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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SHENZHEN TUOZHU
TECHNOLOGY CO., LTD.,
Petitioner,

v.

STRATASYS, INC.,
Patent Owner

IPR2025-00257
Patent 9,592,660 B2

Record of Oral Hearing
Held: March 6, 2026

Before MITCHELL G. WEATHERLY, CHRISTOPHER M. KAISER, and LILAN REN, *Administrative Patent Judges*.

APPEARANCES:

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The above-entitled matter came on for hearing on March 6, 2026, commencing at 1:02 p.m.

P R O C E E D I N G S

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JUDGE WEATHERLY: Good afternoon. This is a hearing for IPR2025-00257, relating to U.S. Patent Number 9,592,660, between Shenzhen Tuozhu -- Judge Ren will correct me if I'm wrong on that -- Technology Company Limited, the Petitioner, and Stratasys, Incorporated, the Patent Owner.

I am Judge Weatherly, and I'm joined remotely by Judges Ren and Kaiser. And each party has one hour to deliver its argument. Petitioner will go first because it bears the burden of proof. It will -- you can reserve time for rebuttal. Patent Owner, you can also reserve time for rebuttal. The time for rebuttal is not to be used to introduce argument for the first time, so please be mindful of that.

And before we start, I'm looking around the room. I don't see anyone except Counsel, but I'd like Counsel to introduce themselves, beginning with Petitioner and then Patent Owner.

MR. GRISWOLD: Hello, Your Honors. I'm Josh Griswold, and I have with me Kenneth Darby, both for Fish and Richardson and both representing Shenzhen Tuozhu Technology Company.

JUDGE WEATHERLY: Thank you. And Patent Owner?

MR. OAKS: Good afternoon, Your Honors. I'm Brian Oaks, lead counsel for Patent Owner, Stratasys, Inc. And with me today and also presenting our argument is Mr. Aashish Kapadia, both of us from McDermott Will & Schulte.

JUDGE WEATHERLY: Excellent. Petitioner, how much time

would you like to reserve for rebuttal?

MR. GRISWOLD: 20 minutes, Your Honor.

JUDGE WEATHERLY: Okay. So you can come to the podium and set yourself up. I will keep the time. And whenever you're ready, let me know, and I will start the clock.

MR. DARBY: We're ready.

JUDGE WEATHERLY: Okay.

MR. DARBY: So the '660 Patent is about polymer-coated build plates for 3D printers, and it was filed in 2014. By that time, 3D printing technology had been around for decades, about 25 years. And skilled artisans had long since discovered the core elements of the '660 Patent's claims. It was known to use polymer materials for printing surfaces. It was known that polymer materials could be coated on substrates, including build plates for 3D printers. And it was a known and desirable objective to achieve a printing surface that allows a clean and easy removal of the part without causing any damage.

So these claims, the '660 Patent's claims, they combine these known elements -- the polymer, the coating, the plate -- in a known way to achieve a known and desirable result. And we all know from KSR that that's obvious.

Turning to Slide 3 of our demonstratives, and that's Exhibit 1103 in the record. It's a breakdown or just a case overview. The petition is divided into two sets of grounds. We have Grounds 1A through 1C that are based on Cable. We have Grounds 2A and 2B that are based on the Comb reference. These set of grounds covers all 15 of the '660 Patents claims. Only four of those claims are in dispute.

We are planning to focus primarily today on the issues pertaining to Independent Claim 1 of the '660 Patent with respect to both grounds, but my colleague Mr. Griswold here is prepared to answer any questions that Your Honors may have with regard to any of the dependent claims. So please just stop us and let us know if you have any questions about those.

Turning to Slide 4, the vast majority of the elements in Claim 1 are not in dispute. The parties are, in fact, entirely focused, with respect to Claim 1, on the language at the very end of the claim that's about the polymer coating. So, according to the claim, the polymer coating must be capable of, not configured to, but merely capable of permitting removal, "without chemically or mechanically removing the polymer coating from the 3D object, and without damaging the polymer coating."

And so, I'll focus on this first part of the disputed claim language for our presentation, and my colleague, Mr. Griswold, will address the non-tape polymer coating aspect.

JUDGE WEATHERLY: Counsel, if you're referring to slides in your presentation, it helps the record a great deal to mention which slide number you're on.

MR. DARBY: Absolutely.

(Simultaneous speaking.)

MR. DARBY: Just for reference, if I didn't say so earlier, we were resting on Slide 3 currently.

JUDGE WEATHERLY: Okay. Great. It also helps the remote judges follow along where you are.

MR. DARBY: Absolutely. And in fact, if I could turn your attention to Slide 4, we were talking about the claim language, and we were

focusing on some of the limitations there. You may have seen that we submitted into the record, with the authorization from the Board, the District Court Magistrate Judge Preliminary Order on Claim Construction.

JUDGE WEATHERLY: Yes.

MR. DARBY: And that order addressed this language, without damaging, that I just read off a second ago. And the magistrate judge has found that claim language to have simply its plain meaning, the plain meaning to a skilled artisan, no further explanation needed. We are adopting and agreeing with that.

As to the language that reads, without chemically or mechanically removing the polymer coating, that was also addressed in the magistrate judge's preliminary order on claim construction. And we read the magistrate judge as interpreting this language as simply excluding using a chemical reaction or a tool to pry the part off after printing. And we agree with that. These constructions are fully consistent with our mapping in the petition, with respect to both Comb and to Cable.

And I submit that our mapping is also fully consistent with the additional term that the magistrate judge addressed, and that's thermally conductive. The magistrate judge found that claim is indefinite because it lacks objective boundaries.

JUDGE WEATHERLY: And what, if anything, are we supposed to do with that ruling here?

MR. DARBY: We submit absolutely nothing. And we explained it in the reply -- it's at the very end of the reply -- that the boundless nature of this term, the problem that makes it indefinite for purposes of determining infringement, has no impact here with respect to determining invalidity.

Because the fact that the term is unbounded

JUDGE WEATHERLY: Because all materials are thermally conductive.

MR. DARBY: You hit the nail on the head. Absolutely.

JUDGE WEATHERLY: Okay.

MR. DARBY: And in fact, you'll find there's no dispute in this proceeding about whether Comb or Cable or any other reference teaches a thermally conductive plate.

JUDGE WEATHERLY: Okay. Very unusual indefiniteness situation, I would say.

MR. DARBY: Turning now to Slide 6. So if we hop into the Cable reference now, Cable is very similar to the '660 Patent. It teaches a thermally conductive plate with a polymer coating. No dispute there. Cable's polymer-coated substrate -- again, this is just like the '660 Patent -- it permits the easy removal of a printed object. So easy, Cable tells us, that the removal process is conducted -- and this is a quote out of the abstract; it's on the left hand of Slide 6 -- the removal process is conducted, “without mechanically contacting the object with a device or chemically contacting the object.”

Again, you can see that expressly stated in the abstract of Cable. It's also repeated time and time again in Cable: paragraph 4, paragraph 6, 20, 52, 54, 67, and Figure 6.

JUDGE WEATHERLY: Counsel, I'm sorry to keep interrupting you on the -- this coordination with the slides. I don't know. Are you using the slides to do the presentation?

MR. DARBY: Yes, we are using the slides. Would it help if we

hooked up to display them?

JUDGE WEATHERLY: It probably would help me. I don't know. The remote judges can't see that monitor.

MR. DARBY: Right.

JUDGE WEATHERLY: But I'm having trouble following which slides you're on.

MR. DARBY: Okay.

JUDGE WEATHERLY: And it may be that my attention is just too fractured because I'm still trying to catch up. I don't know if you're mentioning the slide numbers before you start speaking about them, but --

MR. DARBY: It is fully my intention to do so.

JUDGE WEATHERLY: Yeah.

MR. DARBY: I'll slow down a little bit.

JUDGE WEATHERLY: Okay.

MR. DARBY: And make sure I, you know, can just make eye contact to make sure we're on the same slide. I'm happy to do that.

JUDGE WEATHERLY: Yeah.

MR. DARBY: All right.

JUDGE WEATHERLY: So, are you on Slide 7?

MR. DARBY: I am turning to Slide 7 right now, absolutely.

JUDGE WEATHERLY: Okay. All right.

MR. DARBY: So, Slide 7, and I had mentioned Figure 6 in Cable about this easy removal process. And on the left-hand -- or excuse me -- the right-hand side of Slide 7, you can see it. This is Figure 6. This is showing the easy removal process in Cable.

And what Cable tells us is, to release the part, you simply apply a

load to the underside of the build plate, the opposite side of where the coating is. And that load causes the build plate to flex. You can see it in the figure. And the flexing delaminates the part. You never need to chemically or mechanically contact the coating or the object. And when you use this approach, Cable teaches us, the part is removed easily, without damage, and without leaving a residue.

So we know, as a matter of fact, just like in the '660 Patent's claims, that Cable's polymer-coated build plate permits removal without having to chemically or mechanically remove the polymer coating from the 3D object.

I'm turning to Slide 8 to show you how we put it in the petition, and I'm soft-quoting from the left-hand side of the slide, an excerpt from the petition, that last highlighted sentence: There is no need to chemically or mechanically remove the coating from the 3D object in Cable because the coating remains on the plate.

So that's why Cable tells us at paragraph 67 that the object can have a smooth finish that's aesthetically pleasing, and further, that the plates can be reused time and time again.

Turning now to Slide 9. So one thing I noticed when I read Cable for the first time is just how closely the language in Cable is mirrored by the '660 Patent. It's, in fact, strikingly similar, the two documents. Cable specifically says things that are in the claim: no damage, without mechanical or chemical contact.

Another example here on this slide shows, and we have Cable on the left hand -- excuse me -- on the right hand of the slide and the '660 Patent on the left hand of the slide, excerpts from each. And what you can

see when you look at those excerpts is that they describe the same kind of removal process. Because the plates are thin and they're flexible, the part just, “pops off”. It's a very distinctive phrase, and yet it's used in both documents. The part just pops off is said verbatim in each. That's how we know there's no damage. That's how we know there is no mechanical or chemical removal.

Slide 10; this is also like the '660 Patent, Cable tells us. Because the part just pops off, this approach avoids the kind of mechanical and chemical removal operations that were known to cause damage. No need for a chisel or blade, no need to chemically dissolve material at the interface between the printed object and the plate, again, just like the '660 Patent.

Turning to Slide 11. This is another excerpt from the petition, where we point out and specifically rely upon Cable's explicit disclosure of no damage to the object or the polymer-coated thermally conductive plate. And we submit that should be the end of the story. The reference expressly teaches what the claims reply -- require. Excuse me.

Now, Patent Owner acknowledges these teachings from Cable, as they must, but they tell you to ignore it or to disregard it. That's probably more accurate to say. They tell you to disregard it, because in their view, you can disregard Cable's clear no-damage disclosures because other portions of Cable. The examples at the end allegedly involve damage in the form of residue, Patent Owner says, residue being part of the printed part left on the plate.

I would submit that's the wrong approach as a matter of law. The law is very clear on this. We don't ignore teachings in the prior art. A prior art reference is considered for everything that it teaches, not just a subset of

examples. And I point you to the Ultradent case that's cited on pages 2 through 3 of our reply brief. I have other case law as well, if you'd like the citations to them. I think that's a very prevalent and well-established principle of law.

And when you apply it to this case, again, it tells us very clearly, it's very straightforward: We do not disregard Cable's clear no damage teachings simply because there are other disclosures that show residue.

JUDGE REN: Counsel, let me stop you here. What do you say to Patent Owner's position that you raised this argument about the residue too late, and it's a new argument that you didn't raise in the opening preliminary -- in the opening request for IPR?

MR. DARBY: Absolutely. So, our response to that is, we were responding in the reply to an argument that we were presented with for the first time in the Patent Owner's Response. When you look in the '660 Patent, you won't find the word residue, and the examples at the end aren't the disclosures in Cable that we highlight in the petition. We were focused on the excerpts that I walked you through, where Cable is very clearly mirrored by the '660 Patent: no damage, and also, without mechanical or chemical contact with the object or the coating. That's what we relied upon in the petition as the case-in-chief.

In the Patent Owner's Response, we heard from Patent Owner, this argument about the residue and the examples, and we responded to that. And so, we are not introducing a new argument that should have been in the petition; we are merely responding to that which was presented to us.

But I will say -- and I'll move to Slide 18 -- Cable tells us that the removal occurs without residue. So these arguments about residue, is

residue damage, I'm here to tell you, you don't have to reach that question to decide this case because Cable is very explicit that there is no residue when the part is removed. And again, we don't ignore -- the law tells us -- we don't ignore these clear teachings in Cable just because there are other disclosures in Cable.

JUDGE REN: Does the claim language, without damage, require that the lack of damage is, essentially, lack of residue that's visible to the eye?

MR. DARBY: We would submit that the claim just means what it says: without damage. It doesn't mention residue. The specification of the '660 Patent doesn't mention residue. And so, again, we would suggest you don't have to reach the issue, but when you look in the '660 Patent and the kind of damage that's talked about there, it's not the kind of minimal residue that Cable mentions in those examples. It says bare minimum, minimal residue. And so, we would submit that that isn't, in fact, damage at all. There's no reason to believe that that's damage.

In fact, my clicker here that I'm holding; I think it's a pretty good example of that. When I touch it, I leave a fingerprint on it. That fingerprint is residue from me. It's oils, skin, water, right? And that's all left on my clicker. Minimal residue, right? You wouldn't think that the clicker is damaged.

JUDGE WEATHERLY: Depends on who you ask.

MR. DARBY: You wouldn't think my finger is damaged. We would submit that that's the reasonable approach here.

JUDGE WEATHERLY: I agree with you, by the way; it's minimal residue.

JUDGE REN: What about the position that damage necessarily results in destruction of the intended function of either, in your example, would be your finger or your remote control?

MR. DARBY: Well, sure. We would submit that Cable gives us no sign -- besides specifically and explicitly saying no damage, Cable gives us no sign that there is any impairment with respect to the function of either the part or the plates. Time and again, Cable tells us the plates can be reused. Time and again, Cable tells us that the part has a smooth finish that's aesthetically pleasing, and it can go on downstream in any sort of manufacturing process from there. So we have no hint of any damage in Cable, whether it's from some sort of residue or anything else.

JUDGE REN: Thank you, Counsel.

MR. DARBY: So I turn to Slide 22 now. And so, what's left of Patent Owner's Response? At this point, we would submit that all they have, at this point, is their contention that Cable's teachings do not enable the '660 Patent's claimed invention. But of course, the prior art is presumed to be enabling, and we've explained extensively in the reply that Patent Owner does not do nearly enough to overcome that presumption. At best, they've alleged that a skilled artisan would have had to experiment to achieve the kind of optimization that Cable discloses in order to achieve the no damage and no residue results.

But the law is very clear that's not enough. And you can see that on this slide -- this is Slide 22 -- what the Court said in Wands: The key word is undue, not experimentation.

The Court goes on, and this is a quote: "A considerable amount of experimentation is permissible if it is merely routine or if the specification in

question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed."

Slide 29; "Cable provides more than a reasonable amount of guidance. Cable provides extensive direction and guidance for leading the skilled artisan to the optimal adhesion characteristics that are described in Cable. Cable identifies specific parameters, all of which were known, and Cable provides narrow ranges for each of them."

We submit that Cable provides far more implementation details than the '660 Patent on how to make and use a polymer-coated thermally conductive build plate. Cable gives us ten pages of written description on this subject. The '660 Patent gives you less than three. Cable identifies, again, specific parameters with specific ranges and values. The '660 Patent leaves all of these implementation details to be filled in by the skilled artisan.

We simply don't see how a Patent with fewer details can be said to enable the full scope of its claim, while an even more detailed prior art reference filed three months earlier somehow cannot enable even a single embodiment of that claim. That's what you would have to find to conclude that Cable is not enabling of the claimed invention. We don't think that's correct.

JUDGE REN: Well, Counsel, to be fair, there's no enablement argument in the '660 Patent. So I think the enablement, or whether each patent is enabled, is an independent assessment; wouldn't you agree?

MR. DARBY: Well, the case law does tell us that when a Patent Owner is requiring more detail than the prior art, there's a problem with that. The Federal Circuit has made that point. In fact, what the Patent does is it

shows us an example of what the skill level was of a skilled artisan.

So, if the skilled artisan can take the sparse disclosure in the '660 Patent and make and use all of its -- all of the embodiments that are within the scope of that broad claim, then we submit that's evidence that the skilled artisan could certainly take a more detailed reference, like Cable, and practice at least one embodiment of the claimed invention.

And so, I would agree that they're two separate inquiries in terms of which, you know, the Patent enabling the full scope of its claim, and the prior art enabling at least one embodiment of the claim, and yet, one is evidence of the other. The sparse details in the Patent, comparatively to Cable, is absolutely evidence of what the skilled artisan would have been able to do.

And so, finally, if you have any hesitation at all about Cable, we don't think you should. But if you do, please know that none of these disputes that we've talked about today arise with respect to Comb's coating. The petition maps Comb's coating to these very same elements, and Patent Owner has no evidence-backed argument against those mappings. All of those arguments have been waived.

What Patent Owner appears to be asserting is that the examiner allowed the '660 Patent over Comb, so the Board should, too. But we all know that the examiner's view is not evidence, and certainly not enough to overcome the undisputed testimony of Petitioner's expert, Dr. Hickner, on these particular limitations.

So, with that, hearing no questions, I will turn the podium over to my colleague, Mr. Griswold.

MR. GRISWOLD: Thank you, Your Honors. I'm going to

address the limitation, the negative limitation, wherein the polymer coating is not a polymer tape. I'll address that both for Cable and Comb. And then, to the extent you have questions about dependent claims, I can address those as well.

I'm going to start on Slide 32 just because it doesn't say much. It's a good starting point, because I want to make a few observations that will frame the later discussion. And then, after I deal with those initial observations, we can get into the substance of the grounds.

So, as I said, wherein the polymer coating is not a polymer tape, that's a negative limitation. The claim basically defines two, a genus of two, tape and not tape, and excludes one of those two species, right? The included species, the non-tape species, is huge. It's literally every other way of applying polymer -- coating polymer to a surface, other than by tape.

So, under the Patent Owner's position that coating includes tape, it must show that both Cable and Comb's disclosures of coating are limited to only tape. In other words, that those Patents meant to exclude all other manners of applying coating. And this, of course, is if you apply the Patent Owner's construction. That's a tall, tall task.

JUDGE WEATHERLY: Is that really the issue? Isn't really the issue whether the prior art does affirmatively describe a non-tape coating?

MR. GRISWOLD: Both --

JUDGE WEATHERLY: Not that it excludes them.

MR. GRISWOLD: Both references disclosed coating, and it's Patent Owner's position that a coating includes tape. And so, the question is, does a disclosure of coating -- and there are two. In this binary world, there's coating -- there's tape and not tape. So the question is, does the

disclosure of coating disclose both tape and not tape?

JUDGE WEATHERLY: Coating would not -- the disclosure of coating without further explanation, does it disclose both tape and non-tape?

MR. GRISWOLD: That's right. That's right. And I would submit that there is further explanation.

JUDGE WEATHERLY: Okay.

MR. GRISWOLD: So, we also advance, for both the Cable and the Comb Grounds, that non-tape solutions are obvious. And again, in this context, where there is two things, it's binary, tape or not tape, Patent Owner's position that coating includes tape to find that it would also be obvious to include other manners of coating is a very small step.

I also want to make the point that interpretation of what coating is, it is not a claim construction issue simply because the word appears in the claim. I think all parties agree the claimed coating and the not tape limitation, those are clear on their face. And you'll see, perhaps, Patent Owner point out that we, in the District Court, said that there was no construction necessary for that term. And we stand by that today. It's clear, and I think there is no dispute, that the limitation excludes tape, and it includes every other manner of coating polymer to a thermally conductive plate.

So the dispute here is really about how a POSITA would understand the prior art's teaching based on its use of the word coating. And that's a wholly separate issue from whether the inventors defined coating in a special way, or why the inventors felt it was necessary to include the non-tape negative limitation.

JUDGE REN: Counsel, what do you say to the argument that, you

know, Cable is silent on this non-tape coating? It doesn't use the phrase, you know, the coating is not tape.

MR. GRISWOLD: And that's a weird way to describe a coating, especially when you appreciate that the POSITA understood coating and tape to be different things. I think we provide multiple examples of --

JUDGE WEATHERLY: Well, but that statement, essentially -- if I'm following the logic of the statement you just made, that a skilled artisan understands a coating to not be tape, then why would anyone need to say in a claim, as a negative limitation, that the coating is not tape?

MR. GRISWOLD: I agree. That's a very odd recitation.

JUDGE WEATHERLY: And you've also sort of started this portion of your argument with a premise that there are two kinds of coatings: tape and non-tape.

MR. GRISWOLD: I think my point was that, under the Patent Owner's interpretation of coating, there are two things: things that are tape and things that are not tape.

JUDGE WEATHERLY: Okay.

MR. GRISWOLD: Under our interpretation, under the plain meaning, under what the references that we provided into the record show, POSITA understood coatings to be something different from tape.

JUDGE WEATHERLY: Okay.

MR. GRISWOLD: And that bears out both in Cable and Comb and the extrinsic references that we've put forward and the testimony that our expert has put forward.

JUDGE WEATHERLY: Okay.

MR. GRISWOLD: And let's get to an example. I'm going to jump

to Slide 44. And this shows Cable's specification. And Cable mentions tape once in its specification. It's in the background. And it's saying that, in the prior art, people used painter tape as a surface for the substrate, that it's similar substrates to the one that it describes. Subsequently, Cable doesn't use the word tape as a surface to a substrate. It describes all of its embodiments as having a coating.

And so, I submit to you, first of all, just simply using the words coating and tape separately in the body of its specification is evidence that it meant them to be two different things.

But Cable also informs us -- the context of Cable also informs us of its meaning. In the petition, we pointed out that Cable identified its substrate, which is collectively the coating and the main body, is a preformed structure. I don't think -- to me, I wouldn't think of something that had painter's tape on it as being a preformed structure. Cable also speaks to the substrate being made to be used repeatedly. And the '660 Patent admits that the POSITA knew that reusing tape was a problem. So both of these teachings are inconsistent with the word coating encompassing tape.

And I will switch back to Slide 35. I again apologize for the big jump. Slide 35 is an example of coatings that people knew for build plates of this type in the 3D printing art. This is Wolfbite. It was applied as a gel. Dr. Hickner says that he remembers it from 2014. This YouTube video is from 2014. And you can see the woman there is holding a paintbrush and painting the Wolfbite coating onto the build plate for a 3D printer. It's not a tape.

And as I mentioned, we provide multiple examples in the record of

how a POSITA would understand a coating to not be tape. And our examples are in the 3D printing space.

So, if you turn to Slide 36, the textbook, Mastering 3D Printing, is discussed in the petition. It's shown on Slide 36. I'm not going to dig through the slides and show you the other examples, but I do want to point out that some of the other things that we point to are Patent Owner's other 3D printing patents, including Comb, which we'll discuss a fair bit in a bit, and Mannella. Those are both Stratasys's patents. And Comb, you'll remember it because I'll say, the disjunctive list, like a hundred times in a few minutes, so -- but Slide 40 is also kind of an interesting one.

Dr. Osswald is Patent Owner's expert, and this is his textbook on plastics, and it's inconsistent with the position that he has taken here. And it's pretty clear. It says, “In coating, a liquid film is continuously deposited on a moving or flexible or rigid substrate.”

You know, liquid coating is, again, not tape. And I would point out that there is no response, other than attorney argument, on this from the Patent Owner. They didn't submit another declaration, didn't ask to submit another declaration from Osswald, so he could explain why he took this different position here, different from what his book teaches.

JUDGE WEATHERLY: That book appears to be directed at a much more -- doesn't appear to be directed to 3D printing specifically.

MR. GRISWOLD: I agree that it’s not directed at 3D printing.

JUDGE WEATHERLY: Okay.

MR. GRISWOLD: Yeah. The first --

JUDGE WEATHERLY: So it's just talking about coating methods in general, right?

MR. GRISWOLD: That's correct.
JUDGE WEATHERLY: Okay.
MR. GRISWOLD: Plastics. But so, we're talking about plastics, and coating plastics onto substrates.
JUDGE WEATHERLY: Okay.
MR. GRISWOLD: So it's not as though the textbook is inapplicable. In fact, I think this might be something I would expect an engineer in the field would learn from and maybe have as a reference guide. He's not going to have the international plastics coating on 3D printer plate handbook. I'm not sure that one of those exists.
JUDGE WEATHERLY: This quoted passage also seems to be using the word coating in its participle form as a verb rather than as a noun.
MR. GRISWOLD: Likewise, Cable, they talk about coating the plate.
JUDGE WEATHERLY: Yeah, that's --
MR. GRISWOLD: So, I don't think that Patent Owner's position that coating the plate is a --
JUDGE WEATHERLY: The claim requires a coating, a noun, right?
MR. GRISWOLD: A coating, correct. That's right.
JUDGE WEATHERLY: It's the noun form.
MR. GRISWOLD: But then, again, I would point out that Cable discloses coating as a gerund, right?
JUDGE WEATHERLY: Mm-hmm.
MR. GRISWOLD: And so, if we take a position that that's different somehow, then I think we have to account for the different

disclosure in Cable. The parties, up to this point, haven't taken that position.

JUDGE WEATHERLY: Okay.

MR. GRISWOLD: And to be clear, our position is, whenever it says a coating, or coating as a gerund, it means applying as a coating, not as a tape.

JUDGE WEATHERLY: I understand your position.

MR. GRISWOLD: Okay. So, apart from an expert who has been inconsistent, and this is Slide 43, the extrinsic evidence that Patent Owner has introduced into the record is an ancient book on -- about pipes, and --

JUDGE WEATHERLY: I don't consider 1976 to be ancient, just to be clear.

MR. GRISWOLD: It's 1976, you're right. My little sister is born 1976, so I'm right there with you.

JUDGE WEATHERLY: I'll have you know I was a high school sophomore in 1976, so --

(Laughter.)

JUDGE WEATHERLY: Be careful.

MR. GRISWOLD: Hey, as one ancient guy speaking to another ancient guy, right?

(Laughter.)

MR. GRISWOLD: But, I mean, you had pointed out that Osswald's textbook might not be relevant to the 3D printing art. I'd say this one is even further afield because it's not a general book. It's a book about pipes. The --

JUDGE WEATHERLY: It at least is using the word coating as a noun, though.

MR. GRISWOLD: Perhaps, perhaps. But again, I don't think

JUDGE WEATHERLY: It has that going for it.

MR. GRISWOLD: -- either party has taken the position that the gerund and the noun mean different things.

So, in Slide 49, there's also a reference to tape and coating in the background of the '660 Patent. And I think we have different interpretations of it, the Patent Owner and the Petitioner. The quote is: "The adhesive for the polyimide tape can burn off, damaging the coating." And it's basically saying that polyimide tape was bad. And POSITA knew that polyimide tape was bad at the time of the '660 Patent's submission.

I think that, at best, this sentence is unclear because there is no antecedent for the word coating in the background. It's just not really clear what the '660 Patent means the damaging the coating is. It could refer to a lot of things. You know, the adhesive is likely coated in the sense that we think of coating, Petitioner thinks of coating, to the tape. Maybe there's another coating on the build plate. I think that this might be an error. We just don't know what this sentence means. It's of little value.

I think, you know, if you take a step back, though, and you look at Cable, it uses the words coating and tape. It knew to use those words separately in its specification. It describes that its embodiment is made with coating. It doesn't ever say that its embodiment is made with tape.

And so, even if you take the position, Patent Owner's position that coating includes tape, it being a negative limitation, it encompasses the entire universe of things that aren't tape. And Cable, using separate words, describing its embodiment as coating and distinguishing tape in its background section, does it really only disclose tape when it's talking about

its embodiments? I don't think it's an instance of silence. I think that Cable is clear.

But you don't have to stop there because, of course, we presented obviousness. And it's clear from the '660 Patent and from other sources, including the 3D Printing Handbook, Slide 46, that tape can be a problem. Slide 46, the quote is: "Polyimide tape can be fairly tricky." And so, POSITA knew that tape wasn't an ideal solution.

There's a question about whether we can point to the AAPA to show the POSITA's knowledge as part of our motivation. In our petition -- or excuse me -- I think it's in our reply at page 16; we cite the Sanofi-Aventis v. Mylan case, a case that Kenneth and I were involved in.

I would also point out that the Qualcomm Apple case, 24 F.4th 1367 at 1376, it's a case we all know because it's the case that Ms. Vidal's memo was based on. It was the case that basically said what you could use AAPA for in IPR. It also describes that you can use AAPA for motivation. And it cites several cases below it.

So, if you're worried about pointing to the background as knowledge of a POSITA, I wouldn't be, and I encourage you to read those cases.

Slide 47, I'm starting to run short on time here. Slide 47, all right. We provide ample evidence that a POSITA knew of non-tape alternatives in the 3-dimensional printing space.

JUDGE WEATHERLY: Can you pause one moment? I'm going to stop the clock. I think we've lost Judge Ren. She's trying to get back.

(Whereupon, the above-entitled matter went off the record at 1:43 p.m. and resumed at 1:45 p.m.)

JUDGE WEATHERLY: Since you're back, I think we can go back on.

I don't know if, Counsel, if you're going to be able to figure out where you were and you pick up, but --

MR. GRISWOLD: I do remember where I was. Thank you, Your Honors.

JUDGE WEATHERLY: Excellent. You've got about a minute and a half left. As you know, you're free to extend the time, but I'll keep track of how far you go over.

MR. GRISWOLD: I won't go too far over.

JUDGE WEATHERLY: Okay. Thank you.

MR. GRISWOLD: So, if you're ready, I'm ready to go.

JUDGE WEATHERLY: I'm ready.

MR. GRISWOLD: All right. So, turning back to Slide 47, I was saying that we presented an obviousness ground based on Cable. I want to make the point that -- so Patent Owner suggests that we have an Arendi Apple issue, where we advance common sense to supply a missing limitation from the claim. That isn't the case.

The petition establishes, at page 26, that the POSITA knew of non-tape alternatives, but there is further testimony throughout that's cited. If you go to the underlying cite, the expert cites, in supporting his position, a POSITA knew of non-tape coatings, two, four, six, seven other references. So I think it's well established a POSITA knew of coatings.

As I said before, that AAPA and other evidence we put into the record shows a POSITA knew the problem with tape. And so, it becomes a classic obviousness case. We have a motivation to combine, and we have a

knowledge of the POSITA as established in the record.

JUDGE REN: Counsel, will you elaborate on your acronym APA for the record?

MR. GRISWOLD: Applicant Admitted Prior Art.

JUDGE REN: So it's AAPA?

MR. GRISWOLD: Yeah, AAPA.

And I'd also point out that the '660 Patent even concedes obviousness of non-tape alternatives. This is Slide 49. The '660 Patent says: "It may be obvious to a person skilled in the art that there exists a variety of coating methods and types of high-temperature polymer coatings that can be used to create a coating layer over the plate."

So, in a genus of two, with knowledge of the problem, and knowledge that you could coat in things other than tape, ask yourself: Is it really not obvious?

I'm going to hit, just briefly, the Comb Grounds. And I would point out very briefly in the Comb Grounds that Comb has this disjunctive list, and the case law is settled on how you interpret a disjunctive list. I think that the Patent Owner had criticized this, saying that we were applying claim construction principles to the interpretation of the specification. They read the first citation.

The second citation that we provided, SkinMedica, it is specifically about interpreting a disjunctive list in the specification. And it's a little not surprising that the same concept applies both to claims and interpreting the specification because SkinMedica cites to the Oxford English Dictionary for, among other sites, for the proposition that a list of -- a disjunctive list with the or in it is stating alternatives.

So I think, on its face, it's clear that Comb is disclosing tape and non-tape alternatives and using them differently. Comb, of course, describes its embodiments with the word coating, but we've --

JUDGE WEATHERLY: So the cases that you're citing and referring to, interpreting claims and "the specification", are those cases that are dealing with how to read the specification of a patent for which you're trying to interpret claims?

MR. GRISWOLD: Correct.

JUDGE WEATHERLY: And isn't that really distinct, that concept of that type of interpretation; isn't that distinct from how would a skilled artisan read a prior art reference in terms of what it taught or described?

MR. GRISWOLD: I would submit a skilled artisan knows the Oxford English Dictionary.

JUDGE WEATHERLY: I think I agree with you. I'm just trying to understand the degree to which the cases that the parties are citing inform the issue.

MR. GRISWOLD: And I think, if you look at SkinMedica, it's in the field of written description, which is asking what a POSITA would understand from the specification.

JUDGE WEATHERLY: Okay. All right. Okay. Yeah, I mean, I was always taught that or was disjunctive, so --

MR. GRISWOLD: We're lawyers. We're very good at it, but you can't --

JUDGE WEATHERLY: Well, that's how I've understood or unless it's -- unless context demonstrates otherwise, so --

MR. GRISWOLD: So, Slide 55, very quickly --

(Whereupon, the above-entitled matter went off the record at 1:51 p.m. and resumed at 1:54 p.m.)

MR. GRISWOLD: Okay. So I'm on Slide 55, and I'm going to say something briefly about the Comb/Tummala combination. We advanced two versions of that. First, that it would have been obvious to apply Comb's coating as a viscous gel based on Tummala's teaching, or that it would have been obvious to advance Tummala's gel coating in Comb's invention, and again, based on Tummala's and Comb's teaching.

Patent Owner has kind of two high-level responses that I want to hit really quick. Making a gel at room temperature out of polyimide, which is one of the polymers listed in Comb, would be difficult and impractical, and they cite some expert testimony about that, and the operative word there is making a gel. And the second point is the combination of Comb and Tummala does not teach a coating that supplies the adhesion limitations of Claim 1.

So, to the second point, I think it's really quick and easy. The combination based on Comb, making Comb's coating as a gel, the discussion about Tummala and what Tummala's coating is capable of is inapplicable.

To the first point, making a gel at room temperature, I think that that whole argument and the expert testimony is also inapplicable because it mistakes that what Tummala is saying. Tummala is saying that its polyimide coating is a viscous gel at room temperature. So, we're all familiar with Jell-O, right? You make Jell-O with boiling water. So it's difficult and impractical to make Jell-O at room temperature. But once it's made, and once it's a gel, it's a gel at room temperature.

And it's kind of the same thing with Tummala's coating. There's a

difference between making the coating at room temperature, which is the testimony that Patent Owner has put forward, and it being a gel at room temperature. And I want to draw that distinction so that when you go back and look at this, you see that.

Also, I'll point out that Dr. Hickner, our expert, provides, in detail, why polyimides like Comb's can be applied as a gel. He has corroboration, a detailed, like, seven-paragraph -- and this is seven paragraph, so it's over multiple pages, cited in the petition at pages 49 through 53. And if you want to compare Dr. Osswald, Patent Owner's expert's testimony on the competing point, which, again, I say is not relevant because it's talking to making gel, it's meager, and it's uncorroborated, and it's conclusory, and it's a single paragraph.

So, with that, I think I would rest on the briefing. I'm happy to answer any further questions that you have.

JUDGE WEATHERLY: I don't have any right now. Judge Ren or Kaiser?

(No audible response.)

JUDGE WEATHERLY: Okay.

JUDGE REN: I don't have any.

MR. GRISWOLD: Okay. Then I'll surrender the podium to Stratasys.

JUDGE WEATHERLY: Okay. I have you going over 7 minutes, so 13 minutes remaining for rebuttal time.

MR. GRISWOLD: Certainly. Thank you, Your Honor.

JUDGE WEATHERLY: For your own planning purposes.

And before -- Patent Owner, as you're coming up, how much time

do you prefer to reserve for rebuttal, if any?

MR. KAPADIA: We'll reserve five minutes.

JUDGE WEATHERLY: Five? Okay. And I'll give you the same advice about making sure you tell us which slide you're on.

MR. KAPADIA: Absolutely.

JUDGE WEATHERLY: I refer to it as record hygiene or transcript hygiene. It makes the transcript a lot easier for us to use if we want to try to reconstruct the experience for ourselves later.

MR. KAPADIA: Understood, Your Honor.

JUDGE WEATHERLY: So, whenever you're ready, you can begin, and I'll start the clock.

MR. KAPADIA: Thank you, Your Honors. Aashish Kapadia on behalf of Patent Owner, Stratasys, Inc. I'm going to start with one of the issues related to claim interpretation.

If you go to Slide 8 of our demonstratives, that's Exhibit 2019. This is about the construction or the interpretation of without damaging in the claim. And it is Patent Owner's position that Petitioner introduced this argument too late in the process. Petitioner has this in its reply.

Now, I understand the Petitioner to be saying today that it was simply a response. But of course, this was all raised with respect to the Cable reference, which they themselves decided to bring in their petition. I don't see any reason why they couldn't have addressed why Cable's residue is or is not within the scope of the claim for damaging, and they failed to do so in their petition.

Their expert in this proceeding -- this is also on Slide 8 -- has said that the claims have an ordinary and customary meaning. So, even if the

Board were to consider Petitioner's belated understanding of the claims, I think if you go to Slide 10 of our demonstratives, you'll see that the intrinsic record makes it pretty clear that damaging includes leaving behind residue. So, without damaging means you would not have residue.

The first thing is in the claim itself. So, the functions of the plate that is coated with the polymer is twofold in the claim. The first one is facilitating adhesion to the 3D object during printing, and the second is permitting removal of the 3D object, once the 3D object has formed and cooled, without chemically removing the polymer coating from the 3D object and without damaging -- and what's highlighted here is without damaging the polymer coating. The claim also states without damaging the thermally conductive plate or the 3D object. So the claim makes clear that the plate has to still function. Those are the functions of the plate.

Now, if you look at the specification --

JUDGE REN: Counsel, let me stop you. I'm on page 10 of your demonstrative, and you cite Exhibit 1001, which is the '660 Patent. And how does that support your position that removal without damaging require that this plate still function?

MR. KAPADIA: Yeah, so the claim itself tells you what the plate has to do. So it's facilitating adhesion and permitting removal. And without damage, the Patent explains in the specification without damaging relates to these functions. If you damage the plate, then you can't either facilitate adhesion or you can't permit removal. So you end up with problems, essentially, where you can't use the plate for its intended purpose in 3D printing.

So that is why damaging -- the claim doesn't say, for instance,

without damaging means these functions, but it tells you what the functions are of the plate. And without damaging would be understood, I think, as a plain meaning that you would have to maintain those functions.

Both parties, by the way, I should mention, I think agree that without damaging, as a result, the plate has to be reusable. So, if you have a plate that, you know, is damaged, then you have to toss it, essentially, because you can't facilitate adhesion; you can't permit removal.

JUDGE REN: Counsel, that -- please explain to me how that's consistent with your position that you took on page 32 of the Patent Owner Response. And on that page, you say that, "A POSITA would have understood that Cable fails to teach that the object can be removed without damage, such that there is no visible residue."

So, how does this visible residue come into your discussion about this functionality? I feel like you talk about this visible residue at some part of the response, and then you kind of take a different position. And if I'm hearing you correctly, you are yet taking a third position, saying that without damage means this plate has to be reusable. That, I don't recall reading in your briefing.

MR. KAPADIA: So, on page 32, the residue that's visible to the eye, that discussion relates to the Cable reference specifically. And, as we explained in our surreply, when you have visible residue that's left on the plate -- I think Dr. Osswald also covers this in his declaration -- that residue results in a plate that cannot be used. He does make that clear. I believe I can get a citation for you if you'd like. I think we have a slide on it.

So, if you look at Slide 13 of our demonstratives, it has an excerpt from paragraph 104 of Dr. Osswald's declaration. That residue prohibits the

plate from being reused, and Dr. Osswald explains that you have to remove that residue in order to reuse it.

JUDGE WEATHERLY: So, the plate can be reused?

MR. KAPADIA: But you have to use chemical or mechanical means of removal, which gets to another aspect of the claim.

JUDGE REN: Page 13 of the demonstrative is what you were saying about figures in the Cable reference. So I thought what we're doing here is understanding what damage is, and that's why I hear you say that page 32 of the Patent Owner Response is about what your position is about what Cable does or does not teach. So, looking at page 13 of your demonstrative, what you're saying is that in these figures of Cable, because there's a visible residue, there is damage.

MR. KAPADIA: That's correct, yes, because that visible residue -- I mean, all we have from Cable are, you know, this circumstances are these photos. It shows you visible residue, and it's called out, you know, in the figures that Cable provides. That visible residue represents damage to someone of skill in the art. That residue would have to be removed either through chemical or mechanical means. And therefore, as the plate sits in that image as shown, it is not without damage. It has damage to it.

JUDGE REN: What do you say to paragraph 85 of Cable's explicit teaching that says: object 700 was not damaged after the removal from the substrate 702, and a minimal amount of residue 800 remained on the substrate 702 after the removal of the object 700. This explicit text in Cable at least tells me that Cable teaches a removal without damage despite some residue.

MR. KAPADIA: So, a couple of things here with Cable's

disclosure. The first is that Cable is expressly saying not damaged after removal. Cable doesn't have any description of whether there's damage during removal.

One of the things that Dr. Osswald explained in his declaration, again paragraph 104, is that the residue -- what does this visible residue represent? It is actually a portion of the object that's left behind. That portion of the object both represents damage to the object but also damage to the substrate. So this portion of this paragraph 85 of Cable is only talking about damage after removal.

Now, I don't know what Cable is talking about there, whether he's talking about something in the object being damaged because it has a structural issue or something. It's not clear. But what's clear from the image is that there is residue. And I think Cable, to some degree, recognizes that by describing separately a minimal amount of residue.

Now, Cable may not believe that residue is damage. I don't know. He doesn't define what he means by, you know, damage versus residue. But what is clear is that the residue remains, and that Dr. Osswald explained, when you have that residue that remains, you have an issue. Your plate has damage. You need to remove that residue, and you have to do that using mechanical or chemical means.

JUDGE WEATHERLY: How do you read the claims requiring that you can't use mechanical or chemical means to --

MR. KAPADIA: So, the claim --

JUDGE WEATHERLY: -- reinvigorate the conductive plate, like bring it back to a state in which it can be used again?

MR. KAPADIA: If you look at --

JUDGE WEATHERLY: I mean, I see the claim. The claim talks about permitting removal of the 3D object, once the 3D object has been formed and cooled, without chemically or mechanically removing the polymer coating from the 3D object.

MR. KAPADIA: So, in this circumstance, Your Honor, there's two things in play. There's the polymer coating and the 3D object. The two things are stuck together. The residue represents a portion of the 3D object.

JUDGE WEATHERLY: Okay.

MR. KAPADIA: So, in order to have removal of the 3D object, which is what the claim says, Dr. Osswald is explaining you'd have to use chemical or mechanical means to remove that portion of the object, the residue that's left behind. So that's why the phrase that you mentioned, without chemical or mechanically removing the polymer coating from the 3D object, is implicated when you need to use chemical or mechanical means to remove the residue that's left behind.

JUDGE WEATHERLY: But it's about -- the phrase in the claim relates to removing the coating from the object, not removing residue of the object from the plate.

MR. KAPADIA: The residue of the object is a portion of the object, so you can't say that the residue is separate from the object itself. They're -- it's a part of the object. And the claim makes that pretty clear. It says permitting removal --

JUDGE WEATHERLY: So the residue becomes the residue when the object is removed from the plate, correct?

MR. KAPADIA: Yes.

JUDGE WEATHERLY: And you're saying that even in that state,

the residue remains to be -- remains as part of the object.

MR. KAPADIA: That's correct. It's printed as part of the object, and it's left behind. And the claim explains it's --

JUDGE REN: And it is your -- go ahead, please.

MR. KAPADIA: The claim explains the 3D object, you know, removal of the 3D object, printing of the 3D object in the preamble. I think it's pretty clear that the 3D object needs to be removed as a whole, not just a portion of it.

JUDGE REN: And your position is that this visible residue necessarily always results in some kind of destruction of the function of the tape, and then, therefore, there's damage.

MR. KAPADIA: Yeah, yes, Your Honor. And I think at Slide 11 of our demonstratives, we talk about the specification and the examples that are provided of damage. And one of those examples are air gaps that create an uneven surface. Residue represents an uneven surface. The residue that's left behind, that portion of the plate, is at a different level than the rest of the plate, so it --

JUDGE WEATHERLY: No, it's not. The plate is the plate.

A plate with residue on it is just a plate with residue on it. The level of the plate hasn't changed just because it has residue on it.

MR. KAPADIA: If you want to reuse the plate, Your Honor, then that portion of the plate is no longer in the same position as it was before.

JUDGE WEATHERLY: No, the plate doesn't change position at all, ever. The plate remains the plate. The residue is some leftover 3D object that has to be cleaned off.

MR. KAPADIA: But it's that residue is affixed to the plate. And

so, therefore, if you're reusing the plate, then that object is implicated.

JUDGE REN: So you want us to essentially construe damage to mean without visible residue, which directly translates to some kind of destruction of the function of the plate -- pardon me -- of the coating, so to speak? And you're saying that's the plain ordinary meaning of the phrase damage?

MR. KAPADIA: Yes, Your Honor, without damaging in the claim requires that the plate, you know, function for its intended -- what its functions are, and --

JUDGE WEATHERLY: To what extent does the '660 Patent specification address this concept of residues that are left on the plate and avoiding them or --

JUDGE REN: Resurrecting --

JUDGE WEATHERLY: -- resurrecting the functionality of the plate by removing residues after an object has been removed? Does it address that concept at all?

MR. KAPADIA: It does. And the way it addresses it is by specifically talking about how do you avoid residue. How do you not have a situation where you have residue left behind? This is on Slide 12 of our demonstratives.

There, the patent describes thermal contraction and differences in thermal contraction. And says, when you have a significant difference in thermal contraction between the plate and the object that's printed on it, when the object completes printing, essentially finishes, and it cools off, the object will pop off the plate. And it's not due to flexing, which is what Cable is talking about. In this circumstance, popping off is due to the

differences in thermal contraction. Under that circumstance, the entire object is being removed from the plate, not just a portion of it that leaves behind residue.

Now, it is true that the specification doesn't use the term residue here, but it is describing to someone of skill in the art that if you follow these teachings, this is how you get an object to be removed from the plate without having residue.

JUDGE WEATHERLY: I don't see any mention of residue in this passage on Slide 12.

MR. KAPADIA: It doesn't use the word residue.

JUDGE WEATHERLY: Or even an implied concept of residue. I understand it to be just talking about the 3D object itself, the printed object that is, and the plate have different, like, a different coefficient of thermal expansion. It doesn't say that, but a difference in thermal contraction is -- implies, you know, discussion of the, like, the coefficient of thermal expansion for the two materials, that they differ. And so, that as things cool off -- you print it hot. Then things cool off. One contracts more than the other. So they tend to -- the 3D, the printed object tends to be released from the plate.

But it doesn't say anything at all about whether residue is left behind or not left behind. Now you're asking us to read this claim as if -- it just --

MR. KAPADIA: It does say that the entire --

JUDGE WEATHERLY: -- feels incredibly strained way of reading these, the words that are in your claim.

MR. KAPADIA: It does say that the entire object pops off. It

doesn't say a portion of the object pops off.

JUDGE WEATHERLY: Well, yeah, the entire, but all of this is dependent upon the context. I mean, like the photo that -- from Cable presumably is a photo of an object, like the desired result. My object got released from the plate, and the fact that some residue was left behind doesn't mean that I didn't get my "entire object". I mean, all of --

JUDGE REN: Counsel, I feel like you are actually trying to construe the claim based on the prior art teaching. So you're asking us to construe damage of Claim 1 of the '660 Patent based on what you think Cable teaches based on this visible residue.

And let me just kind of point out that on page 12 of the demonstrative, you cite to column 37 to 40 of the '660 Patent. And when we read this citation that you have in context, column 5 of the '660 Patent, it's talking about precisely what Judge Weatherly was saying that there is certain coefficient of thermal expansion that are at play during the printing process, giving rise to this lack of an even flat surface.

So to say that this supports some kind of visible residue -- because, let's be clear, that's what your Patent Owner Response said, that there must be a visible residue -- I think that is really trying to construe this term damage beyond its ordinary meaning.

MR. KAPADIA: I believe Your Honor is referring to lines 15 to 25 of column 5; is that correct?

JUDGE REN: I am referring to column 5, about line 32 to 40, because you cite 37, lines 37 to 40, and you kind of leave out the beginning of the paragraph, which talks about coefficient of thermal expansion of the plate versus a different coefficient of expansion, thermal expansion for the

build plate, which is a higher coefficient. So that's where I'm referring.

MR. KAPADIA: Okay. Lines 32 to 37?

JUDGE REN: Well, your quote is from 37 to 40. I'm just reading the entire paragraph that this 37 to 40 is in.

MR. KAPADIA: So I think the example there is related to deformation of the plate. And while deformation of the plate itself is a different, I guess, behavior than having a plate with a portion of the object left behind in the form of visible residue, the description at line 37 to 40 says, resultingly, the surface for printing a 3D object, which is the surface of the removable plate, will become uneven, and hence, the printing process doesn't have a flat surface to print on. So that is explaining why an uneven surface is a problem. Deformation is an example of that problem the patents exhibit, but it's not the only way in which there is a problem.

JUDGE REN: Which the patent itself does not discuss, which, your position is, that it must leave a visible residue. I understand your position.

MR. KAPADIA: Yes. And I think that if the Board is looking for an express discussion of residue in the patent with respect to damage, then I think it turns the plain meaning on its head, and it's basically requiring a patentee to describe all embodiments, all examples, when that's not at all what the plain meaning means. So I think someone of skill in the art, as I think Dr. Osswald made clear, would understand the damage -- without damage doesn't mean that you leave behind visible residue.

JUDGE WEATHERLY: What does he cite for that proposition?

MR. KAPADIA: So, I believe he was, in that discussion, he was talking about --

JUDGE WEATHERLY: No, I literally mean does he cite something in support of that testimony?

MR. KAPADIA: I don't believe he cites additional reference, Your Honor.

JUDGE WEATHERLY: Okay.

MR. KAPADIA: I want to briefly turn to Slide 15 of our demonstratives about the district court claim constructions. It is certainly true, as Petitioner had pointed out, that the district court has issued a claim construction order. But I do want to point out that Petitioner took not one but three inconsistent positions here in claim construction, including on the terms that we've been discussing today: without chemically or mechanically removing the polymer coating from the 3D object.

JUDGE WEATHERLY: Is this notion of inconsistent positions addressed in your briefing at any place?

MR. KAPADIA: Yes, it's -- we address it in our surreply, and our point is that Petitioner, at no point, has, for these two terms, has ever explained why do they say that it's indefinite at the district court, and yet, here, today, I believe they said it has a plain meaning.

JUDGE WEATHERLY: Okay. What are we supposed to make of that inconsistent position, if anything?

MR. KAPADIA: There are a couple of things. The first is that, with respect to the proper interpretation of the terms that they say without damage means X or Y, their position, is -- with the district court, was that there is no meaning at all about this. So I don't know how they can argue, for example, whether visible residue is within the scope or not. I think their only position can be, if they want to be consistent, is that we don't know, and

that's it.

JUDGE WEATHERLY: If they want to advance the indefiniteness position here, that's what they would have to do, right?

MR. KAPADIA: Yes, and then just --

JUDGE WEATHERLY: But they can't advance an indefinite -- they can't ask us for a ruling on indefiniteness because we can't address that concept.

MR. KAPADIA: That's correct, Your Honor, but --

JUDGE WEATHERLY: And the district court didn't say that it was indefinite either, right?

MR. KAPADIA: That's correct, Your Honor.

JUDGE WEATHERLY: And in the petition -- I'll save it for Petitioner. So what, if anything, are you asking us to do?

MR. KAPADIA: So, if the Board determines at the end of the day, after hearing from Petitioner, that they have taken inconsistent positions, that the Board can decide to terminate this proceeding if it so chooses.

The other thing I'll mention in regards to this is with regards to the thermally conductive plate, a term that the district court did find indefinite. Now, Patent Owner disagrees with that finding, but I will note in the district court that --

JUDGE WEATHERLY: You mean you take an inconsistent position here?

MR. KAPADIA: No. That we disagree with the district court's position.

JUDGE WEATHERLY: So you take an inconsistent position here in front of us.

MR. KAPADIA: No, no, Your Honor. It's the same position.

JUDGE WEATHERLY: Yes. The district court says it's indefinite. You say it's not. That's an inconsistent position.

MR. KAPADIA: It's inconsistent between us and the district court, yes.

JUDGE WEATHERLY: That's right.

MR. KAPADIA: Yes.

JUDGE WEATHERLY: Okay.

MR. KAPADIA: The other thing I want to point out, though, is that our understanding is that the Petitioner has taken the position that all of the claims are indefinite as a result of that decision, not just Claim 1. So that would be another thing for Petitioner to address, maybe here today before the Board, and if it is --

JUDGE WEATHERLY: I think it more likely to be something that Petitioner should address with the district court.

But this is a very interesting type of indefiniteness that this district court has preliminarily determined. I mean, it's simply a magistrate's report, so it hasn't yet been -- as I understand it, it hasn't been adopted by the district court judge who supervises the magistrate. It's probably still subject to briefing.

MR. KAPADIA: Yes, Your Honor.

JUDGE WEATHERLY: Are all of the -- are you involved in the district court litigation, as well?

MR. KAPADIA: Yes, Your Honor.

JUDGE WEATHERLY: For Patent Owner? And is Petitioner, are you involved there as well?

MR. GRISWOLD: Yes, Your Honor.

JUDGE WEATHERLY: Yes? Okay. So carry on there, is what I'll say, but I find it to be a very interesting concept of indefiniteness, such that my brief understanding from having read the district -- the magistrate judge's report is that it's indefinite because it could mean any, because all materials are thermally conductive. In a way, that almost reads that limitation, “limitation”, out of the claim. Anything can constitute a thermally conductive material.

So it does present a very interesting legal issue, one that I don't think the Board has jurisdiction to address. But it doesn't interfere, in my view, with our charge, which is to figure out whether the claim reads on the prior art that the Petitioner has adduced.

So, and pardon me for asking this, you -- the record is too thick for me to figure out where exactly in the surreply you raised this concept about inconsistent interpretation position -- or claim construction positions, but have you expressly asked the Panel to terminate the case in your surreply?

MR. KAPADIA: We did not expressly ask the Panel to terminate the case.

JUDGE WEATHERLY: Okay.

MR. KAPADIA: We would do that through a motion if appropriate.

JUDGE WEATHERLY: Okay. This is a concept that's -- I'll just describe it as in flux here at the Board. So I'm not sure what the Panel is empowered or not empowered to do, in particular, in light of not having received any specific request for relief.

MR. KAPADIA: Okay, Your Honor. The other thing I'll mention,

I guess, on the district court order is that, while the district court did disagree with Petitioner's positions on the latter two terms, without chemically or mechanically removing, and without damaging, as I understood Petitioner's arguments before the district court for the term that we discussed earlier, the thermally conductive plate, where I guess thermally conductive doesn't have a meaning there, with respect to without chemically or mechanically removing and without damaging, their position was essentially, as I understood it, was that there is no direction.

So this isn't a question of a range of possibilities or something, but rather that there is no direction. I think that type of indefiniteness argument is more problematic because they are required to tell the Board how the claim should be interpreted as part of the application of obviousness. So it's quite difficult to understand how they could argue that a claim is obviousness -- is obvious if they haven't understood the claim to --

JUDGE WEATHERLY: Well, so far, it hasn't been hard for me to understand how they've argued it. And I don't think it's really been hard for you to understand how it's been argued either.

MR. KAPADIA: No, I understand their arguments in this court.

JUDGE WEATHERLY: Yeah.

MR. KAPADIA: I don't understand how they can take that other position in the other proceeding.

JUDGE WEATHERLY: Well, apparently, the district court judge didn't understand it either because he rejected it -- or the magistrate, I should say, rejected it. We'll see whether the district court judge agrees with the magistrate's report, or maybe we -- we probably won't see it, actually, but you will certainly see if the district court judge agrees or disagrees with the

report. And I'm sure you'll help the district court judge either agree or disagree, depending on which side of the issue you're on.

MR. KAPADIA: Absolutely, Your Honor.

JUDGE WEATHERLY: I say you collectively to everyone here in the room.

MR. KAPADIA: All right. Well, let me turn to another issue that I think the parties disagree on fundamentally, and that is whether tapes and coatings are distinct, or whether coatings commonly refer to tapes. So, if you look at --

JUDGE REN: Counsel, could I just kind of ask you to explain your non-enablement argument before you go into the separate issue, that you were saying that Cable is non-enabling?

MR. KAPADIA: Yes, Your Honor. So, just to be clear, there are two arguments that we advance in our Patent Owner Response. The first one is that Cable doesn't teach what the claim recites. And then the second issue is enablement. So just be -- whether or not Cable is enabled doesn't resolve the ultimate issue on obviousness, of course.

But with respect to enablement, Cable's issue is that it has imposed on himself -- or on itself a bunch of restrictions, if you will. So Cable talks about surface energies, solubility parameters, Hildebrand's solubility parameters. And Cable tries to show how his -- he has a method, basically, of selecting materials, as I understand it. And when he tries to show that in his examples, he came up short. He wasn't able to show that there was removal without residue or that there wasn't damage as a result. And part of that is referenced in Cable itself.

I think the parties also disagree on the interpretation of this portion

of Cable, where Cable is talking about Example 1. And Cable says, essentially, I don't actually know. There are lots of theories around this. There are different theories. It could be related to temperature. It could be related to surface energies. It could be related to other things, but this didn't -- Example 1 didn't work. And Example 2, 3, and 4 also didn't work for different reasons. But ultimately, Cable doesn't know why it didn't work. And so, when you're left with that, you have to consider the reference as a whole.

Now, if Cable had only said, you know, I want to give these general teachings; I'm not going to show how my invention works, maybe we would be in a different discussion. But Cable very clearly said here are my examples of my invention. And yet, he wasn't able to figure out why it wasn't working correctly. And what we're left with is an invention, when you read it on the claims as Petitioner has, that doesn't -- it isn't enabled. It doesn't mean necessarily that the '660 Patent has to spend as many paragraphs or columns as Cable did. It just means Cable has imposed his own restrictions on his invention.

Now, that was Cable's choice to do that. And they only rely on Cable to enable Cable's disclosure. They don't rely on another reference to say, oh, actually, Cable meant something different, and this is how you know because you can look at this prior art reference. They didn't do that. It's all based on Cable itself, of them relying on enablement.

So it is true that there is a presumption of enablement, but that's not a heavy presumption or a high presumption. And here, Cable's own teachings have rebutted that presumption because he doesn't know what's going on. He ran these experiments, and he ultimately concluded I don't

exactly know what's going on; I can hypothesize, but I don't know.

So what Dr. Osswald provided in his declaration is, look, if you look at Cable, it provides you with all of these parameters. It provides you with the surface energy. It provides you with the solubility parameters. And there are different ranges. But if you follow all of those teachings, as Cable did in his own examples, you don't get the result that leads to the claims of the '660. You end up with something different.

And so, if you do have to go find how do you get to what the claims of the '660 Patent have, you would have to do an experimentation. So, of course, the standard is undue experimentation. But what Dr. Osswald explained is you follow all of these parameters. You do permutations of all of it. There is no guidance in Cable of how to get to that result. Cable only tells you with these ranges, and those ranges were already applied in his example. So it's unclear how do you get to this result when Cable doesn't actually provide you with the guidance.

JUDGE WEATHERLY: We may have just lost Judge Ren. I'm pausing. We can go off the record for a moment while I sort this out.

MR. KAPADIA: Okay.

JUDGE WEATHERLY: Judge Ren, you're back? Did you drop off for a moment?

JUDGE REN: I think so. I think it's just a brief, intermittent disconnect. But could we -- is everybody online? Could we go back onto the record?

JUDGE WEATHERLY: I paused this for a moment when I saw your screen go dark, so --

JUDGE REN: Oh, thank you.

JUDGE WEATHERLY: So we're off the record at the moment, but I wanted to find out if you believe that you -- do you need us -- I don't know how much you missed if you --

JUDGE REN: I don't think I missed anything.

JUDGE WEATHERLY: Okay.

JUDGE REN: I heard Counsel saying that Dr. Osswald testifies that a skilled artisan could not follow Cable's disclosure to get to the results of the '660 Patent.

JUDGE WEATHERLY: Okay.

JUDGE REN: Which puzzles me because we're not --

JUDGE WEATHERLY: Well, let us make sure to go back on the record. I don't want --

(Simultaneous speaking.)

JUDGE WEATHERLY: I had taken us off the record.

JUDGE REN: Okay.

JUDGE WEATHERLY: I'm sure that what you've been saying is actually of record, and we can maybe retroactively be back on the record from the beginning of your comment. I'll --

JUDGE REN: It's nothing earth shattering.

JUDGE WEATHERLY: The Court Reporter is telling me that's fine. He can correct the record after we -- post hoc. So I'll start the timer again.

JUDGE REN: And thank you for bearing with these connection issues.

JUDGE WEATHERLY: Yeah.

JUDGE REN: So, yeah. So, I wanted to ask, Counsel, you know,

we're not talking about any kind of surface energy or anything in Claim 1 of the '660 Patent. What we're talking about is that we need to somehow remove these recited parts without damage, and damage is given its plain ordinary meaning, as I think the parties all agree. And so, Counsel, are you asking us to ignore Cable's clear teaching at paragraph 85, saying that this object 700 was removed, was not damaged after the removal? So that's my question. We should ignore these plain teaching of Cable and go with Dr. Osswald's testimony?

MR. KAPADIA: So, two things in response, Your Honor. The first is that, of course, you have to consider Cable's teachings, but you have to consider them as a whole. You can't consider them in isolation. And so, when Cable is talking in paragraph 85 about a particular example, I believe, in his disclosure, then you have to consider that example together. When you look at the figure that Cable has provided, it shows residue on there, and we've talked earlier about why that residue represents damage.

Now, with respect to Cable's statement about damage, earlier, I talked about Cable is only talking about damage after removal. He doesn't talk about whether there was damage during removal. Presumably, there was damage during removal because the residue is left behind. Again, the residue is a part of that object that has been separated from the rest of it. So that's how I read Cable's teachings there.

So I don't think you ignore it, but if you read them altogether, then what you're left with is that there is not damage after removal, but there looks to have been damage during removal, as evidenced by the --

JUDGE WEATHERLY: Isn't it possible that Cable thinks that that's not damage? And that your expert thinks that it is?

MR. KAPADIA: It's possible that Cable did not consider it to be damage, but Cable did not say that. It did not define what it meant by damage.

JUDGE WEATHERLY: But it said it wasn't damaged.

MR. KAPADIA: It said it wasn't damaged after removal.

JUDGE WEATHERLY: Yeah.

MR. KAPADIA: But it did not --

JUDGE WEATHERLY: And your expert looks at the photo and says, well, there's residue left behind, so Cable is lying; it was damaged.

MR. KAPADIA: He said there was damage during removal, that's what it represents.

JUDGE WEATHERLY: And you're asking us to interpret the word damage more consistently with what your expert says damage is, rather than what the prior art reference says.

MR. KAPADIA: No, Your Honor. I think, again, you have to read Cable as a whole. You can't read one statement in isolation when it's -- when he's discussing his example. You have --

JUDGE REN: Well, there's nothing in Cable that says it doesn't work. When we read it in a whole, it doesn't say what your expert says. You're asking us, actually, to ignore Cable and read your expert testimony in place of Cable.

JUDGE WEATHERLY: Yeah.

JUDGE REN: Where we're not reading Cable as a whole, we're not reading Cable in isolation here; we're just ignoring it.

MR. KAPADIA: I submit it's --

JUDGE REN: And let me go back to Claim 1. Claim 1 does not

require that kind -- this without damage like after removal, or are we back to claim construction here? Because it just says, you know, permitting removal after it's been formed.

MR. KAPADIA: Correct, Your Honor. So, permitting removal of the 3D object once the 3D object has been formed. So, if Cable is talking about damage after removal, that does not implicate Claim 1. But if there is damage during removal, as in part of the object is not removed, and it's left behind as visible residue, then during that removal, there is damage to the 3D object because it has been separated in two parts. Now, do --

JUDGE REN: And that's Dr. Osswald's position.

MR. KAPADIA: That's correct. And Cable does not say something to the contrary. Cable is just talking about after removal.

JUDGE REN: And then it says there's no damage.

JUDGE KAISER: Counsel, aren't there -- sorry. Can we talk about why it would be that Cable would care about what happened after removal? I mean, that paragraph 85 of Cable is talking about the removal of the object from the build platform or whatever that surface is called there. Why does after the removal from the substrate mean only after all of removal has been completed? I mean, like, are they alleging that this object never got damaged until the end of time?

MR. KAPADIA: I don't know exactly what Cable is referring to with after removal. I do know that objects have structural integrity, that they may be used for something where structural integrity matters. And I believe removal could impact that structural integrity. So it's entirely possible that Cable is talking about the fact that the way in which he performed removal does not result in a damaged product afterward in terms of structural rigidity

or strength or some other metric that he hasn't discussed in more detail.

JUDGE KAISER: Well, then, doesn't that play into the sort of claim construction issue, if you want to call it that, here about what does damage mean? Does damage mean rendered unfit for purpose, or does it mean, you know, leaving some portion of oneself behind somewhere else, or does it mean something else altogether? I guess, how do we resolve this without going down the claim construction rabbit hole?

MR. KAPADIA: I think you have to consider the plain meaning of the claim just as the district court did with respect to without damaging. But I don't think that the patent, as far as I recall, has a description about damaging or without damaging that's referencing the structural integrity of the part. I believe the damage was all about having the part be removed completely, as I discussed earlier on the differences between thermal contraction, for example, where the object pops off. So I think that's the plain meaning here of without damaging.

And I think, with respect to damage that might occur after removal, whether it be structural or otherwise, I think that's a different issue than, you know, whether there was damage in the process of removal.

JUDGE KAISER: All right. Thank you.

JUDGE REN: Counsel, let me just ask. You heard Petitioner's attorney giving an analogy saying that he leaves a fingerprint on the remote control, and that's a residue. And he analogized that to be lack of any kind of damage to his finger or to the remote control. What do you make out of that analogy? Should we go with it?

MR. KAPADIA: I don't think the analogy works, Your Honor, and the reason why is, on that remote control, whether that surface is -- the

use of that surface is so that you can hold a remote control. Now, if you had, I suppose, if you had a lot of, I don't know, oil or something on your hands and all of that oil transferred onto a remote, then you couldn't hold it anymore, maybe that would be damaging to the remote. I don't understand the analogy with respect to remote.

But what's clear in the patent is that if you damage the plate, then you can't use it for printing. The patent talked a lot about the problems with polyimide tape, where that would result in a problem with the tape where you can't use it for printing, and that's a form of damage.

So, when you talk about a remote control and leaving a fingerprint behind, I don't think that affects the function of that particular remote. And so, I think it's a different issue altogether than leaving behind residue on a plate because you don't have to print anything on that remote, and you don't really care about is the remote level or not. It's immaterial.

JUDGE WEATHERLY: Primarily, what I hear you saying is that the meaning of damage is context dependent.

MR. KAPADIA: Yeah, I don't think you can read damage outside the scope of what this claim is talking about with respect to 3D printing and the polymer-coated plate.

JUDGE WEATHERLY: And unfortunately, the patent doesn't do a very good job of setting the context. The prior art reference doesn't really discuss the concept of damage in a -- against an express context. All of it's implied.

MR. KAPADIA: I do want to turn -- I see that I've got about ten more minutes. I want to turn to the concept of coatings and tapes and whether they are, you know, different or the same.

I think the first thing is that, if you look at the claims, I think, as Judge Weatherly had pointed out, the claim says wherein the coating is not a tape. That indicates -- if coatings and tapes are separate, then I think that that element is probably superfluous, which is, of course, not how claims are read. But I think the specification makes it clear that coatings were commonly referring to tapes, as well as the fact that, with respect to 3D printing, that was the case. I don't think that the background of the '660 Patent at lines 54 to 56 -- this is Slide 22 of Patent Owner's demonstratives.

JUDGE WEATHERLY: Which columns? Lines 54 to --

MR. KAPADIA: Column 1, lines 54 to 56. "Further, the adhesive of the polyimide tape can burn off under high temperatures, releasing fumes and damaging the coating." I don't think it's unclear what that coating is referring to. That specific paragraph is talking about polyimide tapes. And there is no suggestion that there is some other type of coating here. It is specific to that tape. So I think that's, again, another indication that coatings commonly refer to tapes.

In Slide 23 of Petitioner's demonstratives, in 3D printing, uncoated surfaces were commonly compared to surfaces coated with tape. And of course, coated pipes for plumbing or whatever are not 3D printing, but it just shows that polymer tapes were used in other fields, as well.

The other point I'll mention -- this is also on Slide 23, is that tapes were used as a laminate. And the reason why that matters is one of the arguments that Petitioner has, that Cable's disclosure in relation to a laminate arrangement somehow indicates a non-taped polymer coating. That's not at all true. The record indicates that tapes were used as laminates. And that's -- and Dr. Osswald, I believe, testified that that is how you would interpret

Cable's teaching of a laminate.

The other thing, on Slide 24, the references that Petitioner brought up in its reply brief, Exhibits 1043 and Exhibit 1042. Exhibit 1043, that's I think a patent to Mannella. It just provides non-limiting examples of coatings. It doesn't list tapes, but it doesn't say these are what coatings indicate across the board. Yeah, there could be coatings that aren't tapes, but that's not at all -- you know, there is no sort of definitional explanation here where coatings and tapes are distinct. So just because you hear coating, doesn't mean that it's not a tape coating.

And the same thing goes for Dr. Osswald's handbook. That's Exhibit 1042. He says that one type of coating that's coating a liquid film could be done on adhesive tapes. Now, Dr. Osswald testified, and this is in our surreply. He testified, when he was asked in deposition several times, that adhesive tape includes a coating, and that's why it's considered a coating, because you apply that tape to a surface. So, if you have a tape, and you coat it with a liquid film, apply that tape; that's a coating. And that's why tapes and coatings are not mutually distinct. When you talk about coatings, it includes tapes.

I think Petitioner's Slide 40, I believe, says that coating refers to this disclosure here. And again, there is nothing here that says coatings and tapes are distinctive.

So, if we look at, you know, Ground 1A through 1C, this is the Cable reference. Cable does talk about painter's tape in its -- in paragraph two. Cable, again, is about a method of selecting materials. Cable does not say that tapes have problems, and I'm providing a solution to tapes. That's what the '660 Patent says, that Kapton tape has -- polyimide tapes have

problems, and I am providing a solution. That's what the inventor recognized. There is no disadvantage to tapes in Cable.

And the other aspect of Cable is Cable doesn't tell you how its coating is applied. It just says that you have a substrate, and you make -- made by, manufactured by a coating. Applying a tape is not necessarily -- we think -- we might colloquial think of tape as, I don't know, our child applying tape to something. That's not what we're talking about here. These are industrial tapes that could absolutely be applied in a manufacturing process. So, when you say manufactured by a coating, that doesn't teach a non-tape-based coating. That's just telling you that you are using a coating and that very well could be a tape.

Now, I think Petitioner, their second argument relates to obviousness. This is on Slide 28 of Patent Owner's demonstratives. And with respect to obviousness, the key thing that they talk about time and time again is that the drawbacks of polymer tapes, like Kapton tape, were well documented. I've looked through their evidence. I don't understand, actually, what they're talking about here. I think they're going a little further than what the evidence actually says. So let me walk through that briefly.

Exhibit 1011 is one of the references they refer to. That's discussed here on Slide 28. It is true that that reference says it can be a little tricky to apply Kapton tape. But then, that same reference says, I have a nifty way of doing this, and I'd ideally layer Kapton tape when I apply it. So this isn't a motivation to not use Kapton tape. This is, if anything, a motivation to use layering of Kapton tapes in that reference.

The '660 Patent itself, this is in our surreply, but I think we disagree with Patent Owner that the '660 Patent -- it does not acknowledge

that the problems with Kapton tape were well known. That is distinctly something that the inventor had recognized.

The other reference they point to, I think, are Exhibits 1018 and 1019. I don't -- you know, what's interesting about those is that some of the portions they're talking about in their slides, they didn't cite to or talk about those portions in their briefings, so I assume they're responding to something we've said in our surreply. I'm not exactly sure.

But even if you look at those references and the portions they have in their slides, Exhibit 1018 and 19, it's not even clear that represents what was already known in the art. I think there was maybe a misstatement by Petitioner that, what was it, Dr. Hickner -- I think they said something to the effect that Dr. Hickner knew or remembered the solution in those references. That's nowhere in his declaration does he say that he knew of those or that he used them or was familiar with them.

What is odd, also, is that Exhibit 2019, if you look at exhibit -- or Petitioner's exhibit list, Exhibit 2019 lists the date of 2015. That's what they put in there. So I don't understand how that's prior art if we're talking about the '660 Patent here.

So, putting all that aside, even if you were to consider them, in Exhibit 1018, it talks about kind of a solution that I don't think any of us have really talked about here today, and that is, it has, as I understand it, it has a tape, and then on top of that tape, you don't print in that solution. What you do is you put a slurry of dissolved ABS in acetone, and then you print on top of that. And then that reference is saying that solution doesn't work, while ours is better. Well, that's not at all what is specific to the '660 of describing the problems, the drawbacks of tapes. That's a different issue

altogether.

So, if we look at all of the evidence about whether there are problems with Kapton tape that are well known, that really boils down to are you going to consider the background of the patent, which doesn't say that this is what was known in the art but rather describes it as in the present tense where it's the inventor's recognition of a problem, then what you're left with is a motivation to combine based on the inventor's motivation. And I think that's clearly wrong.

You can rely on admitted prior art in some senses, but it is not appropriate. I don't know of a case where you can directly rely on the patent to provide your motivation when it's not clear from the patent that that is anything but the inventor's own motivation. In fact, I don't know what would be left of hindsight if that were appropriate.

If we turn to Slide 29, it also discusses the differences with tapes in Cable. So, you know, a POSITA would use tape if it corresponded to the materials selected according to Cable's teachings.

I'll -- I think there is a slide, Slide 31, on the silence in the reference. I take it from Petitioner's argument today that they're not arguing that just the disclosure of coatings without more somehow teaches a non-tape-based coating. They're relying on some other sort of teaching to supplement that.

The last thing I'll touch on for Cable is the obviousness theory that they put forth in their reply. I think you heard a fair amount about predictable choices between, as I understand it, tape-based coatings and non-tape-based coatings, that they're two options here. If that is their theory, I would like to hear where in their petition that theory was put forth. Their

obviousness theory in their petition was different. It was a motivation based on, you know, whatever they thought was in the art, whatever they thought was in the references themselves. So it was a different theory, and we discuss this in our surreply on pages 14 and 15.

The other point I'll mention is that they have some background references that they point to, Exhibit 1018, and they say this is that shiny example of where we apply a non-polymer-based coating in the art to a substrate, and what they left out is the substrate in that reference. It's a background reference. That substrate is a heated glass plate. And their combination for Ground 1 is a metal plate. And there's no teaching; there is no testimony from any of the experts that that solution would work for a metal plate. And so, I don't actually understand how that is a clear indication of a teaching related to a non-polymer-based coating for the plate that they've put forth in their combination.

JUDGE REN: Counsel, could I take you back to page 27 of your demonstratives? And there, on the right-hand side, you quote, I believe this is from Cable, paragraph 2, and you highlight that there is a variety of materials that could be applied to the surface of substrate. And these materials include painter's tape, glass, garolite, fiberglass, among others. So this portion that you quoted, for example, glass, that is a non-tape coating, correct?

MR. KAPADIA: As I understand that description in Cable, it is mixing coatings and plates. So, painter's tape, I think, would be a coating because it doesn't -- last time I used it, it didn't have much structural integrity, but glass, garolite, fiberglass, among others, I think that would describe the plate itself. So you may have a homogeneous plate made out of

glass with no coating on top. So that may very well be what Cable is describing there. I think Cable has an example of using, I want to say it's Tritan plastic, where the whole plate is made of it, that there's not just a coating on top. So, again, that would be distinct from the --

JUDGE REN: Is it possible that when the teaching of Cable saying those materials, including painter's tape, glass, et cetera, that the glass refers to coating rather than the entire material of the substrate?

MR. KAPADIA: It's possible. I don't know if Cable provides more direction. I think this might be the only reference to tape, at least in Cable, so it might very well be the only reference to glass, garolite, fiberglass, et cetera.

I will note that I don't know, you know, about garolite or fiberglass, but glass certainly is not a polymer coating. So I don't think there is any teaching here in Cable of a polymer -- non-tape polymer coating.

I see that I'm well past my time, so I'll just reserve whatever is left for rebuttal.

JUDGE WEATHERLY: I have you going over about a minute and a half. We'll call it a minute. So you have four minutes remaining for rebuttal.

MR. KAPADIA: Thank you, Your Honor.

JUDGE WEATHERLY: Petitioner, I have you 13 minutes remaining for rebuttal.

MR. GRISWOLD: Your Honor, unless you have questions, we're going to rest on these.

JUDGE WEATHERLY: I don't have any questions. Judges Ren and Kaiser? Judge Kaiser is shaking his head no.

JUDGE REN: I don't have any questions.

JUDGE WEATHERLY: Okay.

MR. GRISWOLD: We thank you, Your Honors.

JUDGE WEATHERLY: Patent Owner, you're back on for four minutes. I presume that you don't have anything further either, given that there was no rebuttal from Petitioner, but --

MR. KAPADIA: That's correct, Your Honor.

JUDGE WEATHERLY: Okay. Judge Ren, do you have anything you want to say before we adjourn?

JUDGE REN: Thank you for asking, Judge Weatherly. I think I understand the parties' positions well enough after the hearing.

JUDGE WEATHERLY: Okay.

JUDGE REN: Yeah.

JUDGE WEATHERLY: Okay. Then we are adjourned, and off the record.

(Whereupon, the above-entitled matter went off the record at 2:58 p.m.)

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