say, Patent Owner, is that it means to arrest the progress or motion
15 enough to cause to halt. I would submit to you that that's a pretty good
16 summary of what it means to be fixed in place. And so, I think taking all the
17 evidence together, even their own evidence, our position is pretty well
18 supported here.

19 So, now that we've gone through this, one question that might
20 come to mind is, okay, why is it that we don't see all these extra features
21 from Patent Owner's constructions in the claim? Right? Why aren't they
22 shown in all the embodiments, right? Why is that? Well, the answer is
23 because it wasn't their invention. And we know that from their admissions.
24 So, Patent Owner decided to submit a declaration from one of the inventors,
25 Mr. Ray. Okay?

26 And from those admissions, what he told us is that for some

1 embodiments, they chose to use an old, well-known design. It was
2 highlighted in the Grann patents, which we talked about. You can see that
3 same design as some of the other evidence. It's shown in the Bhandarkar
4 patent. For instance, it's Figure 1. You can see it in the Bhandarkar
5 provisional, Exhibit 1015 on page 3. It was -- they had a picture of the on-
6 sale version. There was this sort of well-known standard connector. And
7 again, I'm using Patent Owner's words here. The inventor from his
8 deposition, Exhibit 1017, pages 98 to 100. He said it was, quote, standard,
9 quote, common. And they explained when it came time to figure out how to
10 house their main components, the ones we saw from the very beginning
11 about, you know, how to do this, they fell back on the prior art. And they
12 said, well, we'll just do it the way everyone does it already. And that's all
13 the Grann patents tell us, right? And that's all these admissions tell us is that
14 there's nothing new here.

15 And so, I just want to sort of highlight, that's why we didn't see any
16 of these extra features in the claim, right? That's why we don't see concepts
17 relating to passive alignment, compact and cost-effective, any of that.
18 Because it was already known, it was in the invention.

19 And I'm on slide 21 here. We've collected up some quotes from
20 Exhibit 218. Again, all these ideas that they're saying need to be read into
21 the claims, somehow make this new and novel and inventive, were admitted
22 by Patent Owner, unprompted by us, to be new -- to be not new, not non-
23 obvious, borrowed from the prior art.

24 So, with that I would like to turn to our Ground 1 and Kurita. And
25 I'm on slide 25 now. And in particular, on the screen we have Figure 3 from
26 Exhibit 1004, which is Kurita. And just like we saw in the earlier

1 conception --

2 JUDGE OWENS: Counsel, before you continue, I have a
3 question. This is Judge Owens.

4 MR. JONES: Yes, Your Honor.

5 JUDGE OWENS: Are any of the alternative fibers connected the
6 way you propose known as being stopped?

7 MR. JONES: Thank you, Your Honor. As I understand it, the
8 term stopped wasn't typically used in this field. But these other structures,
9 and I would point to Lemoff's testimony -- I mean, Dr. Lebby, Patent
10 Owner's testimony, were still considered stopped. And he looked at these
11 and he says these are stopped. So, I'm on slide 18, Exhibit 1006, Figure 2 of
12 Lemoff. Lebby, Patent Owner's own expert, he said that it stopped on
13 element 260. I think the term it used was receptacle, not stop in Lemoff, for
14 instance. But I don't think there's any dispute, again, because of Patent
15 Owner's admissions, that this structure was known as -- or could be called
16 stopped to a POSITA.

17 JUDGE OWENS: Does that apply to a clamp or V-notch?

18 MR. JONES: The way we presented the clamps and V-notches, if
19 we go back to Claim 17, as known methods for fixing an optical fiber in
20 place. So, I think Patent Owner has taken the position that if you read stops
21 narrowly to require that sort of standardized connector shown in Figure 1,
22 their position is that that wouldn't include stopped. Our position is that
23 taking the evidence as a whole, the correct construction of stopped is fixed
24 in place, and clamping V-grooves, what their expert calls etching or fiber
25 mounting, would fix it in place. And that's stopped.

26 JUDGE OWENS: The patent specification says at column 3 that

1 the light is focused onto a spot at which a single optical fiber is stopped by
2 fiber stopper seat 60 formed in ferrule 80. Doesn't that indicate that stopped
3 means it's pushed in until it hits a stop? Now, Lemoff's may arguably be a
4 stopped fiber. Bhandarkar has a stopped fiber. Fine. But what does the
5 claim mean? The claim term stopped optical fiber. Is it capable of receiving
6 a fiber that's pushed in until it hits a stop? You see it -- Dr. Willner said it
7 doesn't matter as long as it's fixed. Is there perhaps a benefit of using a fiber
8 that is pushed in until it stopped? Might, if you push it in until it hits a stop,
9 it'll be automatically pre-aligned with everything else. Isn't that a benefit?
10 And if so, would that benefit be obtained with a clamp or a V-notch?

11 MR. JONES: Yes, Your Honor, those are good questions, and I'll
12 try to take them in turn. Figure 1 is an example of a way in which this is
13 stopped. And you're absolutely right, it uses the word stopped. We don't
14 believe that it's using sort of restrictive or re-definitional terms that limit
15 stopping to only that arrangement. We don't think that's supported in the
16 intrinsic record. In terms of the benefit, as Dr. Willner explained, it has to
17 be held in place to receive the light. And that should mean in all
18 dimensions. It should be fixed X and Y, it should be fixed Z, right? One
19 way you could do that would be what we saw in Figure 1.

20 Other ways are like Figure 2 for instance of Lemoff. Clamping in
21 V-grooves would have the exact same benefit, right? By clamping it and
22 holding it in place in an etch structure or what Dr. Lebby has admitted set up
23 a fiber mount, holds it in place. When it's held in place, it's going to be fixed
24 in all the dimensions. So, that's clamped in V-groove. So, it would
25 accomplish the exact same benefit that we see in Figure 1.

26 JUDGE OWENS: What if the benefit is the consumer doesn't have

1 to do anything except push it in? Is that benefit achieved by a V-groove or a
2 clamp?

3 MR. JONES: And -- it would probably depend on the set up of the
4 V-groove or the clamp. But I think you've touched on an important point
5 here, that there are definite benefits to using, for instance, Lemoff's structure
6 to using the known structure of the Grann patents. And I think that goes to
7 our ultimate position, which I know you asked about in the pre-hearing
8 conference, as to why this is still obvious even in view -- even if we adopt
9 their construction, right? If there were known benefits to using this known
10 structure, then it's not a non-obvious addition. Right? So, the inventors here
11 told us this story. They said we have to figure out how to house and connect
12 our lenses. What did they do? They fell back on the standard known
13 connector. A POSITA faced with Kurita would do the exact same thing.
14 Use the standard, again, this is our (CROSSTALK) --

15 JUDGE OWENS: It's the same thing if it's known to do that. But
16 the Grann patents arguably, well, they aren't in the petition. So, they were
17 prior art, but not relied upon by the Petitioner. Now, Lemoff, let's assume
18 that's a stopped optical fiber. Then we get the issue would there have been
19 an apparent reason to use Lemoff's in Kurita, taking into account the
20 differences in the structures of the devices? And so, if the stopped single
21 optical fiber, I mean, even if it was well-known, we need evidence that it
22 was well-known. And they do have that evidence.

23 MR. JONES: Yeah, you've raised on an important point. And
24 there's an issue in the record that I want to clarify here. I think Patent Owner
25 has taken a position that I don't think is correct, and I want to clarify this
26 because I know it's important. This was in our petition. So, at page 22 to 23

1 of our petition, we cite -- we have pages 22 to 23 of our petition, which cite
2 Exhibit 1003, our opening declaration, paragraphs 172 to 173, Dr. Willner.
3 And in that, those passages, we explained this exact point. In the opening,
4 before the Grann patents were introduced, before they admitted all this, we
5 made this point in the opening petition.

6 And I'm going to read from Dr. Willner's opening, paragraph 173.
7 He says, that using a seat and ferrule, this design we're talking about, was
8 and still is a typical way to secure an optical fiber. So, from the outset, our
9 position on Grann in the petition was that -- sorry, our petition on Kurita in
10 the petition from the outset was, we don't think the particular connector is
11 required, fix is enough. But even if a stop in ferrule seating arrangement
12 was required, that was obvious, right?

13 So, we took that position from the very outset. And then what
14 happened? Patent Owner came in and confirmed exactly what our expert
15 said. The Grann patents came in. The inventor testimony came in. And all
16 that did was confirm our initial position from the petition that even if you
17 have to use a seat-and-ferrule arrangement, that was and still is a typical way
18 to secure an optical fiber. And again, we don't just see it from Willner's
19 testimony. We don't just see it from the Grann patents. We don't just see it
20 from the inventor Ray admissions, right? We see a stop in Lemoff, right?
21 We see it in Bhandarkar. We see it in Bhandarkar, Exhibit 1015, the
22 provisional application submitted with the petition, page 3.

23 JUDGE OWENS: Could we see it in your petition?

24 MR. JONES: Yes, petition pages 22 to 23. We have the fallback
25 position citing Dr. Willner, paragraphs 172 to 173, that pincite.

26 JUDGE OWENS: Okay. But does Dr. Willner have any

1 evidence?

2 MR. JONES: His evidence was that he said that this was and still
3 is a known way, right? But then the evidence in this case --

4 JUDGE OWENS: Everything's known. It's what everyone's
5 doing. Everything's known.

6 MR. JONES: Yep. So, it was a known solution to a known
7 problem. That's sort of our, if you want to put an obviousness bucket on it
8 or obvious design choice. But what Willner did was he stated it and he
9 testified to it. And that's not been challenged. And what we got after the
10 fact is the evidence in the IPR developed. And we know evidence in IPR is
11 developed. Our position didn't change. Our grounds didn't change. All we
12 saw was additional evidence from Patent Owner that confirmed our expert
13 was right. Again, we're not relying on new embodiments. We're not relying
14 on new evidence. They confirmed. And we don't think Patent Owner
15 should be able to run away from these admissions, right?

16 Let's think about what Patent Owner is doing here, right? They're
17 saying, well, our invention was the stuff. It should be read into the claim. It
18 distinguishes the art. Except, well, we borrowed it from the prior art, and it's
19 not new. And again, it's also important evidence in another respect that
20 we've not discussed. And I think it's important evidence for the credibility
21 of Dr. Lebby.

22 So, we highlighted this in our papers. I don't have the pincite in
23 front of me, but we highlighted the fact that Dr. Lebby's whole obviousness
24 position came out over and over and over and over again in his deposition.
25 It was this idea that integration, pre-alignment, a certain connector were
26 new. He said it over and over again, right? His testimony, you can call it

1 impeachment evidence or whatever you want, is directly contrary to the
2 other evidence of record, right? So, when he stood up and said, this is not
3 obvious, this connector's not obvious, you wouldn't have done Kurita like
4 this. We know he misunderstood the state of the art. We know he
5 misunderstood what a POSITA would have known because it's opposite to
6 the other evidence that Patent Owner submitted. So, we can talk about this
7 evidence being important for claim construction. We can talk about this
8 evidence as supporting our alternative read for Ground 1 that we presented
9 in the petition, saying that Dr. Willner was right. And we can look at this
10 evidence as impeaching or contradicting Dr. Lebbby, their expert, as being
11 contrary to what a POSITA would have known. And we think that's an
12 important consideration for credibility between these experts.

13 JUDGE OWENS: But what is our reason for interpreting Claim 1,
14 the stopped optical fiber, as being something other than something that you
15 push in until it hits a stop?

16 MR. JONES: Yep. So, I think there's a couple of ways. I think
17 we should look at this as we go back to the claim language, right? I think
18 we shouldn't start with one embodiment say, hey, let's read this embodiment
19 into the claim and then ask ourselves why not to do that, right? You don't
20 read embodiments in the claims that start with bedrock Federal Circuit
21 precedent. Instead, we should be interpreting the word stopped. And as I
22 mentioned, stopped is an adjective describing the fiber. It's not additional
23 structure. It's not even part of the optical combiner. Again, as we
24 mentioned, all we have is one example, one embodiment that says this is one
25 way to do it. Again, under bedrock canons of claim construction, we don't
26 import all that structure into the claim. They knew how to write a claim that

1 had additional features. They could've have said an optical combiner
2 comprises a connector wherein the connector is A, B, C, D, and E. They
3 didn't do that. And I don't believe it's our job to rewrite the claim in this
4 selective fashion now that Patent Owner is concerned about the prior art.
5 Right?

6 If we go to just basic canons of claim instructions from *Phillips*,
7 it's the word stopped. And again, Dr. Lebby told us these other structures
8 are stopped. They have a stop. And yet, that's not good enough for
9 Petitioner -- I mean, Patent Owner. This can't be right. It can't be right that
10 things that are stopped are not stopped, that a stop doesn't meet the definition
11 of a stop, right? There's something wrong here. And what's wrong here is
12 that they're trying to take one word and turn it into a slew of limitations and
13 new structure. And that's why, again, I'll point you to slide 18 of these
14 admissions. Their construction can't be right. We know that from the way
15 they're applying it. Something is amiss from the own words --

16 JUDGE OWENS: Mr. Jones, please continue.

17 MR. JONES: Yeah. So, there are other ways in which we know,
18 though, that using a connector like this would have been obvious, and that's
19 Ground 2. And that's the Lemoff ground. So, I just want to briefly hit that
20 there is one dispute under our construction. I know I've used quite a bit of
21 my time. There is a dispute under their construction -- I mean, under our
22 construction about whether this n separate radial sectors is met. We don't
23 think this is a colorable argument. I'll just point you to slide 28 and Figure
24 3. You can just follow those ray traces on the screen coming from lens 21
25 over to the other lens. And you can see that in the setup of Kurita, the light
26 hits the separate radial sectors and hits the four different quadrants. Again,

1 as the record is clear, the pattern on the focusing lens 30 is going to be the
2 same as the pattern of collimated light in array 20. So, I'm happy to answer
3 any questions you may have about this sort of lone argument under our
4 construction, but we don't think it's a plausible argument.

5 Again, you can just look at Figure 3 of Kurita and see that it's met.
6 I would caution, I've seen Patent Owner's demonstratives, they point to other
7 embodiments that we don't rely on. They'll suggest things, again, that we
8 didn't argue as saying maybe it counts against us. But in Kurita, right, the
9 lenses, arrays are all the same size, they're lined up, and you can follow the
10 light and see how it hits. I would just leave it at that unless there are
11 questions about this separate radial sector argument under Petitioner's
12 construction.

13 JUDGE OWENS: One question. Would your argument apply if
14 the ones on the left were very close to each other vertically and the two on
15 the right were very far from the two on the left? Would your argument that
16 they're radially arranged still apply?

17 MR. JONES: Two responses, Your Honor. One is we think that
18 what's actually shown here very clearly shows this. I mean, they aren't
19 arranged like that. They're arranged as shown in Figure 3, and 3 actually
20 gives you the light tracing showing its met. So, we think what's shown
21 clearly means it. If something -- if this were somehow modified in the
22 manner you suggested, I think they probably would still hit the separate
23 quadrants, I'm not sure. I've not seen this modified structure you're referring
24 to, so it's a little bit hard to answer on the fly. But they could be slightly
25 moved, and this would still be met. But again --

26 JUDGE OWENS: Do they have to be pretty close to being square?

1 MR. JONES: No, you could get separate radial sectors if it was a
2 round structure, for instance.

3 JUDGE OWENS: I don't mean round. I mean like rectangular, a
4 thin rectangle.

5 MR. JONES: They could probably still hit separate sectors with
6 different shapes. But again, Kurita shows this. So, what Kurita actually
7 discloses discloses the claim limitation. So, we think that this is not,
8 frankly, a plausible argument from Patent Owner. Again, based on just what
9 Kurita actually says.

10 JUDGE OWENS: Please continue.

11 MR. JONES: Yeah. We talked a lot about the extra combiner.
12 Well, any argument that Patent Owner might have about why they're, you
13 know, inventive over Kurita is immediately remedied by Lemoff, right? So,
14 Lemoff has, as their expert admitted, a fiber 250. And I should just read it in
15 the context of their construction, right? I'm on slide 31 looking at Figure 2,
16 right? As you see here, you've got a single optical fiber, 250. And I'm using
17 their construction language. Single optical fiber, 250, that is inserted into
18 the optical combiner, element 200, until it abuts a physical structure, 260,
19 that prevents the fiber from being inserted further into the optical combiner.
20 So, Lemoff plainly has even what they say stop requires. And we saw that
21 admission from Dr. Lebby. And it has all the other features, too. I mean,
22 again, we don't think it's part of optical combiner. But, you know, Lemoff's
23 integrated. It's pre-aligned. It's all these things. Again, we know that was
24 known, it had known benefits. There's a lot of testimony about that.

25 But to cut into the chase, there are two motivations for using
26 Lemoff's connector. Two. Two separate motivations each equally sufficient

1 on its own. The first is what we've talked a lot about, and that is securing
2 the optical fiber improves coupling efficiency, right? It helps to ensure that
3 the light will be focused into the fiber. So, that's the first one we've talked a
4 lot about. That's supported by Dr. Willner in his declarations. But there's a
5 second additional motivation for using Lemoff's connector. And it comes
6 right from Lemoff itself. This is like your classic TSM. Lemoff itself
7 provides the motivation to combine. It says, if you use its receptacle and
8 ferrule arrangement, you get a connector that improves insulation and
9 maintenance and allows optical fibers to be plugged into or out of the optical
10 device based on changing circumstances. I'm sure you've plugged an
11 ethernet cable in or out of your computer, right? Plugs are useful, and
12 Lemoff says it. So, we have, one, the basic motivation we've been talking
13 about, coupling efficiency, but two, another TSM right from Lemoff,
14 column 5, line 63 to column 6, line 2 for this motivation.

15 Now, Patent Owner has pushed back on this combination in a
16 couple different ways. One, they said that there are size differences. We've
17 addressed this in the papers. Kurita is silent regarding size, right? They've
18 said that it had to be on a workbench or it's optical computing. Again,
19 totally inconsistent with the Kurita reference. There's no evidentiary basis
20 for this size argument for not combining Lemoff.

21 Then they have this other Lemoff argument that somehow it
22 teaches away or disparages WDM. Again, that is directly contradictory to
23 the text of Lemoff. And I think this is an important point. Not only does
24 Lemoff not discourage WDM or wavelength division multiplexing, and I'm
25 on slide 33, it says that it is. So, if we look at the abstract, it says, and I'm
26 reading from the abstract, wavelength division multiplex WDM optical

1 communication system, right? We just think Patent Owner has simply
2 misunderstood Lemoff with this teaching away argument. There's a
3 sentence I've highlighted in red from column 1, 51 to 56. What Lemoff says
4 is that it's emitter 200 here shown from Figure 2, that's enough. That that
5 device does the multiplexing, just like the '416 patent, just like Kurita, right?
6 Those lenses, they operate together to do the multiplexing. What it says is
7 you don't need an external device to the emitter to do it, right? So, Patent
8 Owner didn't finish reading the sentence. We don't think this is a very good
9 argument. There's clearly no teaching away Lemoff is WDM.

10 With that, I know I'm like already past my 40 minutes, and I do
11 want to save time for rebuttal. I just want to briefly touch on Ground 5 and
12 the swear-behind. And I had planned to save this for last because in our
13 view, this is relatively simple. Nothing changed since the institution. It
14 wasn't good enough then, and it's not good enough now. And the reason is,
15 is because Patent Owner did not submit any new evidence about what was
16 occurring in that 60-day window. They continue to rely exclusively on prior
17 art searching, and I want to reiterate that. You can look at Patent Owner's
18 response, page 80, and the summary of their evidence. All they rely on is a
19 couple days of prior art searching for that window. But I want to make
20 clear, we're cognizant of the Federal Circuit's guidance in *Perfect Surgical*.
21 We are not solely looking at that big gap in a vacuum. We're looking at the
22 evidence as a whole. We're looking at what came before and what came
23 after. And that helps Petitioner, too, because the evidence as a whole shows
24 a total lack of diligence, it's sporadic, occasional work.

25 And I want to touch on a couple of key points before I wrap up.
26 They admitted it was just several days of work, right? They don't allege

1 there was any other work. I'm on slide 49. But what they omitted was that
2 there were two other months of prior art searching. So, we have four months
3 of prior art searching in this case, where the first search was just a copy and
4 paste in the end. They have never explained, not their papers, not their
5 attorneys, not their inventors, not their witnesses, why four months of prior
6 art searching, let alone two months of prior art searching, was necessary or
7 reasonable on these facts? Why was that reasonable? Why did they need all
8 this prior art searching? They didn't, right? That question has never been
9 answered why this was reasonable on these facts. And in fact, we know it
10 was not reasonable because we can look at how it was used, right? They had
11 these disclosures, and after the prior art search that they're hanging their hat
12 on that was so important, they made no changes to the problem of the
13 invention, they made no changes to the description of the art, and they made
14 no changes to the unique features.

15 In fact, there's no reference at all in the provisional application to
16 the art that was uncovered in this prior art search. There is nothing in the
17 record that suggests this level of prior art searching was reasonable on these
18 facts. And moreover, when we look at the bigger picture, we see a global
19 lack of diligence. And this is what distinguishes *Perfect Surgical*, right?
20 For instance, their drafts barely changed. In fact, this was basically done
21 October 16th, yet they didn't file until February.

22 And I just want to hit one last point. Your Honors had mentioned
23 in the institution decision that maybe modeling was part of the answer.
24 Maybe modeling was why they were diligent. And I want to make this
25 clear. Modeling cannot be the answer to the diligence question, right? Page
26 75 of Exhibit 1002, they already told us that modeling was basically done in

1 July and carried over to the application. And in fact, if we compare the
2 October draft, pages 89 to 94 of Exhibit 1002, to the provisional application
3 that was filed in February, the models are identical. October to February,
4 identical models. So modeling, even when we zoom out from the gigantic
5 gap, modeling cannot save them on their diligence story. They're only
6 relying on the search a couple of days, no other evidence. Any other
7 suggestions you hear about what might have been going on during that
8 window is conjecture, is surmise. It will be attorney argument. We don't
9 know, because there is no evidence of anything, actual evidence of anything
10 other than a couple of days of searching.

11 JUDGE TORNQUIST: Counsel, this is Judge Tornquist. When
12 we look at reasonable diligence here, should we take into account the size
13 and structure of Patent Owner?

14 MR. JONES: Yeah, what I would say, Your Honor, short answer,
15 no, but I'll give a longer answer. Every diligence question is factual, right?
16 And the facts of that case, the facts matter, right? And we have to look at
17 the evidence that has been developed, right? Nothing was developed in the
18 evidence that suggests the size affected their work. Right. Nothing that was
19 developed in the evidence says that this couldn't have been filed when it was
20 done October 16th. Right? Nothing in the evidence says that they needed
21 an additional two months of searching because they were a small company,
22 right? So, while that may matter in some factual scenarios, it doesn't seem
23 to matter here. Again, because we have to look at the evidence and the facts
24 of every case and what was actually developed by Patent Owner.

25 JUDGE TORNQUIST: Okay. And is there any criteria that we
26 should look to to decide when a particular situation is unreasonable? I know

1 it's all fact-dependent, but is that the (CROSSTALK) --

2 MR. JONES: Yeah. You know, I think the best guidance we have
3 is I would say a couple of things. One is I would just mention *Perfect*
4 *Surgical* didn't do away with the requirement of diligence. The Board has
5 found, and we cited papers in our reply, 2023, 2024, that people weren't
6 diligent under similar circumstances to this. But what we did learn is that
7 you don't just narrowly look at the gap, but you look at the bigger picture.
8 And I think the points I highlighted earlier, while there's no black and white,
9 the total lack of explanation or evidence about why all the searching was
10 needed, there is no explanation for why that would be reasonable. We don't
11 assume reasonableness, right? They had to show this is their burden of
12 production to bring this evidence forward under *Dynamic*, right? When we
13 look at how the searching was used, that counts as against it being
14 reasonable, right? It wasn't used for anything. Nothing changed, didn't go
15 into provisional. How can that be reasonable, right? When they had done
16 models in October but didn't file until February, this doesn't suggest
17 reasonableness. This looks like, again, on the evidence, sporadic, occasional
18 work.

19 JUDGE TORNQUIST: But they could have done a search that
20 suggests that they didn't need to do any changes, correct?

21 MR. JONES: Well, they haven't testified to that, and they also
22 haven't explained why that search would take two months. And why that
23 search was necessary on the heels of another two months search, right?
24 Again, this wasn't the first search. There are four months of searching. Why
25 is that reasonable? They haven't said. It's not.

26 JUDGE TORNQUIST: Okay.

1 MR. JONES: And I would like to -- I had hoped to reserve 20
2 minutes of rebuttal. I think that may have gone out the window.

3 JUDGE TORNQUIST: I think you have 10.

4 MR. JONES: Okay. Thank you, Your Honor.

5 JUDGE GALLIGAN: This is Judge Galligan. I did want to ask
6 one question for Petitioner. Does Petitioner contest the conception date at
7 all? I didn't see it in the papers. Just want to confirm.

8 MR. JONES: I don't believe, and I'm looking at my colleagues in
9 the room to see if they seriously shake their head at me. I don't believe we
10 contest the conception date. This is really about the lack of reasonable
11 diligence.

12 JUDGE GALLIGAN: Okay. We're focusing on diligence. Thank
13 you.

14 MR. JONES: Yes.

15 JUDGE TORNQUIST: Okay. Thank you very much, Petitioner.
16 Like I said, you'll have 10 minutes of rebuttal time. Patent Owner, when
17 you're ready, and please let us know how much time you'd like to reserve.

18 MR. MAMMEN: All right. Thank you, Your Honors. Give me
19 one moment to set up our slides. We'd like to reserve about 10 minutes for a
20 response as well.

21 JUDGE TORNQUIST: Okay.

22 MR. MAMMEN: Ms. Richey and I will be splitting the argument.
23 I'll be covering the claim construction issues, the request to exclude, as well
24 as Kurita and Lemoff. And Ms. Richey will be addressing the other issues
25 after I'm done.

26 So, I'd like to start by addressing the questions that Judge Owens

1 brought up during the prehearing call, focusing on the stopped optical fiber
2 limitation. Everything in the '416 patent specification describes a module or
3 subassembly as part of the invention that includes an integrated ferrule that
4 has a stop or seat inside it. The term subassembly that we've used in our
5 proposed construction, as Dr. Lebby explains, at paragraph 63 of his initial
6 declaration, Exhibit 2003, subassembly is essentially the same thing as
7 module describing a part that has been either formed singularly or combined
8 together, assembled to form a single part. And it's clear in the specification
9 that's what we're talking about.

10 Judge Owens' first question is, is there any support? Can the
11 stopped single optical fiber include other configurations? And our answer to
12 that is no. There is one in exactly one configuration that's disclosed in the
13 '416 patent. It's the ferrule 80 with the stopper seat 60 inside of it. To the
14 extent that that is not additionally shown in the third and fourth
15 embodiments, the law is clear. We've cited it in our papers that the non-
16 inclusion of a particular component in the drawings does not remove what
17 the specification supports and does not open it up to be anything else.

18 The term fixed, which is the basis for Petitioner's proposed
19 construction of stopped single optical fiber, appears nowhere in the
20 specification. Their expert, Dr. Willner, has acknowledged that stopped
21 does not have a plain and ordinary meaning or well-accepted meaning to a
22 person of skill in the art at the time of the invention. So, we look to the
23 specification to provide meaning. What the specification provides is the
24 particular structure that's disclosed. To the extent that there is -- argued that
25 there are alternatives, the ones that Petitioner has identified, first, Lemoff,
26 we contend, and as we've explained in the papers, does not disclose a stop

1 single optical fiber, as within the definition. But even if it does, as I will
2 demonstrate and explain, there's no reason to combine that with Kurita.

3 Additionally, the Grann patents, we'll talk about those, they were
4 late introduced, as we heard from Mr. Jones' argument today, Petitioner is
5 clearly relying on the Grann patents as additional prior art and not to simply
6 show the nature of the state of the art, and I'll explain that in a bit more
7 detail.

8 As I said, there's no support for any other structures. The support
9 that they have cited at paragraph 120 of Dr. Willner's expert declaration
10 alleging that a ferrule-and-seat arrangement is common, there's only a
11 reference to a ferrule in the quoted language. During his deposition, Dr.
12 Willner could not identify other methods of fixing a fiber. The references to
13 clamping in V-grooves are something that he has brought in in his
14 supplemental declaration to bolster the testimony and the absence of that
15 information previously.

16 In any event, if there are other ways of fixing a fiber, including
17 XYZ stages, that does not mean they are disclosed within the phrase stopped
18 single optical fiber as it appears in the '416 patent. We don't need to
19 construe this patent to include all of the ways of fixing a fiber, fixing not
20 being a term that appears anywhere in the patent.

21 I believe Judge Owens also asked about the conception evidence
22 for the stopped single optical fiber, and answering the question specifically
23 in the file history, Exhibit 1002, page 80, and at pages 89 to 94, there are
24 ferrules shown, the ones on the left side of the page, the right half of those
25 figures include the kind of ferrule that's exactly like the one disclosed in the
26 '416 patent. There's a labeled item E which shows the stop within that

1 ferrule.

2 There's also inventor evidence, Exhibit 2010 at pages 20 to 21, and
3 there's also ample evidence in Exhibit 2034 where there's a reference to
4 reinventing the OSA board, that's the optical sub-assembly board and
5 connector. In Exhibit 2045 at paragraph 12, Curtis Ray discusses the use of
6 mechanical models and cross-references Exhibits 2027 to 2031 which are
7 diagrams, mechanical models that track the patent figures, and importantly
8 in Curtis Ray's declaration at 2045, paragraph 15, they explain that they used
9 the same form factor as the '978 patent, one of the Grann patents, to save
10 money because of the cost of a mold machine.

11 So, to be clear, the invention here is an integrated module that
12 includes the particular optics, lasers, collimating lenses arranged radially,
13 including an integrated pre-aligned connector with a stop, and the claimed
14 invention is the entirety of that. And the fact that they to save money, tried
15 to fit this new set of optics and this new invention in the same form factor is
16 not a sign that the ferrule with a stop is something that was generally known
17 in the art, but rather it's, you know, it's something that they developed further
18 themselves, and, you know, the Grann patents were not included in the
19 petition.

20 Other questions that Judge Owens asked?

21 JUDGE GALLIGAN: Counsel, this --

22 MR. MAMMEN: Sorry?

23 JUDGE GALLIGAN: This is Judge Galligan. I wanted to follow
24 up on Exhibit 1002, page 80, and the three figures there, which you point us
25 to, and also in conjunction with that, Mr. Ray's declaration, Exhibit 2045, at
26 para 15. So, how do we know looking at those figures that it's a ferrule

1 connector that would meet the definition of the stopped optical fiber? And I
2 want to ask in conjunction with that testimony from Mr. Ray at paragraph 15
3 of Exhibit 2045 because he testifies that this was in January of 2004, they
4 decided to use the Grann patent, the ferrule. So, what about this particular
5 diagram in Exhibit 1002, page 80, tells us that it meets the definition of the
6 stopped optical fiber?

7 MR. MAMMEN: So, if you look at any of the three mechanical
8 drawings on page 80, the two on the left-hand side of the page show a
9 depiction of a ferrule that includes by solid lines the outside, dashed lines the
10 interior of the ferrule. And there's a vertical line that's marked as line E, and
11 you can see with the interior space of the ferrule, there is a structure that
12 narrows that interior space in both of the figures on the left-hand side of the
13 page. And the picture on -- to the right there shows a head-on view where
14 you're looking down the barrel of the ferrule, and you can see that structure
15 as well as part of the interior before it goes farther in. Does that answer your
16 question, Your Honor?

17 JUDGE GALLIGAN: Yes, thank you.

18 MR. MAMMEN: Okay. So, Judge Owens' next question is what
19 reason is there to believe that some other structure is disclosed in the '416
20 patent? We have no reason to believe that there's any other structure
21 disclosed.

22 The next question is where in Kurita is any structure disclosed for
23 fixing or attaching or otherwise controlling the location of the optical fiber.
24 It's clear from reading Kurita as a whole that this is a test bench setup.
25 Paragraph 17 of Kurita references each component being singular. There's
26 other discussions throughout discussing the respective arrangement of the

1 parts. And as Dr. Lebby has testified, a person of skill in the art would
2 understand that this is a test bench, and the expectation is not as maybe we
3 infelicitously said in our initial response, free floating, but certainly
4 separately attached to a test bench by devices such as XYZ clamps. There's
5 no reason to combine something like an integrated ferrule in that kind of pre-
6 alignment into Kurita. You know, to have an integrated ferrule at the end of
7 an XYZ stage where you have to manually adjust and align does away with
8 the benefits or values of having that kind of pre-aligned connector.

9 JUDGE GALLIGAN: Counsel, this is Judge Galligan. I want to
10 follow up on that. So, the claims of Kurita are to, with Claim 1, for instance,
11 or all four claims, are to an optical connection element. And it's Patent
12 Owner's position that if we look at Figure 3, those would be set up on a lab
13 bench is what you said. And I think that's reflected in the papers and Dr.
14 Lebby's testimony, that elsewhere Kurita talks about wanting to avoid man
15 hours and installation. I do have a little trouble understanding why a person
16 of skill in the art would look at Kurita and think that this is -- that they're just
17 -- they're going to -- that Kurita would claim a lab bench setup when it's
18 directed -- when the claims are directed to an element. Can you kind of
19 explain that a little more? And I read Dr. Lebby's testimony. It wasn't
20 explained too much in there.

21 MR. MAMMEN: So, the desire to reduce the number of
22 components and elements that are included in Kurita include, for example,
23 the combination of the collimating lenses from individual collimating lenses
24 into a lens array, simplifying the setup in that fashion. There's no discussion
25 anywhere about combining these into a module or a sub-assembly or
26 something like that, or the advantages that are described in the '416 patent in

1 a commercial deployment of having all of the parts assembled together in a
2 sub-assembly. And, you know, I believe that's what Dr. Lebby was was
3 trying to address.

4 JUDGE GALLIGAN: And, this is Judge Galligan, to follow up on
5 that. Can you respond to Petitioner's point that there's an embodiment in the
6 patents in Figures 10 and 11 -- in the '416 patent, Figures 10 and 11 column
7 4 lines 35 to 52 discuss this and they say that the combiner includes a two-
8 piece molded module. So, why can't multiple pieces make a combiner in the
9 claim?

10 MR. MAMMEN: Thank you, Judge Galligan. The description in
11 the '416 patent starts with a single monolithic molded block, and then it
12 additionally says you can build a sub-assembly or a module by combining
13 together two or more pieces. It says that. But even if you say we have a
14 sub-assembly that's built out of two pieces or three pieces, and they're put
15 together, they're fully assembled in that fashion, that there's still plenty of
16 daylight between that and, you know, the setting up on a lab bench of the
17 various elements that are disclosed in Kurita. It doesn't, you know, having
18 those parts assembled together in a module or sub-assembly does not
19 inherently mean that anything that's connected enough to work is an optical
20 combiner within the meaning of the '416 patent.

21 JUDGE GALLIGAN: And this is Judge Galligan to follow up.
22 So, the proposed -- Patent Owner's proposed construction of optical
23 combiner includes that it's an integrated sub-assembly, and I just want to get
24 Patent Owner's position. Is the embodiment, the fourth embodiment of the
25 '416 patent at Figures 10 and 11 and the one we talked about, is that an
26 optical combiner? Is that within the scope of an optical combiner? And if

1 not, why not when it says that it's a combiner in describing those?

2 MR. MAMMEN: So the, thank you. I'm sorry, I cut you off there.

3 JUDGE GALLIGAN: That was all. Thank you.

4 MR. MAMMEN: Okay, thank you. So, the fourth embodiment is
5 a depiction of an optical combiner. Not all the elements are shown. Some
6 of the elements that are shown are shown because they are different from the
7 earlier embodiments. But for both the third and fourth embodiments,
8 specification says it's shown generally. There are elements that are not
9 included in other of the disclosed embodiments. And the case law is clear
10 that we've cited in our papers that not showing a particular element or not
11 showing all the elements in a particular diagram does not mean that the term
12 should be construed to have eliminated those not shown elements.

13 JUDGE GALLIGAN: And this is Judge Galligan. So, I appreciate
14 your position there. But if we're construing the term optical combiner, I
15 think there are, you know, cases that say you don't want to read out an
16 embodiment. And if the Figure 10 and 11 embodiment is described as an
17 optical combiner, then it seems that your proposed construction would not
18 include that embodiment. And so, is the integrated subassembly an
19 appropriate way to define the term optical combiner in light of the Figure 10
20 and 11 embodiment?

21 MR. MAMMEN: So, Your Honor, I don't believe that we are
22 reading the third or fourth embodiments out of the proposed construction.
23 It's simply that different configurations of some of the elements are shown,
24 and all of the elements are included. There's nothing in the specification to
25 suggest that the particular elements that are built into our construction are
26 not included. By way of example, in the third embodiment, there is a

1 reference to the effect of the stopped single optical fiber. But it does not
2 depict the stopped single optical fiber. But it's clearly there. And so, you
3 know, for that reason, the appropriate construction of the specification as a
4 whole includes the construction as we've provided. And that's consistent
5 with all four disclosed embodiments.

6 JUDGE GALLIGAN: This is Judge Galligan. Just real quick. So,
7 maybe I'm misinterpreting your proposed construction is integrated
8 subassembly I took to mean one piece. But if your proposed construction
9 encompasses a multi-piece, a two-piece module in Figures 10 and 11, then
10 integrated subassembly does not mean one piece. Is that correct?

11 MR. MAMMEN: The integrated subassembly does not mean
12 single monolithic molded, that sense of one piece. It can include multiple
13 parts that have been assembled together into a module or subassembly as
14 those terms are understood in the art.

15 JUDGE GALLIGAN: Okay. Thank you.

16 MR. MAMMEN: And we would submit that the standard and
17 ordinary meanings of sub-assembly or module do not expand to, you know,
18 all constructs, whether it's a setup on a lab bench or whatever else, that it has
19 a particular meaning about putting some pieces together into a particular
20 unified construct.

21 JUDGE GALLIGAN: Thank you.

22 MR. MAMMEN: Certainly. I believe the last question that Judge
23 Owens asked, and then I will turn to a few other questions, is assuming that
24 Lemoff's connector has a stopped optical fiber, why combine it in view of
25 the purpose of Lemoff? Why use it? I think that's exactly right. There's no
26 reason to emphasize pluggability. You heard counsel in argument today

1 emphasize pluggability, and swap ability is a reason for combining that
2 structure with Kurita. And there's nothing in the rationale of Kurita that
3 calls for that kind of pluggability. And so, there's no affirmative reason to
4 combine.

5 JUDGE GALLIGAN: Counsel, this is Judge Galligan. I wanted
6 to follow up on that, because Petitioner's position is that Lemoff itself
7 provides a teaching, suggestion, or motivation. Obviously, we're not
8 constrained by the TSM test, but we can certainly use a teaching, suggestion,
9 or motivation in column 5 to column 6 there, and, you know, Lemoff does
10 say, look, you put the fiber in the ferrule and it secures it. Why isn't that a
11 reason to combine?

12 MR. MAMMEN: Because there's no reason in the Kurita set up to
13 serve the needs that are being described there in Lemoff about the need to be
14 able to unplug this device for maintenance or whatever. Additionally, we do
15 disagree with Petitioner. Lemoff specifically discloses the non-combination
16 of the separate laser elements, the light elements, and instead tries to find an
17 alternative to wavelength division multiplexing, where the elements are not
18 combined together into a single spot. And for that reason, actually, Lemoff
19 does not include an optical combiner even on Petitioner's proposed
20 construction, because it doesn't combine them together into a single output.

21 I'd like to address, let's see, I feel like I've addressed the Grann
22 patents and explained why they do not show general state of knowledge in
23 the art. They were late introduced, they were not introduced responsive to
24 anything new from Patent Owner, and therefore, they're improper and they
25 should be disregarded.

26 We've discussed the claim construction issues. Let me turn to

1 Kurita. And there are three main reasons that Kurita does not render
2 obvious the challenged claims. First one, as we've just been discussing, it
3 does not disclose an optical combiner. It's not integrated. It doesn't disclose
4 anything in the nature of a pre-aligned connector. It doesn't disclose a
5 stopped single optical fiber. Paragraph 17 of Kurita emphasizes that the
6 components are singular, each one being singular, which Dr. Lebby included
7 in his declaration indicates that this is a setup of a bunch of separate
8 components, not something that's integrated as a module or sub-assembly.
9 And the third is that it does not disclose radial sectors or quadrants. And
10 you heard a little bit from Petitioner's counsel about this.

11 And I want to emphasize exactly what we mean by this. It seems
12 to be Dr. Willner's argument that inherently, if you get down to a two by two
13 arrangement, it's necessarily going to be centered, it's inherently going to be
14 centered on the center axis of the focusing lens, because why would you
15 have it any other way? But if you look at Dr. Willner's testimony, and this is
16 in Exhibit 1003 around paragraph 183, he states certain assumptions. And
17 so, it's only true if those assumptions are true.

18 And if we instead look at Figure 2 of Kurita, which shows a three
19 by three array and a focusing lens, it's clear that in this three by three array,
20 we're going to have rows. The optics on the focusing lens are going to be
21 rows and columns rather than some sort of radial arrangement. There is -- to
22 select any four of those, without -- and turn off the other five lasers in the
23 three by three array, so you've now got four. I've circled four here that are in
24 the upper left corner, but hypothetically you could select any four. Without
25 changing the optics of lens 30, there's nothing to be gained by centering the
26 four lasers because the optics are set up as they are for the three by three

1 array.

2 Other disclosures of other arrangements where it makes clear that
3 the setup of the optics in the lens, the focusing lens, really make a difference
4 to the assertion of whether it makes sense to, whether it's inherent that a
5 quadrant setup is what we're dealing with, includes Exhibit 1011, which is
6 cited in Petitioner's slides, slide 62, which shows a five by five array. We've
7 heard a lot in the papers about the Lee reference. The Lee reference is not
8 actually in the record, but is cited in the '416 patent. It shows a concentric
9 arrangement of lasers and a Fresnel lens. So, again there's lots of different
10 optics. It's very dependent on what your optics are before you can get to an
11 assumption or a conclusion that you're centered on a radial arrangement,
12 even in a two by two circumstance. And that's why Petitioner has failed to
13 meet its burden of showing that just because Figure 3 of Kurita is two by
14 two, it's inherently in quadrants.

15 We heard a little bit about comparing the figure in Kurita with this
16 figure from the inventor's notebooks. And said, gosh, they look a lot alike.
17 And so, that shows that Kurita also discloses quadrants. A difference is, and
18 something that's been edited out of the clips that are shown in Petitioner's
19 papers, just above the red circle here on slide 24 of our demonstratives,
20 which shows Exhibit 1002, page 36. Just above that red circle, the word
21 quadrants appears. And at the bottom of the page, there's also a disclosure
22 showing quadrants and that kind of radial arrangement. Neither of those is
23 present in Kurita.

24 And so, for those reasons, Kurita does not render the challenged
25 claims obvious.

26 We're on slide 25. We've struck through the particular language

1 that's not satisfied and highlighted in pink the particular limitations for
2 Claim 1 and exemplary Claim 2 that are not satisfied.

3 I'd like to talk a little bit about Lemoff and then hand it over to Ms.
4 Richey. So, Lemoff does not render obvious the challenged claims for four
5 reasons. The first one is, as we have discussed, it does not disclose or
6 suggest an optical combiner. That's true on either parties' construction. As I
7 mentioned, on Petitioner's construction, it does not combine together into an
8 output. The late introduced dictionary definition, which we have suggested,
9 this is Exhibit 1019, we've suggested is not within the relevant art, in any
10 event does not help them in this regard.

11 Similarly, it does not contain a multiplexer or combiner. As I
12 mentioned, it is designed to provide the light sources separately onto the face
13 of the fiber. It doesn't disclose or suggest collimating lenses. They're not
14 there. What Petitioner attempts to rely on is one generic phrase in the
15 specification referencing any other optics. That's insufficient to disclose the
16 use of collimating lenses in the kinds of structures that we have been
17 discussing. It does not disclose or suggest a stopped single optical fiber.
18 We've discussed that, that's set forth in our papers.

19 And finally, the means plus function limitation. During the
20 petition, the preliminary response, we talked about the corresponding
21 structure for the focusing means. Here we're talking about the function of
22 the focusing means. The function of the focusing means is focusing in
23 collimated output beams onto a single spot at said stopped single optical
24 fiber. There's two problems with Lemoff on that. First is that the output
25 beams are not collimated, and the second is that they are not focused onto a
26 single spot. And for each of these reasons, and for the reasons I've already

1 discussed, the combination of Kurita's pluggable receptacle and ferrule is not
2 combinable, or excuse me, Lemoff's receptacle and ferrule is not combinable
3 with Kurita. And for that reason, Ground 2, that portion of Ground 2 should
4 also be rejected.

5 And with that, I'd like to hand things over to Ms. Richey to address
6 the remaining part of Ground 2, Ground 4, and -- sorry, our phone seems to
7 be ringing, and Ground 5.

8 MS. RICHEY: Good afternoon, Your Honors. This is Carrie
9 Richey, and I'm delighted to talk to you today about Ground 5. Bhandarkar
10 is not prior art because the Patent Owner has sufficiently sworn behind
11 Bhandarkar. This same issue was decided 20 years ago during the
12 prosecution of the '416 patent. And the examiner there found that the Patent
13 Owner had sufficiently sworn behind Bhandarkar. And so, what has
14 changed since that time? Well, during this proceeding, Patent Owner has, in
15 fact, submitted additional substantive evidence of corroboration and inventor
16 testimony of what exactly the inventors were doing during the critical time
17 period. And we also have the benefit of subsequent Federal Circuit case law
18 that further reinforces that the decision made 20 years ago was, in fact, the
19 correct decision.

20 Now, at the pretrial conference, Judge Owens asked to focus in on
21 a couple of time periods, and I would like to do that here. And he asked,
22 first, what were the inventors doing during these time periods? Well, to start
23 with, the critical time period for reasonable continuous diligence here is just
24 before September 29th, 2003, through February 4th, 2004. And that is
25 because the Bhandarkar provisional was filed on September 29th, 2003.
26 And so, there is no gap or a period in which there was not sufficient

1 diligence between August and September as the Petitioner has stated here
2 today and has insinuated in its reply, because the critical time period here is
3 just before the date of the filing of Bhandarkar. And so, what activity were
4 -- what were the inventors doing just before Bhandarkar and then
5 afterwards?

6 So, Inventor Eric Grann declared that he performed eight iterations
7 of the computer models related to the optics, and we submitted evidence that
8 there were computer modeling done in July 21st, July 22nd, and in January
9 2004 as well, and he conducted some prior art searching just before the
10 Bhandarkar reference was filed as well. Then just after the Bhandarkar
11 reference was filed in October, from -- through to the middle of October,
12 inventor Curtis Ray testified that he conducted the computer modeling
13 related to the mechanics of the combiner, and those files were last saved on
14 October 16th, and we submitted metadata to support that. October 7th
15 through October 16th, the inventors prepared their first inventor disclosure
16 form, and they revised that form from October 24th to November 10th. Mr.
17 Grann testified, or provided testimony about exactly what was changed
18 between the first and the second invention disclosure form, and he provided
19 this information 20 years ago. And he said that he realized the invention
20 would minimize reflections back to the same focal position where they were
21 admitted from. And that did in fact make it into the provisional application,
22 and you can read that on page 2.

23 November 10th, we submitted evidence, corroborating evidence of
24 a meeting that occurred between the inventors. And at that meeting, they
25 have a to-do list, and on it, it says file provisional patent. And just under
26 that, they have a to-do item, and it says patent searches prior art search. And

1 so, we know that that meeting is what kicked off Eric Grann's patent
2 searching that occurred between November 10th and January 15th. In his
3 first declaration 20 years ago, he stated that he and Mr. Grann updated their
4 prior art searching from before, during the period of November 10th and
5 January 15th. And then, when they prepared the third and final invention
6 disclosure form, they updated it to reflect the prior art that he and Mr. Ray
7 had discussed.

8 And in this proceeding, we submitted a supplemental declaration
9 for Mr. Grann to explain exactly what his prior art searching entails. It's not
10 just a blip on the radar screen as Petitioner is implying. His process is
11 iterative, as most processes are when you conduct prior art searching. He
12 explained how he reads through the patents. He lets that information digest.
13 He thinks about it and thinks about it, lets it marinate, and then he goes back
14 to the references again, reads through them again, and then continues on
15 with his prior art searching and digging into the state of the art. And all of
16 this is to help him understand the state of the art and further making the
17 patented invention work.

18 JUDGE GALLIGAN: Counsel, this is Judge Galligan. I have a
19 question for you. You referenced the inventor's acknowledgment or the
20 inventor's discovery that there be fewer reflections. Was that what you were
21 referencing, and can you direct me to that particular testimony?

22 MS. RICHEY: Oh, it is, yes, it's Exhibit 102, page 121, paragraph
23 9, and that -- oh, sorry, 1002, if I misspoke. And then the sentence that's
24 made it into the provisional is, and the provisional is Exhibit 1009, page 2.

25 JUDGE GALLIGAN: Thank you.

26 MS. RICHEY: And then, go into the prior art searching that was

1 conducted between November and January, those references that they found
2 were included in the invention disclosure form. We have the metadata as to
3 when that form was updated. And one of the references ended up being
4 discussed on the face of the patent of the utility application that was
5 ultimately filed.

6 Okay. Back to our timeline. We know while this prior art
7 searching was being conducted, we go into the holidays. There's
8 Thanksgiving, there's Christmas, and there's New Year's, and we submitted
9 evidence that Aduro was closed during Christmas and over to New Year's.
10 And so, right after they get back from the holidays, we have Curtis Ray
11 updating his revised optical model on January 9th, and the inventors have
12 another meeting on January 10th. And at that meeting is where they've
13 discussed a cost effective way to build the invention. And then shortly after
14 that, we're at January 27th, and the final invention disclosure form is updated
15 and it's submitted to the patent attorney who then files the provisional very
16 quickly thereafter.

17 And so, you also asked, Judge Owens, what else were the inventors
18 doing during this time? Is it enough that they're a three-person startup or
19 does there need to be additional evidence of what they were doing? Well,
20 we have Eric Grann talking about how the inventors were running the
21 business. Essentially, they were a three-man show and they were spending
22 as much time as they can running this business, building the optical
23 components, the optical sub-assemblies by hand and to keep the company
24 afloat. We have evidence of this. And so, oh, I think you're on mute, Judge
25 Owens. Oh, I think -- never mind. We have an email of this on July 2003
26 where Brian Peters sends to a third person an email that says, we are a three-

1 person operation with no payroll. Oh, he is asking? Yeah, Judge Owens,
2 you're on mute.

3 JUDGE OWENS: Am I on mute now?

4 MS. RICHEY: I'm receiving no, no -- oh.

5 JUDGE TORNQUIST: I'm sorry. Judge Owens, you came
6 through there when you asked are you on now.

7 JUDGE OWENS: Am I on mute now?

8 JUDGE TORNQUIST: No, you're good. I can hear you.

9 MS. RICHEY: No, I can hear you loud now.

10 JUDGE OWENS: Okay. Where is this in the record that he said
11 they spent all the time they could on the project?

12 MS. RICHEY: Well, in his declaration, Exhibit 2046, paragraph 6.

13 JUDGE OWENS: 2046, okay, paragraph 6. We spent most of our
14 time building products by hand to keep the company afloat. We spent as
15 much available time, free time, as we could afford working on the modeling,
16 analysis, and simulation to see how it would work. What does that say about
17 the prior art searches?

18 MS. RICHEY: So, it doesn't specifically reference the prior art
19 searches. I think the point of raising that is that they were spending as much
20 -- they were spending time on -- as much time as they could, reducing to
21 practice the invention. I mean, he specifically references the computer
22 modeling. He doesn't reference --

23 JUDGE OWENS: But we're asking about the prior art searches.

24 MS. RICHEY: Oh, sorry. So, that's on paragraph 19.

25 JUDGE OWENS: I conducted to prior art searches several days
26 from November 10 through January 15. Now, what was he doing on the

1 days other than those several days?

2 MS. RICHEY: Yes. And so, on the other days they were running
3 the Aduro business. So, the three inventors were also -- the three inventors
4 were also the three employees of Aduro at the time. There were no other
5 employees for Aduro. And so, the email that was submitted on July 2003
6 states that there is no payroll and that they are going to start rebuilding in
7 2004. So, our corroborating evidence is the email from July 2003. And we
8 also have an email -- and that -- well, we have an email from December 8th,
9 which discusses that Aduro is closed down during the holidays and that they
10 were doing so to save operations costs.

11 JUDGE OWENS: Where does it say they were doing so to save
12 operation costs?

13 MS. RICHEY: That is the exhibit -- or December 8th email, 2041,
14 Exhibit 2041.

15 JUDGE OWENS: 2041. Let me try to find that.

16 MS. RICHEY: Yeah, Exhibit 2041 at the top, it says, on the
17 second sentence, I am available -- well, let me read the first to make this first
18 second make sense. I am available on Wednesday this week and Monday,
19 Tuesday, Thursday of next week. After that, we are shutting the factory
20 down for two weeks to save operating cash.

21 JUDGE OWENS: Is this in your arguments?

22 MS. RICHEY: Yes, I mean, yes, we've cited to this particular
23 Exhibit in our reduction to practice table. And probably the argument
24 above.

25 JUDGE OWENS: No, the exhibit number was what again? Oh,
26 okay. They're all close, Exhibit 2041. Thank you.

1 MS. RICHEY: Yes. Okay. Thank you. So, back to the timeline.
2 The last question that Your Honor asked us to focus on is whether or not do
3 we need any other additional evidence here to support what the inventors
4 were doing? And the answer to that question is no, under Federal Circuit
5 precedent. And the law does not require a source independent of the
6 inventors on every aspect of the reduction to practice. The law requires that
7 the corroborative evidence support the credibility of the inventor's story.
8 And what standard should you apply? It's the rule of reason standard in
9 governing the credibility of the inventors' story. And here, the inventors'
10 story from 20 years ago to today has not changed and it has been reinforced
11 with corroborating evidence that we've submitted with this IPR, with
12 metadata, support when they were working on the inventor disclosure forms.
13 It matches up exactly with what they said 20 years ago.

14 The modeling, the prior art searching, everything. And so, it is
15 absolutely clear that under the facts of this case, taking the evidence as a
16 whole, it is sufficient to -- that it has sufficiently shown that the invention
17 was not unreasonably delayed or abandoned. So, thank you, Your Honors.

18 JUDGE TORNQUIST: Okay, thank you. I take it then that Patent
19 Owner is reserving the rest of its time now. Is that correct?

20 MR. MAMMEN: We'll reserve the rest of our time for sur-
21 rebuttal, Your Honors.

22 JUDGE TORNQUIST: Okay. You have 10 minutes for your sur-
23 rebuttal. Okay, with that, Petitioner, when you're ready, and you have 10
24 minutes.

25 MR. JONES: Yeah, thank you, Your Honors. Since it's what we
26 were just talking about, I'll start with the swear-behind, and we can keep

1 Patent Owner's slide here on the screen. I want to highlight a few points,
2 right? As you raise in the pre-hearing, there is no other evidence of other
3 activity during that 60 days other than a couple of days of searching. That's
4 not disputed. That's why questions of, for instance, credibility are not really
5 the question here.

6 What they're asking you to do, though, is assume there were other
7 activities in this period without evidence, and that would be the surmise
8 diligence. And I'd point you to the *In re Meyer* case from our papers. We --
9 surmise cannot take the place of proof. And when asked for proof, she
10 pointed you to Exhibit 2041, an email that said they would be shut down for
11 a few days. I think that email and the fact that that is their best proof of
12 other activity is worth looking at. So, what they said was they were going to
13 shut the factory down for a couple weeks. That suggests to me they had
14 plenty of time to work on the invention. We have no evidence that they
15 pursued diligently their invention during that time period.

16 In fact, Brian Peters, one of the inventors, says in that same email,
17 I am wide open since the factory is shut down. But no evidence that they
18 were actually working on the invention. The same when they talk about, I
19 believe it was paragraph 6 of 2046, right? They were working on their old
20 products, that thing we saw on the Grann patent. And again, there's no
21 evidence of work towards this invention, no explanation for why they
22 weren't diligently working on this invention. Even the several days was
23 never linked to why it was necessary, why this was reasonable.

24 So, when we take the evidence as a whole, right, we would have to
25 surmise diligence where there is evidence of none. And this is where I
26 would point back to *Drinkware* and the burdens here, right? While the

1 burden of obviousness remains with us, the burden of production shifted to
2 them when we provided Bhandarkar and it showed that the claims were
3 invalid. They needed to develop a record, and they didn't do that. They
4 needed to develop evidence, not attorney argument, not surmise, not
5 inference. They are treating *Perfect Surgical* as sort of absolving Patent
6 Owners from any obligation to prove a diligence case. That's not true. And
7 I would point to the *Tesla* case. I would point to the *Meta* case that we cited
8 in our papers from 2023 and 2024. That's just not the case. They sought to
9 be diligent, and they didn't provide the evidence here.

10 And I would just touch on the holiday thing. Holidays are, again,
11 they don't absolve Patent Owner of diligence, right? They rely on the
12 *Unified* case. I would encourage Your Honors to look at the difference in
13 the near-daily activities in the *Unified* case, even over the holiday period,
14 where they submitted, I think, six provisional patent applications, right?
15 Again, they act as if they don't need to prove diligence, but the evidence isn't
16 necessary, and we say that's contrary to the law, right? A couple of days of
17 searching wasn't good enough, and I would remind Your Honors, looking at
18 the bigger picture, the way the drafts evolved, the way the modeling was
19 done in October, but this wasn't done until February. Even when we zoom
20 out, when we look at the big picture, it's not just this gap. If we look at the
21 evidence, not attorney argument, not surmise, the evidence, this just simply
22 isn't a diligence case.

23 With that, I'd like to turn to some of the merits-based arguments.
24 When we think about the arguments that Patent Owner makes when it comes
25 to Kurita and whether we're going to use a connector in Kurita, be it our
26 Ground 1 argument that it would have been obvious to use a seat-and-ferrule

1 arrangement or fix it in some other fashion, or our Lemoff-based argument
2 that we would use a connector, right, to hold it in place for coupling
3 efficiency, or alternatively to plug it and unplug it. Their whole argument
4 turned on this idea, and I think, one of Your Honors touched on this, maybe
5 it's Judge Galligan, right? Turned on the idea that somehow Kurita was
6 limited to a workbench. Kurita doesn't say that.

7 And in fact, if you read Kurita, Kurita strongly suggests that's not
8 the case. And I would encourage Your Honors to look at Exhibit 1004, page
9 8. This is the translation of Kurita, right? It starts with the description at the
10 top of the page, the field of industrial application, right? It's providing light
11 connection elements, devices, putting them on optical fibers, used for multi-
12 stage switching networks, inside optical computers, switchboards, and then
13 more globally with optical communications, laser processing, right? So, all
14 these arguments we've heard from Patent Owner that, oh, you wouldn't use a
15 connector. It doesn't make sense in Kurita because Kurita is a workbench.
16 That's just contrary to the evidence. And we did lay this out in the papers.
17 In our reply, we have support from Dr. Willner pressing back on this. But I
18 would just caution Your Honors, any argument regarding combinability,
19 modification of Kurita, adding a connector, this somehow turns on the idea
20 of a workbench. It is simply unsupported.

21 I'd like to just touch briefly on a few other issues. And maybe this
22 may be circling back to a question we heard from Judge Owens. I think
23 Patent Owner may be in a little bit of a Catch-22. And I sensed a bit of
24 conflict in their argument. I'm going to try to articulate it. Their position is
25 that the only way that an optical fiber could have been stopped, fixed, held
26 in place, was what was shown in Figure 1. But then they also go ahead and

1 they say, well, in the fourth embodiment, even though they're shown as
2 separate pieces, and it's left to a POSITA, according to column 4, a POSITA
3 would have just arranged on them and known how to do that, right?

4 And somehow that's fine when they're talking about the patent and
5 claim construction. But as soon as we get to Kurita, it's no, no, no. You
6 would never use a seat-and-ferrule arrangement, right? There's no reason to
7 fix it. There's no reason you'd want to be plugged and unpluggable. And I
8 think that's inconsistent. And what it ignores when we get to the Kurita
9 grounds, Grounds 1, and Ground 2, and this is, I believe, what Judge Owens
10 was getting at, there is a benefit to using a pre-aligned connector, right? A
11 user can just plug it in. It makes sure that you get that good coupling
12 efficiency. We address this in our paper 24 at pages 14 to 15, right?
13 Passively aligned components in a housing, right? They're less costly, less
14 labor intensive. They're valuable in commercial applications, right? This is
15 supported by our expert and theirs, right? Our expert, paragraphs 65 to 74 of
16 Exhibit 1016. And their expert submissions, for instance, Exhibit 1018,
17 pages 84 to 85. Again, we laid all this out in our paper 24, pages 14 to 15.
18 While a connector, a pre-aligned connector, that can be plugged and
19 unplugged and has that stop arrangement, wasn't the only way to fix an
20 optical fiber, it may have been the best way, right? And it would have been
21 the obvious way for Kurita. Because again, Kurita is not limited to a
22 workbench, right? It's a device. It's a commercial product you want to
23 make. You can just read Kurita.

24 So again, I think there's a tension here in something that Patent
25 Owner wasn't able to resolve. And again, I would just point out, while it's
26 not the only way to stop an optical fiber, it was an obvious way to stop an

1 optical fiber. And I think a lot of Patent Owner's arguments missed that.
2 And to quote Your Honors from the institution decision when referring to
3 Kurita in these grounds, this is obvious. It's not anticipation.

4 I think I have a couple more minutes. I will just quickly point out
5 a few things. On slide 22, they got into the separate n radial sectors. As I
6 kind of warned you, they pointed to the wrong figure, the figure we're not
7 relying on. I would just reiterate, that whole discussion about two by two,
8 and it doesn't line up, and you don't get the separate quadrants, that's not
9 what we're relying on. We're relying on the Figure 3 embodiment, not the
10 Figure 2 embodiment. So, that argument is sort of irrelevant. And even if it
11 weren't, as Your Honors acknowledged in the institution decision at page 14,
12 lining these components up on a central axis was obvious, right? It's in
13 paper one, page 24. Our opening expert declaration, paragraphs 183 to 84.
14 We have slides on it, 59 to 60, but I think I'm going to run out of time. But
15 even though that argument is based on the wrong figure, not our argument,
16 the central axis point is the point we made in our opening and you
17 acknowledged.

18 We saw the wrong figure again in slide 27 when they showed
19 Lemoff. They showed that butt couple embodiment. Again, that's not our
20 argument. We're relying on the other figure that has the same arrangement
21 as the patent. And I would just point to -- I've misplaced my exhibits.
22 Column 5, lines 50 to 55 shows that the Figure 2 embodiment works with
23 the other opening figure. We've addressed that in the paper. So, that
24 argument that they made about Lemoff, again, doesn't address our actual
25 arguments.

26 Again, they sort of seem to assert that Lemoff doesn't teach

1 focusing. Again, contrary to the reference, I'd point to Figure 2, lines 19 to
2 23 describing Figure 2 that we rely on. It says, a lens focuses. Again, I
3 think that when you look at our papers, what we actually present from the
4 petition and through most of those rebuttal arguments simply miss the point.

5 So, with that those are the points I would want to make unless
6 there are additional questions from Your Honors.

7 JUDGE TORNQUIST: Okay. Seeing no other questions, thank
8 you very much, Petitioner. We will now hear from Patent Owner, who has
9 10 minutes.

10 MR. MAMMEN: All right. Thank you, Your Honors. Taking
11 things in roughly the same order that Petitioner has taken them concerning
12 Bhandarkar and swearing-behind, there is this repeated suggestion that
13 somehow Patent Owner needs to come up with more evidence than was
14 sufficient for the examiner to reach the conclusion of a successful swear-
15 behind during prosecution.

16 Now first, as Ms. Richey discussed, there was more evidence
17 included in the record. But the second point is, this is kind of a unique
18 situation because prior to *SAS Institute*, this ground considered alone would
19 have been ripe for denial of institution under 325(d). All of the factors that
20 are present there, that are included in that kind of determination are present
21 here. The similarity, it's exactly the same argument that was presented
22 before. It was extensively considered during examination, and there's no
23 argument of error in the examiner's prior consideration, simply that more
24 needs to be shown. But there's not an argument that there was an error. So,
25 you know, the bottom line is, the Patent Owner swore behind Bhandarkar
26 during prosecution in 2004, and have done so once again on this record.

1 Concerning Kurita, and the question of whether Kurita is limited to
2 a workbench, there's nothing affirmatively in Kurita suggesting that it is
3 anything but an implementation on a workbench. It's a conceptual diagram
4 where each of the elements is singular. That's paragraph 17. And Dr.
5 Willner has tried on several occasions in his supplemental declaration to
6 introduce this idea that there needs to be further packaging and so forth in
7 order to make Kurita a commercially viable product. His deposition at pages
8 29 to 33, we tried to explore what he meant by a commercially viable
9 product. He wasn't able to articulate it. So, this is entirely a made up
10 argument that has no support in the body of Kurita itself.

11 Next, counsel suggested that there was some sort of tension in our
12 characterization of a stopped single optical fiber and the structure supporting
13 a stopped single optical fiber as shown in the various embodiments of the
14 '416 patent. This is a mischaracterization of the point I made. The point is
15 that there is one and only one structure disclosed for a stop single optical
16 fiber. That's integrated ferrule 80 with a stop where seat 60. The fact that
17 it's not specifically depicted at embodiments three and four does not mean
18 that we are arguing or that anybody's arguing that there's sort of free to
19 incorporate any other structure known in the art. It's that that structure was
20 not disclosed or not shown or depicted in embodiments three and four.

21 And then similarly, there was a discussion of our slide 22. Let me
22 see if I can go there. The point, again, is I was focusing on the optics of lens
23 30. You didn't hear anything from Petitioner saying that the optics of lens
24 30 in Figure 2 are set up for a three by three linear array. If you went from
25 Figure 2 to Figure 3, which is two by two, if you just turned off any five of
26 the lasers in Figure 2 to get to Figure 3, the optics of lens 30 would not need

1 to change. However, if you went from the lens of Figure 3 to a quadrant-
2 based lens, as Petitioner suggests, for Figure 3, you would have to change
3 the optics. You'd have to move things around. And there's no discussion of
4 different optics in Kurita to support that. And that was our point.

5 So, and then finally, the point of discussing Lemoff is it does not
6 combine onto a single spot. That's true whether you look at the butt coupled
7 diagram or the one that includes a focusing lens, there's -- the entire point of
8 Lemoff is that each of the lasers enters the fiber at a different point, they are
9 not combined together into a single output and that's why it fails under both
10 constructions. Thank you very much.

11 JUDGE TORNQUIST: Okay. Thank you very much to the parties
12 for this argument today, it was extremely helpful. And with that, we are
13 adjourned. But I would ask the parties to stay on the line in case the court
14 reporter has any questions, spellings, and that type of thing before you
15 depart. Thank you very much.

16 MR. JONES: Thank you, Your Honors.

17 MR. MAMMEN: Thank you, Your Honors.

18 (Whereupon the above-entitled matter went off the record at 3:00
19 p.m.)

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PETITIONER:

Michael Jones
Martin Zoltick
Mark Rawls
ROTHWELL, FIGG, ERNST & MANBECK, P.C.
mjones@rfem.com
mzoltick@rfem.com
mrawls@rfem.com

PATENT OWNER:

Barry Herman
Christian Mammen
WOMBLE BOND DICKINSON (US) LLP
Barry.Herman@wbd-us.com
Chris.Mammen@wbd-us.com