

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

JUUL LABS, INC.,
Petitioner,

v.

NJOY, LLC,
Patent Owner.

IPR2024-00160 (Patent 11,497,864 B2)
IPR2024-00161 (Patent 10,334,881 B1)

Record of Oral Hearing
Held: February 25, 2025

Before CHRISTOPHER M. KAISER, KIMBERLY McGRAW, and
Avelyn M. Ross, *Administrative Patent Judges*.

IPR2024-00160 (Patent 11,497,864 B2)

IPR2024-00161 (Patent 10,334,881 B1)

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The above-entitled matter came on for hearing on Tuesday, February 25, 2025, commencing at 1:00 p.m., via video teleconference.

P R O C E E D I N G S

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JUDGE MCGRAW: Good afternoon, everyone. This is a virtual consolidated oral hearing being held in IPR2024-00160, involving U.S. Patent Number 11,497,864, as well as IPR2024-00161, involving U.S. Patent Number 10,334,881, between JUUL Labs, Inc. and NJOY, LLC. I am Judge Kimberly McGraw. Also appearing is Judge Christopher Kaiser and Judge Avelyn Ross.

Before we start, I will run through a few guidelines for our virtual hearing. The court reporter is preparing a transcript of today's hearing. Although the cases are not consolidated, a single transcript will be prepared and entered into both proceedings. To help ensure a clear transcript for the court reporter, please identify yourself before speaking and please mute yourself when you are not speaking.

We also ask that you clearly identify each paper or exhibit or demonstrative slide to ensure clarity of the record. Each of the judges have access to the entire record, but it may take us a moment to pull up the relevant paper exhibit. If any of you encounter any technical difficulties, please let us know immediately. And then also if, at the end of the hearing, the lead attorneys could remain on the line to give the court reporter a chance to ask for any clarifications of spelling or any term that they may need, we would appreciate it.

Also, please note that this proceeding is being streamed online to the public, and although I do not expect any confidential information to be discussed, if at any point in time the parties do wish to discuss confidential information, please let us know ahead of time.

1 Per the hearing order, each party has 75 total minutes of time to
2 argue their case. Petitioner has the ultimate burden of establishing
3 unpatentability, and as such, will present first. Thereafter, Patent Owner will
4 respond to Petitioner's argument. Petitioner may reserve rebuttal time to
5 respond to arguments by Patent Owner, and Patent Owner may also request
6 to reserve time for a brief surrebuttal. Please remember that your arguments
7 should be limited to only those arguments previously presented in your
8 briefs.

9 We see that Patent Owner has filed objections to certain of
10 Petitioner's demonstratives. We ask that Patent Owner and the parties
11 withhold any objections they may have until it is their time to speak. It is
12 likely that the Board will reserve ruling on these objections, but if you do
13 want to maintain the objections, please let us know at the beginning of your
14 speaking time.

15 There is no official clock keeping track of the parties' time, but I
16 will try to keep an eye on the clock and give each party warnings as to the
17 time when you're near the end of your allotted argument time, but we do
18 urge the parties to keep track of their time, as well.

19 So let's begin with appearances. Who is appearing on behalf of
20 Petitioner?

21 MR. DOKHANCHY: Good afternoon, Your Honor. Reza
22 Dokhanchy on behalf of Petitioner, JUUL Labs, Inc. With me in the room is
23 Mr. Bill Meunier, Mr. Adam Rizk, and Mr. Paul Weinand.

24 JUDGE MCGRAW: Okay. And who is online on behalf of Patent
25 Owner?

26 MR. DESAI: Hello, Your Honor. This is Anish Desai for Patent

1 Owner, and I have to see who is on. Sorry. I had hit all the non-video. So
2 also on the video for Patent Owner are Sutton Ansley, Matt Sieger, Tom Yu,
3 and Elizabeth Weiswasser. And also from NJOY and Altria, it's Geoffrey
4 Michael, Michael Klein, and TJ Edlich.

5 JUDGE MCGRAW: All right. Petitioner, do you wish to reserve
6 any rebuttal time?

7 MR. DOKHANCHY: Yes, Your Honor. At this point, I would
8 estimate 20 to 25 minutes of rebuttal time. I'll try to keep it close to that for
9 the affirmative presentation, so around 50 minutes for the first portion.

10 JUDGE MCGRAW: Okay. Petitioner, you may begin when you
11 are ready.

12 MR. DOKHANCHY: All right. Good afternoon, Your Honors.
13 Again, Reza Dokhanchy on behalf of Petitioner, JLI, and I have our
14 demonstratives up here on the screen. Please let me know if you can't see
15 them. On Slide 2 here, we've got a summary or an overview of what I'm
16 going to be speaking about today. This will generally cover both IPR
17 proceedings, given the similarities between patents -- the '864 patent and the
18 '881. We'll generally be going through the elements using language of the
19 '864 patent. Where there are any differences, we'll point those out.

20 First, we'll go over a summary of the arguments. I'll probably skip
21 the patent overview unless there are any questions, and we'll get into Ground
22 1, which is based on the Xia reference. That's how we're pronouncing the X-
23 I-A reference. That's the basis of Ground 1, and then we'll get into Ground
24 2, which is based on the Wang reference.

25 So in terms of the summary of the arguments, we believe that each
26 base reference individually invalidates all claims. It's our belief that Patent

1 Owner's distinctions between its claims and those references contradict the
2 positions it is actively pursuing before the ITC regarding infringement and
3 domestic industry, so i.e. the scope of the claims that they're asserting in the
4 ITC. We believe they should be held to those. If they are, the base
5 references invalidate on their own. If they're not held to those constructions
6 and the -- and/or the Board disagrees with our positions on those issues, then
7 obviousness becomes a question to address.

8 And in the obviousness analysis, there are some very simple
9 modifications that we've explained, and our expert has opined in that have
10 very obvious clear benefits that would improve the devices of Xia in a way
11 and would meet the claim limitations in the event those references don't on
12 their own.

13 Their arguments are -- fall into one or two categories, sometimes
14 both. 'They' being Patent Owner. Often, they mischaracterize the
15 modification. We'll see some instances of that. They put up a straw man
16 and say, this argument fails, but that's not the argument. And they point out
17 technical drawbacks that are minor. In some cases, incorrect in the first
18 place, and essentially, misread the law on obviousness, which they take to
19 mean any drawback means the modification is not obvious, but that's not the
20 case law. The law is very clear that any design has pros and cons, and
21 modification to have pros and cons are certainly within the scope of
22 obviousness.

23 So skipping the summary of the mentioned material, we have these
24 separate slides, as you can see here on Slide 10, to help guide. If anybody
25 wants to find where certain arguments are, just given the fact that there are
26 two petitions, two patents at issue, so this will sort of help organize things,

1 but let's jump into Xia alone. This will apply to both IPR petitions, see some
2 of the basic components here. The controller on the left, that's the power
3 source side. You've got the -- what they call the generator, which is the
4 cartridge side on the right, and the components as claimed in the cartridge.

5 So what are Patent Owner's arguments regarding Xia alone?

6 Again, applying to both IPR petitions. So the first one is that Xia is three-
7 piece, but the claims restricted to two-piece e-cigarettes, and what that
8 means is they say that the cartridge portion, one of the two pieces, has to be
9 a unitary portion -- a unitary piece, but that conflicts with the claims, it finds
10 no support in the claims, and actively conflicts with the specification, and is
11 wrong about the merits on Xia.

12 So let's -- as I pointed out earlier -- it's on Slide 15 -- these are --
13 this is the fundamental structure of Xia. It's a figure that is actually in Xia as
14 is. On Slide 16 here, we have the key pieces that resided in the claims. This
15 is the cartridge; the generator; having in 1a1, housing; having interior and a
16 solution holding medium, and that's the yellow colored portion on the right;
17 the combined liquid storage chamber; and second liquid storage chamber 10;
18 and then the heating element is located there. You can see it on the left. The
19 housing is this outermost structure, which comports with NJOY's
20 construction of housing, and so you see our identification of the elements.

21 So what's Patent Owner's arguments? This is on Slide 17. So
22 again on the top here, we have the figure that's actually in Xia. This is
23 Figure 2. They show the generator as a unit and that's the cartridge. They
24 have concocted this image on the bottom, which it doesn't exist in Xia. It's a
25 piece meal pulling from different images. They are using quotation marks,
26 first cartridge and second cartridge. Those don't exist in Xia. They are

1 apparently quoting themselves. And that's not claim language either, so I'm
2 not sure where that comes from, but their allegation is that you can separate
3 the generator. So the generator could be pulled apart, and therefore, it's not
4 a cartridge, but -- and so -- sorry.

5 The short answer is that's -- that conflicts with the spec and finds
6 no basis in the claims. This is their argument, just to have the citation here.
7 The claims are directed to a two-piece design, that's incorrect. Xia is a
8 three-piece design. I don't think we need to address it, but also incorrect.

9 So looking here on Slide 19, this is Exhibit 1001 of the '864 patent
10 within the 160 proceeding and note all these citations. If they don't
11 explicitly which proceeding, it's the 160 proceeding, the '864 patent. So this
12 is the '864 patent, Claim 1, Exhibit 1001 on Slide 19. There's nothing here
13 limiting the structure of the cartridge in terms of number of pieces. It simply
14 says a cartridge comprising these elements. It doesn't say two-piece, it
15 doesn't say three-piece, it doesn't say anything about a number of pieces.

16 So then we looked at the specification. Is there any support there?
17 No. In fact, it says the exact opposite. The summary of the inventions is the
18 cartridge, which is reflected in the claims as a cartridge, same cartridge, can
19 be manufactured as a multi-piece assembly. So there's nothing saying it has
20 to be a unitary piece.

21 Going on to Slide 21, we see in the specification, this is Exhibit
22 1001 in Column 6, lines 20 to 24. What they say is the embodiment of --
23 that's claimed in the claims, that's Figure 2, while Figure 2 wouldn't lose any
24 ambiguity about the multi-piece construction. Not only can it be multi-
25 piece, the resulting assembly, which is a cartridge of Figure 2, may be able
26 to be unassembled by the end user. So even if they're right -- and I'll jump

1 back to 17, Slide 17 -- even if they're right about the separability, it doesn't
2 matter. It's explicitly covered in the specification to the extent that it gets
3 imported to the claims, which have no limitation. It's a covered
4 embodiment.

5 And they agree. You know, in other places -- this is in the context
6 of a different argument, but I think it's very telling that they actually agree
7 the specification makes clear that the housing is not necessarily a unity
8 construction. And so if that's the case for whatever argument they wanted to
9 make at the time, that should be the case for Xia.

10 JUDGE MCGRAW: If I may interrupt, isn't the issue not that the
11 cartridge can be in two parts, but that the claims require the cartridge to have
12 a housing and the housing has to hold both the solution holding medium and
13 the heating element. Isn't their argument that there is not a single housing
14 that holds those?

15 MR. DOKHANCHY: Yes. I think they've argued it a variety of
16 ways, but there is a single housing that houses all the required elements. So
17 this is in Slide 16, Your Honor. The housing that we've identified, the
18 stainless steel shell, arranged on the outer surface of the controller and the
19 outer surface, in this case, and more relevantly, on the outer surface of the
20 generator. It is that outermost structure that contains everything within it.
21 So it contains the exclusion holding medium we've identified on the right
22 there in yellow, and it contains the heating element on the left there, so there
23 is that housing.

24 JUDGE MCGRAW: Which slide are you referring to now?

25 MR. DOKHANCHY: This is Slide 16.

26 JUDGE MCGRAW: Thank you.

1 MR. DOKHANCHY: And you can find this in our petition at
2 pages 31 to 35. So if I proceed, the second argument from Patent Owner on
3 Xia alone is that the first aperture is not in the housing, and so this is here on
4 Slide 24. Our first aperture is identified. It is inside the cartridge, and their
5 allegation is they can't be inside the cartridge. However, that conflicts with
6 their ITC positions, which they should be held to.

7 On Slide 25 here, we have the Patent Owner's response, explaining
8 their argument. The correct construction of the housing term in the first
9 aperture is that the aperture has to be literally in the housing and our
10 identified first aperture is not a housing aperture, but that's not the claim
11 language and under their read, isn't required. And so how we think the
12 Board should be analyzing this is sort of two sides of the same coin.

13 Under their Patent Owner's ITC infringement, domestic industry
14 allegations, which I'll put up on the screen in a moment, you can look at it
15 either of two ways. The way the Board dealt with it in the preliminary
16 ruling, in the institution decision, is that the first aperture does not need to be
17 in the housing. Under their read in which they point to apertures that are not
18 in the outside structure. Under their read, that would be correct.

19 Alternatively, the Board could find that the internal -- any internal
20 structure that further contains an internal component is housing of that
21 further internal component. And therefore, the apertures we have identified,
22 which they have criticized for not being in housing actually are in housing
23 under their view, because those further internal components in which the
24 aperture literally resides houses further components.

25 So here on Slide 27, we have, just briefly, the Board's construction
26 that the term housing having a first aperture is construed to encompass

1 aperture as they're located within the first end of the housing, but the term
2 does not require that the first aperture be located in the housing itself.

3 And I'm going to jump down to Slide 31. These are their current
4 ITC contentions. What we have here is the JUUL pod that they accuse of
5 infringement in the ITC, and on the left is the complete JUUL pod, which is
6 what they allege to be the cartridge of the claims. And on the right is an
7 image that they took, a photograph where they pulled off the mouthpiece,
8 which on the left is that black sort of cap looking piece that is securely on
9 there and intended to be used that way. They pulled it off and what they're
10 showing is an internal second aperture, and that's what they call the claimed
11 second aperture. So on the right, it's the tank and the tank cap. And on the
12 left, it's the tank, the tank cap, which the aperture sits, and further, the
13 mouthpiece that the user puts their mouth on and through which the air flows
14 to reach the user.

15 So you can see quite clearly here, NJOY is asserting that internal
16 apertures that are not part of the housing, not part of the external housing,
17 satisfied the claim requirements for a second aperture, and the same thing
18 should be true of the first aperture. So when they're looking at Xia and
19 criticizing our aperture read for being internal, they've done the same thing
20 in the ITC, exactly the same thing, and so they should be held to the scope of
21 the claims that they've argued in the ITC. And we saw at -- there are
22 numerous pieces of evidence in the slides. I'm just going to go over like half
23 of them, but happy to talk about any of them.

24 Here on Slide 33, we see the VUSE Ciro device that they allege
25 embodies the claims for purposes of domestic industry in the ITC. And
26 here, the air flows in the device at the top and goes around what's called a

1 positive pin. So it doesn't come in that side. It comes in the top and goes
2 around the positive pin, which therefore, you know it's internal, because
3 otherwise it would come in the side. So it goes around the positive pin,
4 converges in the middle, and then continues on through the device, so that is
5 the first aperture that they allege satisfies the claims and you see it here on
6 the right.

7 This is the Patent Owner's response. They point to that aperture.
8 The gold line indicates the housing. The red line indicates the positive pin.
9 As you can see, it's internal, and they say that this internal positive pin meets
10 the claim limitations. So they should -- again, they should be held to that.
11 And it's not only -- I'm now jumping to Slide 28. It's not only in the --

12 JUDGE MCGRAW: Before you move on, what -- why should
13 they be held to that? Are you arguing some kind of estoppel argument or
14 can you clarify why they need to be held to arguments made in other
15 proceedings?

16 MR. DOKHANCHY: I think it would lead to conflicting results.
17 If they are not held to those arguments, that's their position. They're Patent
18 Owner and they are telling one tribunal what the claims mean, and it's a
19 simple amount of fairness and argue that they be held to that and not be able
20 to bend the claims like the case law says, (INDISCERNIBLE) so that they
21 can argue it one way for infringement and another way for validity. It
22 should not only be the same, both for validity and infringement, but across
23 tribunals, they shouldn't be able to tell one body that is only addressing
24 validity, You can read this very narrowly, even though we told another
25 entity the exact opposite.

26 JUDGE MCGRAW: And I see one of your slides cited to an ITC

1 decision. Is that ITC decision in the record?

2 MR. DOKHANCHY: I'm sorry. Which slide -- oh, this. This
3 opinions is not in the record; however, it was cited by the Petitioner in their
4 surreply, and so we took them sort of at their word that it's, you know -- it's a
5 public document and it's fine to cite that way, so it's really in response to
6 them.

7 JUDGE MCGRAW: By the Patent Owner, you mean?

8 MR. DOKHANCHY: Sorry. Did I say Petitioner? Yes, it was --

9 JUDGE MCGRAW: I just want to keep the record clear.

10 MR. DOKHANCHY: I appreciate that. Thank you. Sorry for
11 that. It was cited by the Patent Owner in its surreply and so we're simply
12 responding to that. They seem to think it's fine to cite public documents
13 without making them exhibits. Happy, obviously, to submit that, but no, it's
14 not -- it is not currently an exhibit.

15 However, the same allegation can be found in the exhibit on the
16 right. That's 1033. The citation is at 2, if you look at pages 1 and 2 of
17 Exhibit 1033. It's the same thing. It's their identification of the cartridge. I
18 chose this image on the left because it's a little bit clear because it has the
19 internal kind of diagrams, but if you look at -- I'm happy to put it up -- but
20 1033 at 1, there's the identification of the cartridge and you can see the
21 plastic mouth cap that's demonstrated on the left there, and they won't
22 dispute that that's their contention. It continues to be to this day. But if
23 you're looking for something in the record that shows the mouthpiece as part
24 of the cartridge, the alleged cartridge, it's 103301, Exhibit 103301.

25 And the next point is that it's not only in a parallel proceeding
26 where they're arguing that internal structures can be housing and internal

1 apertures within those structures are fine in terms of meeting the claims.
2 They're arguing that here, and so as we just talked about in their cartridge
3 construction, they say that the item -- we have identified the outermost
4 structure of the generator on the left here in Slide 29. They said that outer
5 structure does not house the heating element. Only the inner-structure with
6 the black lines that's inside the cartridge -- indisputably inside the
7 cartridge -- houses the heating element. So they have said that internal
8 structures that further comprise, further house elements, are housing of those
9 elements.

10 And I asked their expert -- so your definition is on the right of
11 Slide 29, Exhibit 1035, Column 60 -- excuse me -- page 60. I asked him, so
12 your definition of housing is the outside structure containing device
13 internals, and so I asked him, well how is it that you can point to something
14 on the inside of the generator as being housing, and he said, you can put it --
15 meaning the structure -- deep inside of a product and it would still be
16 recognized as the housing of that internals. He said, again, we see nested
17 housings often.

18 And so I asked, so you can have a structure that's housing, even if
19 it's not the outermost structure then, for example, in Figure 2 of the
20 generator. And he said, yeah, I'm certainly aware of a lot of products that
21 have nested housings. So therefore, on Slide 30, we extend their logic. It's
22 not even an extension. It's the same logic. Then they're arguing about the
23 first aperture fails because they have said that internal structures can be
24 housing, setting aside that their construction says outside structure. Their
25 view is that it's outside structure of the component being discussed.

26 So then this structure we have identified in which the first aperture

1 literally sits is housing under their view, and that's how they are defining the
2 claim scope, not only in the ITC, but literally here. And so they are
3 incorrect that the first aperture is not in the housing if they're held to that
4 interpretation that they're putting forth here.

5 The next point is on the word 'end'. I don't think this is something
6 they really focus on, so I'll only address it if the panel wants to, but
7 otherwise, I'll save it for rebuttal and see if they touch on it, but sort of
8 similar arguments. Okay. So the third argument regarding Xia is that the
9 passageway has obstacles and now they say of a certain size and therefore, is
10 not central and axial. So this is on Slide 39, our identification of the
11 passageway in green. Yes, it has obstacles in it and air flows around those
12 obstacles.

13 The Board preliminary said that that's fine, obstacles are fine, but
14 under their allegations in the ITC for domestic industry and for
15 infringement, that that construction is correct. And so, you know, here's one
16 place where we see -- when I say there are allegations in the ITC, here's one
17 place where we see that.

18 JUDGE MCGRAW: To keep the record clear, could you please
19 refer to the slides when you are moving along? Thank you.

20 MR. DOKHANCHY: Sorry, Your Honor. Slide 41, this is Exhibit
21 2022 and 2036, in which they are depicting their -- they being the Patent
22 Owner -- depicting their infringement theory for the domestic industry
23 alleged product, the VUSE Solo G1. So the blue lines are the air flow, the
24 air flow comes in the middle, it goes around this large object and goes
25 around the heater, and they say that that's fine. That has a central and axial
26 air flow passageway, and you'll see, as relevant to their proposed

1 construction, this object is bigger than the heater. It diverts air flow more
2 than the heater.

3 Now, their construction is incorrect for a number of reasons. It has
4 no basis anywhere in the intrinsic record or elsewhere, and I'll get to that in a
5 second, but their construction actually conflicts with their own arguments in
6 the ITC and not only there with the VUSE Solo, but it conflicts with their
7 arguments for the VUSE Ciro. This is another product -- this was also the
8 subject of allegations from their predecessor interest. NJOY is making the
9 exact same arguments in the ITC that the VUSE Ciro embodies and
10 infringes the claims, and you can see here that the air flows around the
11 obstacles, and in fact, flows around obstacles that divert the air flow more
12 than the heating element.

13 So that blue circle, sort of on the right of the left image, is the
14 heating element, and it diverts, the obstacles being positive pin in a silicone
15 base, divert the air flow more than the heating element. Again, their
16 construction is wrong, but at a minimum, it conflicts with their arguments in
17 the ITC. This is Slide 43. The previous slide was 42 that I mentioned
18 regarding the VUSE Ciro.

19 Slide 43 simply establishes -- I don't think they'll dispute this --
20 that they made the same arguments leaving Patent Owner in the ITC
21 regarding the VUSE Ciro, that FUMA did identify the same air flow
22 passageway and ordered the same obstacles, et cetera. Slide 44 has the
23 relevant constructions which say nothing about -- well, we'll see their
24 construction in a second, but they are asking you to further modify this
25 construction that they agreed to in the ITC. It doesn't say anything about
26 obstacles or obstacle size.

1 And so again, if -- this is Slide 45 -- if their infringement theory
2 regarding the VUSE Ciro and the VUSE Solo G1 are correct that these
3 obstacles are larger than the heating element, which again, is irrelevant, but
4 even under their construction as permitted, then Xia validates literally.

5 JUDGE MCGRAW: If you could go back to that slide. And what
6 number is that slide? Is that 45?

7 MR. DOKHANCHY: It's 45, yes.

8 JUDGE MCGRAW: Can you clarify exactly where is the air flow
9 path in Xia? It looks like, from what you've drawn here, that the air flow
10 path is not central and axial throughout the entire length, from the first
11 aperture to the second aperture, because it touches the outermost parts of the
12 unit.

13 MR. DOKHANCHY: That's right. So the -- under NJOY's view
14 of the claims, there is a difference. This is reflected in the Middle District of
15 North Carolina opinion, which held the same. Under their view of the
16 claims, obstacles are fine. That means that the air flow path can be non-
17 central, but still the passageway, which is the claim language, is central.
18 And if your question is about '864, patent Claim 9, which is about the air
19 flow path, I can get into that nuance, but if your question is about why the
20 passageway is central, even though the air flow within the passageway is
21 non-central, the reason is that under their view and that of the Middle
22 District of North Carolina, that's fine. That the path is distinct, the air flow
23 path where the air flows is distinct from the structural element of the
24 passageway.

25 JUDGE MCGRAW: And what is your view? What is Petitioner's
26 view of that term?

1 MR. DOKHANCHY: So our assertions are only under their
2 allegations, so taking their claim interpretations, the claim constructions in
3 the ITC, to be applicable here, then Xia invalidates.

4 JUDGE MCGRAW: Now, isn't their argument that some
5 obstruction is possible, but not a large obstruction? So in other words, a
6 smaller obstruction would be permissible and there would still be an air flow
7 passageway that extends central and axial, like from one aperture to the
8 other. But if the obstruction is very large, then the air flow passageway
9 would not be central and axial.

10 MR. DOKHANCHY: Yes. They have made that argument. I'll
11 go to that. I think it's the next slide. So this is Slide 46. That is their
12 response that the passageway may include small obstacles, but Xia's liquid
13 storage is large, and they state that obstructions must not divert the air flow
14 any more than the heating element. So I want to jump back a little bit.
15 Again, that conflicts with their ITC positions. If you look at Slide 41, this is
16 the VUSE Solo G1. That obstacle in the middle, it's a PC board, it diverts
17 the air flow more than the heating element.

18 Same thing with Slide 42. This is the VUSE Ciro. Those
19 obstacles, the positive pin around which those yellow arrows depict the air
20 flow, those depict the air flow more than the small blue circular heating
21 element. So again, they're still not being consistent, even with their second
22 attempt at an explanation. They're still not even being consistent with their
23 ITC positions.

24 Moreover, even setting that aside, there's simply no basis in the
25 intrinsic record or in the Middle District of North Carolina case for this sort
26 of test, where small obstacles are okay and large obstacles are not. All

1 they're trying to do is get infringement while avoiding the prior art, but
2 there's no actual principle reason to do that. So this is Slide 47, Claim 1 of
3 the '864 patent. All it says is the air flow passageway extends centrally and
4 axially from the first aperture to the second aperture. It doesn't say anything
5 about obstacle size, what works, what's allowed and what's not allowed.

6 So what do they point to? This is Slide 48, the prosecution history.
7 Nothing in the prosecution history says anything about big obstacles or small
8 obstacles. The applicant said in Han, the air flows around this liquid
9 storage, and therefore, the passageway is non-central. But that has since
10 been modified by NJOY. That would support, seemingly, the notion that
11 there can't be anything in the air flow passageway that diverts the air flow.
12 It doesn't say because it's large, it is therefore a non-central passageway.

13 All they argued is that it forces air around the peripheral surface of
14 the liquid storage, and so by virtue of the air being non-central, the
15 passageway is non-central, and the examiner accepted that, but it conflicts
16 with NJOY's positions in the ITC. They can't say that obstacles are not
17 permitted due to the file history, but they are permitted when we're going to
18 accuse JUUL of infringement. So there's a conflict. You know, they should
19 be held to their later allegations, and there's nothing here to distinguish big
20 from small.

21 So on Slide 49, we have what they point to for the big versus small
22 distinction, and that's the Middle District of North Carolina grant. Again,
23 not intrinsic evidence, but it's also not what the judge's rationale was, more
24 importantly. So the judge's rationale was the difference between the air flow
25 passageway itself as a structural component and the air flow passage, which
26 the judge said could flow anywhere, could flow around anything.

1 And so the way the argument went here -- this is, again, on Slide
2 49, Exhibit 1015 -- the judge said RJR contended -- contends that the
3 presence of certain obstructions prevent the air from seeing a straight line,
4 thus the passageway itself is not central. But the judge said, RJR conflates --
5 what's wrong with their theory? RJR conflates the air flow's path within the
6 passageway, with the passageway itself, the air itself does not flow in a
7 straight line through the Ciro as it must travel across -- around certain
8 obstacles, but the Court's construction only dealt with the structure of the
9 passageway, not with the air flow path within that passageway. And so
10 this -- the distinction is between the flow and the structural element that
11 contains the flow.

12 The sentence that they've put in isolation and actually rewrite is on
13 the right here in the middle of Slide 49, where the judge held these
14 obstructions, meaning the silicone base and the position pin, do not alter the
15 direction of the air flow passageway any more than the heating element,
16 which is to say they don't alter the direction of the air flow passageway at
17 all, and neither does the heating element. It's not a comparison of degree,
18 and certainly not a comparison of degree of the air flow itself. They rewrite
19 the sentence to say, these obstructions don't alter the direction of the air
20 flow, deleting the word 'passageway', any more than the heating element, but
21 that's the critical distinction.

22 They're leaving out the key word and acting as if the language was
23 that the judge held that the obstructions don't alter the air flow any more than
24 the heating element obstructs the air flow. What the judge said was they
25 don't alter the direction of the passageway or the heating element, which is
26 to say not at all because the air flow in the passageway and the structural

1 element are two different things. That was the judge's rationale. There's no
2 support for this big versus small test, and if there were any doubt, the last
3 quote on page -- excuse me -- Slide 49 says exactly that. The positive pin in
4 the silicone base struck the air flow and altered the air flow's path, but not
5 the interior of the passageway. It has nothing to do with size. They're
6 obstacles. They don't alter the passageway. That was the judge's rationale.

7 And so, you know, now we're going to obviousness, so we only --
8 you all only need to address obviousness if you agree with any of the above
9 arguments, the arguments which we talked about from NJOY. So if you do,
10 now obviousness comes into play.

11 The supplementary references here are Wang and Fang and so
12 Slide 51 has a free flow review of the components of the two that we'll get
13 into. Slide 52 here has some ways that the references are very similar. And
14 unless I'm mistaken, they don't dispute a single one of these. We've got less
15 than nine items here that demonstrate how similar these references are, and
16 we'll get into the elements and specific disputes that they have, but at this
17 level, they don't dispute any of this.

18 They're vapor-based electronic cigarettes. They're handheld and
19 portable. They're from an early sort of trend in e-cigarettes, which is to
20 make them slender in shape and look like a cigarette, called cigalikes. They
21 use an internal heating element powered by a battery to vaporize the liquid
22 nicotine with the solution. The device is initiated by user suction, you know,
23 not a button. There are usable non-components, like solution-only medium
24 and said air flow pass, and they're all from the same region. They were filed
25 in the Chinese patent office within a year of each other, and in some cases,
26 even less than that, and by Chinese inventors. So there are clearly references

1 that a POSITA would consider very similar and might look to.

2 So here on Slide 53, we have the modification of Xia, in the event
3 the Board does not agree that Xia itself invalidates under Patent Owner's
4 assertions and positions in the ITC, and that is that on left here, we have Xia
5 as it is. So the air flow passageway flows through the solution-only
6 medium, which would meet the claims. The only thing is, it's not end to
7 end.

8 Well, it would be a very simple modification to extend it end to
9 end. On the right-hand side is the modification whereby the solution-only
10 medium surrounds the entirety of the air flow passage, not just part of it
11 around the heating element, which is on the left. And the only difference
12 really is that instead of going around the solution-only medium, the air goes
13 through it. There's only two options. Go around the solution-only medium
14 or go through it. It's not an even logic to go from one to the other.

15 And so we've provided a number of benefits and a number of
16 reasons why a POSITA would modify Xia in that way. It reduces number of
17 parts in the cartridge, as I'll explain in a moment, and moves the flaps that
18 provide an inferior suction detection mechanism. So removing those results
19 in fewer parts, thus reduce cost, which is a very important consideration in
20 this space if a customer is very cost-sensitive. It improves the air flow.
21 Their own expert admitted when you have an air flow path going right down
22 the middle, there are fewer pinch points, it improves the air flow. It has
23 improved temperature control. The vapor is sitting now in insulation,
24 essentially. The liquid will insulate the vapor from heating the exterior
25 metal structure of the cartridge and getting too hot on the user's finger, and
26 also from getting impacted by, you know, the outside world of cold air,

1 causing it to condense too much.

2 So through temperature control and because you have the liquid
3 storage around the outside instead of in the middle, there's more space for it
4 and it goes along the longer length of the cartridge. The next one is not so
5 much a benefit, but the reason that it's simple to make the modification, it
6 extends use to an already used structure. So as I mentioned previously on
7 Slide 53, that structure already exists in the area of the heating element.
8 This is simply extending it on the other side of the heating element, and
9 these components are simple. The results are predictable. There's not a lot
10 of complexity or experimentation that would be required to make this device
11 work.

12 So here on Slide 55, what are their responses? So the first one is
13 that our design or modification removes the liquid blocking plate. This is
14 their first argument in the surreply, presumably their strongest, and they say
15 our combination removes the liquid blocking plate, but again, as I
16 foreshadowed, they are misreading our modifications and putting up a straw
17 man. They're doing that here. We didn't say that the modification is to
18 remove the liquid blocking plate. In fact, we explicitly say it's to keep the
19 liquid blocking plate.

20 On Slide 57, our expert declaration at 98 to 99, paragraph 150, said
21 move the liquid blocking plate to the edge to allow for upgraded storage
22 capacity. And in a later paragraph, the liquid blocking plate keeps its
23 function, so their argument there is just simply mischaracterizing the
24 reference -- or excuse me, the modification.

25 Slide 58, they argue that the design in support -- or excuse me --
26 removes structures for leakage prevention and reabsorption. Again, not true.

1 We said that the modification uses a liquid impermeable cylinder through
2 the center. The liquid solution holding medium in Xia already has that item.
3 I believe it's 12, has a sponge inside of a heart structure. This is simply
4 using the same concept. Again, just air flow through the middle instead of
5 around the outside.

6 We also said he could use the solution-only medium of Wang. I
7 don't think they've argued that there's a leakage problem in Wang or a
8 droplet reabsorption problem in Wang. So when you use the solution
9 holding medium of Wang, that fiber that we'll talk about in a moment on the
10 right here would work fine and there is no leakage prevention problem or
11 droplet absorption problem.

12 Here on Slide 60, we're demonstrating that there is -- regardless of
13 which method you use that we propose, there is no reabsorption problem, so
14 you go -- and the reabsorption problem to further explain it, is that they say
15 there may be un-vaporized droplets that get into the heating chamber. They
16 don't get vaporized, and they get sucked through, that would reach the user.

17 There's no reason that it would happen any more in the
18 modification than it would in the original reference, and that you go on the
19 left, from a heating chamber that looks like it does on the left, where the
20 liquid storage guide needs reabsorption, to the one on the right where there's
21 reabsorption, again, you could use the solution-only medium of Wang,
22 which is a fiber. Certainly, that would absorb, or you could use the hard
23 separator embodiment of the modification, which would have this end here
24 for absorption. And in fact, the absorption would be better because as their
25 own expert says -- this is on Slide 61, Exhibit 10 -- excuse me -- 2022 at 123
26 and 1035 at 136, 11 to 15 -- their expert said that most of the cavity would

1 be stagnant. And you can see that he means that -- if you look at the Exhibit
2 1035 cite -- he means that the air would be swirling around in there and not
3 go through the heating chamber as readily. It would be sitting around that
4 would cause a greater chance for reabsorption. So I think it actually would
5 have better reabsorption capabilities. According to him, there is -- the air
6 stays in that chamber for a longer period of time.

7 So here on Slide 62 is the point that their argument about
8 reabsorption is purely an after the fact argument from their lawyers. Their
9 own inventor saw a problem with lack of reabsorption. They designed a
10 device -- you know, this is Figure 2 -- there doesn't have -- there can be a
11 wick in the claims and in Figure 2 or there could not be a wick.
12 Embodiments where there's not a wick, the only way for the liquid to contact
13 the oil is for the droplets to be sent to the passageway, but they didn't
14 provide a reabsorption mechanism, so it can't really be all that way that no
15 one would think of it. It's purely a lawyer driven argument without any
16 support of the factual record, and we know that it's not a -- in Slide 62 on the
17 right here, it's not --

18 JUDGE MCGRAW: Is there any evidence in the record besides
19 the patent itself -- the challenged patents -- that this would not be a problem?

20 MR. DOKHANCHY: So I think one place you can look to is the
21 Rise. This is our briefing of these sort of cheap, disposable cigarettes.
22 They're known to have leakage problems, but they have risen in popularity
23 greatly, but I think, you know, in detail on this point about reabsorption, you
24 know, other than what we just talked about in modification, sort of in the
25 concept in and of itself, I don't think there's anything from either side. Just
26 the two experts. One says it's fine and the other says it's not.

1 But if we're going to look to -- you know, again, they accuse this --
2 us in this argument of using the patent to invalidate itself. That's not what
3 we're doing. We're just simply rebutting their point that it would be a bad
4 decision. Well, their vendors didn't even comment on it. They didn't say
5 anything about improving this and fixing reabsorption. They came up with a
6 design that does the same thing, so it can't be that bad.

7 And, you know, we're going through the reasons why their
8 technical arguments are incorrect, but let's take a step back. That doesn't
9 take it -- even if they're right -- the slightly worse performing nature doesn't
10 take it outside the scope of obviousness. So this is mentioned at the outset
11 that the scope of obviousness is broad enough to encompass designs that are
12 both better in some way and worse in other ways, and I'll just provide some
13 case law cites that are in our briefing.

14 So we've got *Axonics v. Medtronic*, 73 F.4th 950 at 957. It says --
15 this is Federal Circuit 2023 -- a skilled artisan may be motivated to combine
16 particular features of different references, e.g. to secure some benefits, such
17 as being cheaper -- those are my words -- at the expense of others, such as
18 here, potentially, for its technical function.

19 Again, we disagree that they're correct about the technical
20 operation, but it ultimately doesn't matter because they're applying the
21 wrong standard. As long as there are some benefits and there's a reason to
22 do them and consider them, despite some drawbacks, it's still within the
23 scope of obviousness. I'll also point the panel to *Intel v. Pact*, 61 F.4th 1373,
24 again, Federal Circuit 2023. It's not necessary to show that a combination is
25 the best option. Only that it would be a suitable option.

26 And the market here has dictated, and their own expert agrees, that

1 these cheaper worse performing products, that's on Slide 63, Exhibit 1035 at
2 167 to 168 at 5, customers buy cheaper worse performing products. Again,
3 we're not conceding that they would operate worse, but even if they're right
4 about all their arguments, it's still something that a -- the modification
5 proposed is still an obvious variation that would be within the scope of
6 obviousness.

7 Okay. Impaired suction detection on Slide 64, that's their next
8 argument. This is incorrect. It actually improves the functioning of the
9 device on Slide 66. How Xia works currently is that the vibrating
10 diaphragm vibrates, so air comes in on the top and bottom of the generator
11 on the right side, goes through these flaps that are labeled 7, flaps vibrate,
12 and that vibration is carried to the other side of the controller where the
13 microphone 4 vibrates and generates the switching signal. That, as we'll see
14 in a second, is an inferior design, better design that uses a simple
15 conventional suction detection. That's how most of these devices operated
16 and still operate. So that's on Slide 67 that that's how Wang operates. The
17 pressure sensor 112 directly senses air flow pressure.

18 So why would you make the modification of the air flow sensing,
19 which again is how you get the result of the first aperture, then being pushed
20 all the way to the left of your cartridge. So even if NJOY is correct and
21 we're going to ignore their ITC contentions, that the first aperture has to be
22 literally in the housing, here's a reason to put it literally in the housing. You
23 get better liquid storage, you simplify the cartridge, you can get rid of these
24 sub-optimal flat-based suction detection approach. You just use a simple
25 pressure sensor, even on the battery side, just like Wang does. It's cheaper,
26 again, which leads to benefits that consumers like. So you can simply swap

1 it in the traditional pressure sensor for the vibration sensor. There's nothing
2 more complicated than that.

3 As we put in the last bullet here -- and they don't dispute this -- the
4 air flow already passes through the liquid blocking plate to get to the
5 cartridge side. So there is already air flowing from the cartridge -- excuse
6 me -- to the battery side, so there is already an air flow flowing from the
7 cartridge to the battery side. So there's nothing else that needs to be
8 changed. You just get rid of the flaps, and you sub it in with the vibration
9 detector, you sub that out, put in the suction detection, reducing the number
10 of components to the cartridge, simplifying the design, allowing for a
11 straight through path. All these benefits come from this modification.

12 And then it degrades vapor efficiency. They say less of the heating
13 element is going to get touched by the air flow. We disagree with that, and
14 our experts disagree with that, so our point is that you get more air flow
15 through the device because it's a straight path. They say that's attorney say-
16 so. It's not attorney say-so on Slide 20. It's their own expert's say-so.

17 So this is Slide 71. Their expert, Dr. Singhose, I asked him, the
18 notion of easier draw that results from the straight path. He said -- I asked
19 him, a person of skill in the art at this time would know that it's basic
20 principle of flow dynamics, a straight path is less resistance than a contorted
21 path, so that's true. So as a result, you get more air flow given the same
22 suction effort, with a straight path over a contorted path.

23 So even if they're right that there's a little less points of contact
24 between air and the heating element, there's more overall air and that's not
25 disputed. So I'm going to skip the 81, specific limitations, unless the panel
26 wants to discuss them. I'm going to jump down to Ground 2.

1 All right. So Ground 2 at Slide 96 has the organization overview.
2 Slide 98, this is an overview of Wang. This applies, again, to both IPR
3 proceedings. This is the device as connected, so the battery side is
4 connected to the cartridge side. The air flow enters the very edge of the
5 battery side, goes around the battery, enters dead center on the cartridge side,
6 and goes through the center of the solutional medium and exits.

7 So what are their arguments? First aperture, Slide 99. First
8 aperture is not in the housing. It's the same argument here on Slide 101.
9 Either the Board can view under their ITC allegations that the first aperture
10 doesn't need to be in the housing, or it can view that that internal structure of
11 the fiber is housing because it houses the liquid and the solution -- or excuse
12 me -- and the heating element.

13 Slide 102, they argue the heating element doesn't extend to
14 transverse. So the claim language that's relevant here is 1V1 in the '864
15 patent. On Slide 104, we have the depiction of what's going on in Wang.
16 They don't dispute that the heating element goes across -- well, at least that it
17 touches the fiber. We all agree that that's the method of heating. There's
18 direct contact between the heating element and the fiber, and as we'll discuss
19 in the next argument, there is an air flow of passageway, and the heating
20 element extends transversely to it. It doesn't need to extend -- in the claims,
21 it doesn't need to extend more transversely than longitudinal. It just needs to
22 extend transfers. The heating element does that in Wang.

23 So what are their arguments? This is on 105 in their surreply. In
24 the two arguments, they say in Wang, the coils and circles of purported
25 passageway, which I think means it has to go in the claims straight across
26 the middle of the passageway, that's not required. It just needs to be in a

1 direction transverse to the axis -- longitudinal axis.

2 And then they have the requirement that the major axis, in their
3 view, needs to extend transversely. It doesn't say that, so the fact that the
4 major axis of Wang stems parallel with the word passageway is irrelevant.
5 There's nothing in the claim saying the major axis has to extend transversely.

6 So we'll see that here in Slide 106. Again, Claim 1 of the '864
7 patent. There's no requirement that the major axis extend transversely. Just
8 the heating element needs to extend transversely, and there's no straight line
9 requirement. We'll see in a second, that would conflict with their ITC read
10 in the first instance.

11 So Slide 107, their expert agreed that an item can extend in
12 multiple directions, again, using the claim language. Extend. It's not that it
13 needs to be a transverse coil. It needs to extend transversely, so he said this
14 only can extend in multiple dimensions -- two, three-dimensions, and in fact,
15 so therefore two.

16 Slide 108, this is their infringement theory in the ITC. They don't
17 point to a heating element that goes straight across the passageway. It's a
18 coil, so it goes in multiple dimensions and there's not particularly -- it's not
19 only in one claim, for example. There is no straight line requirement, so,
20 you know, this would encircle central longitudinal axis.

21 And so in Slide 109, we have the beginning of some discussion
22 with their testimony of their inventor, Daniel Hillenbrandt. He sort of did a
23 build to replacing the coil that's demonstrated in Figure 2 with that of Wang,
24 starting with, you know, just one transversal of the passageway. He said that
25 looks transverse. Then I started to get a little bit more towards the Wang
26 reference and asked him if that looks transverse, as on Slide 110, and he

1 said, yeah. He thinks, you know, going back and forth and back again three
2 times, that that does look -- he would speculate that that does look
3 transverse. Of course, we agree. And he said it previously, too, in the
4 ITC -- in his ITC deposition.

5 This is a figure on Slide 111, Exhibit 1041, which is his deposition
6 transcript in 1042, which is the drawing here on the left of Slide 111. The --
7 that thing that looks essentially identical to Wang, he said he can see how
8 that could be interpreted as transversely across the passageway.

9 Okay. So no passageway through the rolled fiber. This is Slide
10 112 and 113. So Wang has an air flow passageway down the middle. You
11 can see it in Figure 3, which is on the left of Slide 113, Figure 5 which is on
12 the right of Slide 115. This has more detail on the fiber itself. You can see
13 it doesn't bunch up very tightly so that there's no air flow passageway.
14 There is a gap, and of course there is because the organic fiber is wound
15 around the heater. So how would you wind it so tight that there's no gap
16 that -- how would the heater even be in that gap if there's no space.

17 Not only that, but everybody agrees, again, the method of
18 operation in Wang is that the heater contacts the fiber. So that's where the
19 smoke is produced. And it says here that there is a space for the smoke
20 produced. That's exactly the air flow passageway. What other space would
21 they be talking about if that's where the smoke is produced, which it's
22 undisputed, the smoke is produced at the heating element, so of course
23 there's a space for the passageway.

24 Slide 114, there are a number of reasons why a person of skill in
25 the art would know that there's a passageway. Again, this is depicted as
26 having one on the right, Figure 5. The heating element sits there, and the

1 fiber is wound around it. The spec says that. Slide -- again, we're on Slide
2 114. The reference says that there's a space for the smoke produced by the
3 coil, and of course, a POSITA would know, as would anyone, the air flow
4 has to pick up the vapor at the heater to deliver it to the user.

5 And lastly, on Slide 114, why would anybody go through the
6 unnecessary effort of rolling the fibers so tightly that there's no gap. It
7 makes no sense to do. That's not how a person of skill in the art would look
8 at this, an illogical design. And if you want, if the panel finds it helpful,
9 there are real life examples of what this looks like.

10 So on Slide 115, Exhibit 1039 in 28, we have the Smoke 51 duo.
11 It's a fiber with a heating element in the middle and a gap right there. That's
12 how these devices work. If you want to have air flow through your device,
13 you need to have a gap in the middle where the heater is. And this is --

14 JUDGE MCGRAW: I just wanted to let you know, you are now
15 into your rebuttal time.

16 MR. DOKHANCHY: Okay. I'll proceed a little more quickly.
17 And this is -- you'll see here on Slide 115 in the citations on the right, this is
18 a device that their own experts distributed and investigated. Not really
19 relevant to some sort of copying arguing, but it shows that it was there at the
20 time. It was before their invention. This is how the Wang reference
21 operates.

22 Slide 116, the inventor of Mr. Wang said exactly that. He said, of
23 course the air flow goes through the center. It has to go through the air flow
24 channel. What's their theory on 117? That the air exclusively goes around
25 the outside of the fiber. That wouldn't work. It wouldn't pick up the air
26 flow.

1 How do they say it picks up the air flow? This is on Slide 118.
2 They say -- although it's not described this way in Wang, as their own expert
3 agreed, that the liquid is boiling while it's sitting in the fiber, and then the
4 user sucks on this hot boiling -- essentially a teapot -- to get his vapor out.
5 This -- that makes no sense in the context of a portable, handheld e-cigarette.
6 The explanation we propose is the only one that makes any sense, as shown
7 and as described, and as shown in similar devices at the time, there's a path
8 down the middle. So, Wang is modified. Again, we only have to reach
9 these if you disagree with our arguments that we've just gone through.

10 Slide 120, using a wick as in Fang and putting the coil horizontally
11 would result in better contact with the liquid, because you have a wick
12 bringing you the content from all of the coil and better air flow to coil and
13 contact. And the wick is made of the same material in Fang, as it is in the
14 solution-only medium of Wang, so you can simply use the same material.

15 Their expert on Slide 121 agreed that you're going to have better
16 air flow contact as the base principle of fluid dynamics. Anyone would
17 know that. Before they argue on 122, they said we never asserted the
18 rotation plus wick combination. You can see on Slide 123, we very much
19 did. We said if Wang doesn't have the transverse coil -- use the transverse
20 coil of Wang and also use the Wick -- this is petition in 98 to 99. And then
21 they say it's superfluous to make the changes. Well, it's not superfluous.
22 Slide 125 is from our expert declaration. This is unrebutted. They don't
23 dispute that using the coil in the other orientation and having a wick
24 improves contact with the nicotine solution of the air flow. That sounds
25 superfluous.

26 If somehow -- this is Slide 126 -- if somehow there's no central

1 passageway in Wang, it would be obvious. Again, they are -- can either go
2 around the outside or can go through the liquid storage unit. There's only
3 two options. Lots of devices have air flow through the middle. Fang is one
4 such device and there are lots of benefits. Again, better air flow, simpler
5 design.

6 Slide 127, again, they mischaracterize their argument as importing
7 the central channel from Fang into Wang with all of the various components.
8 That's not the argument. It never has been. In 128, we say simply use a
9 central and axial uniform cylindrical passageway. That's how you would
10 modify Wang. Not that you import wholesale. Fang's passageway is that
11 the notion of a central passageway was known by many instances. It's also
12 obvious in and of itself, see Fang as one example. The point is not to import
13 Fang as the issue on 127. Again, they say it has a varying diameter. We
14 said use a uniform cylindrical passageway, so we're not saying to import
15 Fang directly.

16 Slide 129, they say Fang has a solid wall in the middle of what we
17 call the passageway, so there is no passageway. There is no solid wall there.
18 It wouldn't function. They admit on Slide 129, Fang has no discussion of the
19 solid wall. We agree because it's not there.

20 Slide 130, we know that there's a passageway down the middle of
21 Fang because that's how the pressure sensing happens. The smoking
22 channel generates negative pressure, so from the top of where the user's
23 mouth is to the tablet 11, which senses the -- detects the suction, and that
24 deflects upward, in this image on Slide 130, toward the circuit board 12.

25 How does that deflect upward and how does the channel generate
26 negative pressure unless there's a path there? So of course there's a path

1 there. It's not that any line indicates there's no path. If that were the case, I
2 mean, there are lots of lines here, including at the mouthpiece, there are a
3 bunch of lines, and they would think that there's no passageway for a user to
4 even put their mouth on. It's because it's a cross-section of a three-
5 dimensional image. Anybody would know that those lines are not indicative
6 of barriers. Air has to flow through that channel.

7 Lastly, the benefit of -- if they're correct that the apertures have to
8 be in the housing, it's an obvious modification to extend the fiber to
9 apertures 101 and 106, which are certainly in the housing and then the
10 apertures would be in the housing. The benefit would be to increase the
11 storage. So I will rest for now and reserve the rest of the time that I have for
12 rebuttal. Thank you.

13 JUDGE MCGRAW: Thank you. You have 20 minutes left for
14 your rebuttal.

15 MR. DOKHANCHY: Thank you.

16 JUDGE MCGRAW: Patent Owner, how much time would you
17 like to reserve?

18 MR. DESAI: I will reserve 10 minutes. Let me see if I can share
19 my screen here. It's actually telling me that I need to share -- like I need to
20 restart to share my screen. Are you okay if I proceed without sharing the
21 screen? I think you have copies of everything.

22 JUDGE MCGRAW: We don't mind waiting if you want to restart.
23 It's up to you.

24 MR. DESAI: All right.

25 JUDGE MCGRAW: We do have everything, but if it's easier, we
26 can -- we don't mind waiting.

1 MR. DESAI: All right. Let me try and log out and log back in for
2 a moment. Thank you.

3 JUDGE MCGRAW: I can see your slides.

4 MR. DESAI: Okay, great. Thank you, Your Honors. Anish Desai
5 for Patent Owner. I think at the outset, we'll maintain the objections we had
6 to the demonstratives. I believe we filed the objections, and I don't believe
7 there's any need for any argument on them, but we maintain those
8 objections. I'd like to start with some general background on e-cigarette
9 configurations.

10 Our view is that JLI's petition emits the significant differences
11 between these types of configurations in order to justify the position that a
12 POSA would readily combine these devices because they are all e-cigarettes,
13 and the modifications being proposed are simple substitutions. Our view is
14 that this is an overly simplistic characterization that is contrary to how a
15 POSA would view these devices. So let me start with -- I'm on -- let's go to
16 the beginning here.

17 I'm on Slide 3 and this is a three-piece configuration. This is the --
18 what you see here is it's an NPRO device, and as Dr. Singhose explained in
19 this declaration, this is -- corresponds to the Xia reference, and there are two
20 cartridges here and a battery portion. The first cartridge has a heating
21 element, the second cartridge has a liquid solution, and there's obviously the
22 battery portion. And JLI itself acknowledged this kind of configuration in
23 its ITC pre-hearing brief, which we cited here on Slide 3, and the principle
24 of this configuration is that the heating element is not replaced when the
25 solution is depleted.

26 And as I'll touch on later, the Fang reference has a similar principle

1 of operation, even though it's a two-piece device. In Fang, the heating
2 element is in the reusable battery portion and the liquid is in the replaceable
3 cartridge. So the -- this is Slide 4 and this is the Wang reference, and this is
4 a conventional two-piece configuration. And the cartridge here is called a
5 cartomizer, and what it has is it has both, the solution and the heating
6 element, and the cartridge here is replaced when the solution is depleted.

7 The principle here of the Wang reference in this type of device is
8 simplicity. Low cost, ease of manufacturing is a focus because you have this
9 cartridge just being thrown out every time, and so you don't want a really
10 expensive cartridge and all sorts of complex components in there. A very
11 simple design. You have a soaked fiber material wrapped around a heating
12 coil that is arranged parallel to the longitudinal axis. That's it. Super simple.

13 Now, if we go to the patented invention, what we have here is
14 Figure 2 and this is in both patents with respect to the same. The invention
15 here was developed by two inventors at a small company called FUMA in
16 the 2009/2010 time frame. They made and sold a commercial device that
17 embodied this invention, and the cartridge includes a housing having both,
18 the heating element and the solution, so that's distinguished from both --
19 from the configurations in Xia and Fang. And here, there's also a defined
20 central and axial air flow passageway and a heating element that extends
21 transversely to the longitudinal axis. And this is distinguished from Wang
22 where the heating element is wrapped inside a soaked fiber and arranged
23 parallel to that axis.

24 So if we're now on -- we're going to Slide 7. This is just a quick
25 comparison of these pieces of art that are at issue. We have Xia and Fang.
26 You know, heating element and solution are in separate housings. More

1 expensive. You can see just by looking at them, far more complex
2 constructions. Particularly, with respect to the reusable portion containing
3 the heating element. It's really apparent just looking at them and you
4 compare them to Wang, the difference and the complexity.

5 And then Wang on the right is the low-cost simple cartridge design
6 contained in the heating coil, arranged parallel to the longitudinal axis, and
7 it's wrapped inside of a soaked fiber. So that kind of lays the groundwork
8 for the claims -- the grounds that we're going to be discussing.

9 Now, before I get into the grounds, I just want to quickly -- on
10 Slide 9, we've just put in here our proposed constructions and I'm planning
11 to address these constructions in the context of the grounds, and -- but just a
12 few points quickly. Proximate and housing, based on my review of the
13 briefs, I don't believe there's any dispute on the actual constructions that are
14 written there. I don't see any dispute that was raised. Transversely, there's
15 obviously a dispute and that relates to the Wang reference and whether a coil
16 that's arranged parallel to the longitudinal axis falls within the scope of the
17 claim.

18 And then we have end and housing having a first aperture,
19 approximate to the first end. And these pertain to what JLI has identified as
20 the first aperture in Xia and Wang, and whether they fall within the scope of
21 the claim. And then the last term is air flow of passageway, extends central
22 and axially. And this relates to JLI's identification of the passageway in Xia.

23 So now let me turn to Ground 1A, which is Xia alone. Sorry, I'll
24 just get a drink of water real quick. And I'm on Slide 11. This is a road map
25 of what's basically in the POR and the surreply in terms of limitations that
26 are missing.

1 I'm going to walk through this, and I'm starting on Slide 12. And
2 again, Xia is a three-piece design, and the evidence supporting this is the Xia
3 reference in Dr. Singhose's testimony, which we have cited here on the slide.
4 Importantly, I think I heard from Petitioner's Counsel that this is an
5 allegation and there's no evidence. Well, there is evidence. It's Xia and Dr.
6 Singhose's testimony for the perspective of a POSA. And importantly, Dr.
7 Sturges did not address this in his declaration. That's Petitioner's expert, and
8 he did not submit a reply declaration disputing Dr. Singhose's testimony
9 regarding Xia being a three-piece design with two distinct cartridges. It's --
10 and they had the opportunity to dispute it, and they didn't.

11 Now, JLI in its reply, presents attorney argument at page 18 of the
12 reply brief that the heating element and solution are in a single cartridge
13 because Xia refers to the combination of the two as a generator. But the fact
14 that when the two cartridges are combined by the user, Xia calls them a
15 generator, doesn't change the fact that there are two distinct cartridges, each
16 with their own housing. And the first cartridge has a housing with a heating
17 element located in the interior, and the second cartridge has a different
18 housing with the solution located in the interior.

19 And now on Slide -- let me go to Slide 15. The '864 patent
20 expressly distinguishes between these types of designs -- the two-piece
21 design and a three-piece design. And Figure 1 of the patent shows a
22 cartridge having both, the heating element and the solution. And Figure 4
23 shows two cartridges, one having a heating element and the other one having
24 a liquid solution. Now, JLI argues in its reply at page 18 that the claims do
25 not distinguish between a two-piece design and a three-piece design, and we
26 disagree.

1 If you look at claim -- Slide 16, JLI's reply pointed to the summary
2 of the invention section at Column 1, lines 48 to 50, but they didn't address
3 the claim language. And the claim language recites a cartridge comprising a
4 housing having a solution holding medium and a heating element located in
5 the interior of the housing. The same housing, which is the cartridge
6 housing, needs to have both, the solution holding medium and the heating
7 element. Xia does not disclose a cartridge having a housing, and that same
8 housing having both, the solution holding medium and the heating element.
9 It discloses two cartridges, each having their own housing. One has the
10 solution holding medium and the other has the heating element.

11 Now, I would respond to JLI's Slide 20, where I think they pointed
12 to some -- that the language in the specification that each cartridge can be a
13 multi-piece assembly. The cartridge that's shown in Figure 2 of the patent is
14 a multi-piece assembly, and each of the cartridges in Xia is also a multi-
15 piece assembly. But regardless of whether the cartridge is a multi-piece
16 assembly under the claim, there must be a cartridge with a housing that has
17 both, the heating element and the liquid solution, and that's missing in Xia.

18 JUDGE MCGRAW: Can you explain why Xia's housing does not
19 have both components?

20 MR. DESAI: Right. So if you look at the each -- each cartridge
21 has its own housing, and you can see that on Slide 14. And the -- this
22 cartridge on the right, that housing is housing the liquid solution, and on the
23 left -- the first -- this other cartridge is housing -- has a separate housing
24 that's housing the heating element. I mean, they can be --

25 JUDGE MCGRAW: Okay.

26 MR. DESAI: They can be combined, but there still is two distinct

1 cartridges. In other words, the same with the power source, right? The
2 power source has its own housing, but when those are combined, I don't
3 think you would say that the power source's housing is the housing of the
4 cartridge, right?

5 JUDGE ROSS: But what is wrong with Petitioner's argument that
6 when you combine the first cartridge having the heating element, and the
7 second cartridge comprising the solution, when those are combined together,
8 they form a single cartridge and the outer housing of that combined cartridge
9 then houses both, the heating element and the solution -- what is wrong with
10 that argument by Petitioner?

11 MR. DESAI: I mean, I think -- well, it's contrary to the
12 specification and how their claims are written is -- would be our position. If
13 you read the claims in light of the specification, and the fact that the spec
14 does distinguish between these two different designs and claims specifically
15 a cartridge having a housing that has both, which is different from what
16 they -- what's in the spec, as terms of the three-piece design. I mean, that's
17 the basis of our position.

18 JUDGE ROSS: Can you comment for me on the Petitioner's
19 argument about the nested design? Because I think Figure 2 of Xia seems to
20 suggest certainly there are two different housings, but then they're nested
21 into a larger housing. Can you speak --

22 MR. DESAI: Right.

23 JUDGE ROSS: -- to that a bit?

24 MR. DESAI: Yeah. I think that argument was more in the
25 context -- I understood that to be more in the context of whether the
26 secondary liquid storage -- let me get on the right figure here. There's a

1 secondary liquid storage 10. I think that was in the context of Petitioner
2 arguing that the aperture in there can be the aperture of the housing, in the
3 housing, because that's internal housing. And they cited to Dr. Singhose's
4 testimony that -- and what he said was there can be a housing that has the
5 housing in it, right? That, you know, the cartridge can have the housing and
6 then it can have internal pieces that has housing themselves, but I think that
7 doesn't make the liquid storage housing the cartridge housing.

8 JUDGE ROSS: But isn't that what we have here? We have a
9 housing that has two different housings -- that is housing two different
10 housings?

11 MR. DESAI: Right, the --

12 JUDGE ROSS: At least that's what's depicted in Figure 2.

13 MR. DESAI: Right. I think the key -- for the aperture point, it's a
14 different issue as to whether the aperture has to be an aperture of the
15 housing, which is the cartridge housing, which is different than the solution
16 storage.

17 JUDGE ROSS: Okay. Well, setting that aside --

18 MR. DESAI: Yes.

19 JUDGE ROSS: -- let's just go back to this.

20 MR. DESAI: Okay.

21 JUDGE ROSS: It appears in Figure 2 that we -- according to you,
22 we have two different housings that unite to create the generator, correct?

23 MR. DESAI: Correct.

24 JUDGE ROSS: And the generator appears to have a housing that
25 goes all the way around it.

26 MR. DESAI: It is true --

1 JUDGE ROSS: It's a housing, housing two other housings, and I'm
2 not understanding your argument with respect to that.

3 MR. DESAI: It is correct, Your Honor, that when these two are
4 combined, that second cartridge that's shown here on Slide 14, that will slide
5 over the top of the first cartridge. I agree with that point.

6 JUDGE ROSS: Thank you.

7 MR. DESAI: So if I keep going and we go to the air flow
8 passageway limitation -- I'm on Slide 21 -- in the petition, JLI annotated this
9 entire green portion shown at the top as being the air flow passageway, and I
10 think, Your Honor, during the questioning, it was correctly pointed out that
11 that is not where the air flows in that entire green space. The correct air flow
12 passageway is shown in the bottom portion here, and you can see that
13 clearly, the air flow is on the periphery between the heating element and the
14 exit at the right.

15 There is no air flow passage right through the center of the device
16 between the heating element and where the air exits on the right. This very
17 issue was considered during the prosecution history and confirms that Xia's
18 passageway is not central and axial.

19 I would go to Slide 18. This is the prosecution history dealing with
20 the Han reference. It is very similar in terms of the air flow passageway
21 being defined on the periphery of the device because of the liquid bottle.
22 The applicant explained that there's no central passageway because the
23 liquid storage forces the air flow around the peripheral surface. The
24 examiner accepted this argument distinguishing this claims from the Han
25 reference.

26 And I think you can see clearly on Slide 19 that Xia and Han

1 disclosed the same type of peripheral air flow. Now, JLI's argument here is
2 that we've -- Patent Owner has walked this back by way of its position on
3 the VUSE Solo and the VUSE Ciro products in the ITC, that those are
4 within the scope of the claims. These devices are not analogous to Xia and
5 Han. They do not disclose peripheral air flow passageways, and as I'll show
6 you, our contentions are consistent regarding Solo and Ciro.

7 And if you'll turn to JLI's demonstratives, I'm going to go to Slide
8 41. This is the VUSE Solo device, and you can see here that the air flow is
9 down the center of the device, and there is diversion of air flow from both,
10 the heating element and this PCB board, but the air flow is clearly not at the
11 periphery of the device like in Xia and Han, and the same is true with the
12 VUSE Ciro device shown here on Slide 42. And I think these arrows --
13 these green arrows -- are a little bit misleading. I don't believe those were
14 arrows that were placed by Patent Owner. Sorry, the yellow arrows.

15 But you can see on the right that, again, the green portion is the
16 central air flow passageway and there is diversion of air flow around the
17 heating element and around the positive pin, but not in such a way like you
18 see in Xia and Han where the air flow is at the very periphery of the device.

19 And this issue was squarely addressed by the Middle District of
20 North Carolina. In particular, with respect to whether obstacles are
21 permitted, and I'm on Slide 20. And so as a matter of claim construction,
22 obstacles are permitted inside of the air flow passageway and there's claims
23 to this effect -- Claims 5 and 25 of the '864 patent -- that specifically recite
24 that the heating element is the only obstacle in the air flow passageway.

25 The other claims do not recite that limitation. So by inference,
26 there can be other obstacles in the air flow passageway, and as a factual

1 matter, the obstacles in VUSE Ciro and Solo do not alter the direction of the
2 air flow any more than the heating element, and that's exactly what the
3 Middle District of North Carolina found, and you can see it says that there.
4 But these obstructions do not alter the direction of the Ciro's air flow
5 passageway any more than the heating element.

6 And so that was the principle, which is -- the point being that the
7 heating element does not make the passageway non-central because it
8 diverts air flow, and neither do other obstructions that are of roughly equal
9 size in terms of diverting air flow through an otherwise central passageway.

10 So there's a clear factual distinction between Xia and Han, which
11 have a peripheral air flow passageway because of the liquid bottle, versus
12 VUSE Solo and Ciro, which have a central air flow passageway that
13 includes obstacles within it, like the heating element and the positive pin that
14 divert air flow within the otherwise central passageway. So there's a claim
15 construction issue as to whether obstacles are permitted. They are. And
16 there's a factual distinction between the VUSE Solo and Ciro, and the Xia
17 and Han devices.

18 JUDGE ROSS: So help me understand. How much obstruction is
19 permissible in this circumstance? I mean, because you say that it diverts
20 around and it's around the periphery, but you know, where does that
21 degree -- where do I draw that line and where does -- do the claims tell me --

22 MR. DESAI: Right.

23 JUDGE ROSS: -- where I should draw that line?

24 MR. DESAI: I think the claims tell you because the claims do
25 include a heating element in the air flow passageway, so all of the claims do
26 say that there is a heating element in the air flow passageway, and then there

1 are claims that specifically recite that air traverses on both transverse sides
2 of the heating element. So the heating element is going to divert air flow in
3 the air flow passageway, right? So we know that a heating element
4 obstruction is not -- does not create a non-central passageway, and that's
5 exactly what the Middle District of North Carolina said is look, you can
6 have a heating element --

7 JUDGE ROSS: I mean, it does say you can have a heating
8 element, but it says such an obstruction such as a heating element.

9 MR. DESAI: Right.

10 JUDGE ROSS: So it seems to me that the Middle District may be
11 considering something in addition to a heating element that could also cause
12 an obstruction. And so my question is, how much of an obstruction is too
13 much of an obstruction?

14 MR. DESAI: Well, I think it's --

15 JUDGE ROSS: And I don't see anything that helps me with that.

16 MR. DESAI: Well, I think --

17 JUDGE ROSS: I just know that obstructions are okay, to some
18 degree.

19 MR. DESAI: Right. So as a factual matter, I would say certainly
20 something that doesn't divert the air flow more than the heating element is
21 not going to lead you to say that this is no longer a central and air flow --
22 central passageway. I think first of all you have to see, is there a central
23 passageway. And in -- and if you look at Solo and Ciro, you can see there is
24 a central passageway from aperture to the other.

25 Whereas in Han and in Xai, clearly there is not. I mean, the bottle
26 extends all the way to the periphery, so as a factual matter, you could see the

1 existence of the central passageway in Solo and Ciro, but you don't see that
2 in Xia and Han. So clearly, like a bottle that extends all the way to the
3 periphery, and really, that's the only question we need to answer here. Just
4 like they answered in the prosecution history. Does Xia have a central
5 passageway? And it doesn't, for the same reasons that Han doesn't.

6 JUDGE MCGRAW: So to clarify, you're saying we don't need to
7 resolve how far the obstruction can extend because in Xia, it extends just as
8 far as Han, and that clearly is outside the scope of the claim; is that correct?

9 MR. DESAI: That's exactly right and that's exactly what happened
10 in the prosecution history.

11 JUDGE ROSS: That's helpful. Thank you.

12 MR. DESAI: So let me now keep going, and I'm going to go to the
13 aperture claim construction issue, and that's Slide 23. And as I said, I don't
14 believe there's any dispute about the meaning of the term housing. An
15 outside structure containing the device internals. And if I go to Slide 24,
16 what we do think the dispute is about is what does housing having a first
17 aperture approximate to first end mean, and Your Honor has issued a
18 preliminary instruction in the institution decision that allows for the aperture
19 to be within the first end of the housing, and they're not required to be in the
20 housing itself.

21 So meaning they can be an aperture somewhere in the interior of
22 the housing. And Your Honor has invited further briefing on this claim
23 construction issue, and we submit that with the benefit of the full record, the
24 claims properly construed require that the aperture be in the housing itself.

25 And on Slide 25, we'll start with the claim and the claim recites
26 having several times. The housing having an interior and the solution

1 holding medium. That's at the bottom there on the right. The housing
2 having a first end and a second end, and the housing have a first aperture
3 approximate to the first end. And the word having can and does have
4 different meanings in the context of the claims in the specification.

5 In the first context, the housing having an interior and a solution
6 holding medium, having means within. The specification describes and
7 illustrates -- and you can see this in the figures -- an interior and a solution
8 holding medium within the housing.

9 Now, in the second context, the housing having a first end and a
10 second end and the housing having a first aperture and a second aperture,
11 housing a first -- the characteristics of the housing itself, not what is within
12 the housing. And Column 6, lines 18 and 19, Column 3, 57 to 61, Column
13 3, 30 to 32, and 4, 30 to 47, these are all cited in our briefs. These are all
14 showing that the first and second end are part of the housing, and the
15 apertures are, you know, in the housing itself.

16 And I think we -- the point to make here is that it would lead to a
17 nonsensical reading of the claim if housing having A is universally
18 construed to encompass located within. And for example, under that
19 interpretation, housing having a first end and a second end could be met by
20 two ends of any component within the interior of the housing, and that
21 would really be inconsistent with the specification. There would be no
22 support for that.

23 And Your Honors did cite the microprocessor versus TI case in the
24 institution decision that says, there is a presumption, but no requirement that
25 a claim term be construed here informally, particularly if it would lead to a
26 nonsensical result. We think that law applies here.

1 Now, the first aperture that Petitioner points to in the Xia device --
2 it's shown here on the left side of Slide 25 -- is a hole in the secondary liquid
3 storage chamber 10. That is not the cartridge housing. It's the -- it's what
4 they pointed to as being the solution storage medium. And the testimony the
5 Petitioner cited from Dr. Singhose on the nesting issue was that you can
6 have components within the cartridge that themselves have housings, but
7 that doesn't make the housing of that internal component a housing of the
8 cartridge.

9 So even if you say the secondary liquid chamber -- storage
10 chamber has its own housing and that housing has an aperture, that's not the
11 cartridge housing. That's not the outside structure containing the device
12 internals. So this cannot qualify as the first aperture under the proper
13 construction of housing having a first aperture approximate to first end. Let
14 me turn to --

15 JUDGE MCGRAW: That argument only applies if we agree that
16 two housings cannot constitute a single housing when you slide the two
17 housings together.

18 MR. DESAI: Actually, no. I think this is an entirely different
19 issue than that. So the solution storage is -- there's a solid black line, I think
20 you can see here. You see that solid back line I'm pointing to? That's the
21 outer portion of what, you know -- there's the two cartridges. They slide
22 together like that. That --

23 JUDGE MCGRAW: The solid black line -- for the record, the
24 solid black line that you're referring to is on Slide 25, the top figure, the
25 uppermost dark black line on --

26 MR. DESAI: Yes.

1 JUDGE MCGRAW: -- on the left side of the figure.

2 MR. DESAI: Yeah. And then above it, you see a white wall,
3 right? So that's the -- the black would be the cartridge that contains the
4 heating element and then sliding over that is the cartridge that's containing
5 the liquid solution. They're not saying the first aperture is an aperture in that
6 black wall. They're saying the first aperture is a hole inside, in the solution
7 storage medium -- the secondary liquid chamber. So they're not even
8 arguing that this first aperture is an aperture in that nested housing. It's
9 different. They're arguing that it's the hole in this secondary liquid storage
10 chamber.

11 Let me quickly try to get through the argument that our positions in
12 the ITC are inconsistent. We don't think they are. So here on Slide 26, this
13 is the JUUL pod on the left, cartridge for JUUL, and on the right is the
14 VUSE Ciro. There's no inconsistency here. We've identified the first
15 aperture at the first end in the JUUL pod. That's not an internal -- that's not a
16 hole in an interior component. That is a hole in the cartridge housing. You
17 can see it right there on the right side of the -- on the slide.

18 Same thing for Ciro. The hole we've pointed to is that hole right
19 there in the electrical connector, which is the first end of the housing that is
20 adapted to electrically couple. That is a hole in the housing itself. It is not
21 an aperture or a hole within the interior of the housing, like a hole in the
22 secondary liquid storage or something like that. It's -- there's no
23 inconsistency here.

24 And then on JLI's Slide 31 -- let me pull that up really quick. They
25 made a comment here about the second aperture in the JUUL pod, and what
26 you see here, to be clear, is the JUUL pod includes a cartridge that has a

1 housing, and you can see that on the right side, and then they append a
2 mouthpiece to it. And for infringement purposes, the cartridge housing is
3 what you see on the right and it has a tank cap and the hole in the tank cap,
4 in the black piece, is the second aperture we pointed to and the '864 patent
5 specifically described that the ends of the housing can be formed by end
6 caps. That's at Column 5, lines 34 to 35. So that is a housing that has end
7 cap, and the aperture is in that end cap.

8 Now, they do append a mouthpiece on top of that end cap, but
9 that's allowed under the patent. The '864 patent specifically contemplates a
10 mouthpiece can be placed on the end of the housing. That's at Column 5,
11 lines 39 to 41, which describes placement of a wood tip, which is a type of
12 mouthpiece on the second end of the housing. Again, these claims are
13 comprising claims, and they do not preclude a mouthpiece from being
14 attached to the second end of the housing. So there is no inconsistency here
15 with respect to our infringement case.

16 JUDGE MCGRAW: Before you move off of Slide 31 --

17 MR. DESAI: Sure.

18 JUDGE MCGRAW: -- Petitioner points out that you cited to the
19 ITC determination in your reply. I'm assuming that you don't have an
20 objection then to having the decision entered as an exhibit into the record; is
21 that correct?

22 MR. DESAI: I don't believe we do. I think we cited to it because
23 it's a decision that's publicly available. I don't -- we don't have any objection
24 to it being used as an exhibit.

25 JUDGE MCGRAW: So there's no objections to having any of the
26 ITC public decisions entered? I just want to confirm.

1 MR. DESAI: That's correct.

2 JUDGE MCGRAW: Thank you very much.

3 MR. DESAI: All right. And then let's -- I'm going to go to the
4 term 'end,' which is -- I'm on Slide 27. And there is an issue about what
5 does 'end' mean. We submit that it means the end is the extreme part of an
6 object, the extreme end of an object. In this case, the end is the end of the
7 housing and that is exactly what is shown in Figure 2 of the patent. You
8 have two ends of the cartridge housing. And as I mentioned, you can
9 append a mouthpiece to the end, but in the end -- the question is what are the
10 ends of the housing, and they are the extreme portions.

11 And importantly, at Slide 28, the ends are distinguishable from the
12 interior. And this is at Column 3, lines 28 to 30. The specification says the
13 housing comprises of a first end and a second end. It also includes an
14 interior. Ends in the interior are different, and if you look at how JLI has --
15 the Petitioner has identified the first end in Xia with these big circles, they're
16 encapsulating a significant portion of the interior housing in what they're
17 saying is the end. And there's really no support for that. There's no basis for
18 that.

19 And if we go to Slide 29, the dictionary definitions also comport
20 with how end is illustrated and discussed in the patents. The extreme or last
21 part lengthwise, the outside or extreme edge. Now, JLI, I expect, will cite
22 the portion of the dictionary that says the end can be at the extremity or
23 adjacent to the extremity, but even if you were to adopt that, that does not
24 support the circles that have been drawn around Xia's -- the device capturing
25 the interior. You can see, for example, in the annotated first end from JLI,
26 that they have circled the heating element. That is not at or adjacent the

1 extremity, by any definition of the word 'end'.

2 So even if you were to adopt their broader construction of end,
3 which is at the extremity or adjacent the extremity, it still wouldn't support
4 how they've circled the ends here. Again, Slide 30, I expect JLI will argue
5 that we're being inconsistent with the ITC contentions. Again, we disagree
6 here. The end of the housing can be non-planar. You can see this in Figure
7 2.

8 The bottom end there of the cartridge in Figure 2 of the patent is
9 non-planar, and the same is true of the end in the JUUL cartridge shown on
10 the right. This is an illustration from Exhibit 2043, which was an
11 infringement demonstrative used at the ITC trial, and it shows what was
12 identified as the first end of the JUUL cartridge. And it's -- it is the end. It's
13 non-planar, but it meets the definition of 'end' as we propose it.

14 Slide -- I just want to quickly cover Slide 31, 33, and 34. I'll start
15 with 31 and these are just dependent claims that Xia does not disclose.
16 Claims 12 and 31 of the '864 patent require that you have a heating element.
17 It includes a wicker material, operative to draw a solution toward the heating
18 element. There is no wicking material in Xia that draws liquid to the heating
19 element. It is sprayed toward the heating element when user inhales, so
20 there is no wicking material in Xia. That meets this requirement in Claims
21 12 and 31.

22 There's also Claims 5, 25, and 45, that require that the air flow
23 passageway extends in a straight path from the first and second aperture with
24 only the heating element obstructing a portion, and that's obviously not met
25 here by the Xia reference. And then Slide 34, we have a list of claims
26 here -- I won't read them off -- that require that no portion of the air flow

1 passageway adjacent to heating element has a cross-sectional area smaller
2 than the cross-sectional area of the second aperture. And you can see here
3 on the slide that Xia does not meet that requirement.

4 So let me move on now to the combination of Xia plus Wang and
5 Fang, and I'm on Slide -- I'm going to go straight to Slide 43, and this is the
6 proposed combination that JLI has put together on the right side. It's a
7 modified Xia that they proposed based on combining with Wang or Fang,
8 and they've tried to bucket this into the category of the KSR rationale,
9 simple substitution of one known element for another that yields predictable
10 results.

11 And they also represented in the petition that all items would
12 function as they currently do in Xia. That was in the petition at 62. The full
13 record does not support either of those positions. This is a complete
14 overhaul of the configuration in Xia and fundamentally alters the principle
15 of operation.

16 I'm going to go to Slide 42, and this was the section in the petition
17 from JLI. They called the section motivation to combine and reasonable
18 expectation of success. And the evidence they cited in this section is Dr.
19 Sturges' declaration, and that's paragraph 61 to 66, which is shown here.
20 And these are superficial motivations that should be rejected. The first is,
21 well these are all e-cigarettes. That's a very generic motivation. There's no
22 assessment of how these e-cigarettes have significantly different principles
23 of operation that impact the proposed modification.

24 There's a conclusory statement that they all use very similar
25 structures and internal components. Again, that's not remotely accurate, and
26 I'll go through this. The next is that they're all published in an 11 month

1 period by Chinese inventors. There's really no explanation of why the time
2 between publication and the nationality of the inventors is a motivation to
3 combine. I don't think you would have extra motivation to combine UK
4 patents or US patents or French patents. I just don't see that as a motivation
5 to combine, and then paragraph 63 and 64 are just more conclusory
6 statements regarding substitution of known elements. And one thing I
7 would note is that JLI throughout their petition and in their expert
8 declaration doesn't use the correct terminology from KSR, which is simple
9 substitution of known elements. That's the correct recitation -- simple
10 substitution.

11 I mean, you could argue that all obviousness combinations involve
12 a substitution of known elements, but the rationale for obviousness is
13 whether it's a simple substitution, and not all substitutions of known
14 elements are simple. So that's just a no -- they did not actually characterize
15 it as a simple substitution here.

16 Now, if we go to Slide 44, I think we can discuss here how the --
17 JLI's expert, Dr. Sturges really did a --

18 JUDGE ROSS: Before you move on, though, Petitioner also cited
19 to additional paragraphs in their declarant's brief to support motivation to
20 combine, and I believe they were in the 90s -- maybe 90 to 99 -- and I think
21 there might've been additional ones.

22 MR. DESAI: They did.

23 JUDGE ROSS: Will you address those in your presentation?

24 MR. DESAI: I will. I did. I will. I will cover those in a moment.
25 I wanted to start with those, but they were at the beginning of the petition
26 first. So we start with Slide 44 here. Again, I think they -- he treated -- Dr.

1 Sturges treated all of these devices essentially the same, so they use the same
2 components, they're all e-cigarettes, they're clearly not. Xia on the left relies
3 on a spray method to get liquid to the heater. The inhalation by the user
4 pulls the liquid to the heater.

5 To implement this method of operation, Xia includes numerous
6 features that JLI's proposed combination eliminates. The device also uses a
7 three-piece design where the cartridge contained in the heating element is
8 reusable. That's important because it relates to complexity and the cost of
9 the design.

10 In Wang in the middle, again, it's a cheap, simple device that uses
11 a saturated fiber wrapped directly against the heating coil, and this
12 arrangement relies on the heating coil being arranged parallel to that
13 longitudinal axis. And then Fang, again, a more -- much more complex
14 device where the heating element is a thin film wire contained in the
15 reusable portion and the liquid is in a separate cartridge. And you can see
16 here, the transfer of the liquid is complex, and it involves an oil conservator
17 7, an oil storage device 14, and then a wick 15 that is arranged with the thin
18 film wire.

19 Now, if we go to Slide 49, the modified Xia in the petition does
20 eliminate critical components in Xia. I mean, that's -- that is what they drew
21 in the petition and that's what you see here on Slide 49, and it is not correct
22 that all items function as they currently do in Xia. Now, they have
23 eliminated the liquid guiding mechanism 11 and the liquid-blocking tank 15.
24 You can see those on the left and they were eliminated in the proposed
25 modification.

26 The guiding mechanism transfers liquid from the storage tank 12

1 and into the secondary storage 10. When a user is inhaling, the guiding
2 mechanism also reabsorbs large droplets to prevent the user from inhaling
3 them. The blocking plate 15 is intended to capture large droplets. These
4 features go hand-in-hand with the spray method used by Xia, and they were
5 eliminated in the proposed modification.

6 Now, if we go to JLI's Slide 59, JLI responds that a liquid
7 impermeable cylinder can be added through the center of the storage
8 container. There is no explanation or illustration of how this would work,
9 including how liquid would get to the heating element with this impermeable
10 cylinder. This liquid impermeable cylinder is not disclosed in Wang or
11 Fang, and it clearly also undermines their motivation of reducing
12 components and that this is a simple substitution if now we have to add an
13 unspecified and undisclosed impermeable cylinder.

14 Now, JLI alternatively says, well, we can just use the solution
15 holding medium of Wang, which is the wrapped fiber, but there's no
16 explanation of how the rolled absorbent fiber would be placed in Xia and
17 functioned with the heating chamber that's shown. None at all. And there's
18 also no explanation of why a POSITA would take the rolled absorbent fiber
19 from Wang, but leave behind the longitudinal coil that it is designed to work
20 with. You're sort of picking and choosing pieces that are -- they're meant --
21 they go together.

22 The longitudinal coil is wrapped around that fiber, and it's
23 designed that way so that it can be wrapped. And there's no explanation of
24 how you could take just the absorbent fire and then jam it in here and get it
25 to work with this different heating chamber. None at all. And ultimately,
26 using the rolled absorbent fiber would be a complete overhaul of the

1 operation of Xia, which the principle of operation is using the spray method
2 for delivering liquid to the heating element.

3 Let me turn now to Slide -- back to Slide 49. The proposed
4 modification also eliminates the liquid-blocking plate 8, and the vibrating
5 diaphragm 7. Liquid-blocking plate 8 prevents liquid from backtracking into
6 the battery portion. JLI argues that they didn't actually remove it and that it
7 would be moved to the end of the liquid storage. In their illustration, it was
8 clearly removed, but if -- ultimately, if they're saying, well you could move
9 it to the end, that undermines this argument that they're actually reducing
10 components because they're not reducing it and also negates their benefit of
11 elongated a liquid storage to store more liquid.

12 The vibrating diaphragm, you can see is number 7, that's used to
13 actuate the heater in combination with an electric microphone center that's in
14 the battery portion. Both need to be actuated and that's how the heater gets
15 electrified. The diaphragms cannot remain in their existing place because
16 there is no air flow there anymore once you've changed it, as JLI has
17 proposed.

18 Dr. Singhose explained at paragraphs 224 and 226 of his
19 declaration that moving him into the new air flow passageway would not
20 work because they would not properly seal there. Now, JLI argues that well,
21 we can just eliminate those and replace with a pressure sensor configuration
22 in Wang. Again, this would require redesigning the circuitry in Wang to
23 implement a different type of heater actuation. It's another example that
24 contradicts the idea that this is a simple substitution.

25 Let me go to JLI Slide 54. And Your Honor, this is the other
26 rationales that they had proposed for modifying. Let me start with less

1 complex, fewer parts, reduced costs. This is presumably based on the
2 illustration of modified Xia in the petition where they eliminated a whole
3 bunch of components. If you eliminate all of those components, as we've
4 explained, you're really destroying the operation of Xia and the principle of
5 operation of the spray method and you're going to create all sorts of
6 problems.

7 Now, in response, JLI argues that the combination actually
8 involves the addition of other components that are not disclosed anywhere.
9 The impermeable barrier or alternative at crafting an entirely new
10 configuration involving a rolled fiber from Wang but not using the
11 longitudinal coil in Wang that actually goes hand-in-hand with the rolled
12 fiber and then reconfiguring the heater actuation mechanism.

13 Ultimately, if a POSITA desired a less complex reduced cost,
14 fewer part design, the answer is exactly what you have in Wang. The rolled
15 fiber around a longitudinal coil. It doesn't get any simpler than that and
16 there's no reason really, other than hindsight, that a POSA would be mixing
17 and matching between the spray configuration in Xia and the rolled fiber
18 with a longitudinal coil in Wang.

19 Better temperature control. There's no evidence unmodified Xia
20 suffers from any temperature issues. Xia explicitly discloses structures to
21 deal with temperature. This is addressing Singhose's declaration at
22 paragraph 125. Xia has a heat insulation layer and Xia's air flow
23 passageway is also specifically designed to allow vapor to cool before
24 getting to a user's mouth. Again, explained in Singhose's declaration at
25 paragraph 125, and JLI's proposed modification eliminates that part of the
26 design.

1 Smoother and improved air flow. Again, there's no evidence that
2 Xia suffers from too high of draw resistance, and during their presentation,
3 Petitioner cited to the testimony from Dr. Singhose that the straight air flow
4 path can reduce resistance but wrongly assumes this is beneficial.

5 One of the very purposes of these devices is to mimic the feel of an
6 actual cigarette, and so higher resistance can be desirable. In fact, the
7 resistance needs to be assumed. And the modification to reduce resistance
8 can actually make the device less desirable, and this is discussed in our
9 surreply at 16 and Dr. Singhose testified about this at his deposition, which
10 we cited in our surreply.

11 And then last is better vapor content. There's no explanation from
12 JLI's expert what vapor content means or how the modification provides
13 better vapor content. Dr. Singhose explained that modifications result in
14 worse vapor because of large droplets ejected into the user's mouth. It's at
15 paragraphs 196 and 200. And also, it leaves the ineffective vaporization.
16 That's at paragraphs 201 to 210.

17 And then let me quickly address this slide, Slide 63. This is one of
18 the slides we objected to. This testimony was not cited in their reply, and if
19 it had been, we would've responded in our surreply. And what this is talking
20 about is the proliferation of cheap devices today in today's marketplace, and
21 the proliferation of cheap disposable devices in the marketplace today is
22 because they are illegal products that come in flavors that are not authorized
23 by FDA.

24 The legal devices on the market, JUUL, NJOY, and VUSE, for
25 example, do not come in these flavors, and in other words, the market today
26 is totally irrelevant to the questions here because the proliferation of these

1 cheap devices has to do with flavors, which are not at issue here.

2 Let me now transition to the Wang reference. Wang alone. I'll go
3 to Slide 54. And the first issue I want to cover is the transverse heating
4 element extending transversely. Wang does not disclose the heating element
5 extending transversely to longitudinal axis. This is a claim construction
6 issue.

7 The plain meaning of transverse is crosswise. Sorry, I'm on Slide
8 53. The plain meaning of transverse is crosswise. This is how the heating
9 element is illustrated in Figure 2 of the patent. This is how transverse is
10 defined in dictionaries, crosswise. The parties litigated this issue at the ITC.
11 The ALJ adopted NJOY's construction and rejected JLI's position, and JLI
12 did not appeal the ALJ's construction to the commission.

13 Now, if we go to Slide 54, JLI's position effectively renders this
14 claim limitation meaningless, and if you look at their expert's deposition
15 testimony, he confirmed this by saying his understanding of extends
16 transversely means that it has a dimension across -- it has the dimension at
17 90 degrees on the longitudinal axis.

18 The heating element, like all objects, is going to have three
19 dimensions and is therefore going to have a dimension in all directions. If
20 we go to JLI Slide 107, they relied on this testimony from Dr. Singhose,
21 where he was asked, can something extend in two-dimensions or does
22 something only have to extend -- can it only extend in one dimension. Dr.
23 Singhose responded, I think something could extend in three-dimensions.
24 So you add two, you could do two. I mean, all he's saying here is that things
25 can extend in two and three-dimensions.

26 But importantly, the claim limitation is not whether the heating

1 element has a transverse dimension. The limitation is that the heating
2 element extends transversely to the longitudinal axis of the housing.
3 Transversely means crosswise and extends transversely to the longitudinal
4 axis means that the major axis of the heating element is crosswise to the
5 longitudinal axis. That's the only definition that gives this term meaning,
6 otherwise everything would extend transversely.

7 Now, if we look at Wang, Wang's coil encircles the longitudinal
8 axis helically. It extends parallel to the longitudinal axis. This was Dr.
9 Singhose's testimony in his declaration, and I'm on Slide 55. There is no
10 inconsistency here between our crosswise construction and the ITC
11 infringement case against JUUL. I think Counsel pulled up JLI Slide 108.
12 And the JUUL heating element is a coil and it is arranged crosswise to the
13 longitudinal axis.

14 So unlike the Wang heating coil that is arranged parallel to the
15 longitudinal axis, the JUUL coil is rotated by 90 degrees. So there is no
16 inconsistency here between our position -- our construction and our
17 infringement case at the ITC.

18 JUDGE MCGRAW: But doesn't the heating coil here have a
19 certain amount of width that extends from one end of the air flow
20 passageway -- assuming we agree that there is an air flow passageway in
21 Wang -- doesn't that heating coil extend from one end of the air flow
22 passageway to the other?

23 MR. DESAI: Well, it has a width.

24 JUDGE MCGRAW: Um-hum.

25 MR. DESAI: I mean, it has -- if you were to draw a line through
26 the center of the device --

1 JUDGE MCGRAW: Um-hum.

2 MR. DESAI: -- the coil does have a width.

3 JUDGE MCGRAW: Um-hum.

4 MR. DESAI: But the coil does not extend transversely. It's not
5 arranged crosswise to that longitudinal axis. It's arranged parallel to that
6 axis, and it actually rotates around it, going up and down, in contrast to if
7 you had it going this way, it would be rotating across it. So it actually does
8 not extend crosswise to that transverse axis. It does have a width, which is
9 what I think JLI is referring to is well, because it has a width, it extends
10 transversely. And that really eviscerates the meaning of extends transversely
11 because everything would have a width. It wouldn't matter how you
12 arranged it. It would be extending transversely.

13 JUDGE MCGRAW: Are you saying a heating element has to be
14 wider than it is tall in order to meet this claim limitation?

15 MR. DESAI: I'm not sure I've thought through that particular
16 issue, but I can say with particular clarity that this heating element shown
17 here in Wang does not extend transversely to that longitudinal axis. In order
18 for that one that's shown there to extend transversely, we need to be rotated
19 90 degrees. And the one that's also shown in the patent figure is rotated 90
20 degrees relative to this.

21 JUDGE MCGRAW: I think what I'm trying to get at is where do
22 we draw the line. Assuming that there is some width to the heating element,
23 why couldn't some width of a heating element satisfy the claim limitation
24 requiring that heating element to extend transversely to a central longitudinal
25 axis? I'm a little uncomfortable interpreting that phrase to mean that it has to
26 extend -- that it can't be up and down, that is has to be across, and I'm trying

1 to figure out where the line is going to be drawn.

2 And here, it seems that Petitioner has argued that the heating
3 element in Wang has a certain width, and that width does transverse the
4 entirety of what they assert is the air flow passageway. And because it
5 extends all the way across the air flow passageway, it extends transversely to
6 the central longitudinal axis.

7 MR. DESAI: Well, I think actually if you were to look down the
8 tube, if -- assuming there is a central hole and you were to look down it, you
9 would not see the coil crossing. You would just see -- it would be encircling
10 it. So I don't agree that there's a portion of the coil that crosses the central
11 longitudinal axis because it's rotating around the central hole -- if there is a
12 central hole. But ultimately --

13 JUDGE KAISER: Does it not have anything to do with which --
14 you know, which dimension -- the axial dimension or the radial dimension --
15 of the coil is bigger? Does it just have to do with, well, at some point, that
16 wire has to actually intersect the central longitudinal axis of the passageway?

17 MR. DESAI: I think it definitely does have to intercept it, and this
18 one does not. If you have a coil that -- if you have a heating element that
19 goes from one side of the passageway to the other, it's going to extend
20 transversely. This one doesn't go from one side to the other. It goes around
21 it.

22 JUDGE KAISER: Yeah. I mean, I guess I had the same question
23 that Judge McGraw had, which is -- and I think I would phrase it like this is,
24 if you assume a heating coil that's of the sort of general shape of what's here
25 on Slide 55, but has only a couple of turns of the coil, such that the radial
26 dimension of the coil is much, much larger than the axial dimension of the

1 coil, and now the major -- sort of the major axis, the major dimension of that
2 coil is one that is in -- is no longer parallel to the central longitudinal axis of
3 the passageway.

4 So I'm not sure I could tell you what direction it is because it's -- as
5 you say, it's circular -- but it certainly isn't running up and down. It's
6 running in some dimension perpendicular to that. And so I guess the
7 question is why isn't that -- why wouldn't that coil be enough? And if that
8 coil is enough, then where do you draw the line?

9 MR. DESAI: So Your Honor, to be fair, I'm not 100 percent sure I
10 understand exactly the orientation you're describing, but I will say this. It
11 seems similar to me to the issue we were talking about with respect to the
12 obstruction, and the point being that -- I'm not sure, for the purposes of this
13 analysis, we need to figure out all different permutations that could be
14 transverse or not, which there's -- it's clear that transverse means crosswise.
15 That's the meaning, and the claim term says, extends crosswise to the
16 longitudinal axis. Makes sense transversely.

17 This heating element in Wang does not do that. It does not. So as
18 a matter of -- like the ground that's been presented here, we can say that does
19 not meet that construction. A heating element that could go straight across,
20 like the JUUL one, for example, or the one that's shown in Figure 2 of Han
21 does.

22 Now, do we need to figure out all different other factual
23 permutations? I don't think we do because that, I think, is sufficient for the
24 purposes of this case. And I don't think there's any issue that the word
25 'transverse' is, you know -- doesn't have any meaning. It's unclear. I mean,
26 that was actually litigated at the ITC. It was argued that it was indefinite.

1 The ALJ rejected that and said it means crosswise.

2 So again, I'm not sure that we could say -- we could probably come
3 up with all sorts of wild different orientations and debate whether they
4 could, but I don't think we need to do that because we have one here that's
5 clearly not extending transversely to the longitudinal axis in Wang.

6 JUDGE MCGRAW: Let me follow-up on Judge Kaiser's point. If
7 there was a heating element that was not in the central longitudinal axis in
8 the center of the device, but was off to the side, so it was a quarter of the
9 way in from the side, that heating element has a certain width, but the width
10 of that heating element does not transverse the central longitudinal axis
11 because it's off to the side. In contrast, this heating element does have a
12 width, and it crosses the central longitudinal axis. What is wrong with us
13 then determining that because this heating element, which has a width, and
14 transverses the central longitudinal axis of the housing satisfies this claim
15 limitation. What's wrong with that analysis?

16 MR. DESAI: Well, I -- when you say 'this', I assume you're
17 meaning the Wang coil?

18 JUDGE MCGRAW: Right. I am talking about the Wang coil in
19 the embodiment that's shown --

20 MR. DESAI: Yeah.

21 JUDGE MCGRAW: -- on Slide 55 on the right, Exhibit 1029,
22 Figure 3.

23 MR. DESAI: Again, I -- we dispute that this extends across that
24 longitudinal axis. If you draw the line straight down through the center, it'll
25 go straight through the center and the coil will be around it and it never
26 crosses that. So I don't see how this crosses that central longitudinal axis.

1 JUDGE MCGRAW: So that's an interesting argument. You're
2 saying that a coil that goes around the axis, but doesn't actually have
3 anything that crosses the very center of the device does not transverse the
4 central longitudinal axis?

5 MR. DESAI: Yeah. I mean, if you think about the way this is
6 arranged, you're going to have a coil if you're looking at it like this, and then
7 you wrap the fiber around it so that now all of the fiber is touching the coil,
8 all around it. And how the -- the central ones, they'll actually go right down
9 the middle through the --

10 JUDGE MCGRAW: Um-hum.

11 MR. DESAI: -- top of that coil. The coil is not extending across
12 the central longitudinal axis, which is very different than what you see in the
13 patent, which goes across from one side of the passageway to the other,
14 extending crosswise to the longitudinal axis. It's orthogonal. The patent --
15 the coil -- or the heating element is orthogonal to that longitudinal axis.

16 JUDGE MCGRAW: And which figure in the '864 patent are you
17 referring to that teaches extending --

18 MR. DESAI: Figure 2.

19 JUDGE MCGRAW: -- transversely across? Figure --

20 MR. DESAI: Figure 2.

21 JUDGE MCGRAW: -- 2, I assume?

22 MR. DESAI: Yes. And actually, Your Honor, you'll see that
23 there's a Figure 3 in the patent, which is --

24 JUDGE MCGRAW: Okay.

25 MR. DESAI: -- not claimed, and Figure 3 is a heating coil that
26 goes around the passageway. It wraps around helically and that is not -- that

1 one is -- the difference between that -- the Figure 3 -- and Wang, is that
2 Wang's, the coil is like wrapped on the inside of what they're alleging is the
3 passageway, and Figure 3, it's wrapped on the outside. But neither one of
4 those is going transversely to the central longitudinal axis. Neither one is
5 extending crosswise.

6 JUDGE KAISER: Could I pose a hypothetical coil design to you,
7 just to try to get my head wrapped around this completely?

8 MR. DESAI: Sure.

9 JUDGE KAISER: If you go back to that figure -- yeah, on 55 --
10 Slide 55 here.

11 MR. DESAI: Sure.

12 JUDGE KAISER: You have what -- at least I think is a sort of
13 coil, right? It's a spiral hole --

14 MR. DESAI: Spiral, yeah.

15 JUDGE KAISER: -- that circles the outside of the central
16 longitudinal axis --

17 MR. DESAI: Yes.

18 JUDGE KAISER: -- as it -- as you go in the axial direction.

19 MR. DESAI: yes.

20 JUDGE KAISER: What if you were to essentially like squash
21 that? So now it's planar, right? Instead of spiraling around the outside of the
22 axis, it just repeatedly crosses the axis. But it doesn't extend very far past
23 the axis in each direction. It's still the same ratio width as this one and still
24 the length as this one, so it's very long in the axial direction. Not very long
25 in the radial direction, but it does repeatedly cross the axis -- intersect with
26 the axis. Would that be something that extends transversely across the

1 opening?

2 MR. DESAI: Your Honor, I had not considered that scenario. I
3 mean, I think to figure that out, we'd probably need to -- we would need an
4 expert and some testimony, and we'd have a construction which says that the
5 heating element extends crosswise to the longitudinal axis, and I suppose
6 you would have experts that would opine as to whether that configuration
7 meets that claim construction or not. I can say right here, sitting today, I
8 have not thought that through. We've been focused on the Wang
9 configuration and it's -- it doesn't have that configuration. It doesn't have
10 that problem, and so I don't -- I haven't -- no one has offered any testimony
11 on that.

12 JUDGE KAISER: Okay, thank you.

13 JUDGE MCGRAW: Before you move on, where in your brief do
14 you argue that a coil that extends around an axis does not meet this
15 particular claim limitation?

16 MR. DESAI: You know, you'll have to give me a moment to look
17 through the briefs real quick. EOR (PHONETIC) at page 13. Moreover,
18 because the heating element is an axial coil, it wraps around the longitudinal
19 axis, no part of the element intersects the longitudinal axis. And the citation
20 there is to Dr. Singhose's declaration at paragraph 65. Does that answer
21 your question, Your Honor? Okay.

22 JUDGE MCGRAW: It does, thank you.

23 MR. DESAI: All right. Let me keep going here to central -- let's
24 see, we're on Slide 56 and I think the key issue here is does Wang disclose a
25 central and axial air flow passageway? Like it's admitted that the text in
26 Wang does not describe an opening in the center of the fiber. There's no

1 illustration or annotation in the figure of a passageway in the fiber.

2 I mean, what you've been shown are the green annotations and the
3 passageway the annotations were added by JLI. They're not part of the
4 figure, and I think really what JLI's expert is relying on, and you can see this
5 in his deposition testimony, he was asked does the text in Wang describe
6 that there's an opening in the center that you believe is in there. He said no,
7 but Mr. Wang confirmed that his solution holding medium surrounds the
8 complete central air flow passageway. This is improper.

9 I mean, Mr. Wang's prior declaration, even if admissible, cannot
10 supplement the Wang reference, but I think importantly, the Wang
11 declaration is not admissible for the reasons that we set forth in our motion
12 to exclude. He wasn't presented for a deposition and there's a whole host of
13 other reasons that his testimony wouldn't be admissible. I think it's worth
14 noting that in the ITC proceeding, Mr. -- the ALJ specifically noted that Mr.
15 Wang lacked credibility, when she was assessing whether to admit his
16 declaration, and she did not. And then the declaration that JLI relies on is
17 tainted by the fact that Mr. Wang was paid over \$20,000 by RJ Reynolds to
18 provide that testimony in support of its invalidity defense in the North
19 Carolina case. So effectively, what you were left with here is an argument
20 from JLI that there --

21 JUDGE MCGRAW: Excuse me. I just want to interrupt that
22 you're now in your rebuttal time --

23 MR. DESAI: Okay.

24 JUDGE MCGRAW: -- by about a minute.

25 MR. DESAI: Thank you. Effectively, we are left with an
26 argument at JLI that there must be a central gap and that's not correct. You

1 know, Dr. Singhose explained how this is a soaked fiber, it's wound around
2 the heater, and Wang provides these other gaps at the top and bottom in
3 periphery to allow air and vapor to flow from the air inlet to the air outlet.
4 He also explained how vapor can travel through the wet fiber because it can
5 bubble through the porous fiber. It was in his deposition testimony that we
6 cited in our papers, and I think Counsel took issue with Dr. Singhose's
7 description of vaporizing as a boiling operation, but that's exactly what's
8 happening here in this context. You have extreme heat -- heating of the
9 liquid -- to turn it into the gaseous phase.

10 And there's a reason why JLI did not prevent -- provide any reply
11 to declaration to dispute this testimony from Dr. Singhose. Dr. Sturges
12 didn't disagree. And all you have is attorney argument from Petitioner's
13 Counsel. So Wang does not describe a central ground, does not illustrate it,
14 does not annotate it, and there does not need to be a central gap. It's a
15 soaked fiber that's compressed against this heated -- heating coil.

16 Let me turn to the combination of Wang and Fang. This is at 65.
17 This is the proposed modification of wrapping the solution holding medium
18 around the air flow passageway and orienting the heating element
19 horizontally across the air flow. That's what Dr. Sturges described. They
20 describe this as a simple design choice. Similar to Xia, they relied on the
21 same motivations that were in paragraphs 61 to 66 of the Sturges
22 declaration. Again, those were the superficial types of motivations. Let me
23 cover some of the other ones.

24 Dr. Sturges did not assess -- I'm on Slide 67 -- the significant
25 differences between Wang and Fang. He treated them as, effectively, the
26 same device. They are not. Wang, again, is a low cost device with a very

1 simple disposable cartomizer design, a soaked rolled fiber around a
2 longitudinal coil. There are no parts or structures for holding the heating
3 element, other than the soaked rolled fiber, and no structure for an air flow
4 passageway. Simplicity and low cost are the objectives of this design.

5 Fang is a complex design with a thin film heating wire and a wick
6 in the battery portion, and a cartridge containing a liquid. The portion with
7 the heating wire is reusable, the delivery mechanism is complex involving
8 an oil converter 7 and an oil storage device 14. These are very different
9 types of e-cigarette devices with significantly different objections in
10 architectures restoring liquid, delivering liquid, and vaporizing liquid.

11 And as explained by Dr. Singhose, modifying Wang as proposed
12 would significantly increase the manufacturing cost and complexity, change
13 the air flow and have different power consumption requirements. Let me go
14 to Slide 68. Importing the heating wire, wick, and air flow passageway into
15 Wang is counter-intuitive, given that the design of Wang is intended to be a
16 simple, disposable, cartomizer design. Each time the liquid is spent, these
17 components would be thrown out. They would -- that's completely counter-
18 intuitive to Wang's objective, which is to have this low cost design with the
19 silk roll fiber and a coil, and that's it. Adding all these complex components
20 for a passageway and a thin film wire and a wick are contrary to that design.

21 They would also take up significantly more space. I think we've
22 been generous in drawing these components here, like miniaturized, but they
23 would take up significantly more space which would reduce the liquid
24 storage capacity. And in Wang's design, there is just the roll of fiber around
25 the coil for a reason. Low cost. Now you're increasing the cost and
26 reducing the liquid storage, which means it's going to get thrown out more

1 often.

2 Now, Dr. Sturges at 69 says it's a simple design choice. He
3 identifies increasing surface area of the heater, contacting the solution is a
4 benefit. He identifies a wider air flow passageway, and he says that
5 designing the heater in this way is equally simplistic as the Wang design.
6 These are all incorrect.

7 If we go to Slide 70, Fang's design is clearly not as simple as
8 Wang's. The change does not increase the surface area of the heating
9 element contacting the solution holding medium. In Wang, as we just went
10 through, all of the coil is touching the solution holding medium, because it's
11 circling around and all of it's touching. If you were to invert it
12 horizontally -- if you were to rotate it 90 degrees, you'd have the ends
13 touching the solution holding medium. So that's -- it's not correct that it
14 increases the surface area.

15 Widening the passageway reduces the amount of liquid storage,
16 meaning the cartomizer needs to be replaced more often, which is even more
17 problematic given that you're increasing the manufacturing costs. Now, if
18 we're at Slide 71, JLI tried to characterize this as simply rotating the heating
19 coil 90 degrees, and that's not what a POSITA would do. It wouldn't work.
20 It is not as simple as saying, let me just rotate it 90 degrees.

21 As Dr. Singhose explained, if you think about it, if you rotate the
22 heating coil 90 degrees, this would result in an inoperable design. The coil
23 would be prone to deformation and damage when the fiber is rolled around
24 it. I mean, there's a reason why it's oriented in that direction with the rolled
25 fiber. If you were to rotate it and try to roll the fiber on it, you're going to
26 crunch it up. I think, Your Honor -- I think that -- ultimately, the point here

1 is they tried to characterize this as a simple substitution between two e-
2 cigarette devices that are effectively the same. That's not correct. These are
3 two fundamentally different types of e-cigarette devices with very different
4 objections. And Your Honor, I'll reserve what I have left for rebuttal.

5 JUDGE MCGRAW: You have, I believe, two and a half minutes
6 for rebuttal.

7 MR. DESAI: Thank you.

8 JUDGE MCGRAW: Do you think you might need more? If you
9 might, I'm okay giving you an extra five minutes and giving an extra five
10 minutes to Petitioner.

11 MR. DESAI: If I have an extra five minutes, I would use it to
12 cover some -- just a quick point on some secondary considerations, but I
13 think I would need to do that now and not in rebuttal.

14 JUDGE MCGRAW: All right. So then you'll have a total of five
15 minutes for your rebuttal and Petitioner has -- he had 20 minutes before, and
16 so -- I'm trying to redo the math. So you've requested 10, you've used up 7,
17 so you have 3 left. If we up you to 5, that gives Petitioner an extra 2
18 minutes, so 22 minutes for Petitioner. Does that sound accurate to
19 everyone?

20 MR. DESAI: It sounds right to me.

21 MR. DOKHANCHY: Sounds good, all correct.

22 JUDGE MCGRAW: All right. You may begin when ready.

23 MR. DOKHANCHY: Thank you, Your Honor. I want to start
24 with the cartridge point. So the crux of Petitioner's -- excuse me -- Patent
25 Owner's argument is that these two items on the bottom are cartridges. That
26 is --

1 JUDGE MCGRAW: And you're on Slide 17, correct?

2 MR. DOKHANCHY: Yes, thank you. Slide 17. So essentially if
3 they're wrong about this -- even if they're right about this, it's wrong for all
4 the reasons I discussed. When they're combined, the generator is a cartridge
5 and there's simply no reason it's not. The fact that it can be disassembled is
6 fully covered, s explained in the specification, but they're actually wrong
7 that these two things are cartridges. They are not cartridges. There's no
8 reason to think they're cartridges; they're not called cartridges. The only
9 ones calling them cartridges are Patent Owner.

10 And we know they're not cartridges because they're incomplete
11 parts of an actual unit called the generator. These components are not self-
12 contained things. They're not cartridges, and you know that because they're
13 open-ended components that have to be combined together to be of any use
14 whatsoever.

15 That item on the right, the -- what they call the second cartridge,
16 that item 12 that's the solution holding medium, or part of the solution
17 holding medium -- excuse me, I hit a wrong key. I want to show the -- so if
18 you're looking at Slide 16, we see that item 12 that as assembled, that
19 solution holding medium contacts the liquid guiding mechanism 11, and
20 that's how the liquid gets directed toward the heating element. That's an
21 open-ended unit. That is not a cartridge. That solution holding -- that
22 solution would fall out.

23 It is -- if you look at the Exhibit 1004, which is Xia, at page 13, it
24 says that item 12 is an open-ended unit, and the only time it is functional and
25 is a part of a cartridge is when it's combined with the item on the left so that
26 it contacts and is kept in place by that bridge. It's simply not a cartridge on

1 its own, nor is the item on the left. So I think there are multiple ways you
2 can look at this. Xia discloses a generator. The fact that separator matter,
3 but actually affirmatively wrong that the sub-components of the cartridge are
4 themselves cartridges.

5 Okay. On the air flow passageway point, I heard a new test, which
6 I object to. This was not in their briefing, and that is, I think -- if I get the
7 articulation right -- an air flow passageway essential and axial if the air
8 flows anywhere, but only the periphery. Something like that. It's not
9 allowed to flow with the periphery, but it's allowed to flow anywhere --
10 there's no basis for that construction, this is the first we're hearing it, and so I
11 object to it on that basis, but it's also just wrong.

12 I believe we were called misleading -- this is here on Slide 42 -- for
13 indicating the arrows as they are in the Ciro. I object to being called
14 misleading. As Counsel surely knows those yellow arrows sit exactly on top
15 of red arrows in the underlying document. We highlighted them in yellow
16 so they're more easily visible, but -- so I take issue with being called
17 misleading here. That's exactly the indicating air flow in the exhibit.

18 So we heard, again, that the air flow in this device does not get
19 diverted more by the positive pin than the heating element. Well, it clearly
20 does. I mean, if you look at it here, the heating element is the blue circle,
21 positive pin diverts it more, both along its length and along its width.

22 JUDGE MCGRAW: What are you citing to? That's Slide 42?
23 The figure --

24 MR. DOKHANCHY: Yes, it's --

25 JUDGE MCGRAW: -- on the left?

26 MR. DOKHANCHY: This is Slide 42 and this is Exhibit 1021 at

1 9 to 12, and 1025 at 17. This image appears a few times. It's also in the
2 petition at the cites, and I believe Exhibit 5 is RJR's briefing on how the air
3 flows. It's their device and they're describing how the air flows. And you
4 know, even still, the periphery construction, which we're hearing for the first
5 time, conflicts with this interpretation. The air flow is flowing around the
6 periphery. It's flowing around the periphery of the positive pin and then it
7 goes and flows around the periphery of the green alleged central air flow
8 passageway.

9 If you look at those yellow arrows and you compare them to where
10 the green is, it can't get any closer to the edge of the green alleged central air
11 flow passageway. Looking around the middle where there's a blue
12 rectangular diversion, that air flow is very much at the periphery. So even
13 this new fabricated construction fails. It conflicts with their ITC allegations.

14 JUDGE MCGRAW: I'll ask you the same question that I asked
15 Patent Owner. How does Xia teach an air flow passageway that meets the
16 claim, given the statements that Patent Owner made during prosecution to
17 distinguish Han? In other words --

18 MR. DOKHANCHY: Right.

19 JUDGE MCGRAW: -- why isn't Xia's air flow passageway the
20 same as Han's air flow passageway, which was disclaimed?

21 MR. DOKHANCHY: So the reason why is that the size of the
22 obstacle is not discussed in the Han discussion in the file history. The only
23 point -- the sole point made is that the liquid storage is in the middle of the
24 shell, and thereby, it forces the air flow around it. That is true of any
25 obstacle that's in the middle of the shell. There is no argument from the
26 applicant and no discussion from the examiner that because the air flows

1 around a large object, it is impermissible. So there's no basis in the intrinsic
2 record to come up with a construction that says anything except for Han is
3 okay. Any obstacle other than a Han size obstacle is okay. It just doesn't
4 exist in the intrinsic record. It also --

5 JUDGE MCGRAW: We don't need to reach that issue of what
6 other obstacles are permissible or not. We're just focusing on what is not
7 permissible. So an air flow passageway that goes to the periphery such as
8 that in Han, that is not an air flow passageway given the statements made by
9 Patent Owner during patent prosecution.

10 MR. DOKHANCHY: I don't think -- well, I disagree, Your
11 Honor. I don't think you can read their argument as being that. Their
12 argument was simply, the air gets diverted, and so there's nothing in the
13 Middle District of North Carolina case, there's nothing in the specification,
14 there's nothing in the claims. It would simply be coming up with a
15 construction. I don't even know what the construction would be. Certainly,
16 you'd have to come up with some construction that sets the bounds on the
17 claims. We couldn't just say something other than Han is okay.

18 And so notably, also, with respect to their construction that it can't
19 be in the obstacle, it can't be any larger than the heating element, their own
20 expert admitted that there is no limitation on the size of the heating element.
21 So as you stated, the heating element could be an obstruction. Well, the
22 heating element can be as big as it wants. There's no limit on it; their own
23 expert admitted that. And let me find the citations in the deposition
24 transcript in a moment, but it could be as big as the Han liquid storage.

25 And so, you know, then you get to a comparison of the actual
26 device is the actual obstruction. It just kind of doesn't make any sense.

1 There's no foundation upon which to set boundaries or claims so some can
2 know whether it's infringed or not. And ultimately, their position in the ITC
3 is that obstacles that divert the air flow in very large amounts are permissible
4 and they should be held to that.

5 Again, despite what the Patent Owner said here, which did not
6 comment on the size, but sort of the fundamental point that there can't be
7 any obstacle, that is no longer good as far as we're concerned because they
8 are taking the opposite position. And in terms of finding a boundary based
9 on Han, I don't know that it can be done and there's simply no support for it
10 other than something that would be a reference to Han, literally, which I
11 don't think is proper.

12 And okay, the first aperture -- yeah, I think I heard Counsel say
13 that the item on the right is the alleged cartridge and the alleged housing.
14 That's incorrect. That is not what NJOY argued at the ITC. The ITC --

15 JUDGE MCGRAW: And you're talking about Slide 31? Just so
16 the record is clear.

17 MR. DOKHANCHY: Yes. I thought I said that, but maybe I
18 missed it. On Slide 31, the left image -- and you can go to that citation 38 to
19 40 -- the judge found, and it's true from the -- from Exhibit 1033, you can
20 also see it. What they allege is the cartridge is the thing on the left with the
21 mouthpiece. Therefore, the judge held the housing is the entirety of the
22 outside of that structure, including the mouthpiece. They never said that the
23 cartridge is the thing on the right, so that's incorrect. They squarely pointed
24 to an internal cartridge -- excuse me -- internal aperture in the cartridge as
25 the second aperture. The judge held that and if you'd like to look at those
26 portions of the ID, that was actually key issue in those portions of the ID.

1 I'd like to cover the end comments that was raised by Patent
2 Owner. Patent Owner says the word 'end' means the extreme end of an
3 object. They get that essentially from the dictionary they provided at Exhibit
4 1021. I'm at Slide 34 here. The fourth definition says the most remote place
5 or point. Even the word 'place' adds some length, I think, but their expert
6 admitted that the third definition is also correct, and that is a part or place at
7 or adjacent to an extremity.

8 So when you talk about a place adjacent to an extremity, clearly,
9 you're getting some dimension inward from the very edge of the device, and
10 that's exactly what their expert said. So here on Slide 35, I asked their
11 expert, do you agree with the construction of end as a part or place at or
12 adjacent to an extremity. He said yes. On the right, I said, so there would be
13 a range, and they say it's not a range. Their own expert says it's a range. A
14 range of distances from the very end, inward towards the center of the
15 cartridge that you would call the end. He said, that's correct.

16 Again, the same thing with their ITC contentions. The second
17 aperture has to be at the end, and they pointed to an internal aperture. It's no
18 more internal than the one we pointed to in Xia. It's -- you might say 20 to
19 25 percent of the way into the cartridge. It's just like Xia. There's no
20 argument that it's an external aperture. It's an internal aperture within the
21 cartridge, so end has to have some length.

22 And then on the first end -- so this is Slide 37, previous discussion
23 is on Slide 36. On Slide 37 here, this is from their ITC allegations. You can
24 see on the left, there is a notch in the cartridge. That fits into a protrusion in
25 the battery side, and that's how the mechanically coupling, if it happens,
26 happens. There's no other way for mechanical coupling to happen. The

1 notch fits in the -- or the protrusion fits in the notch, and that's how they
2 drew it in their contentions. They said, this is the first end, they used dashed
3 lines to indicate the first end. It's not the extreme end of the object. It has
4 some width. Of course it has some width. If you were to say, you know,
5 here right now, I'm holding this pen on the end, I'm not holding it on an
6 infinite testimony small claim. I'm holding it on the end where, you know,
7 there is some range to that.

8 Okay. I'll briefly do the dependent claims because those were
9 addressed by the Patent Owner. So this '864 independent claim, I think it
10 was 12 was the first one they touched on. Okay. So they say there's no
11 wicking material on -- this is Slide 79. So it's in the petition at 77, Xia says
12 that the chemical liquid flows from the liquid storage chamber 12 through
13 the liquid guiding mechanism 11, which is the wick, to the secondary liquids
14 source chamber 10, and all parties agree it gets sucked into the air flow
15 passageway from there. That guiding towards the heating element -- so from
16 the liquid storage chamber 12 on the right toward, in this image, leftward
17 and upward, toward the heating element, satisfied the claims. It doesn't say
18 it reaches the heating element. It says, drawing towards the heating element
19 to be vaporized and that's the reason that it's drawn there, and that's how it's
20 carried there, toward the heating element.

21 On Slide -- and I'll just note briefly on Slide 80, they don't dispute
22 that in our modification in which the wick of Fang is used to draw the liquid,
23 the elements met, clearly it draws into direct contact in modification. They
24 argue Claim 5 -- well, let me touch on Claim -- I believe it was Claim 4 --
25 that the -- no portion of the air -- this is Slide 87. No portion of the air flow
26 passageway or chamber immediately adjacent to the heating element to the

1 second aperture, having cross-sectional area smaller than the cross-sectional
2 area of the second aperture, and they pointed to the portion of the -- or the
3 space immediately adjacent to the heating element on the left side of this
4 image.

5 That's not what the claims are talking about. The claims say that
6 no portion of the air flow passageway in the space immediately adjacent to
7 heating element to the second aperture. That's the right side of the heating
8 chamber to the second aperture. It's not about the left side. That's the
9 opposite side. The claim language is talking about in the space from
10 immediately adjacent the heating element, on the side of the second aperture,
11 to the second aperture. It's not including the heating element in that.

12 In Claim -- I'm just trying to find it. Yes. So this is the discussion
13 of Claim 5 and a few others on Slide 85. And the language is, wherein the
14 air flow passageway extends in the straight path from the first aperture to the
15 second aperture with only the heating element obstructing a portion of the
16 air flow through the air flow passageway, along the longitudinal of the axis.
17 Their argument is that this requires only the heating element throughout the
18 entirety of the air flow passageway. That's not a correct read. These are
19 very smart and capable patent prosecutors. They knew what they were
20 doing when they put the words ' a portion of'.

21 If you take that out, then it reads that only the heating element
22 obstructs the air flow through the air flow passageway, but they specifically
23 wrote, only the heating element obstructs a portion of the air flow. We have
24 identified such a portion and that's in the area of the heating chamber. In
25 that part of the air flow passageway, only the heating element obstructs the
26 air flow, so they are taking out part of the claim language in order to make

1 their argument.

2 Xia under 103. So the -- so Xia as modified with Wang and Fang.

3 This is Slide 81. They point to these differences that they say are -- make

4 the references so different their -- a POSITA would not look to one or the

5 other when looking at Xia, but they point to things that are not relevant to

6 the modification. They point to the differences in the way the solution

7 makes that last step to the heating element. In one, it's direct contact. In

8 one, it's a spray. That's not relevant to the modification. The modification

9 is, is there a passageway through the solution holding medium.

10 Again, as we said, in Xia, it goes around the solution holding

11 medium, which is fine for the reasons we discussed in their view. The other

12 option is for it to go through the middle. Those both happened in Wang and

13 Fang. It's a simple concept of going through the solution holding medium.

14 The fact that one uses direct contact and one uses spray to heat the liquid is

15 not relevant to the concept of does the solution -- does the air flow through

16 the solution only medium or around it. It's simply a different question.

17 So I guess what they're saying is these devices are so massively

18 different, they're just not in the same field of art, which is just simply wrong.

19 There are different mechanisms for certain parts of the operation, yes. No

20 one ever disputed that. I think I heard Counsel say, we're treating them as

21 exactly the same device. I'd like to see a citation for that because we

22 certainly never said that. All devices are going to be different. If you

23 couldn't point to different devices, you wouldn't have any obviousness, but

24 those differences they point to are simply irrelevant to the question of, can

25 the air flow through the middle. Just briefly on the point of using the word

26 'simple'. I heard that we never said the changes were simple. I'll provide

1 some brief cites in the petition at 35, 48, 94. We called the modifications
2 simple and easy.

3 Whether the cylinder in Xia is impermeable and that is one of the
4 versions, as we saw earlier, that shell that contains the (INDISCERNIBLE -
5 TECHNICAL DIFFICULTIES) item 12, that's a shell. And inside it there is
6 a sponge or some other mechanism, or it could be empty, but that -- it
7 already has the solid material. You don't need to add it. I think Counsel said
8 you'd have to add a new component. No, it just says going around the
9 solutional medium, the air can flow through it. And also Fang, as a gas pipe
10 and smoking channel, those are solid boundaries, but you don't even need to
11 look outside of Xia.

12 Okay. So Wang and the transverse concept. I think what Patent
13 Owner ultimately settled on is the notion that some -- like kind of distancing
14 from -- this is Slide 104. Distancing itself from the major axis, minor axis
15 dispute, and now it's all about does the heating element have to go through
16 the middle of the passageway. It doesn't. Let's look at the claim language.
17 The heating element extends transversely to the longitudinal axis. That just
18 means -- so the claim language that I was just talking about, that's on Slide
19 106. The claim language says that the heating element needs to extend
20 transversely to the axis. It doesn't say cross through the middle of the air
21 flow passageway.

22 The -- in this instance, the coil in Wang goes from one side of the
23 passageway to the other. That's not disputed, essentially. It just does so
24 with a curved line, but that's fine. It still goes in a direction that is transverse
25 to the longitudinal axis. You have along the axis. That's one dimension, and
26 then the opposing direction, you have things that are transverse. It doesn't

1 have to intersect the axis. I heard that language used. There's nothing in the
2 claim language that says intersect. It goes across the passageway, and it
3 does so in a direction that is not in the longitudinal direction. It's in the other
4 direction, the transverse direction, orthogonal to the longitudinal axis.

5 Nothing in the claims requires a straight line across the middle of
6 the passageway. In fact, it would be unclear how the JUUL cartridge would
7 meet that. There's a coil, as well. There's no straight line across the middle.
8 And so this notion that the helical coil cannot meet the claim limitation on
9 Slide 106 of extending transversely is incorrect. It doesn't say extending
10 transversely through the axis or intersecting the axis. It goes in a direction
11 that is transverse to the axis.

12 You could have, for example, freeways, one freeway is laid over
13 the other at a 90 degree angle. They certainly don't intersect, but they're
14 transverse to each other. They go at a 90 degree angle. That's how traffic
15 goes in two different directions. The heating element here, as you can see in
16 Slide 104, extends transversely. There's no requirement to go through the
17 middle.

18 Okay. I think I heard that Dr. Sturges does not disagree with Dr.
19 Singhose about the passageway in Wang. He certainly does. His whole
20 theory is that there's an air flow passageway in Wang. They read a portion
21 of the deposition transcript that said, you know, even Mr. Wang agrees with
22 me. If you read the very next question and answer, it was asked, so Dr.
23 Sturges, you agree that your only support is Mr. Wang's testimony. He says,
24 no, that's not what I said. I said that it also supports my testimony of what I
25 see in Figure 5 of the specification. And so I think that's all I have on
26 rebuttal, unless there are any questions from the panel. All right.

1 JUDGE MCGRAW: Thank you very much.

2 MR. DOKHANCHY: Thank you.

3 JUDGE MCGRAW: Patent Owner?

4 MR. DESAI: Yeah. Let me share my screen again quickly. All
5 right. Thank you, Your Honor. Let me just quickly start with the central
6 and axial passageway. I mean, there's no new construction here. It has to be
7 a central and axial passageway with respect to the housing -- the longitudinal
8 axis of the housing. The passageway goes to the periphery. Like you see in
9 Xia and Han, it is not central and axial. This is exactly what the Patent
10 Owner -- the applicant said to the patent office, the patent office screen.
11 And this is exactly what we argue in our surreply at page 11 -- at pages 11
12 and 12 regarding the prosecution history, so there's nothing new here in that
13 respect.

14 Second aperture in the housing -- or assuming Your Honors adopt
15 our construction, because having means different things in context. For
16 example, having -- housing having an aperture and housing having a second
17 end, first end, they mean -- having means something different in those
18 contexts. If you adopt our construction in Xia and Wang -- and I'll go to
19 Slide 28 right here, Xia -- they pointed to a hole in the solution storage
20 medium. That's the hole. It's not a hole in the housing. The housing has a
21 solution storage medium in the interior and that's the hole they're pointing to
22 for the first aperture.

23 They've done the same exact thing for Wang on Slide 61. You can
24 see where they've pointed to the first and second aperture. It's in the fiber.
25 It's not -- that is the solution storage medium they're pointing to, so it's -- and
26 that is not our infringement case against JUUL. We are not pointing to a

1 hole in the solution storage medium for either aperture.

2 And if we go to Slide 31, this gets a little complicated, but the
3 bottom line is on the right side, JUUL's cartridge is made of a tank, which is
4 that clear plastic that you see on that right side, and then there's a cap that
5 goes on top of it. That plastic piece. That seals the tank so liquid doesn't
6 pour out. The patent talks about how the housing can be formed with a
7 cap -- end cap -- and that can be an end, and that is the end of this particular
8 housing of the JUUL cartridge, and it has an aperture in it. So there's --
9 we're not pointing to a aperture of the solution storage medium. We're not
10 pointing to that. That's not -- it's not the situation. They were being
11 inconsistent.

12 Now, the ALJ decision is it's different in this respect because the
13 issue there -- and it's really not at issue here -- but the ALJ adopted a
14 construction at page 29 of the ID where she determined that the housing and
15 the cartridge had to be co-extensive. And we don't agree with that
16 construction, and we've appealed that to the commission. And the point
17 there is that the ALJ basically said, if you add a mouthpiece on top of this
18 housing here, that's now part of the housing.

19 And our view is no, there's the housing, and you can add a
20 mouthpiece that doesn't make the mouthpiece part of the housing. And that's
21 a different issue that has nothing to do with what we're talking about here
22 and it -- there is no inconsistency between our position on JUUL having that
23 second aperture there in the tank cap, and the entirely interior holes they're
24 pointing to in Xia and Han that are in the solution storage medium, the rolled
25 fiber and the secondary storage tank.

26 Now, quickly, I just -- to circle back on the transverse heating

1 element, I think while we were -- while I was listening to Petitioner, I just
2 simply wanted to draw -- this is how we would look at Wang. You would
3 have the circle -- if there is a hole in that fiber, the red would be the coil
4 going around and round and round, and it would not cut across that center.
5 It is not arranged crosswise, it is not extending crosswise to that longitudinal
6 axis, it's not orthogonal to it. This is how JUUL in the '864 patent would
7 look with the coil extending crosswise. It goes across the longitudinal axis
8 and crosses right through it. And so they are totally different, and Wang
9 does not fall within the scope of the claims.

10 And then the last thing I want to cover is just quickly on secondary
11 considerations, and I think this is useful in terms of the crosswise -- the
12 transverse issue. This is sort of a timeline, I think, that is really helpful here
13 on Slide 80, and you know, before 2009, you had sort of these varieties of
14 devices. You had these, you know -- the expensive -- more expensive type
15 of designs with the reusable portions with the heating elements like Fang
16 and Xia, and Xia being the NRPO device. That was actually a commercial
17 device.

18 And then you have Wang, which is sort of this very cheaply made
19 rolled fiber, very simple rolled fiber, with the longitudinal coil, and that was
20 sort of the state of the art then. And then in 2009, FUMA comes out and
21 FUMA's device, unlike any of those three, combine these features of having
22 the central passageway, but the heating element also extending crosswise
23 through the passageway. So, different than what you see in the Wang
24 device.

25 And then all of a sudden, after several years, I mean, FUMA
26 actually -- just to quickly go back -- FUMA's sales actually, you know -- for

1 a small company, they made a significant amount of money. It was a three-
2 person company. All things are relative here and their sales spiked, but then
3 they started to decline in 2011, '12. After that, they started to go down, and
4 the reason why is everyone started copying their design. They shifted away
5 from this -- the Wang type design, and they started using the central tube and
6 the wick with -- and the heating element that we're extending crosswise
7 because it was a better design.

8 And there's a specific example we have from a brand called Green
9 Smoke. This is Slide 81 where in 2008, they had the first generation Green
10 Smoke design, and if you look carefully on the left figure, you see that coil
11 going longitudinally on the left side up the center. In 2009, FUMA's device
12 comes out, goes public. In 2010, Green Smoke now has a generation
13 product with a horizontal heating coil.

14 So, like, there was a paradigm shift in how they were making these
15 types of devices, and it was because of FUMA's patent and their product that
16 changed things, to change the way they were done. And then helpful, Your
17 Honors, you'll see it's at the POR -- there's a long -- there's an exhibit -- let
18 me get the exhibit number right quick. Slide 80. Yeah, Exhibit 2039 is a
19 consulting report that sort of marches through all these products -- these
20 products that all of a sudden shifted to this alternative design that FUMA
21 had come out with after 2009. I think this really demonstrates that it was an
22 innovation here that took place with respect to the air flow passageway and
23 the transverse heating element.

24 JUDGE MCGRAW: I believe that your time is now up.

25 MR. DESAI: Thank you, Your Honors.

26 JUDGE MCGRAW: I'd like to thank both of you for your

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IPR2024-00161 (Patent 10,334,881 B1)

1 presentations today. Those were very helpful. The case is submitted and a
2 final written decision in both proceedings will issue in due course. Have a
3 wonderful afternoon.

4 MR. DESAI: Thank you, Your Honors. Bye.

5 MR. DOKHANCHY: Thank you, Your Honors.

6 (Whereupon, the above-entitled matter went off the record at 3:49
7 p.m.)

IPR2024-00160 (Patent 11,497,864 B2)

IPR2024-00161 (Patent 10,334,881 B1)

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