

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NEURENT MEDICAL INC. & NEURENT MEDICAL LTD.,
Petitioner,

v.

AERIN MEDICAL, INC.,
Patent Owner.

IPR2024-00277 (Patent 11,241,271 B2)
IPR2024-00278 (Patent 11,033,318 B2)
IPR2024-00282 (Patent 11,766,286 B2)

Record of Oral Hearing
Held: April 23, 2025

Before MICHAEL J. FITZPATRICK, ZHENYU YANG, and
MICHAEL A. VALEK, *Administrative Patent Judges*.

IPR2024-00277 (Patent 11,241,271 B2)
IPR2024-00278 (Patent 11,033,318 B2)
IPR2024-00282 (Patent 11,766,286 B2)

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The above-entitled matter came on for hearing on Wednesday, April 23, 2025, commencing at 1:00 p.m., at the U.S. Patent and Trademark Office, 600 Dulany Street, Alexandria, Virginia.

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P R O C E E D I N G S

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USHER: All rise.

JUDGE YANG: Please be seated. Good afternoon. This is a consolidated hearing for IPR2024-00277 involving patent number 11,241,271, IPR2024-00278 involving patent number 11,033,318, and IPR2024-00282 involving patent number 11,766,286. I am Judge Yang. Joining me via video are Judge Fitzpatrick and Judge Valek. Now, counsel, please introduce yourselves. Let's start with Petitioner.

MR. CAVANAUGH: Good afternoon, Your Honors. David Cavanaugh with Wilmer Hale.

JUDGE VALEK: I'm not getting sound.

MR. CAVANAUGH: Can you hear me now? Should I be closer?

REPORTER: Try the podium, sir.

MR. CAVANAUGH: Good afternoon, Your Honors. Can you hear me?

JUDGE VALEK: I can hear you now.

MR. CAVANAUGH: Thank you. David Cavanaugh with Wilmer Hale for Neurent, the Petitioner.

MS. COHEN: Alexis Cohen, also from Wilmer Hale. For the Petitioners.

JUDGE YANG: Thank you. In house counsel or somebody else?

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1 MR. CAVANAUGH: Sure. I'd like to also introduce Stephen
2 Horan, who's a company representative from Neurent.

3 JUDGE YANG: Okay. Thank you. Welcome. Patent Owner?

4 MR. GILFORD: Good afternoon, Your Honors. Ben Gilford,
5 on behalf of the Patent Owner, Aerin Medical. With me today is my
6 co-counsel, Heath Briggs, and my co-counsel, Trenton Ward. And we
7 also have here today Erin's chief legal officer, Irina Ridley. Thank
8 you.

9 JUDGE YANG: Thank you. Welcome, everyone. As we
10 stated in the trial order, each party has 90 minutes to present its
11 argument, starting with Petitioner and then followed by Patent Owner.
12 Both parties may, if you'd like, reserve no more than 30 minutes for
13 rebuttal. Please note this proceeding is being streamed online to
14 enable public attendance. Just a reminder to everyone, recording of
15 any PTAB hearing is prohibited. The court reporter will provide a
16 transcript of the hearing that the Board will enter into the record when
17 available. To ensure the transcript of this hearing is clear, please
18 clearly identify the record, including the slide numbers of the
19 demonstratives. This will also help my colleagues because they
20 cannot see what you put on the slide. But they have the record and the
21 demonstratives, and they can follow you as long as you identify where
22 you are.

23 Because this is a consolidated hearing you are free to present it
24 however you want. You want to do it sequentially; you want to
25 present them together. Whichever way is fine with us. I just want to

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1 say, if you want to present the three cases all together, there are case
2 specific issues, and when you address those, please clearly identify
3 them. And if you decide to do them sequentially, one by one, no need
4 to repeat the common issues.

5 Also, a reminder, we will not consider any new argument, new
6 evidence. So to save your time, my advice is not to present them. But
7 if you find opposing council somehow made that mistake, you can
8 object, but we ask you not to interrupt the council. You can save it
9 when it is your time to present. We are not going to make any
10 decisions here on spot today. As long as you identify something that
11 we see it's new, we will not consider it when we eventually make the
12 decision. Any questions? No? All right, then. Petitioner, would you
13 like to reserve any time for rebuttal?

14 MR. CAVANAUGH: Yes, Your Honor, we'd like to reserve 30
15 minutes for rebuttal.

16 JUDGE YANG: All right, whenever you're ready, you may
17 begin.

18 MR. CAVANAUGH: Good afternoon, Your Honors. May it
19 please the Board. I'm Dave Kavanaugh again, for the record, and with
20 me is Alexis Cohen. I also want to introduce two people from
21 WilmerHale, Josh Stern and Alex Nemtzow. And we'll be arguing
22 these proceedings together. We'll, as Your Honor is counseled, will
23 identify which proceeding is relevant to which particular issue. Let
24 me begin briefly by summarizing three matters that are not in dispute
25 between the parties today.

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1 First, there's no dispute that the elements of the challenge
2 claims were well known long before the filing date. There's no
3 dispute that the technology was well known and in practical use as of
4 2011 when the patent application was filed. The Aerin's expert
5 admits that the claimed elements used in the steps for treating a nasal
6 airway and the treatment device using RF electrodes was well known.
7 Specifically, bipolar electrodes were well known. And while there's
8 some dispute about some particular elements today, the majority of
9 the limitations are not in dispute. Second, that there's no dispute that a
10 POSITA would have had a reasonable expectation of success at
11 combining the prior art references used in the combinations. In other
12 words, there's no dispute that the known elements, when combined,
13 would function in a predictable manner according to their intended
14 purpose.

15 Third, the Patent Owner is implicitly adding limitations in the
16 claim and other requirements to the claims when seeking to
17 distinguish the prior art, as we'll discuss in a moment, when they seek
18 to distinguish the description of Stern, the only reference that they're
19 challenging in these IPRs, they seek to put on requirements on Stern's
20 disclosure and not that are not in the claim. In any event, the
21 requirements that they put on Stern are part of the reference.

22 So the issues are narrow. Now let's get to them. And on this
23 slide, I'm going to walk through the agenda. This is on slide two. I'll
24 have a brief summary of the technology just to maybe set the stage a
25 bit and then go through a little bit of what Stern discloses with regard

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1 to some of the disputed issues. And then third, my co-counsel will be
2 talking about the multiple RF output channels. And then finally, we
3 want to spend a moment on the Patent Owner's definition of a
4 POSITA.

5 So moving now to slide four. You know, the application of RF
6 energy was well known. It requires completing an electrical circuit,
7 as Your Honors know. And you know there's a voltage source and a
8 voltage source, it goes to an electrode with bipolar. It goes from one
9 electrode to another electrode through the tissue. And that's what the
10 RF energy is doing the treating. In Figure 17 of Stern, which I think
11 is on the right, we're showing a bipolar kind of bipolar setup where
12 one electrode on the left kind of is showing energy going to the right.
13 And I think that if we go to slide 8, I'm going to go through the
14 technology, as Your Honors are known.

15 And I just want to stop on Stern Figure 15 just to describe kind
16 of what's going on with the electrodes which are highlighted in green
17 and the kind of energy path, if you will, from the energy source to
18 through one switch and to an electrode, goes through the tissue to the
19 other electrode and then returns to the energy source. And there's a
20 very common way of structuring bipolar electrodes. There's, you
21 know, a lot of different technology, but put simply, these switches are
22 just part of the process in order to close a line to allow energy to go to
23 a particular electrode and to the tissue.

24 So, it's not disputed that all this was well known and available
25 decades before the patents at issue here. The Petitioners submitted

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1 with this petition, not just the art on the grounds, but also additional
2 references that support the various combination the various concepts
3 and to identify that they were well known. Disputes for this case we'd
4 like to focus on are about what I would say are implementation details
5 that are in the prior art references, and they relate to using multiple
6 pairs of electrodes, putting them in rows and combining them to
7 power the electrodes. And as we'll explain to you, Your Honors, you
8 know, there's the disputes the Patent Owner has raised are not so
9 much that these concepts were new or actually novel, but if you look
10 at the prior art and you look at how the Patent Owners interpreting the
11 claims, they're adding limitations to the claim or making requirements
12 of the prior art that just simply aren't required of the claims.

13 And so with that, I'd like to move to the disputed issues and the
14 multiple pairs of electrode and psi. And so, what I've done on the
15 slide 13, Your Honors, is to identify the various limitations that are at
16 issue, along with the particular location in which petition they reside.
17 So Your Honors have a useful guide to which limitations are relevant
18 to which IPR. But what I'd like to do, and start with this argument on
19 the multiple electrode pairs, is to talk through what Stern actually
20 discloses, because I think that's very relevant. And if we look at what
21 Stern discloses On the slide 14, you know, there are selected pairs of
22 electrodes that are described on the top. And then, you know, if Your
23 Honors look at the bottom quote, the bipolar operations so that any
24 pair or any combination of pairs may be utilized together. And that,
25 in our view, is disclosure of multiple pairs of bipolar electrodes.

1 But there's more on slide 15. There are, and this is also with
2 Stern, bipolar RF energy to chosen pairs of an array of separate
3 electrodes. And that too is confirming that there's bipolar energy
4 going to chosen pairs of an array. And we had an opportunity to ask
5 the Patent Owners expert, Dr. Bikson, about how one would interpret
6 the multiple pairs of bipolar electrodes. And as we put on slide 17, he
7 agreed that, you know, there are two different pairs of bipolar
8 electrodes. And the quote is on the top. And, you know, he said he's
9 a professor in somewhat kind of professorial way.

10 I think we've discussed that Stern allows you to select one pair
11 of electrodes, and then if you return to the situation where the
12 switches are open, you can then select another different pair. And
13 then, you know, then the question so there are two pairs. And then,
14 and again, in somewhat professorial language, if you were talking
15 about a first case, there was one pair, and we talked about a second
16 case where there'd be a second pair, and then you would add those up
17 and you'd get the number two, that's two pairs of bipolar electrodes.

18 JUDGE YANG: I think Patent Owner was arguing that, you
19 have to, have two pairs at the same time instead of having this pair
20 activated and then another. Any response to that?

21 MR. CAVANAUGH: Sure. Yes, Your Honor. And the Patent
22 Owner does make that argument. And I'm going to respond to it in
23 three ways. One is, I'm not sure that at the same time is a requirement
24 of the claim. Every time they talk about at the same time, they seem
25 to be importing a limitation to the claim about multiple pairs of

1 bipolar electrodes. So that's the first response. The second kind of
2 analysis of what they're really doing. And there's some incoherence in
3 how they're arguing because they say it must happen at the same time
4 versus not simultaneous, because they backed away in their sur reply
5 about simultaneous. But it's not clear exactly how you can be not
6 simultaneous and also at the same time. So there's some incoherence,
7 at least as they presented in the sur reply about how that should be
8 interpreted.

9 And then we get to, and as I talked about in the reference Stern,
10 about what is disclosed. Now, let's. They agree that there's one pair
11 of electrodes that gets energized. They agree that there's another pair
12 of electrodes that gets energized. And their position is that somehow
13 that the switches themselves, that Stern must operate as an instruction
14 manual, that somehow that those switches must be operated as
15 someone would need the switches to have three of them closed. I
16 think they put it in their sur reply. And that, I think, is a requirement
17 of Stern that is not -- and here on slide 19, you know, we identify that
18 as, you know, three or more Stern switches must be closed at any
19 given time.

20 What I think that they're trying to do with Stern is read it so that
21 it must disclose the closing of the actual switches and not, as someone
22 would read the IPR, read the reference as a person skilled in the art,
23 with ordinary creativity, with ordinary understanding of how these
24 switches would operate for a bipolar electrode pair. And I think that
25 that, too, to the extent that they're saying it must disclose three

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1 electrode pairs, three electrode switches kind of closed at the same
2 time, I think they're requiring something from the reference that is not
3 needed.

4 But what I think, taking a step back and maybe up leveling for a
5 second, if we look at what Stern is actually disclosing with regard to
6 bipolar pairs, and we look at what Stern is actually disclosing, and I
7 think we have a slide for it on column 13. Where's the -- see the --
8 yep. Yes, that's exactly right. Thank you. So on slide 14, we identify
9 the selected pairs of electrodes which, again, like as Figure 15
10 illustrates, a pair of electrodes, another pair of electrodes, and that
11 those electrodes, as Stern is saying, could be utilized together.

12 Now, a person reading Stern is not going to say, oh, well, I need
13 instructions in terms of how to close those particular switches to say
14 that there should be three switches that are closed. They look at the
15 switches, they look at the configuration, and they decide whether or
16 not they should be utilized together. And there's nothing unusual or
17 particularly, you know, inconsistent about where Stern is in terms of
18 all of those disclosures of bipolar electrode pairs.

19 JUDGE VALEK: Counsel, I have a question for you as far as
20 this is concerned.

21 MR. CAVANAUGH: Sure. Okay.

22 JUDGE VALEK: So I believe that the Patent Owner argues
23 that Stern teaches that the different pairs are activated sequentially by
24 operation of the switches. And if Patent Owner was correct with that
25 interpretation, that Stern only teaches that individual pairs are

1 operated sequentially and not at the same time, would that still read on
2 the claim in your view?

3 MR. CAVANAUGH: In our view, yes, it would. I mean, I
4 think what they are adding to the claim is the requirement of
5 simultaneity or at the same time, however, that is required. Now,
6 Stern, we think, amply teaches the fact that they are. You can do one
7 pair, you can do the other pair, you can do them both together. Or
8 there's other disclosure in Stern where there are multiple electrodes
9 that are along the entire device.

10 And if we take a step back, and this brings me back to my prior
11 point, if we look at Stern, Stern is talking about is an array of
12 electrodes that is oriented toward the even heating, the even
13 distribution of heat as a part of a treatment cycle. And, you know, so
14 it would be inconsistent, or it'd be kind of anomalous for Stern to say,
15 oh, I'm only going to do one or two at a time in that context. I mean,
16 like if they have a treatment device that in this case it's going into,
17 intended to go into the uterus, and it has, you know, electrodes on top,
18 electrodes on the bottom, and electrodes around the side, that itself
19 suggests, as Stern discloses, that those particular electrodes could be
20 operated together. So does that answer your question, Your Honor?

21 JUDGE VALEK: It does, in part. I think their argument, as I
22 understand it, is that because Figure 15 discloses both bipolar and
23 monopolar application, they're really the same set of electrodes that
24 you don't actually have a bipolar electrode pair form until there's some
25 sort of closing of these switches such that you then have the path of

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1 energy proceed from one electrode to the other and form a pair.I think
2 that that may be their argument. Is that the reason why you have to
3 have some understanding of which switches to open and close at a
4 given point in time is because those electrodes are just electrodes, and
5 they don't form a bioelectrode pair, bipolar electric pair, until you've
6 operated the switches in a particular way?

7 MR. CAVANAUGH: And, Your Honor, I think you've
8 captured a crux of what I think their mistake argument is, in the sense
9 that they do teach a pair of bipolar electrodes. Their expert agrees
10 with that. It talks about the implementation on column 13. They do
11 teach another pair of bipolar electrodes. And I think, if I understand
12 the Patent Owner's argument, is that it has to be done together in
13 order to have multiple bipolar pairs. And so if I can kind of go into
14 where, if they agree that there are two pairs of bipolar electrodes, the
15 only way that that doesn't meet the limitation of the claim is if they
16 need to be fired simultaneously. And I hope we haven't lost the judge,
17 because he's no longer on the screen, and I was answering his
18 question, too.

19 JUDGE FITZPATRICK: Judge Valek, can you hear us? Let
20 me text with him. Hold on, hold on, please.

21 JUDGE YANG: Judge Valek has been disconnected from the
22 hearing. Can we -- Court Reporter, can we go off the record for a bit?

23 MR. CAVANAUGH: Perhaps we could stop the clock.

24 (RECESS)

25 JUDGE VALEK: Yes, I'm back.

1 JUDGE VALEK: Sorry about that. I don't know what
2 happened.

3 JUDGE YANG: All right, back on the record, please. Go
4 ahead.

5 MR. CAVANAUGH: Thank you, Your Honor. Judge Valek, I
6 was answering your question about the presence of bipolar pairs of
7 bipolar electrodes in Stern, and I'm not quite sure when you got cut
8 off, but what I'd like to do is look at the disclosure of Stern that we
9 cited in the petition and then kind of walk you through how it teaches
10 one pair and then another pair and then kind of the kind of the
11 omnibus, you know, it can be utilized together.

12 JUDGE VALEK: Sure, that would be helpful.

13 MR. CAVANAUGH: So if we go to the description of Figure
14 15 on column 12, and right now, particularly looking at line 55,
15 actually, I'll go up to line 52. The switch is closed, some remain open,
16 the device operates, but it provides monopolar. On the other hand, if
17 the switch 232 is opened and the switch is with the other, with one of
18 the pair being selected, and the switch and the other pair being
19 selected are operated in proper conjunction, the electrodes will
20 provide bipolar operation. And then it provides an example. And this
21 is on column 12, line 61 goes through the example. And then clearly,
22 bipolar operation is not limited to these pair couplings. And then it
23 goes through a switch 48 and switch 238 are closed that we bipolar
24 operation between the electrodes 220 and 222.

1 And so, I think the way our expert and someone skilled in the
2 art would interpret that is a disclosure of bipolar electrode pairs.
3 There are two of them. That's not disputed between the parties, or at
4 least the expert, Dr. Bikson, for the Patent Owner, doesn't dispute it.
5 And then we go down to the column 13, the embodiment Figure 15,
6 and this is on line 39, not only provides the choice between
7 monopolar and bipolar operation, but it also provides flexibility within
8 bipolar operation so that any pair or any combination of pairs of
9 electrodes may be utilized together. And so that's the context. I put
10 that quote in first because I think that that's the context which I think
11 someone skilled in the art would be looking at what Figure 15 is
12 providing.

13 And so if I can just. I think your question, Judge Valek, is an
14 important one. You know, if you agree with the Patent Owner that the
15 two electro -- the two pairs of electrodes have to be operated
16 simultaneously. You know, we think Stern amply discloses that. We
17 don't think that that's a requirement of the claim because there's
18 nothing in the claim that requires simultaneous. There's nothing in the
19 claim that requires at the same time. And there's nothing in the claim
20 that requires more than one, a specific articulation of, as they term it,
21 three or more switches.

22 So, you know, the two other points that I have with regard to
23 multiple bipolar pairs is first of all, kind of looking at the comparison
24 between what Stern discloses on the one hand and what the challenge
25 patents disclose on the other, because that gives us at least an

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1 indication, perhaps a clue how much disclosure would be required for
2 someone skilled in the art to understand how to look at a reference.
3 And so, if we go to slide 18, we see on the left-hand side, now, this is
4 the '318 Patent that's identified, but it has similar disclosure in each
5 patent. Each of the challenge patents, there are multiple pairs of
6 electrodes. Each pair of electrodes bipolar or each electrode
7 monopolar have separate controlled electrical channels.

8 And then we look to, for here, Stern, we've provided a bunch of
9 different examples of quotes, but here, claim four, you know,
10 providing bipolar energy to selected pairs of said plurality of
11 electrodes. And that to us is indicative that what is happening is that
12 there are multiple pairs of bipolar electrodes. And the disclosure is
13 not more specific in the challenge patents than it is in Stern. In fact,
14 Stern arguably is more disclosure about bipolar electrode pairs.

15 On slide 22, we do a similar exercise. On the left-hand side,
16 you know, we see the Stern disclosure independently and sequentially
17 energized and controlled with a thermistor and then also a bipolar RF
18 energy. And on the right-hand side, we have the '318 Patent separate
19 controlled electrical channel activated separately. Each pair of
20 electrodes are activated separately. So, you know, there's rough kind
21 of levels of detail with regard to the prior art and the challenge
22 pattern. And that's the basic point. And I think that if we go to slide
23 23, I think our final point is that, you know, part of the Patent Owner,
24 sur-reply, and this is in the 277 sur-reply in particular Patent Owner's
25 argument is, and this is on slide 23, of course your Honor, they say

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1 Petitioner's argument is based on a single sentence in Stern stating that
2 any combination of pairs of electrodes may be utilized together. And
3 you know, based on a single sentence in Stern.

4 Well, as Your Honors have seen plainly from this presentation,
5 but also from our briefing, we're not relying on a single sentence or a
6 single statement in Stern. In fact, if you look at the highlighted
7 portions in purple, like those are all part of our disclosure, our
8 understanding and explanation of Stern's disclosure that our expert has
9 worked through both in his initial declaration as well as his reply
10 declaration. And you know, the Patent Owner can choose to address
11 whatever kind of statements we make or Stern, whatever portions of
12 Stern. But fundamentally, I think it has to be consistent with the other
13 parts of the disclosure of Stern, which we believe we are, and we don't
14 believe that there's any ambiguity at all. And so, in the interest of
15 time, unless Your Honors have any questions about multiple bipolar
16 pairs, so I'm going to move to two rows if that's okay. All right, thank
17 you, Your Honors.

18 So, what I've done on slide 24, and this is again claim 1 of the
19 '271 Patent and claim 15 of the '318 Patent, identifying which IPRs
20 are related. And so, with our two rows of bipolar pairs and what
21 we've done on the right-hand side is just a Figure 19 of Stern, row
22 one, row two. And I want to kind of walk through in the next slide,
23 slide 25, what it is that we did in order to arrive at our understanding
24 of what Stern discloses. And what we did was to look at the challenge
25 patent specifications. And you know, this is Figure 8F on the lower

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1 right hand side. And they talk about one row of electrodes and the
2 other row of electrodes and what they're -- and I'm going to --
3 unfortunately, we've covered it over. But the pair of electrodes are
4 identified 252.

5 And what is being described, the one row of electrodes to the
6 other row of electrodes is between the negative and the positive of
7 row one. And row two is that bipolar pair. And then there's another
8 pair circled in red, pair two. And that also is consistent with the
9 disclosure of the patent that, you know, that is another pair that's
10 going from row one to row two. And that's consistent with how the
11 Patent Owner is describing their invention in the -- now my screen has
12 gone off, which I'm not quite sure why. Perhaps you could help me.
13 Good. Thank you very much.

14 And so, Your Honors, what we've done is to map the disclosure
15 of Stern to the disclosure of the patent. And, you know, not
16 surprisingly, it has two rows of bipolar electrode pairs. And here is a
17 confirmation, and this is on slide 26, that the pairs of electrodes are
18 arranged side by side, which is consistent with how we're interpreting
19 Stern. We think it's a fairly simple read on Stern to see the two rows
20 of bipolar pairs. And I'm going to pause for a moment to make sure
21 Your Honors don't have any questions. No. All right.

22 And then one last thing with regard to slide 27, even if you
23 agree that somehow there might need to be multiple electrodes in each
24 row, Stern actually discloses that, too. And that's in Figure 4A of
25 Stern and as we've identified in our briefing.

1 JUDGE VALEK: So let me just back up a little bit. I
2 understand your position based upon the figure that you've shown us
3 on slide 25 from the challenged patents, that your position is that this
4 figure doesn't disclose multiple pairs of bipolar electrodes in a single
5 row because the pairs are only formed across the rows, correct?

6 MR. CAVANAUGH: No, Your Honor, I think that that would
7 be the Patent Owner's position. Our position is that it does disclose
8 bipolar electrode pairs, even when they go across the row, just like in
9 Stern and just like in Figure 8F. And that's. So when I talked about
10 the overlay of how we're understanding the claim language and
11 looking at what's disclosed in the Patent Owner's patent, it is that
12 Figure 8F. And you know, as they describe the electricity electrodes,
13 you know, pair one, pair two, those are having the electricity or the
14 energy going across the electrodes between the rows. And that's
15 exactly what Stern is doing.

16 JUDGE VALEK: Sure. Let me follow up again on that.

17 MR. CAVANAUGH: Sure.

18 JUDGE VALEK: But are you also saying that there are pairs
19 formed, for example, in row one? So I just look at the electrodes in
20 row one, there's plus and minus electrodes next to each other. Pairs
21 form between the individual electrodes in row one?

22 MR. CAVANAUGH: I think there could be. I think the Patent
23 Owner would say that multiple pairs of bipolar electrodes in rows, in
24 their interpretation of their invention would say that requires multiple
25 pairs along row one and multiple pairs along row two. We think that

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1 each time they do that, though, they require something added to the
2 claim. It's either multiple pairs in each row or multiple pairs per row.
3 And every time they say that they're adding a limitation to the claim.
4 And so, our position is like, we're not disputing that, you know, you
5 can daisy chain a bunch of different electrodes along the line, but
6 that's not what the claim requires.

7 What the claim requires is multiple two rows of bipolar
8 electrode pairs. And that's what's shown here, and that's what's shown
9 in Stern. And then on slide 27, even if they're right, that it requires
10 multiple electrodes per row. Just if you kind of go one row one on
11 Figure 8F like, Stern also discloses that, as we've put in the briefing
12 and in slide 27.

13 JUDGE VALEK: I believe this interpretation of Figure 4A
14 from the slide that you say discloses rows with multiple pairs that only
15 came into the reply, correct?

16 MR. CAVANAUGH: That's right, Your Honor. And you
17 know, it was. It came into the reply. The Patent Owner in their sur-
18 reply says that it's a new argument. It's, you know, a -- it's not a new
19 argument in the sense that we've always kind of like, acknowledged
20 that there could be an interpretation or there is a disclosure in Stern
21 that has multiple electrodes per row. I think what we were responding
22 to was the Patent Owner's attempt to add limitations to the claim in
23 the Patent Owner Response. And even if you were to add those
24 limitations, this is the response.

1 And so we are permitted. We're not backfilling anything.
2 We're not like, we're sticking with, like, they're adding a limitation to
3 the claim. But even if you add that limitation to the claim, which we
4 think would be improper, but even if you were to add it, Figure 4A
5 provides that disclosure. So I'm going to. If you have no more
6 questions on two rows, I'm going to move to the motivation to
7 combine, which hopefully I'll be able to go through quickly. So, in
8 slide 28.

9 JUDGE VALEK: I was going to say my understanding of the
10 motivation to combine argument here is that it's fairly narrow and it's
11 really not that there's no motivation to combine Stern and Edwards
12 535, but rather that there's not a motivation to combine the two row
13 configuration that you see in some of Stern's figures with Edwards
14 535. Do you have a different understanding?

15 MR. CAVANAUGH: I think that's correct, Your Honor. In
16 some way you've stolen my thunder in terms of saying the issue is
17 really quite narrow. But as I said earlier, this is an implementation
18 detail that someone skilled in the art would readily be able to do. And
19 you know, so we look at kind of the movement from Edwards. Baker
20 is describing a similar kind of electrode configuration. Stern has a
21 similar electrode configuration. So in our view it is not an improper
22 combination or that there's ample motivation to bring those in. It
23 simplifies the design. It provides the ability to have even heating, also
24 provides even destruction when that's desired. All of those things are
25 destruction of tissue, if that's desired.

1 So, I think that the dynamic that the narrowness of their
2 challenge to the motivation to combine, I think in some ways belies its
3 obviousness. And again, Your Honors recall that they have not
4 challenged the reasonable expectation of success in kind of that
5 combination. So I think that, you know, if the reference has the
6 teaching and you know, someone would be motivated for it as a
7 design consideration or as a particular issue like, then, you know,
8 there's no question whether or not someone would be able to
9 implement implement it with a reasonable expectation of success.

10 JUDGE VALEK: Sure. And I understand that you have
11 multiple sort of rationales for the motivation to combine, but one of
12 those is Baker. You mentioned it before.

13 MR. CAVANAUGH: Yes.

14 JUDGE VALEK: And the language in Edwards 535 where it
15 refers to the Baker application says something about an example of a
16 suitable surface for disposition is described and then refers to the
17 Baker application since it's incorporated by recognition. What do you
18 make of that language? Because to me at least, it's difficult to figure
19 out what it is that Edwards 535 is referring to there.

20 MR. CAVANAUGH: I think that I'm going to say at two levels
21 what someone is looking at with regard to. I'll do the more specific
22 first and then I'll go more general because I think it's important to read
23 a reference for what it teaches, not necessarily for, okay, well, how am
24 I going to parse out these words. But, you know, as the Patent Owner
25 likes to parse out words and kind of what's there, what not there. Let's

1 start there and then we'll go to the more general understanding of the
2 reference.

3 So, I think what they're saying is that there are a variety of
4 different electrode configurations. This is an electrode configuration
5 that would be possible to spread out electrodes along a surface and
6 sometimes that desirable. Sometimes the surface is the size of a
7 uterus. Sometimes the surface is the size of a nasal cavity. I think
8 someone skilled in the art would be able to realize that. I think the
9 specific teaching is that. But where I think the Patent Owner makes
10 the mistake is saying, and they've kind of backed away from this
11 aspect of it, that, you know, it's not really incorporated by reference
12 and all that. But that's not our argument. Our argument is someone
13 skilled in the art looking at Edwards, would understand that Edwards
14 can be applied in a variety of different configurations. One of those is
15 Baker, and that's talking about the electrode configuration and one of
16 them and also the controls and things like that.

17 But the other part of it is that Stern is teaching that. Stern is
18 looking at that. So there is a narrow. But we're not saying that you
19 have to incorporate it by reference. We're not saying this the teaching.
20 We're saying someone skilled in the art looking at Edwards would
21 read it for all it teaches and understand that there's an arrow pointed to
22 the structure, like Baker. And just like Baker, Stern is describing a
23 similar structure. And so that would be a reason to bring the
24 disclosure of Stern into consideration.

1 So, and I think that that kind of one of our basic points of that, I
2 mean, to the extent that they're looking at a -- I'm going to go to, I
3 think the kind of obvious arrangement of parts, which is, I think the
4 next one on slide 34. And you know, so we have, you know, the issue
5 of, you know, there's a number of different ways of doing, doing it,
6 like Stern is providing rows, Baker is providing rows. You know,
7 someone's skill in the art would not be so channel minded or would
8 not be so focused with blinders on reading the reference, but would
9 understand the variety of teachings that are possible and the various
10 configurations, as we said in Stern.

11 And then on slide 35, and unless there are other questions, but
12 there are a number of different motivations to combine that we
13 provided that are not that the Patent Owner really hasn't responded to.
14 And I think they would say, well, we responded to it because we
15 responded globally that we disagree with your motivations to
16 combine. But fundamentally there is a straightforward predictable
17 combination and that is apparent. You know, there's known elements
18 according to known methods to yield a predictable all of these are
19 bases for a motivation to combine that are adequate. They are
20 described in our petition and the Patent Owner has yet to spill much
21 ink on them. And unless you have any questions, Your Honors, I'm
22 going to turn it over to my co-chair council on the particular issues
23 with regard to the things she'll address.

24 MS. COHEN: Thank you and good afternoon, Your Honors. I
25 will now address the issue of how Stern discloses multiple radio

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1 frequency output channels, and this is relevant for the petitions
2 challenging the '318 and the '286 Patents in the 278 and the 282 IPRs.
3 In those two IPR proceedings, Patent Owner argues that the prior art
4 does not disclose multiple radio frequency output channels. As we
5 will discuss, the prior art clearly discloses this limitation and in fact
6 when asked to draw this limitation, their own expert drew exactly
7 what is in the prior art. Patent Owner in their sur reply makes no
8 attempt to address this drawing or explain its expert's testimony.

9 On slide 37 we just have the two independent claims from the
10 '318 and the '286 patent to show where this limitation appears.
11 Importantly, these are claims to a device for delivering energy to a
12 nasal airway. The 278 petition identifies how strong Stern discloses
13 this limitation at pages 41 to 45 and the 282 petition contains that
14 information on pages 40 to 43. So, to argue that the prior art does not
15 disclose this limitation, Patent Owner argues that a single voltage
16 source with a single output wire attached to that voltage source does
17 not constitute multiple output RF output channels. It is unclear what
18 exactly in Patent Owners' estimation would constitute multiple RF
19 output channels, but I think we are all on the same page. That single
20 voltage source with a single wire in their view is not multiple RF
21 output channels.

22 For our part, Petitioners rely on the plain and ordinary meaning
23 of this term, especially when we look at the challenged patents.
24 Figures 39 through 44 in the '318 and the '286 Patents are the only
25 figures that show different examples of output channels and the

1 accompanying text for those figures is what describes output channels.
2 And as you can see on the slide, slide 38, the patent explains that in
3 some embodiments each pair of electrodes may have its own separate
4 controlled electrical channel and this allows for each pair to be
5 activated or in other words, deliver energy separately from the other
6 pairs.

7 When we look at the figures and we look at the description of
8 the figures, what we see as being output channels are the actual wires
9 that connect to the different electrode pairs in the treatment device.
10 What we have on slide 39 is the annotated Figure 39. And we've
11 circled the element number 961, which the patent says is an RF output
12 channel. And the same is true for figures 39 to 44, that the way the
13 output channel is identified is as the connection to the electrode
14 electrodes itself. There's no dispute between the parties that the '318
15 and the '286 Patent do not actually show a voltage source.

16 JUDGE FITZPATRICK: Sorry to interrupt. We're getting
17 feedback, which I'm sure is distracting you. It's distracting me.
18 Somebody maybe on staff doesn't have their microphone muted.
19 Everybody who's listening to this presentation, please make sure that
20 muted. I'm sorry. Go ahead and proceed.

21 MS. COHEN: Okay. Let me know if you keep getting
22 feedback or if there's any issue. So I was saying that there's no
23 dispute that within the challenged patents, there's no depiction of a
24 voltage source. There's no depiction of how RF signals come from.

1 JUDGE FITZPATRICK: Oh, I'm sorry. I made it worse.
2 Somebody has muted your microphone behind me. I can't hear you.
3 Now it's going. Maybe it's just multiple microphones in the room and
4 it's picking up somebody in the background.

5 MS. COHEN: Okay, can you hear me now?

6 JUDGE FITZPATRICK: Yes. Thank you.

7 MS. COHEN: Okay, well keep me posted. All right. So
8 there's no dispute that the '318 and the '286 Patents do not show the
9 voltage source, and we don't have any. There's no vision in the
10 challenge patents as to how the RF signal comes from the voltage
11 source and goes to the output channels. What the patent says is that
12 you need to have individual connections to the electrodes and that
13 they need to be individually controlled. And that's exactly what we
14 see in Figure 15 of Stern. Figure 15 of Stern has a single voltage
15 source 228, it has a single output wire from that voltage source. But
16 then that output wire gets branched into several different channels that
17 are each individually controllable with the switches that we were
18 talking about when it comes to the multiple pairs. You can control
19 how energy is being directed through those different channels. And
20 there's a lot of disclosure and Stern, which we've talked about at
21 length already, we have on slide 40, the disclosure and Stern, that the
22 switches allow for the selective application of RF energy to various
23 combinations of electrodes. On slide 41, we have an excerpt from that
24 long paragraph.

1 JUDGE VALEK: Ms. Cohen, before you move on from slide
2 40, I want to ask you a couple questions about Figure 15.

3 MS. COHEN: Sure.

4 JUDGE VALEK: So the description of Figure 15 in Stern
5 refers to voltage source 228, which the Patent Owner says, they said it
6 corresponds to a radio frequency generator. Is there any dispute from
7 a Petitioner on that point that there's a correspondence between the
8 radio frequency generator and voltage source 228?

9 MS. COHEN: I think that there's a little bit of a dispute, not
10 that I think it matters. At any point in one of these RF ablation
11 systems, you are going to need a voltage source. And I think that Dr.
12 Martin kind of explains in his discussion of Figure 15 in Stern that in
13 his view, the switches and the voltage source are all sort of part of the
14 same generator. That you have your signal source and then you have
15 wiring located within a generator, kind of just an overall box. And
16 even if you say the switches are actually not within that box, they're
17 still part of that generator system. So I think there is a little bit of a
18 discrepancy on what's a generator versus just a voltage source.

19 I also think it doesn't actually really matter either way for either
20 independent claims or claims 9 and 7 of the challenged patents, which
21 just required the radio frequency generator to be configured to deliver
22 energy separately. That's what we see in Stern. And I know that Dr.
23 Martin testified about how with Stern figure 15, what he's seeing are
24 output channels that are part of the generator.

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1 JUDGE VALEK: Aren't there figures in Stern where it shows
2 the controllers separate from the RF generator?

3 MS. COHEN: Oh, like figure 12 that has the separate power
4 source controller?

5 JUDGE VALEK: Yeah.

6 JUDGE VALEK: And I think that there is some disclosure in
7 Stern that -- one of the goals that Stern discusses is you can take an
8 off the shelf generator, hook it up to the circuitry in a power source
9 controller, and configure that generator to deliver energy separately to
10 the different channels. There is also disclosure in Figure 15 of this
11 schematic of having the output channels. Sorry.

12 JUDGE VALEK: Let me rephrase. Figure 15 doesn't show
13 where these different things are. And so the switches could be in that
14 controller box that you see in Figure 12 and voltage source 228 could
15 be in the RF generator. Two different components. Right?

16 MS. COHEN: I think that could be one interpretation as well. I
17 think there is testimony, Dr. Martin, that his interpretation of Figure
18 15 and a person of ordinary skill in the arts interpretation is that the
19 black outline is what's in the device and everything else is separate.
20 And you would still consider this kind of part of an overall generator
21 control system. I think also, even if they are separate, that's still
22 within the scope of these claims. Because the challenged patent that
23 we're looking at here doesn't specify how the voltage source is in
24 relation to the output channels and how the energy is being controlled
25 to be delivered separately to different output channels.

1 In fact, the patent talks about how you could have a generator in
2 the device itself. It could be part of a separate assembly. It has
3 disclosure about having the power source separate from a control unit,
4 which we see in Figure 3 of the patent. So, I think even if you accept
5 that voltage source 228 is housed in a different box from the switching
6 mechanism, that's still within the scope of the challenged claims
7 because there's nothing in the patent that says it shouldn't be. And in
8 fact, the patent discloses that it can be.

9 JUDGE VALEK: Now, in Petitioner's view, I'm looking at
10 Figure 15. You have annotated here on slide 41. Is the entirety of that
11 orange line, the channel, that particular electrode pair that you
12 identified?

13 MS. COHEN: I think the thing that is important, which we
14 highlight in a couple more slides on slide 43, is the fact that you have
15 the separate connection to the electrodes and that that's where you
16 need to consider whether there are multiple RF output channels and
17 that you have the two separate channels based on the connection to the
18 electrode.

19 JUDGE VALEK: I'm just asking for your position. Is your
20 position that the entirety you have highlighted there the channel, or is
21 it just the part from the switches over to the electrode?

22 MS. COHEN: I think it's the part from the switches over to the
23 electrode pair. Especially in view of the challenged patent. The
24 challenged patent really focusing on how the connection is happening
25 to the electrode. And so that is within Stern where the channel should

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1 be considered. And the orange line is to show here's the path of
2 energy from a voltage source to the ultimate electrode.

3 JUDGE VALEK: Okay. I'm thinking back to the petitions --
4 for example, on page 43 of the 278 Petition, now the Petitioner offers
5 side by side, two versions of Stern Figure 15 with different
6 annotations. And those annotations include an orange line that
7 showed an output channel to one pair of electrodes on the left side and
8 a second output channel to a second pair of electrodes on the right.
9 Do you recall the figure I'm referring to?

10 MS. COHEN: Yes.

11 JUDGE VALEK: It's your figure. And so according to
12 Petitioner's annotations, at least a portion of what you've identified as
13 a channel there in the petition includes the portion between a voltage
14 source 228 and the switches, correct?

15 MS. COHEN: Yes, that's correct.

16 JUDGE VALEK: So are you pivoting to something different in
17 the reply or are you sticking with that original position?

18 MS. COHEN: I think I'm trying to clarify where I think the
19 dispute is between the parties and what the patent requires. Because
20 in the Patent Owner Response I think that they've, they took one quote
21 from our experts deposition about an output channel is the output
22 from a radio frequency generator. And they said because Stern has a
23 single voltage source 228 and a single wire coming off of that voltage
24 source, there is only a single output channel from the RF generator,
25 and they ignore everything that gets independently controlled and

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1 connected to the electrodes. And so, the claim does require that you
2 have an RF output channel, which means you must be getting RF
3 output from somewhere. And so, what the petition shows is here's the
4 RF output is coming from the signal source 228.

5 Dr. Martin, in his original declaration on page 71 that
6 accompanied the petition explained, explained there are different
7 ways to have multiple RF output channels. You could have multiple
8 voltage sources. That's impractical. You aren't going to want to have
9 different generators in your operating room or what Stern shows is
10 how to wire a system that has multiple RF output channels with a
11 single signal source. So what we're showing in the petition is here's
12 where the RF energy is being output from. But you do have two
13 separate channels because there are two different connection. Two
14 different channels being connected to the electrodes that are
15 separately controllable.

16 JUDGE VALEK: The electricity goes down different paths. Is
17 that right?

18 MS. COHEN: Correct. Correct.

19 JUDGE VALEK: Even if a portion of the path is the same, the
20 channels as a whole are different. Ultimately at the electrodes the
21 channels are different because they are independently controllable and
22 separate?

23 MS. COHEN: I think. Sorry. Yes, Judge Valek.

24 JUDGE VALEK: No, finish your thought and I have a follow
25 up question.

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1 MS. COHEN: Sure. I was going to say I think a difference
2 would be kind of an old school set of Christmas tree lights where you
3 have one plug into the wall and they're all along the same wire and
4 they all go on at the same time. They can all go off at the same time.
5 When you unplug it, that's where you have a bunch of different, you
6 know, you would have a bunch of different electrodes along a single
7 channel. But what we have in Stern are the separate electrodes, just
8 like in the patent, the separate electrodes with separate connections
9 that are separately controllable.

10 JUDGE VALEK: Now one of the criticisms that Patent Owner
11 has of your position is they accuse you and Dr. Martin of changing
12 your position and offering a bunch of different definitions for the
13 radio frequency output channel term. And so what is your position?
14 What is your interpretation of that term?

15 MS. COHEN: Our interpretation, which I think is the same as
16 their expert's interpretation, is that it's the connection, and this is
17 consistent with the patent, the plain, ordinary meaning. In view of the
18 patent, what I asked their expert to draw and what is shown in the
19 prior art, which is that the term as it's used in the patent, as it's shown
20 in Figures 39 through 44, is that you have to have separate,
21 independently controllable connections to the electrodes in the
22 treatment device. And you can look at what they call the smorgasbord
23 of definitions, which actually comes from Dr. Martin's reply
24 declaration, where he walks through each of those figures to explain.
25 Look let's see what the patent says about output channels. Here's

1 Figure 39 and the excerpted text and what that's saying. Here's Figure
2 40. So the smorgasbord of definitions is actually just coming from his
3 description of their figures that show different output channels and
4 different ways you could have output channels.

5 But for each of those figures, what we're looking at is the
6 connection to the device. And I asked their expert, because I was
7 trying to understand from their view what is, what is not an output
8 channel. And I said, can you draw a device that has multiple radio
9 frequency output channels as required by claim 1? And he said, I'm
10 drawing four electrodes, and this is on slide 42. I can label them 1, 2,
11 3 and 4. I'm drawing wires going to electrodes 1 and 2. I'm drawing
12 wires going to electrodes 3 and 4. I'll put a circle around 1 and 2 and
13 around 3 and 4. And this is one bipole, and this is another bipole.
14 The wires coming to them would represent one channel, and this
15 would represent another channel. And I wanted to try and understand
16 what the difference is between the patent, the prior art, and the parties.
17 And he drew what is in both the patent and the prior art, which is the
18 individual connections to the electrodes that are independently
19 controllable.

20 You can see how that all lines up on slide 43. He agreed at his
21 deposition on slide 44 that the figures do align in showing the multiple
22 RF output channels. I have on slide 45, what we've been talking
23 about, which is what the dispute is between the parties, that there is a
24 single wire coming off the voltage source in Stern and their view, that
25 output from a radio frequency generator, that that would require kind

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1 of multiple wires or something attached to the voltage source or
2 multiple voltage sources. I don't know exactly. But I think what is
3 clear is that what the patent's focused on is the connection to the
4 electrodes. And what the prior art is focused on also is the connection
5 to the electrodes. I know I'm running out of my time, so I'll take an
6 additional five minutes from.

7 JUDGE YANG: Given all the technical difficulties --

8 JUDGE VALEK: One more question about that. Does Patent
9 Owners expert also agree with your idea that each pair needs to be
10 separately controlled? It seems like if you look at the figure that you
11 say he drew during his deposition, you know, if you combine off
12 page, if you combine those two leads into a single input into the
13 generator, they're not separately controlled. You have to have some
14 sort of switching mechanism or as you say, separate voltage sources.
15 And so does he agree with that aspect of your interpretation as well?

16 MS. COHEN: He said on redirect from his counsel that one
17 implementation could involve separate voltage sources with 1 and 2
18 and 3 and 4. I think you can also see in their response and their sur-
19 reply, they make an argument about how the channels, the advantage
20 of the channels is that you avoid energy diversion because you can
21 control. I think the whole point about energy diversion is that you're
22 able to control where energy is flowing more than if you had kind of a
23 single output. Like if we go back to the Christmas tree lights and
24 they're all on one wire, you can't really control how much is going to
25 each light because it's all in the same wire. The idea of energy

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1 diversion is if you want certain energy to go to one pair or another,
2 which they agree and say is a goal of the multiple channels, then you
3 need to have that independent control. So I think they agree on that
4 point based on my interpretation of their arguments.

5 JUDGE VALEK: And if you were to. I know that you have
6 one interpretation of Stern Figure 15, where you're switching on
7 multiple pairs at once. Right? Based upon that utilize together
8 teaching in Stern. Correct?

9 MS. COHEN: Correct.

10 JUDGE VALEK: And if you did that though, wouldn't you
11 lose some of that control? I think the patent even talks about this. It
12 talks about, you know, there could be electrodes at different
13 orientations to the tissue where you have different impedances. And
14 so if you have those things, you know, electricity is going to travel
15 down the path of least resistance basically.

16 MS. COHEN: Right. I think that other parts of the petition
17 really dive into this and how that's kind of simply incorrect, especially
18 when we view the combination of Edwards with Stern. If we start,
19 Stern itself has a lot of disclosure of the different feedback
20 mechanisms and control systems that you can have. In these systems,
21 it talks. We go at length about this in our petition for different
22 limitations about how Stern has temperature sensors that are
23 conventional thermistors or thermocouples that contact the area of the
24 tissue surface. We have this on page 47 of our petition and our

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1 petition, pages 62 to 65, we explain the different subsystems in Stern
2 that provide the control over energy delivery.

3 And also in the petition, if we go back to that, the combination
4 that we're proposing is that you take Edwards, a bipolar RF ablation
5 device that's used in the nose that has extensive disclosure about a
6 generator, about feedback mechanisms. If you look at limitation 1F in
7 our petition, we talk a lot about how Edwards has disclosure of
8 sensors you can use to control and detect the level of energy delivery.
9 But what Edwards suggests is already known by a person of ordinary
10 skill in the art is sort of the specific wiring and sort of the specific
11 pairing. And what we have in Stern is a schematic. And what we
12 propose is taking this teaching of how to wire a single voltage source
13 and how to pair particular electrodes from Stern and combining that
14 with Edwards. And so, both Stern and Edwards have disclosure of
15 how to control the delivery of energy and how to use sensors to
16 provide feedback so that it's not going to be this sort of uncontrolled
17 mayhem that Patent Owner proposes.

18 JUDGE YANG: All right, just to clarify, you've already gone
19 over your time. Given all the technical difficulties, we're going to
20 give you extra two minutes. Anything above that, it will be cutting to
21 your rebuttal time. It's your choice whether you want to keep on
22 going or save your rebuttal time.

23 MS. COHEN: I will make a few quick points and then I'll turn
24 it over to Patent Owner. I wanted to quickly, before addressing the
25 definition of a POSITA, address claim 6 and claim 9. Claim 6 from

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1 the '318 Patent and claim 9 from the '318 Patent, which both have
2 corollaries. In the '286 Patent, claim 6 is directed to the treatment
3 element having multiple segments that are expandable that comprise a
4 shape memory alloy material. We wanted to note that the patent says
5 very, very little about segments and simply states that they are
6 configured to expand and can comprise a shape memory alloy MA
7 material. And the petition shows two ways that this is obvious. The
8 first is the combination with Patel, where the electrodes are part of the
9 segment and clearly can be made of nitinol. And then the second is
10 the combination with Makower, which clearly uses -- Judge Valek.

11 JUDGE FITZPATRICK: I noticed that, too. I was just asking
12 him if we lost him. I'll let him know. My man is calling him back
13 right now.

14 JUDGE FITZPATRICK: Welcome back.

15 JUDGE VALEK: Okay, I'm here.

16 MS. COHEN: Hi, Judge Valek, can you hear us?

17 JUDGE VALEK: I can. Sorry about that.

18 MS. COHEN: No worries. I was quickly going through the
19 positions for claim 6 of the '318 Patent, and I wanted to just
20 emphasize and encourage Your Honors to go back to the disclosure in
21 Makower, which Patent Owner says is insufficient. Makower clearly
22 discloses that nitinol can be used when you want a device that is
23 deflectable. And what it talks about for figure 5H is that's collapsible
24 and expandable. And I think one point that I wanted to note that they
25 said is that we improperly represented that the file history applied the

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1 same mapping from Makower. And they said that in the file history,
2 it's citing to figure 5F of Makower. But the file history also cites to
3 paragraph 194 of Makower, which we cite in our petition, which has a
4 very broad disclosure about how any catheters or elongate flexible
5 devices of this invention may include design elements that impact
6 performance features, and that they talk that that paragraph also talks
7 about using shape memory alloys such as nitinol to predictably deflect
8 various sections of the catheter. So just what I wanted to note on
9 claim 6 of the '318 Patent, unless Your Honors have any questions on
10 that.

11 JUDGE VALEK: So as I understand your position, it's that
12 Makower's teaching about nitinol isn't limited to any particular
13 position portion of the catheter. Any of those things could be made
14 with the flexible material, Correct?

15 MS. COHEN: Correct. And I think that's very clear from
16 Makower's disclosure of kind of not really drawing a firm line
17 between the catheter, the elongate flexible device, and sort of you can
18 design these to have the different features and functionality that you
19 would need depending on that particular device. Sorry, Judge Yang.

20 JUDGE YANG: In the reference, when it talks about the shape
21 memory alloy, as you pointed out, is to predictably deflect the various
22 sections of the catheter. And I believe one point Patent Owner made
23 is the member 214 actually does that deflect the catheter?

24 MS. COHEN: Sorry.

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1 JUDGE YANG: So I'm looking at exhibit 1021 page. Again,
2 the sentence bridging pages 18 and 19, the part you just went through,
3 use of elements to predictably deflect various sections of the catheter.
4 Is that what you were just talking about?

5 MS. COHEN: That whole paragraph is.

6 JUDGE YANG: Right. And there, there is the parenthesis.
7 One of the examples is the shape memory alloy, right?

8 MS. COHEN: Correct.

9 JUDGE YANG: So my understanding of Patent Owner's
10 argument is the shape memory alloy is an example to use to
11 predictably deflect the catheter. Different sections of the catheter.
12 Correct? And then they followed on to say stroke member 214 does
13 not deflect the catheter. I believe that's the argument.

14 MS. COHEN: It is though collapsing and expanding. So it is
15 deflecting because it is bending and collapsing to be it's collapsing to
16 be inserted and then it is expanding once it's in place. So it has the
17 same need needs to be able to be predictably changed to a different
18 shape once it's deployed.

19 JUDGE YANG: All right, thank you.

20 MS. COHEN: Then the other quick note I wanted to make on
21 claim nine of the '318 Patent, which has a corollary to the '286 Patent.
22 This is the claim that requires the RF generator to be configured to
23 deliver energy separately to the multiple RF output channels. And I
24 wanted to encourage Your Honors to go back to the petition and look
25 at how the petition 1 shows that Stern, as we were talking about, and I

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1 talked about previously, how Stern shows a generator configured as
2 required in the claims.

3 But also the petition relies on Edwards disclosure of a generator
4 and that the Edwards generator teaches a feedback control system
5 where a processor reads a sensor value from the sensor and controls a
6 signal generator so as to achieve delivery of an effective amount of
7 RF energy. And so I think the combination in the petition also relies
8 on the generator in Edwards and modifying the generator in Edwards
9 in view of the multiple channel panels disclosed in Stern, which I
10 think the response and the sur reply don't quite get at that overall
11 combination.

12 Just one last thing on the person of ordinary skill in the art.
13 And this starts on slide 49 of the presentation. You know, Patent
14 Owner accuses Petitioners of defining the level of ordinary sex skill in
15 the art to ensure that its experts fall within the scope of the definition.
16 But Patent Owner instead is simply redefining to try and exclude
17 particularly Dr. DelGaudio in the 277 IPR petition from being a
18 person of ordinary skill in the art. And if you go to slide 50 of our
19 demonstratives, you can see that the claim we're talking about in the
20 '271 Patent is a claim that is a method for treating a nasal airway. The
21 only expert in these proceedings who would actually perform any
22 method aligned with this claim is Dr. DelGaudio, who's eminently
23 experienced, and we lay that out extensively in our papers.

24 The thing I wanted to end on, on slide 52 is that there's actually
25 no substantive issue that the definition of a POSITA is relevant for.

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1 They just want to wholesale exclude Dr. DelGaudio, but they don't
2 take a position that any prior art reference or combination would be
3 different based on the definition. So, unless if Your Honors have any
4 questions.

5 JUDGE VALEK: There hasn't been a motion to exclude filed,
6 correct?

7 MS. COHEN: Correct. Thank you, Your Honors.

8 JUDGE YANG: All right, you have 20 minutes for rebuttal.

9 Before you proceed, how much time do you want to reserve for
10 your sur rebuttal?

11 MR. GILFORD: 15 minutes, please.

12 JUDGE YANG: 15 minutes. All right, whenever you're ready.

13 MR. GILFORD: So, good afternoon, Your Honors. I'm Ben
14 Gilford, and I'll be arguing on behalf of the Patent Owner, Aerin
15 Medical Inc. Again, with me today is my co-counsel, Heath Briggs
16 and Trenton Ward, as well as Aerin's chief legal officer, Irina Ridley.
17 So we appreciate Your Honor's time this afternoon and the
18 opportunity to present our arguments regarding Aaron's innovative
19 and highly successful product, the RhinAer device, which is covered
20 by the three patents at issue. The Ryanair device uses radio frequency
21 ablation to non-invasively treat chronic rhinitis, a condition that
22 millions of Americans suffer from, including apparently me, because
23 my allergies are going crazy right now. So, some of the details about
24 the RhinAer device are set forth in the record, including in Exhibit
25 1091. So with that said, if Your Honors would please turn to slide 6.

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1 JUDGE VALEK: Mr. Gilford, before we get started, I have a
2 housekeeping question. I probably should have asked this question
3 before, but can you give us an update on the status of the parallel
4 litigation in Delaware in particular, has there been a stay or are the
5 patent claims challenge here still at issue there? And if they are, when
6 do you expect to go to trial?

7 MR. GILFORD: Thank you for your question. Your Honor,
8 our understanding is that relative to these patents at issue today, the
9 case is still stayed. So anyways, looking at slide 6. Slide 6
10 summarizes the pertinent disputes between the parties. Of particular
11 note, the parties have one dispute which is dispositive of all patents,
12 claims and grounds. And if the board finds in Patent Owners' favor
13 on this dispute, the board should determine that all challenge claims
14 are patentable.

15 Specifically, the parties dispute whether Stern teaches the
16 limitation multiple pairs of bipolar radio frequency electrodes, which
17 is recited in the '318 and '286 Patents, as well as the limitation bipolar
18 electrode pairs which is recited in the '271 Patent. The party's second
19 dispute is whether Stern teaches the limitation multiple radio
20 frequency output channels which is recited in the '318 and '286
21 Patents. Third dispute is whether certain teaches the limitation two
22 rows of bipolar electrode pairs which is recited in the '271 Patent.
23 The fourth dispute is whether a person of ordinary skill in the art
24 would have been motivated to combine Edwards 535 with Stern's
25 alleged two rows of bipolar electrode pairs. The fifth dispute is

1 whether the prior art renders obvious certain dependent claims of the
2 challenge patents.

3 And with that let's jump right into the party's first dispute,
4 which is whether Stern teaches the limitations of multiple pairs of
5 bipolar radiofrequency electrodes and the limitation of bipolar
6 electrode pairs. If Your Honors would please turn to slide 11. So
7 here we see a summary of Petitioner's argument. According to
8 Petitioners, Stern teaches multiple pairs of bipolar electrodes.
9 Petitioners specifically rely on Stern's Figure 15 argue that a bipolar
10 electrode pair can be formed depending on which switches are closed.
11 Petitioners also provide an example where switches 248 and 238 are
12 closed to form a bipolar pair between electrodes 220 and 222, which
13 are circled in green in the annotated figure on the right. But before we
14 address the flaws in Petitioner's argument, I think it's important to
15 discuss what a pair of bipolar electrodes is. If Your Honors would
16 turn to slide 12. Here we see that the party's experts generally agree
17 on the definition of a pair of bipolar electrodes. So Patent Owners
18 expert Dr. Bikson explained that a pair of bipolar electrodes is two
19 electrodes located near each other that have opposite polarities. In
20 Petitioners expert Dr. Martin provided extremely similar testimony.
21 He said that a pair of bipolar electrodes is two electrodes with
22 different polarities such that current can flow between them.

23 If Your Honors would turn to slide 13. The experts also agree
24 that the claims require multiple pairs of bipolar electrodes. So, there's
25 really no dispute here that a single pair of electrodes fails to satisfy the

1 claims. If Your Honors would turn to slide 14. Here we see that
2 Stern has no bipolar electrode pairs when all switches in Figure 15 are
3 open. So, this is a crucial line here. Stern repeats it several times.
4 But stern says that it has an array of separate electrodes. And we see
5 that, for example, at Stern column two lines 25 to 29, column two
6 lines 36 to 40, column two lines 59 to 61. So, Stern's very clear. It
7 repeats itself multiple times that here we have an array of separate
8 electrodes. This is not an array of electrode pairs.

9 So, when all the switches in Stern Figure 15 are open, none of
10 the electrodes here have opposite polarities. No current can flow
11 between any of these electrodes. And if Your Honors recall, the
12 party's experts agreed that a pair of bipolar electrodes is two
13 electrodes with opposite polarities, such the current can flow between
14 them. So, under the expert's definition of a pair of electrodes, Stern
15 has no pairs when all these switches in Figure 15 are open. So of
16 course, we know that there is at least one pair that can be made in
17 Stern. So how then is a pair of electrodes formed? If Your Honors
18 return to slide 15. Both parties' experts agree that a pair of electrodes
19 is formed by closing certain switches. And the expert's testimony is
20 consistent with the petitions themselves. If Your Honors would turn
21 back to slide 11 briefly. And again, this, this is, you know, verbatim
22 from the petition itself. But here we see the petitions state that a
23 bipolar pair is formed depending on which switches are closed. And
24 again, the petitions provide an example where switches 248 and 238
25 are closed to form a pair between electrodes 220 and 222.

1 If Your Honors would go back to slide 16, please. So, as we
2 discussed earlier, the party's experts agree that the claims require a
3 device comprising multiple pairs of bipolar electrodes. One pair is not
4 enough. The issue here is that Stern fails to disclose a device
5 comprises multiple pairs of bipolar electrodes as the claims require.
6 As Dr. Bikson testified, Stern teaches a device that at any given time
7 comprises at most a single pair of electrodes. And the evidence In
8 Stern supports Dr. Bikson's testimony. We'll discuss that evidence
9 right now. Your Honors would turn to slide 17. And again, this is,
10 you know, before I dive into Stern itself, I want to just point this out
11 from the petition because I think it perfectly encapsulates Patent
12 Owners position here.

13 But you know, here we see again an annotated figure taken
14 directly from the petition on the left side of the screen, the petitions
15 point to one possible configuration having a single pair between
16 electrodes 220 and 222. And on the right side of the screen, the
17 petitions point to a second possible configuration having a single pair
18 between electrodes 224 and 226. The crucial thing to remember here
19 is that Stern has an array of separate electrodes, not an array of pairs.
20 So, in either of the configurations here we see one pair and then two
21 other separate electrodes. So again, in either configuration, Stern's
22 device comprises one pair, not two. And the claims require two or
23 more multiple pairs. If your eyes were --

24 JUDGE VALEK: Counsel, I have a question about that. So I
25 think that you're focusing here on Figure 15, which really can't show

1 the different ways of operating these switches. The disclosure in
2 Stern about Figure 15 says that you operate switches to individually
3 control separately controlled pairs. It uses the word "pairs" plural,
4 and it does so at least nine or eight times. And so, I have a hard time
5 with this idea that Stern is not disclosing multiple pairs, even though
6 at any given point in time, only one of those pairs may be energized.
7 Because what occurs to me is Stern's disclosing that a pair is formed
8 and then you switch another pair, and then you switch back and forth,
9 that you cycle quickly through them sequentially. And I think that's
10 your argument, in fact. But each instantaneous moment, maybe
11 there's just one pair that's turned on. Is that your interpretation of
12 Stern?

13 MR. GILFORD: So, I want to be clear, Your Honor, our
14 position has nothing to do with whether the electrodes are actually
15 energized or not. That you know and I know Petitioners in the reply
16 said that's what we are arguing. But that's incorrect. You know, you
17 can have pairs without the device actually being turned on. I think
18 that is shown in several examples in the patents themselves. But to
19 answer your question, I would like to start with the claim language,
20 and I think if we go to slide 10. So here we have the claims
21 themselves with the limitations that at issue conveniently highlighted.
22 So, let's start, for example, the three team pad. So, this is an apparatus
23 claim. It says it's directed to a device for delivering energy to a nasal
24 airway to improve nasal airflow. And then it says the device
25 comprising. And if you look a few lines down, it says the device

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1 comprising an array of multiple pairs of bipolar radiofrequency
2 electrodes. So the claimed device has to have multiple pairs. Right.
3 If we're looking at a device at any given time has at most a single pair.
4 Well, that doesn't fit within the claim language because it's not a
5 device that comprises multiple pairs.

6 So with that being said, now that we have the claim language,
7 mind, let's flip back to slide 17. And again, this is taken directly from
8 the petitions themselves. And what we see here is honestly consistent
9 with how we understand Stern operates. You know, as you
10 mentioned, Judge Valek, I think you correctly mentioned that our
11 understanding is that Stern has multiple possible ways of making a
12 pair, and you kind of can cycle through them sequentially. And, you
13 know, this kind of shows a good example of that. So, we have on the
14 left side, one possible pair. You know, it's the top two electrodes. On
15 the right side, we have another possible pair, it's the bottom two
16 electrodes. And you could cycle back and forth between those. But at
17 any given time, what you have is a device with one pair. And again,
18 we need a device that comprises multiple pairs.

19 So even though there's multiple possibilities here of ways to
20 make A pair. And if you have those possibilities up, you get more
21 than one. What you don't have is the claimed device, which is a
22 device that comprise multiple pairs. And, you know, I think just to
23 kind of close the loop here, it's important to remember that, again,
24 Stern teaches an array of separate electrodes. So, for example, when
25 we look on the left side here, you know, you have a pair at the top,

1 and you have two electrodes below that. The two electrodes below
2 the pair are not a pair. They're just separate electrodes, as Stern says.
3 And when you look on the right side, again, the bottom two are a pair,
4 but the electrodes above it are separate electrodes. The electrode pair
5 that existed on the left side no longer exists on the right side. That
6 pair has been unformed. It's gone. Now we're just back to separate
7 electrodes. And I think that's maybe something that Petitioners kind
8 of understood, that, you know, a pair always exists. Once a pair is
9 made, it always exists. But that's just not simply true. You know, you
10 can make a pair, you can unmake a pair. You have to remember the
11 baseline here is that Stern has separate electrodes.

12 JUDGE VALEK: One of the concerns counsel I have. Sorry,
13 Judge Fitzpatrick, go ahead.

14 JUDGE FITZPATRICK: Go ahead Judge Valek.

15 JUDGE VALEK: So, one of the concerns I have with that
16 argument is I'm not sure the disclosure in Stern itself suggests that one
17 of skill would look at it that way. And the reason I say that is because
18 Stern doesn't say we have possible pairs, like multiple possible pairs.
19 It doesn't say there's a pair and then there's another pair. It uses the
20 word pairs plural, and it does it over and over and over again, even
21 when you haven't selected a particular pair to couple at a point in time.

22 And so, to me, what that suggests is that one would look at
23 what you have in Figure 15 and understand that you do have multiple
24 pairs, they may not be energized at the same point in time, but you do
25 have multiple pairs that you can select and control independently with

1 these switches. And the disclosure backs that up by repeatedly using
2 the word pairs plural with an s over and over. So how do you
3 respond? What should we do with the fact that Stern says pairs plural
4 over and over and over? Because we have to if we're going to side
5 with you and your expert, we have to do something with that
6 disclosure. How would you have us interpret that?

7 MR. GILFORD: Sure. Again, I think, you know, staying on
8 slide 17, if you look at both sides, we have a pair on the left, a pair on
9 the right, that's two pairs. Add that up. That's more than one. I agree
10 with that. But you have to remember what the claim says. The claim
11 says a device comprising multiple pairs. So, at any given time, you
12 have to have a device with multiple pairs. And again, our position is
13 that on the left side, you have a device that comprises one pair. On
14 the right side, you have a different configuration. Again, one pair. So
15 at no point in time are you coming up with the claim device, which is
16 a device comprising multiple pairs.

17 JUDGE YANG: So, to that point, Stern at column 13 around
18 line 40, lines 39 to 43, it mentions that the embodiment in Figure 15
19 provides flexibility within the bipolar operation, so that any pair or
20 any combination of pairs of electrodes may be utilized together. So
21 how should we interpret that?

22 MR. GILFORD: Thank you for your question, Your Honor.
23 And I was just about to get to this sentence, so thank you for directing
24 us there. Can we go to slide 24? So, slide 24 is kind of the root of
25 Petitioner's position, which is like, you know, okay, we understand

1 your point, Patent Owner, that, you know, you can go through pairs
2 sequentially. But take a look at this sentence. You know, Petitioners
3 are saying clearly, well, this sentence is saying you can form multiple
4 pairs at the same time. And, you know, sure, if you read this sentence
5 in isolation, you could maybe, you know, make an argument that,
6 yeah, this could potentially be saying multiple pairs at the same time.
7 But you can't read a single sentence of the priority in isolation.

8 You have to look at everything the priority teaches. And when
9 you look at the remainder of Stern's disclosures, it's abundantly clear
10 that what this sentence is saying is consistent with what we've been
11 talking about, is that you're cycling through pairs sequentially. So,
12 you know, again, let's say you have four different possible ways to
13 make a pair. A, B, C, D. You can go from pair A to pair B to pair C
14 to pair D and just keep cycling through. That's a combination of pairs
15 utilized together. But again, it's just one pair at a time. But anyways,
16 putting that aside, I want to dive into what the evidence says in Stern
17 that supports our position, which is that this sentence is saying, you
18 know, cycle through pairs sequentially. That's how you're using the
19 combination together. So first --

20 JUDGE FITZPATRICK: Mr. Gilford. Sorry, can I interrupt
21 the next question? Looking at that block, that box on slide 24, taking
22 from Stern the very last words, quote, pairs of electrodes may be
23 utilized together, unquote. You just said that the context of this is that
24 there would be in time but not at the same time. You said something
25 like that, right?

1 MR. GILFORD: Yes.

2 JUDGE FITZPATRICK: If that was true, they wouldn't be,
3 according to your definition of pairs of electrodes, there wouldn't be
4 pairs of electrodes. Correct? There would be one, it might be one and
5 then be one, but it would never be more than one pair.

6 MR. GILFORD: Correct. At the same time it would not be
7 more than one pair. But again, in example as saying four different
8 possibilities, A, B, C, D, that's four pairs in a sense. But you don't
9 have a device that at any given time actually comprises four pairs. It's
10 just four possible ways of making a pair.

11 JUDGE FITZPATRICK: But I see an inconsistency there in
12 that this reference is referring to multiple pairs of electrodes. And I
13 think you're saying the definition of a pair of electrodes doesn't come
14 to be in existence unless and until switches close to create that pair.
15 So a lot, I think you realize that there is some inconsistency there. I
16 want to go also to slide 12 because I have a question that relates to
17 this. It's the definition. There are two definitions. There are two
18 experts' views that are pretty similar. But both of them talk about
19 these electrodes having opposite polarities. It's my understanding that
20 that would only occur during a state of energization, you know, when
21 this would be energized. Correct?

22 MR. GILFORD: I don't necessarily understand it that way.

23 JUDGE FITZPATRICK: So okay, how could you have
24 opposite polarities if there was no charge on both electrodes?

1 Well, I would say, okay, they're not electrodes yet according to
2 the definition, one definition, a pair of electrodes doesn't come into
3 being unless the switch is closed. Let's say there's a voltage source,
4 but the switch is open. And so, nothing's getting to those two pieces
5 of metal that are going to become the electrodes. Then the switch is
6 closed. Now they have, I understand now they have opposite
7 polarities. But prior to them being provided with the voltage
8 differential, do they have opposite polarities, or do they have zero
9 polarity or zero charge?

10 MR. GILFORD: So, I think there's several pretty good
11 examples of kind of what we're talking about in the patents
12 themselves. You can look at Figure 8F, Figure 8G, Figures 39
13 through 44. All those figures talk about, you know, electrodes with
14 essentially an assigned pre-configured polarity. You know, it's, it's
15 talking about positive electrodes, negative electrodes, and then it says,
16 you know, and then you can turn on the device, and there will be
17 current flow between a positive and a negative. But that's, you know,
18 I think, consistent with what the experts are saying is that, you know,
19 you don't necessarily have to turn the device on to have electrodes of
20 opposite polarities. You know, you can have electrodes that are
21 preconfigured with an opposite polarity.

22 Or, for example, in Stern, you know, if we look at Figure 15,
23 for example, on slide 17, if you were to flip. But let's just say, for
24 example, switch 248 and switch 238. Flip those switches. Well, now,
25 those, you know, those two electrodes have opposite polarities, and

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1 that's opposite polarities regardless of whether this device is actually
2 turned on or not. So it's kind of a wiring situation where you're
3 wiring, you know, electrodes in a way that current will flow from the
4 positive to the negative. It has nothing to do with whether the device
5 is on or not. Does that answer your question, Your Honor?

6 JUDGE FITZPATRICK: Not fully. I look at those. The
7 testimony that you have for us. See, they have. I mean, I'll take
8 Bikson first. It says, quote, have opposite polarities. Not set up to. I
9 mean, I think any piece of metal can become an electrode depending
10 on and what you distribute to it. If you give it an electrical charge, it'll
11 become a monopole or electrode. I don't think it has anything to do
12 with whether it's. Excuse me. I think you said it has nothing to do
13 with whether or not it's energized. But I think these experts are both
14 saying it does, and I think there's an inconsistency there, I guess.

15 MR. GILFORD: I respectfully disagree, Your Honor. For
16 example, Dr. Martin's testimony is two electrodes with different
17 polarities such that current can flow between them. He doesn't say
18 such that current is flowing. That being said, I think it is critical here
19 to kind of circle back to that sentence about the combination utilized
20 together and really look at the remainder of Stern and just, you know,
21 see how the entirety of the reference confirms that what is being said
22 there is, you're using a single pair, you know, sequentially. So, I think
23 a good starting point would be slide 29. And, you know, I think
24 Petitioners, counsel said this, but one of Stern's main goals is to
25 ensure even heat.

1 And the issue here is that if you were to turn on multiple pairs
2 or you form multiple pairs in Stern at the same time, you wouldn't be
3 able to achieve that. You know, the testimony of Dr. Martin in his
4 deposition was pretty unequivocal that, you know, when you have
5 different pairs that are kind of sharing the same energy, what happens
6 is that you have a divergence of current to whichever pair has the least
7 impedance between the electrodes. And invariably, when you're using
8 these devices in a patient, you're going to have differences in
9 impedance that cause I believe, he says, an uneven temperature
10 distribution. So, Stern can't achieve even heating if multiple pairs are
11 on at the same time. Another issue here is that Stern expressly teaches
12 the importance of precisely controlling the current return path in the
13 bipolar arrangement. That's, for example, Stern hit column 12, lines
14 25 to 30.

15 But if we turn to slide 21, both experts here agreed that if you
16 were to activate multiple pairs at the same time in Stern, what you
17 would get is a loss of control. You wouldn't be able to control
18 whether currents flowing, you know, just within a given pair or maybe
19 some current leaks out to a different pair. You just can't control
20 what's happening in Stern if multiple pairs are on at the same time
21 based on, you know, Stern specific wiring configuration. So that's
22 another reason why a person born in a skill in the yard would not have
23 understood Stern to be teaching multiple pairs at the same time.

24 JUDGE VALEK: But how, counsel, how is that any different
25 from what the specification of the challenged patent that teaches when

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1 it says that the different pairs can be operated separately and
2 controlled independently, meaning they're not activated necessarily at
3 the same point in time?

4 MR. GILFORD: So, I guess I would direct Your Honors to
5 slide 37. And here we see. I think this is potentially what you're
6 talking about, Judge Valek, but this is taken from the '318 Patent.
7 And what the '318 Patent's saying here is that the goal of preventing
8 uneven heating, it's actually critical to the challenge patents. And
9 what the patents teach is that the claim inventions offer a significant
10 improvement over prior art single channel designs. So according to
11 the patents, one of the problems encountered with prior art single
12 channel designs is that when multiple pairs of electrodes are activated
13 at the same time, treatment energy is diverted to whichever pair of
14 electrodes has the least impedance between the electrodes. This is
15 consistent with what Dr. Martin was saying is an issue with Stern.

16 So what you end up happening, what you have in these prior
17 single channel designs, is that you get different amounts of energy
18 flowing to various electric pairs, and you get uneven heating. So what
19 the challenge patents did is they developed a multi-channel
20 configuration where each channel is separately controllable, and this
21 prevents this energy diversion problem that you encountered. If we
22 go back to slide 20. So again, Dr. Martin confirmed in his deposition
23 that if multiple pairs of electrodes were activated at the same time in
24 Stern, then the current would be diverted to whichever electrodes
25 experience the least impedance. So this is again the exact same

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1 energy diversion problem that the challenge patents say is
2 encountered in the prior art. It's not what our invention is, it's what
3 the prior art problem was. So Stern's device is very different than the
4 device of the challenge claim. So unlike the challenge claim.

5 JUDGE VALEK: Let me ask you a follow up question about
6 that then. Is it Patent Owner's position that the output channels
7 limitation that it requires a separate voltage source for each electrode
8 bear?

9 MR. GILFORD: No.

10 JUDGE VALEK: So how is it not the same exact thing?
11 Because if you don't have separate voltage sources and you switch
12 multiple of these things on at once in your device, the same issue that
13 you have here is going to come up where whatever the path of least
14 resistance is, that's where the energy is going to flow.

15 MR. GILFORD: So again, it's not a requirement of the claims.
16 What I would say is a requirement.

17 JUDGE VALEK: At least, if it's not a requirement of the
18 claims, how could it distinguish the prior art? You can't have it both
19 ways.

20 MR. GILFORD: So, I would answer it this way. So, in order
21 to meet the challenge claims, you have to have, at least for the '318
22 and '286 Patents, you have to have multiple radio frequency output
23 channels. And both parties, experts agree that radio frequency output
24 channel is an output from a radio frequency generator. So, what I
25 would say is that in order to solve this energy diversion problem, you

1 can't solve that problem without multiple outputs from a generator.
2 So, you know, certainly two voltage sources would get you there. I
3 don't want to necessarily say that two voltage sources is a requirement
4 though. But you cannot solve this energy diversion problem without
5 at least having two separate outputs from the radio frequency
6 generator.

7 JUDGE VALEK: Let me ask you a hypothetical. This is a
8 hypothetical, so I'm asking you to assume certain things. But suppose
9 the switches in Stern's Figure 15 are inside the RF generator.
10 Everything else is the same. The switches still operate as taught in
11 Stern. Would a bipolar pair formed between electrodes 220 and 222
12 be connected with a different output channel than the pair between
13 electrodes 224 and 226.

14 MR. GILFORD: Can we bring up slide 17? I'm sorry, would
15 you mind re asking the question? I just want to have a figure in front
16 of me.

17 JUDGE VALEK: So, what I'm asking you is suppose we move
18 all these switches that you see in Stern's Figure 15. And we put them
19 inside the generator, so everything else is the same. The switch is still
20 operated as taught in columns 12 and 13 of Stern with a bipolar pair
21 for electrodes 220 and 222. Would the two top electrodes
22 be connected with a different output channel than a pair between
23 electrodes 224 and 226, hypothetically, where the switches are inside
24 the generator?

1 MR. GILFORD: I guess it depends on if you're saying then that
2 if you're moving the switches inside the generator, if you would have
3 multiple outputs from the generator in that situation. Again, I'm
4 having trouble wrapping my head around this because it's a
5 hypothetical and I think Stern's pretty consistent that the switches are
6 not in the generator. But, you know, potentially.

7 JUDGE VALEK: I don't think it's specific at all, actually. I
8 think it just shows a schematic diagram. I think that you've
9 interpreted it that way and perhaps Petitioner has as well. But the
10 question I'm asking is this really just a question about where the
11 switches are located, either in the RF generator or not?

12 MR. GILFORD: Again, I would say that you have to have at
13 least multiple outputs from the generator, at least for the 318 and 286.

14 JUDGE VALEK: If the switches, if you draw, say you draw a
15 box around voltage source 228 and all those switches and you call it
16 the RF generator, then you do have multiple lines coming out. Isn't it
17 no different than what you're saying the patent requires?

18 MR. GILFORD: Again, you know, if you're drawing that box,
19 which I don't think exists in Stern, if in that case you're saying that,
20 okay, now we have a radio frequency generator with multiple outputs.
21 You know, I think that would potentially read on the claims, but what
22 you don't have is the solving the energy diversion problem. So, yeah,
23 you know, again, that that would be achievable with multiple voltage
24 sources. But I don't want to say that multiple voltage sources is a
25 requirement of the claims.

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1 JUDGE VALEK: Well, I'm not saying that it had multiple
2 outputs. Say it has one wire coming out. But because of the
3 switching operation, there's only one channel to each electrode at any
4 point in time. Isn't that still multiple channels as long as it's coming
5 out of the generator?

6 MR. GILFORD: In that case, no, because there would be one
7 output from the radio frequency generator. So there has to be multiple
8 outputs is what I would say. At least for the –

9 JUDGE VALEK: Separate wires?

10 MR. GILFORD: Yes, that would require separate wires.

11 JUDGE VALEK: Okay, so there has to be a wire for each
12 electrode pair to the generator. So, if you have eight pairs, you have
13 to have eight different wires connected to the generator?

14 MR. GILFORD: No, not necessarily. Again, the claim at a
15 minimum, requires multiple outputs from the generator. So, my
16 understanding how this, this all works is that's going to require, I
17 believe, at least four wires coming from the generator. So, two output
18 wires, two input wires, back to it. But again, at a minimum, the claim
19 requires multiple outputs from the generator. That's what absolutely
20 has to be there. And that's what is not shown in Stern. It is a single
21 output generator.

22 JUDGE VALEK: The claim requires a separate channel.
23 Right? For each pair. I'm looking at claim one of the '318 patent.

24 MR. GILFORD: Right. Each pair has to be connected to a
25 respective output channel, I believe is the claim language.

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1 JUDGE VALEK: So, if I have eight pairs, I need to have eight
2 wires, is that correct?

3 MR. GILFORD: Yeah. Yes. Every electrode would need a
4 wire to be connected somewhere.

5 JUDGE VALEK: Connected from the generator to the
6 electrode.

7 MR. GILFORD: I mean, the electrodes wouldn't be able to be
8 energized unless they were somehow connected to the generator. But
9 I think I'm with you.

10 JUDGE VALEK: I'm just again, trying to understand. I agree
11 with you. You need to have a wire to the electrodes that passes power
12 for them to be energized. But what I'm trying to understand is your
13 interpretation of separate channels. And so, what you're saying is you
14 have to have a separate wire going from each pair to the RF generator
15 in order for there to be separate radio frequency output channels.
16 That's required by the claims?

17 MR. GILFORD: I think I'm looking at it from a different
18 perspective. So, you need to have multiple outputs from the
19 generator, and you need to have each pair connected to those outputs.
20 And presumably you need wires to make the connection between the
21 electrodes and the outputs. But as long as you have that, I would say
22 the claim is met. And whether there is a switching arrangement or
23 not, or extra wires, I'm not sure. But you need to, at least at a
24 minimum, have multiple outputs and a connection between each pair
25 and the multiple outputs from the generator.

1 JUDGE VALEK: But don't you get exactly that in my
2 hypothetical where you move the switches inside the RF generator in
3 Stern Figure 15?

4 MR. GILFORD: Yeah, potentially. But again, I think that
5 that's just not a correct reading of what Stern actually teaches. So, I
6 understand your hypothetical, and I'm sorry it took us a long way to
7 get there. But yeah, I think I generally agree with you that if those
8 switches are inside the generator, then now potentially you have
9 multiple outputs and a connection between the electrodes. But the
10 bigger issue is that's not that's not what is taught in Stern, and I'm
11 happy to discuss that in a little more detail. But I think our expert, Dr.
12 Bikson, was very clear. If you look at all the evidence In Stern,
13 Figure 5, I think Figure 12, there's other disclosures in there, but they
14 all point to one conclusion, which is that the generator is different
15 than the switch is in this control box. And I think Stern does say it's
16 using a conventional radio frequency generator. So, the point is that
17 all these switches they're incorporating, that's in this separate box that
18 they're bringing to the table, that you have a conventional generator
19 that's supplying the electricity.

20 JUDGE VALEK: Maybe you can help me out. Is there a
21 particular part of Stern where it teaches that those switches that you
22 see in the electrical schematic in Figure 15, that those are something
23 that are separate from the rf generator? That supports your argument
24 that two things are separate.

1 MR. GILFORD: I would point, Your Honor, to Figure five,
2 which shows the internal box of the. I think they call it the power
3 control, the power controller or something like that. So this is
4 showing the power controller, which in Figure 12, I believe is numeral
5 1, 156. And if you can kind of see on the top left side of Figure five,
6 there's kind of like lines, it says RF input. So that's showing the. The
7 input from the separate generator. So, you know, this kind of
8 confirms is consistent with Figure 12, that you have a generator
9 somewhere else, and then you have this box with all these switches
10 and stuff in it, and that's separate. It's the power source controller
11 156.

12 JUDGE VALEK: How does the claim term output channels
13 avoid or not read on something like you see in Figure 12, where you
14 have a wire going to the controller which is then connected to the RF
15 generator? So why isn't that path--because obviously they're
16 electrically connected at some point through those two wires--why is
17 that not an output channel?

18 MR. GILFORD: So again, we're not entirely sure what's in
19 those wires. The way I interpret it is one wire's for the output, one
20 wire's for the input back to the voltage source. You know, it could be
21 that both of those wires are in one of those cables and the other cable
22 could be, you know, anything. It could be the. Some kind of wire
23 from the computer or something. It's just not entirely clear. But once
24 you actually look at all the figures, you know, even Figure 15, it's
25 consistent. You know, you got separate switches, and then you got a

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1 voltage source with two wires. And again, our expert, Dr. Bikson laid
2 this out pretty clearly in his declaration of why. Just all the evidence
3 confirms that the switches are elsewhere and the generator's its own
4 thing with one voltage source, one output, one wire back as an input.

5 JUDGE VALEK: But the claim doesn't recite RF generators in
6 the claims. At least claim 1 at the '318, the claim seems to just require
7 multiple radio frequency output channels. And so my question is,
8 why isn't the channel still there, even if it passes through a separate
9 box of switches before it gets to the radio frequency generator?

10 MR. GILFORD: So, I think it would be helpful just at least to
11 start with what the experts said radio frequency output channel means.
12 So, if we could turn to slide 33. So, I know Petitioners counsel said
13 they're applying the plain and ordinary meaning here, and there's
14 really no better place to look to get a plain and ordinary meaning than,
15 you know, Petitioner's own expert. And here we have a situation
16 where both experts were 100 percent in agreement on what the plain
17 and ordinary meaning of radio frequency output channel means. So,
18 Dr. Bikson and Dr. Martin both testify that a radio frequency output
19 channel is an output from a radio frequency generator, end quote.
20 And to be clear, this definition wasn't a slip of the tongue from Dr.
21 Martin. It wasn't something that he maybe misspoke about. He said
22 this repeatedly and consistently at deposition. I mean, for example, he
23 said that in Exhibit 2004, page 318, lines 15 and 19, as well as page
24 319, line 17 to page 320, line 2.

1 JUDGE VALEK: When I look at that testimony, when I read
2 what's actually on page 318, not just these snippets, it doesn't seem
3 like he agrees with you at all. He says very clearly that he believes
4 that Figure 15 of Stern shows multiple output channels from a radio
5 frequency generator. Right? We can turn there if you like.

6 MR. GILFORD: Well, he certainly said that his deposition, but
7 his understanding was based off of he interpreted the switches to be
8 inside the radio frequency generator. Now, I don't think Dr. Martin
9 had considered the rest of Stern when he said that his deposition,
10 because, you know, it's certainly not in his original declarations where
11 he kind of lays out, you know, I think the switches in Figure 15 are in
12 the generator. And here's why he doesn't do that. It was kind of an
13 offhand remark at his deposition. Again, the real only testimony on
14 that specific issue is from Dr. Martin where he just, he just goes
15 through, you know, figure by figure, line by line. In Stern and shows
16 why those switches are elsewhere. That being said --

17 JUDGE VALEK: But he didn't accept your position that Stern
18 Figure 15 doesn't teach this limitation. Correct?

19 MR. GILFORD: He did not accept it because he understood
20 the switches to be in the generator. And I think what's important to
21 know here is if we turn to slide 35, and this is Dr. Martin's testimony
22 on Exhibit 2007, which is reproduced on the right. This is kind of a
23 sample circuit that was made for him at his deposition. But I think it
24 generally shows mostly what's in Stern Figure 15 and what Dr. --

25 JUDGE VALEK: It doesn't have switches?

1 MR. GILFORD: That is true, but other than that, I think it's
2 pretty spot on. So what I think is important to know here is that when
3 we asked Dr. Martin if you were to assume that the radio frequency
4 generator is what's shown inside the red dashed rectangle, Dr. Martin
5 said, well, in that case, this circuit has only one radio frequency output
6 channel. I said, well, okay, what if we make it a little bigger now and
7 make the radio frequency just generated the red, excuse me, the black
8 dashed rectangle. So now you have four wires coming out of that
9 black dashed rectangle, in that case, how many radio frequency output
10 channels would there be in that case? And he said, well, now there's
11 two.

12 So clearly, what Dr. Martin understood at the time of his
13 deposition was that the number of radio frequency output channels
14 depends on the number of outputs from the radio frequency generator.
15 So again, when, when he's saying the red dashed box is the generator
16 only one output channel because there's only one output. But now he
17 said, okay, let's make the, the black dashed rectangle the generator.
18 Well, he says now there's two outputs. So there's two channels. And I
19 think that's, that's the critical issue here is that if we could go back to,
20 for example, slide 717 just to have Figure 15 in front of us. There's no
21 difference between what's shown in that red dashed rectangle and
22 what's shown in a voltage source 228. So again, if voltage source 228
23 is the generator. Well, according to Dr. Martin, you have a radio
24 frequency generator with one output. And as Dr. Martin said, in that
25 case, well, you only have one output channel.

1 Now, again, as we discussed earlier in your hypothetical, if
2 we're going to take the position that all these switches are also in the
3 generator, which is inconsistent with Stern, in that case, maybe you do
4 have more than one output channel. But the critical issue here Is that
5 those switches are not in the generator, those are output elsewhere.
6 And I think, you know, you were asking console about the orange
7 lines and all that stuff. The fact that the orange lines always go back
8 to voltage source 228 is to me, very, very telling. When they wrote
9 their petition, they understood that the origination of output energy is
10 coming from voltage source 228. That's where the generator is, that's
11 where you're outputting the radio frequency energy from. And all
12 these switches are. They're downstream, they're elsewhere, they're
13 outside of the radio frequency generator. So I don't think you can take
14 Dr. Martin's testimony on slide 35. And you know, again, if you
15 agree with us that the generator is what's shown in voltage source 228,
16 if you agree on those two positions, there's no dispute here that this is
17 a single output channel circuit. So.

18 JUDGE VALEK: But you will agree that the individual pairs
19 that are shown here, that they're separately controlled.

20 MR. GILFORD: Yes, using the switches that are somewhere
21 else. And again --

22 JUDGE VALEK: Let me just ask a follow-up before you move
23 on. And that means that you can independently control each of the
24 two pairs that they highlighted here. The one in green on the left and
25 the one in purple on the right, correct?

1 MR. GILFORD: Yes, I would say not at the same time,
2 though, for reasons we've discussed. And you can't get that really the
3 separate control that the '318 patent talked about, which is where you
4 have two pairs on at the same time and you prevent energy. Excuse
5 me, prevent energy diversion. But yes, using these switches, you can
6 turn different pairs on separately. So yeah, I agree with that.

7 JUDGE VALEK: One of the questions I had, and maybe I'm
8 not looking at this correctly, when I look at these two channels that
9 the Petitioner has highlighted here on their side-by-side comparison,
10 they're highlighted in orange. There's a channel on the left and the
11 channel on the right, and they're different. They're different channels
12 in whole. The part on the right of the switches that connects to the
13 electrodes is different than between the two channels. The part on the
14 left from the switches to the voltage source 228 is the same. And so,
15 it seems like Patent Owner is focused on everything on the left and
16 maybe Petitioners is focused on the right. So, which is more
17 consistent with the specification of the patent and its use of this term?

18 MR. GILFORD: Well, I would say our position is. So, the way
19 I look at what they've drawn here on Figure 17 is that you have a
20 single output channel. And then you have different pairs that are can
21 be connected to that single output channel. So you know, again, the
22 claims require maybe let's pull up slide 11 and I'm just looking at slide
23 timing. Excuse me, Your Honors. So again, just looking at the claim
24 language, I know this slide has the array part highlighted, but if we
25 look just below that, it says multiple radio frequency output channels

1 can connected with the multiple pairs of bipolar radio frequency
2 electrodes where in each pair of the multiple pairs of bipolar radio
3 frequency electrodes is connected with a respective one of the
4 multiple radio frequency output channels.

5 So that's what the claim says. There has to be a connection
6 between each pair and the multiple channels. And if we go back to
7 claim 17 or side 17, excuse me, what we see here is two different
8 possible pairs, each connected with the same output channel, the same
9 singular output channel. So that, that's really, that, that's really where
10 I'm kind of losing Petitioner, is if you just ignore the stuff on the left,
11 you know, I'm just. Where's the connection happening? You just
12 have wires coming from a electrodes, but where's the connection to
13 the output channel?

14 JUDGE VALEK: It seems like the connection doesn't happen
15 until those switches are closed. So that's why I'm having trouble, how
16 can you ignore the switches part?

17 MR. GILFORD: I guess in that instance, you know, then you
18 still just have one output channel. You have two different. This kind
19 of goes back to the configuration issue, you know, if you're looking at
20 it that way now in the left side you have one output channel, you have
21 a device with one output channel, and on the right side you have a
22 device with one output channel. But you still are, you're missing out
23 on a device that comprises multiple channels. So, I mean that, that's a
24 perfectly -- I guess if we're going to look at it that way, Petitioners
25 still lose. Again, you need a device that comprises all this stuff. It's

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1 not something where, you know, at one point in time it has one and at
2 a different point in time it has a different one. And then if we look at
3 those two different points in time and add them up, we get two. That's
4 not enough. You have to have a device that actually comprises
5 multiple channels.

6 JUDGE VALEK: So, at the same time?

7 MR. GILFORD: Yeah, well, it has to have it. So if, for
8 example, if we're looking, I mean, I think, I think you get my point.
9 But you know, if.

10 JUDGE VALEK: Because that's sort of the nature of how
11 switches work. They're either on or off. So, the only way you could
12 have two of these things on, I think in your view, at the same time, is
13 if you don't have switches?

14 MR. GILFORD: I don't think that's -- I mean, look, Stern has a
15 very particular configuration, and, you know, they chose you, Stern,
16 as their reference. So, we have to look at Stern's configuration. But
17 that's not to say, you know, some other device with a different
18 configuration couldn't meet the claims just because it has switches.
19 That's certainly not the case. You know, our position is you have to
20 look at Stern specific implementation because that's what they relied
21 on. That's what they're combining Edwards with. And, you know,
22 how does Stern work? How is it configured? So, you know, Stern
23 uses switches downstream from the generator, and, you know, it needs
24 to close certain switches to make pairs.

1 If we're going to say that the channels only occur when
2 switches are closed, you get this instance where you have different,
3 you know, different possibilities of making one channel, but you don't
4 have the device that actually has multiple channels. Was there any,
5 anything else you wanted to ask about that, Your Honor?

6 JUDGE VALEK: I think I understand your position. Thank
7 you.

8 MR. GILFORD: So, I think, you know, I'll try and be a little
9 brief here on the rest of our channel's discussion, but I did want to talk
10 about, at least to some extent, the replies and kind of the different
11 definitions, if you will, that Petitioners kind of throw out there in the
12 reply. So, if we could turn to slide 39. So, if you look here, this is the
13 different definitions, if you will, that Petitioners gave in their replies.
14 So, the first five of these things are the ones that Dr. Martin provided.
15 And as you can see, he's kind of all over the place there. And then
16 Petitioners, for their part, kind of ignored Dr. Martin's definitions and
17 came up with their own new reply definition. That's the bottom thing.
18 But these are all kind of inconsistent with each other.

19 I mean, looking at these definitions, for example, do the
20 claimed radio frequency output channels have to allow pairing
21 between chosen electrodes? Do they have to allow pairings separately
22 from another chosen pair? Do they have to form a complete circuit?
23 Are they just wires attached to electrodes? All these inconsistent
24 definitions fail to answer all those kind of basic questions. But, you
25 know, if we go to slide 40, we did give Dr. Martin kind of an

1 opportunity to really elaborate on his new definitions at his
2 deposition. And, and I do want to spend a little bit of time talking
3 about what he said.

4 So, if you look at the top left of the slide, one of the things Dr.
5 Martin testified over and over and over again in Exhibit 2008, which
6 is his reply deposition, is that a radio frequency output channel is just
7 a, quote, logical construct. Okay, what does that mean? Well, the
8 bottom left-hand side of the slide, he said the number of radio
9 frequency output channels depends on how you want to define this
10 construct. Okay, that seems a little subjective, but if you look at the
11 right-hand side of the slide here, he actually confirmed that what he's
12 saying is that this logical construct is entirely subjective. So, as Dr.
13 Martin testified, the number of radio frequency output channels is in
14 the eye of the designer or in the eye of the user. And he similarly
15 testified that different experts could come up with different numbers
16 of radio frequency output channels depending on how the device is
17 designed or intended to be used.

18 If we go to slide 41 here, we see similar testimony from Dr.
19 Martin. So when we asked him how many radio frequency output
20 channels Stern allegedly has, Dr. Martin said, I didn't count them.
21 Depends on how you would construct the device and actually
22 implement this device. But of course, even though Dr. Martin didn't
23 know how many radio frequency outputs channels Stern has, he
24 naturally said, well, I know it's more than one. If we go to slide 42,
25 please. So, the problem here with Dr. Martin's completely subjective

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1 interpretation of radio frequency output channels is that it's legally
2 incorrect. As the Federal Circuit held in *Datamize vs Plumtree*
3 software, the scope of claim language cannot depend solely on the
4 unrestrained subjective opinion of a particular individual. So, as we
5 saw earlier documentation, Dr. Martin testified that the number of
6 radio frequency output channels is in the subjective eye of the
7 designer or user. So Dr. Martin's interpretation of radio frequency
8 output channels cannot be correct.

9 But before we move on to the third issue, I did want to quickly
10 address one of Petitioner's slides. Can we go ahead and pull up slide
11 43? So according to Petitioners here, they say the challenge patents,
12 Dr. Bikson and Stern all disclose the same multiple radio frequency
13 output channels. Now, to the extent Petitioners are somehow
14 implying that Dr. Bikson agreed that Stern discloses multiple
15 radiofrequency output channels, Petitioners are simply wrong. So Dr.
16 Bikson was very unequivocal that Stern has only one radio frequency
17 out channel.

18 But putting that aside, I think this slide is highly indicative of
19 Petitioners incorrect analysis for both the payors argument and this
20 multiple channels argument. And what they're really doing is they're
21 not comparing the prior art to the claims like you're supposed to.
22 They're comparing the prior art to the challenge patents drawings in
23 this case, or you know, with the pears argument they're just picking
24 out, I think they have a slide where they point to one sentence from

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1 the 318 patents specification and we're comparing that to one sentence
2 from Stern.

3 So, this is an extremely improper analysis. You need to
4 compare the prior to the claims. You're not comparing the drawings
5 from the patent to a drawing. A highly zoomed in drawing in this
6 case from the prior art. The other problem with Petitioner slides is it
7 indicates that a radio frequency output channel is apparently just two
8 wires attached to electrodes. Dr. Martin, when asked at his deposition
9 whether a radio frequency output channel is that just simply two
10 wires, he said no, of course not. You can see that testimony at Exhibit
11 2008, page 104, lines 15 through 22. So, to the extent Petitioners are -
12 -

13 JUDGE VALEK: Counsel, one question on that. Looking
14 again, this is. I think you were referring to Petitioner's demonstrative
15 43. And I'm looking at slide the Figure 39 from the patent. It seems
16 to just show a wire connected to electrodes. It doesn't show an actual
17 connection to the generator, correct?

18 MR. GILFORD: Yeah, that's what it appears to show.

19 JUDGE VALEK: Yeah. Is there any disclosure in the
20 specification that you can point me to where it talks about what
21 happens that's outside this figure where it talks about how that wire is
22 connected to the RF generator?

23 MR. GILFORD: So, I would point your honors, maybe if we
24 go to slide 34.

25 JUDGE VALEK: Is this your slide or Petitioner's?

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1 MR. GILFORD: Oh, I'm sorry. Patent Owner's slide 34.

2 Thank you, Your Honor. So, I think this slide goes through some of
3 the disclosures that in our view are consistent with the definition that
4 both parties experts gave of radiofrequency output channel. So, for
5 example, the '318 and '286 Patents disclose transmitting treatment
6 energy from a generator to a treatment device. The patents also
7 disclose that the electrodes of the treatment device can be arranged in
8 a multi-channel configuration. They describe these channels as
9 separate controlled electrical channels, at least in our view. What
10 Figure 39 is showing is four separate channels or outputs from the
11 generator. I will note.

12 JUDGE VALEK: Do each of those channels have to go
13 directly to the generator or can they pass through some intermediate
14 piece of hardware, for example, a box of switches?

15 MR. GILFORD: Well, our understanding is this is showing
16 four separate outputs from the generator so that those four lines at
17 least on the top are going directly to the generator. What I will say is
18 that if you look at all three of these patents in issue, what you will not
19 find is any discussion of switches. You know, I think switch is
20 mentioned like once and it's just about like a, you know, a turn on
21 switch. But you're not going to see anything in there about what's
22 shown in Stern with this whole switching arrangement. So, in our
23 view that this is, this is showing four outputs directly from the
24 generator and you have four electrodes connected in that.

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1 JUDGE VALEK: The citations that you have here to the '318
2 patent, that's the best evidence you have for that particular
3 proposition?

4 MR. GILFORD: Yes, I believe in our sur-reply there might
5 have been additional ones. So I would point Your Honors there. I
6 don't have a specific page site for you, but I believe it's something
7 similar to what's shown on this slide. So again, the patents, to an
8 extent are somewhat vague on what radio frequency output channel
9 means. And you know, that's okay. There's plenty of patents that
10 don't. There's no lexicographic definition. So that's why, you know,
11 earlier I thought it was important to say look, the two experts are in
12 agreement here. They know exactly what the plain ordinary meaning
13 of this term is. They both said it's an output from a radio frequency
14 generator. So even though the exact disclosure on what this term
15 means is a little lacking in the patents themselves, we have a situation
16 where both parties experts agree.

17 So I guess I would like to unless there's any further questions
18 on the output channels, I would like to turn to the two rows issue.
19 Can we go ahead and turn to slide 46 please? So here, here we see
20 that the plain language of the limitation two rows of bipolar electrode
21 pairs requires multiple pairs per row. So as Dr. Bikson testified, the
22 claimed term bipolar electrode pairs is written in the plural and thus
23 requires multiple pairs. A row of bipolar electrode pairs requires at
24 least three electrodes in the row. And notably, Dr. Martin agreed with

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1 Dr. Bikson. So according to Dr. Martin, to have multiple pairs you
2 need at least three electrodes.

3 If your Honors would turn to slide 47. So here the specification
4 of the '271 patent is consistent with the expert's interpretation of the
5 term two rows of bipolar electrode pairs. For example, Figure 8F
6 shows a device comprising two rows of bipolar electrode pairs with
7 each row having multiple pairs per row. If your analyst would turn to
8 slide 48. The expert's interpretation of the term two rows of bipolar
9 electrode pairs is also consistent with the doctrine of claim
10 differentiation. So the '318 patent and US Patent Number 898-6301,
11 both of which are related to the '271 patent recite rows of electrodes.
12 The 271 patent, on the other hand, recites rows of electrode pairs. So
13 under the doctrine of claim differentiation, rows of electrode pairs
14 must have a different meaning than rows of electrodes. And Dr.
15 Bikson confirmed that that's true. They do have different meanings.

16 So according to him, rows of electrode pairs requires at least
17 three electrodes per row. Rows of electrodes, on the other hand,
18 requires only two electrodes per row. As we talked about earlier, Dr.
19 Martin was consistent with Dr. Bikson. He said, you know, to have
20 multiple pairs in a row, you need at least three electrodes. So let's turn
21 to what the petition says on this issue. If we go to slide 49. So here
22 we have it. The petition relied on Stern Figures 15 and 19. It
23 provided three examples. The important thing to note here is in each
24 of these three examples they relied on the petition. Each row has only
25 two electrodes per row. If your Honors would turn to slide 50. As Dr.

1 Bikson explained, the petition failed to show that Stern teaches two
2 rows of bipolar electrode pairs. As we discussed earlier, both parties
3 experts agree that a row of bipolar electrodes requires at least three
4 electrodes in the row. But as shown on the bottom of the slide, each
5 of the petition's alleged rows has only two electrodes per row. As Dr.
6 Bikson explained, Stern teaches two rows of a single pair each, not
7 two rows of pairs as claimed.

8 If we go to slide 51, and here we start to see Petitioner's counter
9 argument, and they spent some time on this about how the patents
10 teach forming pairs across rows, not within them. So here's what
11 Petitioners said. They say the '271 patent discloses a preferred
12 embodiment where pairs are formed across rows, not within them.
13 Petitioners argue that requiring multiple pairs within a single row
14 excludes this preferred embodiment. So, putting aside that, I don't
15 think the '271 patent says anything about forming pairs across rows to
16 be a preferred embodiment. Even putting that aside, I think
17 Petitioner's argument just simply misses the point here. Regardless of
18 whether the two sides patent discloses an embodiment where pairs are
19 formed across rows, the claims are specifically directed to
20 embodiments that have multiple pairs per row. And if we go to slide
21 53, Dr. Bikson confirmed in his deposition that an embodiment where
22 pairs are formed across rows is not within the scope of the claims.
23 And of course, the claims control not the specification. Again, the
24 claims expressly require multiple pairs per row.

25 JUDGE VALEK: But counsel, they don't actually say that.

1 MR. GILFORD: Right.

2 JUDGE VALEK: They don't say multiple pairs per row. The
3 language is.

4 MR. GILFORD: Two rows of bipolar electrode pairs.

5 JUDGE VALEK: Correct. Thank you for that. And so, it
6 seems to me that it's not as clear as you make out. There's multiple
7 readings of that. One reading is one that you advance. Each row has
8 to have multiple pairs. And another is that the rows collectively have
9 multiple pairs, which I believe is the Petitioner's position. And so,
10 you offered the claim differentiation argument earlier. Is there any
11 other argument that you're making as far as how we should interpret
12 that claim language?

13 MR. GILFORD: Can we pull up Petitioner slide 25? Well, I
14 think, just so we're clear, I think slide 25 from Petitioners gives you a
15 good idea of what their position is. And I'll kind of dive into that a
16 little bit. And can we zoom in on the figure on the bottom? So, I
17 know this figure is taken from the patent itself, not from Stern, but I
18 think this is.

19 JUDGE FITZPATRICK: Mr. Gilford, I just had a little bit of a
20 glitch, and I missed the beginning of your response, which probably
21 included the slide number.

22 MR. GILFORD: Oh, I'm sorry. Petitioner, slide 25.

23 JUDGE FITZPATRICK: Thank you.

24 MR. GILFORD: So I'm not sure if you caught this, Judge
25 Fitzpatrick, but what I was saying is, you know, I understand this is a

1 figure taken from the '271 Patent, but I believe that this is kind of
2 what Petitioners are getting at is, you know, they're saying what you
3 need to do is look across the rows, and that's where you're getting the
4 pair. Well, let's take that argument at face value. And again, this is
5 Petitioner's own annotations with the circles. So, they have one pair at
6 the top circled, and then below that another pair circled. And
7 presumably you could go all the way down to the bottom of this
8 device. You would have five circles, you know, to show five pairs.

9 The problem with that is now you have one row of pairs, and
10 the claims expressly require two rows of pairs. So even if you take
11 Petitioner's argument at face value, that, you know, the claims
12 actually, you need to look across the rows. Fine, let's do that. Now
13 you have pair one, pair two, pair three, pair four, pair five. It's five
14 pairs in a row. And that's not two rows of pairs. That's one row of
15 pairs. And again, the claims require two rows of pairs. So in order to,
16 you know, under their interpretation --

17 JUDGE VALEK: Wouldn't it, counsel, wouldn't it be. It seems
18 to me, under that interpretation, where you're saying there's five pairs
19 and each of those red ovals identifies the pairs. They've only
20 identified two in the figure, but there's five, as you say. Wouldn't it be
21 that there isn't any row of pairs? And it's only because you have two
22 rows that you actually get any pairs. But looking at each row
23 individually, there's no pairs because it's only half of the electrodes
24 you need.

1 MR. GILFORD: If they're taking the position that the pairs are
2 formed across rows, and if you're looking at just the left side of this
3 device going downwards or the right side of the device going
4 downwards, then. Yeah, under their interpretation, you know what
5 says row one and row two would have no pairs. It would just be pairs
6 across rows. So that's the circles, and you would have five circles
7 going downwards. So that's a row of five circles and the circles
8 represent a pair. So what you would have is --

9 JUDGE VALEK: But under that interpretation, I guess it
10 would be. It would be consistent with their interpretation that when it
11 says two rows of multiple bipolar electrode pairs, it's talking about
12 collectively the two rows have multiple pairs in them.

13 MR. GILFORD: But that wouldn't be true because row one
14 would, like you said, would have no pairs and row two would have no
15 pairs. The only pairs --

16 JUDGE VALEK: But together you would have five pairs.

17 MR. GILFORD: You would have five pairs, that's five circles.
18 And those five circles would be in one row. I mean.

19 JUDGE FITZPATRICK: Could I interrupt? I think this might
20 be. You might be talking past each other. I understand, once you have
21 a pair that you go for, that's a single thing. And so, everything in the
22 pair 1 that's been circled, and pair 2, and the additional three pairs that
23 could be circled, those. There's a row. It's a single row of five things.
24 The thing being a pair, that's your position. Right? So, I mean, three
25 rows, I mean. That's your point in describing this. Whereas if you're

1 talking about rows of electrodes, there is 10 of those. There's only
2 five pairs, but there's 10 of those in this figure you were talking about.
3 So you have two rows of electrodes, but you can only have one row of
4 a pair of electrodes. And I'm talking with respect to side 25. I don't
5 know what figure it is.

6 MR. GILFORD: If you are going to interpret the pairs having
7 to be across a row, yes, you would have two rows of electrodes, one
8 row of electrode pairs. But I think all of this about how pairs have to
9 be formed across rows is kind of missing the point to an extent.
10 Because if we could go back to Patent Owner slide 49, just so we're
11 all on the same page. So this is Patent Owner slide 49. It's showing
12 the three examples from the petition itself. So this is Petitioner's
13 annotations, not ours. We wanted to check with Dr. Martin to see
14 how he interpreted the claims, how he interpreted his own drawings.
15 And Dr. Martin at his deposition was unequivocal that the way he
16 interpreted the claims is that, you know, if you look at what he's
17 calling row one and what he's calling row two, that the pairs, his
18 alleged pairs are within what he labeled row one and within what he
19 labeled row two. They're not across the rows. They're not across the
20 rows. He thought that his alleged pairs were within the rows. And
21 you can see that testimony at Exhibit 2003, page 275, lines 5 through
22 12.

23 So I don't want to get too caught up on this across the rows
24 thing, because that's Petitioner's counsel's interpretation. It's not their
25 experts. And of course, the expert's the one that have ordinary skill in

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1 the art. And I don't think it's proper for Petitioner's counsel to take a
2 position that's inconsistent with their own expert.

3 JUDGE YANG: But counsel, the challenged patent itself in
4 Figure 8G actually seems to show the electric pairs are actually
5 formed across the rows, right?

6 MR. GILFORD: No, Your Honor. So 8G is just one row of
7 multiple pairs. So to have two rows of pairs, you would double what's
8 short shown in 8G.

9 JUDGE YANG: Right, I understand you're saying that's one
10 row of pairs, right? To form a pair, you have to have two electrodes.
11 And it seems like they are across the rows. If you look at 8F, right
12 above, what you are arguing in row one, there are five electrodes, and
13 they form the pairs, however many pairs with that second row.
14 Looking across row one and row two. Do I read that figure
15 incorrectly?

16 MR. GILFORD: I guess I'll start with 8G, because you brought
17 it up first. And then I'll talk about 8F. So 8G, you know, you got
18 three, six electrodes, and as you can see, it's a little hard to see, but
19 each.

20 JUDGE YANG: You mean the electrode pairs or electrodes?

21 MR. GILFORD: Each electrode, if it has a little minus or a
22 little plus next to it, that's an individual electrode. And as you can see,
23 starting from the top, it goes minus, plus, minus, plus, et cetera. So,
24 the pair is a minus and a plus that are next to each other. So, what 8G
25 is showing is one row with, I would say, five pairs. Every time you

1 have a minus and a plus next to each other, that's a pair. So, you
2 know, you can just go down the row and see how many times there's a
3 minus and a plus. There's five times. So, it's one row of five different
4 pairs.

5 Now, you'd asked about 8F as well. So at least the way we're
6 interpreting 8F is, you know, you can really look at the pairs across
7 the rows or along the length. So, the way I, you know, the way I see it
8 is if you look at 8F, you potentially have, I think it's like 13 pairs. So,
9 you know, four pairs along each row and then another five pairs
10 across, for a total of 13. But at the very least, 8G shows one row of
11 pairs. 8F shows two rows of pairs. And the key here is that in the two
12 rows, you don't just have two electrodes in each row. You have, in
13 this case, five electrodes per row. And I think our point, if we look
14 back at Patent Owner slide 49, is that each of the alleged rows and
15 Petitioner's petition has only two electrodes. So, there can only be at
16 most a single pair per row. So, you have two rows of a single pair
17 each. You don't have two rows of pairs.

18 Now, I want to, I did want to briefly talk about Figure 4A. I
19 know Figure 4A came up. If we could go to slide 56. And I believe
20 Petitioners put this slide up on the screen and said, well, this is
21 another instance where, you know, ignore all the examples we
22 actually gave in the petition. You know, look at, look at Figure 4A.
23 Well, there now you have two rows with more than two electrodes per
24 row. If we could go to slide 57, and I think Judge Valek, you pointed
25 this out. That argument's nowhere to be found in the petition. It's a

1 completely new argument. It was raised for the first time on reply.
2 And from our perspective, that's an improper use of a reply. You can't
3 just totally create a new prima facie case of obviousness with a figure
4 you never even discussed in your discussion of two rows. Let's put
5 that aside.

6 The problem Petitioners have, if the Board is inclined to
7 actually consider this Figure 4A issue is that Figure 4A is a unipolar
8 device. It is not a bipolar device. And Stern is very, very clear on
9 this. So, if you look, for example, in the top right here, we see that
10 Figure 4A. Excuse me, Figure 4 and Figure 5, they're supposed to be
11 read in conjunction with each other. And then if you look at below
12 that, it says clearly, figure five is a unipolar arrangement. So, you
13 know, Figure 4, it's not even a bipolar device. It's monopolar. You
14 can't have two rows of bipolar electrode pairs when you have a
15 monopolar device. That's easy to kind of understand. So for those
16 two reasons, you know, this Figure 4A argument, it's improving
17 proper, and it just doesn't teach what's claimed. It can't. It's unipolar.

18 So, I did want to spend a little bit of time. I know we're kind of
19 running out of time here, but I did want to spend just a couple minutes
20 talking about the motivation combine argument. Can we go ahead
21 and turn to slide 63? And I'll be brief here. There was a discussion of
22 Baker. You know, as Your Honors pointed out, Baker's mentioned
23 only once in Edwards. And just to back up a second, so we're very,
24 very clear here, Baker wasn't included in any of Petitioner's invalidity
25 grounds. Petitioners haven't proposed modifying Edwards in view of

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1 Baker. They provided no reasons why a person of ordinary skill in the
2 art would have combined Edwards with Baker. The only relevance
3 Baker had to this proceeding is that there's a very narrow
4 incorporation in Edwards 535 of what Baker has to say.

5 Specifically, it cites Baker for an example of a suitable surface
6 for disposition on Edwards 535's membrane. I believe, Your Honor
7 asks, you know, what does that mean? What's that a reference to? I
8 don't think we got a clear answer from Petitioner's consul.

9 Apparently, you know, they haven't read the entirety of Baker and the
10 entirety of Stern, because once you do that, it's entirely clear what it's
11 referring to. And Dr. Bikson laid that out very clearly. And really,
12 what Edwards 535 is citing the Baker for is for a teaching of a porous
13 exterior surface for releasing an electrolyte solution. So, Edwards has
14 a kind of somewhat extensive discussion about how you want to have
15 an electrolyte inside the catheter, and that gets released, and that kind
16 of allows electrical conduction between the device and the patient.
17 And it says, you know, okay, you know, to know how to kind of
18 release that electrolyte through the skin of the membrane, you know,
19 look to Baker's porous exterior surface.

20 That's all it's talking about. It's not saying, hey, look at Baker
21 for an electrode reagent. It's saying, simply, look at Baker's porous
22 exterior surface. That'll tell you how to kind of make a membrane
23 with pores to allow the electrolyte to get out. If we turn to slide 65.
24 This is kind of the gist of what Petitioners are proposing to do.
25 They're saying, take Edwards 535's four ring electrodes. These are

1 electrodes that go around the circumference of the device. They're
2 arranged along the length of the device. They're saying, well, if you
3 multiply that by two, well, now you get Stern's arrangement. That
4 doesn't make any sense. I mean, putting aside the fact that Stern has
5 surface electrodes, Edwards has ring electrodes. If you multiplied
6 what Edwards 535 says by two, you would get a single row of eight
7 ring electrodes. You don't magically come up with totally different
8 type of electrodes. And the math doesn't make sense. I mean, four
9 times two is eight, but, you know, there's not eight electrodes in
10 certain. I just don't really. I guess the problem is I don't really
11 understand what Petitioners are getting at here, you know, with this
12 duplication issue. It doesn't. Doesn't track.

13 So, Judge Valek, I feel like you're also a little. Sorry, I don't
14 want to put words in your mouth, but I'm just having trouble seeing
15 where in the record we have any discussion of why it would make
16 sense to do a wholesale change from ring electrodes to surface
17 electrodes, and I'm just not seeing it. I know there's some issue here
18 about simplifying the energy. Dr. Bikson was very clear that two
19 rows doesn't simplify anything. It adds complexity. So really, if we
20 wanted to simplify things here, what we would do is we would have
21 two electrodes to form one pair, or we'd have just a single row, as
22 Edwards already has. So just all of a sudden doubling this to make
23 two rows. There's no simplification there. It doesn't track, really. All
24 of Petitioner's reasons combined, they're totally illusory, and they
25 don't track with the real-world evidence.

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1 JUDGE YANG: Just to remind you, you've already gone over
2 your time into your rebuttal time.

3 MR. GILFORD: Thank you, Your Honor. I think with that, I
4 will rest. And unless there are any questions pending, I think I'll
5 reserve the rest of my time for rebuttal. Thank you.

6 MS. COHEN: Good afternoon again, Your Honors. I have a
7 few points to get to. At first, I wanted to mention that Patent Owner's
8 counsel started with a discussion of the RhinAer device and said that
9 it's covered by the patents. I just wanted to note that Patent Owner
10 never took that position in any of the filings. There's no evidence to
11 support that in the record. And Patent Owner, I want to be clear, has
12 not made any arguments about secondary considerations. So that's not
13 something for this board to be considering. I think what's clear from
14 Patent Owner's argument is that they're requiring a lot more out of the
15 prior art than is present in their own patent. And Patent Owner
16 wanted to focus on, well, what do the claims require? But the claims
17 are viewed in the context of the disclosure of the challenged patents.
18 And this comes up a few different ways throughout the Patent
19 Owner's argument.

20 So, the first one was the argument about pairs and how Stern
21 discloses an array of electrodes. You don't know if they're pairs until
22 they're actually paired together and there's electricity flowing between
23 them, but that somehow there are pairs with the devices that are
24 disclosed in the patents, and that the claims here are covering
25 something that I don't quite still understand what that device would

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1 look like. The reason why I think that they're requiring more from the
2 prior art than what's in the patent is that there's no dispute that the
3 patent discloses. And they've focused a lot also in their Dr. Bikson
4 and his opening declaration on Figure 8F. And if you look at the '271
5 patent at column 23, lines 40 to 53, it talks about how Figure 8F
6 shows an array of electrodes comprising one, two, or many pairs of
7 bipolar needles.

8 And one thing that I discussed with Dr. Bikson at his deposition
9 is that there's no dispute that the challenged patent covers a device
10 where individual pairs can be activated at a single time. This
11 testimony is on exhibit 1084, line one, page 127, line 20 to 128.13.
12 So I think the issue that I am having and that I had and Judge
13 Fitzpatrick, I asked Dr. Bikson a similar question at his deposition
14 about how, if the position is true, that you can't have a pair until it's
15 activated, but that their position is also that you can have pairs of this
16 device out of the box, I don't understand how you can reconcile the
17 two. I think the patent clearly contemplates a device where you have
18 sequentially activated pairs one pair at a time. Dr. Bikson agrees.
19 And that's exactly what we see in Stern.

20 JUDGE VALEK: Counsel, can you walk us through some of
21 the support in the specification of the challenged patent for the idea
22 that it encompasses sequential activation of the pairs?

23 MS. COHEN: Sure. So, I think we have this on one of our
24 demonstratives as well. If you look, for example, on our slide 21, we
25 have this is disclosure from the '318 patent. And this is talking about

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1 the idea of you have channels that where each you can have separate
2 controlled electrical channels that allow for different regions of the
3 treatment element to be activated separately. In some embodiments,
4 each pair of electrodes may have a separate controlled electrical
5 channel to allow for different regions to be activated separately. This
6 is also true in the '271 patents disclosure, which is slightly different
7 from the '318 and the '286 disclosure. And if we were looking back
8 where I was talking about previously in the discussion of Figure 8F in
9 that column 23, if you go down to line 64, it says in some
10 embodiments of treatment devices comprising an array or multiple
11 pairs of electrodes, each pair of electrodes are bipolar or each
12 electrode may have again a separate controlled electrical channel to
13 allow for different regions of the treatment element to be activated.

14 Dr. Bikson at that section I mentioned page 127 of his
15 testimony, exhibit 1084, he agreed. Figure 8F and the patent
16 contemplate the idea of separate activation of pairs. And so if that is
17 true, that's what's in the patent. So the claims by requiring multiple
18 pairs are not saying you must have multiple pairs active at the same
19 time. Instead you have to have a device that will have different
20 multiple pairs. And that's exactly what we see in Stern. And setting
21 aside the disclosure that Your Honors have keyed into where Stern
22 plainly talks about using combinations of pairs together.

23 Another place where Patent Owner is requiring more from the
24 prior art than what's in the patent is the discussion about the uneven
25 heating and the loss of control. The Patent Owner, Patent Owner's

1 counsel in his argument said that Dr. Martin was unequivocal that if
2 you activated multiple pairs of Stern, then you would have this
3 problem of uneven heating, and you'd lose control. And I think he is
4 overstating what Dr. Martin's testimony was. If you go to page 50 of
5 Exhibit 2008 and you continue reading, Dr. Martin explains that
6 uneven temperature distribution, even if that might occur in some
7 instances, could be desirable. In fact, Stern contemplates that in some
8 instances, if you look at Stern column 1226, line 26 through 37, it says
9 the bipolar arrangement allows for this prescription. Precise control,
10 precise direction of energy a physician can visualize so they know
11 what areas they're treating and how they're heating it. And then Stern
12 also notes in some instances precise control is not necessary or you
13 can use a monopolar arrangement.

14 So, Stern itself is saying that the system it's teaching gives you
15 the flexibility and the ability to control heating and even destruction
16 of tissue. And we also -- I raised this in my previous argument, but
17 that there is also a lot of discussion in the petition that's not on the
18 specific limitations we've been talking about, but on limitation 1F, for
19 example, on some of the dependent claims where for example, on
20 page 38 of the 278 Petition, we cite several excerpts from Stern about
21 how its design allows a physician to control energy delivery and
22 ensures complete heating even in uneven tissue morphology. And
23 how the Stern really talks about how you can heat uneven or rather
24 asymmetrical areas within individual patients. Like Your Honors
25 were saying and noting where electricity will go is simply a matter of

1 physics and it's where the impedance is less. Edwards teaches using
2 impedance sensors to detect that and be able to control the delivery of
3 RF energy.

4 I now wanted to go to the output channels point and again how
5 they're requiring more from the prior art than what is disclosed in the
6 patent. So, I think one of the first things that counsel, one of the
7 things that counsel said that I noted was that there's no better place to
8 look for the plain and ordinary meaning than Petitioner's expert. And
9 I agree that Dr. Martin testified that an output channel, as he
10 understood it generally is the output from a radio frequency generator.
11 I think a better place to look than deposition testimony is the patent
12 itself and what the patent is disclosing and describing, which we did
13 and looked at previously. If we go to our slide 39 and this is the same
14 the same text from the patent that Patent Owner was also pointing to.

15 What the patent shows over and over and over again is how
16 these wires are connecting to the electrodes themselves. And it says
17 you need to have independent control. And Patent Owners counsel
18 said that in order to have a Stern disclosed multiple RF output
19 channels, you have to ignore everything on the left past the switches.
20 And I think the problem I'm having with their argument is that that's
21 what's shown in the patent figures. The only things that the patent
22 figures show is the connection to the electrodes. The patents disclose
23 that you must have a generator and that there is a signal source, but
24 they don't disclose anything specific about how you get the multiple

1 RF output channels and how specifically they have to be wired to
2 connect to the generator.

3 Mr. Gilford questioned our expert a lot about this at his
4 deposition. If you look at Exhibit 208, pages 136 to 137, that there's -
5 - that he questioned over and over again. None of figures 39 through
6 44 show voltage source. None of the figures limits how the channels
7 connect to the voltage source in the generator. So there's no dispute
8 that the patent that we're challenging, what we're looking at, doesn't
9 actually talk about how the output channels ultimately connect to the
10 generator. And when I was listening to Patent Owner's counsel, I
11 don't know if it's their position that in Figure 39, the four different
12 wires that we see going into the electrode have to directly connect to a
13 voltage source, kind of individually, or can they all converge at a
14 point that is controllable, like the switching mechanism in Stern? It's
15 not clear from their argument, and I think that the patent doesn't have
16 a requirement, and it's certainly not in the claims that there's some sort
17 of difference about what a multiple RF output channel requires.

18 A few additional points that I wanted to make on the output
19 channels, I had addressed slide 39 in my opening remarks. There's
20 slide 39, which has the smorgasbord of definitions, and Patent Owners
21 counsel says that they're inconsistent. I think we walked through how
22 it's all the different descriptions of output channels that are in the
23 challenge patents, which are generally consistent, that it's the
24 connection to the electrodes that provides the individualized control.
25 The Patent Owner cites the Datamize case as supporting its position.

1 But if you go back and look at that case, it's completely inapplicable
2 to the situation here. It's about whether the term aesthetically pleasing
3 is definite or indefinite. And there the court found that aesthetically
4 pleasing is an indefinite claim term.

5 Instead, here what Dr. Martin testified to repeatedly is that the
6 number of output channels depends on how a device is designed and
7 intended to be used, which are concrete elements of design. And he
8 said that with Stern, we see that there are at least two output channels
9 because. Because you can have at least two different pairs of the
10 array. There could be four output channels because Stern is flexible
11 with its switching arrangement about which electrode will be the
12 active electrode, and which will be the return electrode. And that
13 could be considered a different channel if you switch the polarity. But
14 ultimately, that's a very, very different. That's a very concrete
15 understanding of how to view RF output channels than the issue that
16 happened in the Datamize case.

17 Finally, I wanted to take a couple of minutes to talk about the
18 two rows point, because I know when I think that there is some
19 confusion around this issue. And so I just want to make sure that kind
20 of take a step back and make sure we're all on the same page. Dr.
21 Bikson, in his declaration, pointed to Figure 8F as being a figure that
22 discloses two rows of bipolar electrode pairs. And he pointed to the
23 figure. He said, here's row one and here's row two going down the
24 length of the treatment device. And he said, my position is that what
25 the claim is talking about is that within each row you have to have the

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1 multiple pairs. And so, we went back and looked at this, and this is on
2 his exhibit 2001 for the 277 IPR at page 30. And he points to Figure
3 8F. He says, here's row one, here's row two, and Figure 8G has just
4 one row.

5 If you go back and look at the patent and try to understand,
6 okay, how is the patent requiring this where you have multiple pairs
7 within each row? The answer to that question is no. The patent is not
8 saying that you have two rows where within each row you have
9 multiple pairs of bipolar electrodes. The patent disconnected from
10 Figure 8F says you can have a device that has two rows where you
11 will pass radio frequency electricity from one row to another. If we
12 apply that teaching to Figure 8F, then the pairs are not actually formed
13 within the rows, as Dr. Bikson has annotated. Instead, they're formed
14 across the rows. What that means is that the claims are not requiring
15 multiple pairs within each row, as Dr. Bikson is saying that they do.

16 If you then go to the specific description about Figure 8F, it
17 says, as opposed to Figure 8G, where the pairs are aligned along the
18 length of the treatment element, the pairs in Figure 8F are side by
19 side. That's consistent with the disclosure that you can have energy
20 pass from one row to another. We cite this not to say that the claims
21 require a particular pairing or arrangement in any way. It's just that
22 their position that two rows of bipolar electrode pairs means you have
23 two rows where each row has multiple pairs is not supported by the
24 patent. And the figure that they cite, in fact, show the opposite. It

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1 shows that you can have pairs formed across the rows as opposed to
2 within each row.

3 And it's our position that all the claim is saying and all its
4 requiring is that you have two rows of electrodes. And with the two
5 rows, there are multiple bipolar electrode pairs. That's all the claim
6 says, two rows of bipolar electrode pairs. And that's exactly what we
7 see in Stern. Patent Owners counsel cited to the claim differentiation
8 argument that they make on slide 48. We responded to that very fully
9 in our reply as to why claim differentiation here really is inapplicable
10 when we're talking about these very distantly related patents that have
11 other differences in their claim elements.

12 Finally, two quick minutes on the motivation to combine
13 position. I think really Patent Owner is requiring some sort of, in their
14 argument, some sort of physical combination of these references, as
15 opposed to taking the teaching of having two rows and applying it to
16 the Edwards reference. I also think that they're misunderstanding and
17 misinterpreting the Edwards reference by limiting it to the ring
18 electrode embodiment. We presented evidence in our petition on page
19 35, and also we cite this in our reply at page 20, that Edwards at
20 column 8, lines 19 through 33 really does talk about having surface
21 electrodes as well. And it's kind of agnostic about the arrangement of
22 surface electrodes. It just shows the one in Figure 6, the one
23 embodiment with a row of ring electrodes. But clearly by
24 contemplating surface electrodes, that that is a very straightforward,
25 easy combination.

1 I think to just very quickly close on this, there is no argument
2 here that there's a lack of reasonable expectation of success. There are
3 no secondary considerations at issue. The vast majority of limitations
4 of the challenge claims are actually not disputed as being disclosed in
5 the prior art. The disputes are extremely narrow. And if you look at
6 the prior art, it clearly discloses the plain meaning of the claims,
7 especially when viewed in the context of the challenge patents. So,
8 unless if Your Honors have any additional questions, that's all for us.
9 Thank you for your time.

10 MR. GILFORD: Are Your Honors ready? Thank you, Your
11 Honors, I'll try to be brief. I'll start with the pairs issue that was talked
12 about. I believe one of the questions was whether there's disclosure in
13 the patents themselves about whether sequential activation can be
14 encompassed by the claims. And to be very clear here, Patent Owner
15 is not saying that the claims somehow can't encompass sequential
16 activation. That's certainly possible. The issue is you need to have
17 sequential activation with the claimed device. And again, the claimed
18 device is a device comprising an array of multiple pairs. So if you
19 have that, it doesn't matter if you want to do activation of the
20 electrodes at the same time or sequentially or whatever. You just
21 have to have that device.

22 And I'll give you a for instance here. So if we look at the '318
23 patent in column 24, lines approximately 45 to 52, it's a brief
24 description of Figure 8F of the '318 patent and what it clearly says
25 there is. Figure 8F is an example of a treatment device comprising an

1 array of multiple pairs of electrodes. So we're already in the zone of
2 what's claimed. If we look at Figure 8F itself, you know, you can
3 clearly see all the pluses and minuses there, which are clearly showing
4 that these are electrodes with opposite polarities. Current can flow
5 between them, and we have multiple pairs. It doesn't matter whether
6 this device is actually turned on or off. Doesn't matter. This is what
7 is claimed. It's a treatment element comprising multiple pairs. And
8 whether you turn each of those pairs on sequentially or at the same
9 time doesn't matter because this device has multiple pairs. And what
10 we explained is that Stern does not. It starts off with no pairs and you
11 can make one pair at a time and cycle through them, but you never get
12 what's something similar to what's shown in 8F, which is a device
13 comprising multiple pairs.

14 I want to be brief on the channels issue. I think there was an
15 argument from counsel that in Figure 39 that there's a potential there
16 for the four plus electrodes to somehow converge at a point and then
17 have a single connection to the generator. Well, obviously Stern
18 doesn't show or the '318 patent doesn't show that. And no person of
19 ordinary skill in the art would even read the '318 patent is potentially
20 infinite, potentially having that. And here's why. If we look at the
21 '318 patent at column 48, lines approximately 42 to 62, we have this
22 whole discussion about the current divergence issue. And this is a
23 specific discussion that's related to 39. It says at the beginning, Figure
24 39 shows a nasal treatment device arranged in a multi-channel
25 configuration. And then what it does is distinguish that configuration

1 from the prior art from single channel configurations. And it says,
2 well, figure 39, multi-channel, single channel. What you're going to
3 get is that if you have multiple pairs on at the same time, you're going
4 to get current divergence.

5 So clearly, if you read all that together, the only way you can
6 prevent this current divergence issue is if you have multiple outputs
7 from the radio frequency generator. So in our view, what you would
8 get from reading that in combination with the figures is Figure 39 is
9 showing four positive electrodes and they're going straight to the
10 generator. So the generator has at least four outputs. There wouldn't
11 be a contemplation there of those four wires coming from those
12 positive electrodes and converging somewhere. Because you couldn't
13 possibly have a situation then where you're preventing current
14 divergence where multiple pairs are on at the same time.

15 The last thing I wanted to end on was there was a brief
16 discussion about the two rows issue. And I know Petitioners counsel
17 said that specifically for Figure 8F, you know, they, they read the
18 specification of the '271 patent is saying that in Figure 8F there can
19 only be pairing across rows. That Figure 8F there's absolutely no
20 pairing within rows. Obviously, we read it a little bit differently. So,
21 I wanted to give your, Your Honors, a sight here. And specifically
22 this is going to be the '271 patent at column 32, lines 1 through 5.
23 And what the '271 patent says there, it's very clear is that the pairs can
24 be within rows or they can be across rows. Both are very valid
25 embodiments. But what we need to look at is what the claims say.

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1 The claims are clearly claiming the embodiment where the pairs
2 are within the rows. And again, Dr. Martin, Petitioner's expert,
3 agreed. He read the claims as is having pairs within rows. So yes, I
4 get that there's a situation, you know, in the patent where you can
5 have pairs across rows. That's not the claimed embodiment. The
6 claimed embodiment is where the pairs are within rows. And as Dr.
7 Bikson testified, the claim requires multiple pairs per row. It can't just
8 be one pair per row. And you know, each one of Petitioner's
9 examples in the petition has only a single, at most a single pair per
10 row. And unless Your Honors have any further questions, Patent
11 Owner rests.

12 JUDGE YANG: Well, thank you. All right. We would like to
13 thank the parties for your time. Counsel for both parties did a great
14 job in these cases and today's argument is very helpful. These cases
15 are submitted, and we will issue the final decisions in due course. We
16 are adjourned.

17 (Whereupon, the proceedings at 4:15 p.m. were concluded.)

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