

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INDUCTEV, INC.
Petitioner,

v.

WITRICITY CORPORATION
Patent Owner

IPR2023-01182
Patent 8,461,719 B2

Record of Oral Hearing
Held: November 19, 2024

Before JAMESON LEE, ROBERT J. WEINSCHENK, and SCOTT
RAEVSKY, *Administrative Patent Judges*.

IPR2023-01182
Patent 8,461,719 B2

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P R O C E E D I N G S

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JUDGE WEINSCHENK: All right. Good morning, everyone.

This is an oral hearing in IPR2023-1182, InductEV vs. WiTricity. I'm Judge Weinschenk. With me today are Judge Lee and Judge Raevsky. Let's start with some appearances. Who do we have today for Petitioner?

MR. DAVIS: Good morning, Your Honors. This is Blake Davis from Latham & Watkins. I'm here for Petitioner, InductEV. Also with me are David Zucker and Steve Peters, also from Latham & Watkins, and also for Petitioner.

JUDGE WEINSCHENK: Okay. Mr. Davis, will you be doing the presenting today for Petitioner?

MR. DAVIS: Yes, I will be.

JUDGE WEINSCHENK: Okay. All right. Great. And who do we have for Patent Owner today?

MR. LAWSON: Thank you, Your Honor. This is Lance Lawson. I'm with the law firm Burr & Forman, representing Patent Owner WiTricity Corporation. In addition to myself, my colleague and partner, Ryan Corbett, is on and also our technical expert, Dr. Horenstein, and our client, Patent Counsel, Mr. Misha Hill, is also on the proceeding this morning.

JUDGE WEINSCHENK: Okay. Mr. Lawson, will you be doing the presenting then?

MR. LAWSON: I will.

JUDGE WEINSCHENK: Okay. Great. All right. So, just a few preliminary matters before we begin. As always, our primary concern today

1 is your right to be heard. If at any time you encounter any technical
2 difficulties, please let us know. If you're able to, you can try to tell the
3 Judges. If, for some reason, you're not able to communicate with us, please
4 reach out to the team member who sent you the connection information and
5 they'll try to get any issues resolved for you.

6 Please try to remember to mute your mic when you're not speaking
7 so that we don't have any feedback during the hearing. Also, it's helpful if
8 each time you start speaking again, you can reintroduce yourself. It's helpful
9 to the court reporter to keep a clear transcript. As always, we have all the
10 papers, exhibits, and demonstratives, but it's very helpful if you can direct us
11 to specific page numbers or slide numbers so we can follow along.

12 There is a public line today. I don't believe there's any confidential
13 information at issue in this case, but if there's an issue at any time where you
14 think maybe there's an issue with a public line, please let us know and we
15 can try to address that.

16 As you know from our order, each side will have 60 minutes to
17 present their case. Before you begin, just please let me know how much
18 time you'd like to reserve for rebuttal. With that, let's see, are there any
19 questions on Petitioner's side, Mr. Davis, before we get started?

20 MR. DAVIS: No questions, Your Honor.

21 JUDGE WEINSCHENK: Okay. Anything from you, Mr.
22 Lawson?

23 MR. LAWSON: No questions, Your Honor. Thank you.

24 JUDGE WEINSCHENK: All right. Well, then I think we're all
25 set here. Mr. Davis, I will try to give you both warnings when you get close
26 to your rebuttal time. Sometimes if we're in the middle of a questioning, it

1 can get a little delayed, but I'll try to give you at least a five-minute heads-up
2 before you get into your rebuttal time. Mr. Davis, just let me know much
3 time you'd like for rebuttal?

4 MR. DAVIS: I'll reserve 20 minutes for rebuttal.

5 JUDGE WEINSCHENK: All right. Thank you. You can begin
6 whenever you're ready.

7 MR. DAVIS: Thank you, Your Honor. And I'll be walking
8 through Petitioner's demonstratives primarily, and so I'll refer to slide
9 numbers as we go in order to try to help the Court follow along.

10 Again, I am Blake Davis from Latham & Watkins. I'm here for
11 Petitioner, InductEV, and today we are addressing WiTricity's patent
12 number 8,461,719, which I'll refer to as the '719 patent. In the petition, we
13 challenged two claims of the '719 patent, Claims 16 and 17. The Board's job
14 is halfway finished already. Claim 16 was canceled by WiTricity. And so,
15 all that remains is Claim 17. In the petition, that corresponds to Grounds 2
16 and 4 of the petition, and really the dispute with regards to both grounds are
17 very similar. They both relate to just a single limitation, which is a network
18 of capacitors, and under Petitioner's plain meaning construction, there's no
19 dispute that the references in both Ground 2 and Ground 4 disclose every
20 limitation of the claims. Even under Patent Owner's construction, which we
21 think is plainly wrong in view of the record and in view of the intrinsic
22 evidence, the prior art in both Grounds 2 and 4 disclose every limitation of
23 the claims under that construction as well.

24 The only other dispute relates to Ground 2 alone and that is a
25 Dynamic Drinkware where we are relying on Cook '554's provisional filing
26 date and Patent Owner disputes whether one limitation is the provisional

1 provides support for one of the limitations of Claim 17 of the issued Cook
2 '554 reference, and I'll address those as we go.

3 Starting with slide 5 of Petitioner's demonstratives, this is Claim 17
4 of the '719 patent. This is the one claim that we will be addressing today.
5 Just very briefly to set the stage, this is a system claim. The first limitation
6 is undisputed in each of the grounds. It requires that there are two
7 resonators, a source, and a second resonator that are located a distance apart
8 from one another, D. The next limitation requires energy to be exchanged
9 wirelessly between those two resonators and having certain Q factors.
10 Again, that's not disputed in any of the grounds.

11 The final limitation of the claim is where there is a dispute. And
12 specifically with respect to the highlighted portion, where it states wherein
13 in at least one of the resonators includes a coil of a plurality of turns of a
14 conducting material connected to a network of capacitors. And specifically,
15 Patent Owner doesn't dispute that each of the references have a coil of a
16 plurality of turns of a conducting material. They just dispute whether there
17 is a network of capacitors and we'll show that each of Grounds 2 and 4 does
18 in fact disclose that under either construction.

19 The remaining portion of the limitation merely recites some
20 additional requirements of the coil of plurality of turns. And again, those
21 remaining limitations are not disputed in either of Grounds 2 or 4.

22 JUDGE WEINSCHENK: Mr. Davis, this is Judge Weinschenk.
23 While you have this slide up, does this claim limitation in Claim 17 that
24 you've highlighted, does that require the resonator itself to include both the
25 coil and the network of capacitors?

26 MR. DAVIS: Yes, for purposes of the prior art, that is what is

1 disclosed is that the resonator includes both of these things, which is to say
2 that the capacitors need to impact the resonant frequency of the resonator.

3 JUDGE WEINSCHENK: Okay. So, even if we read the term that
4 the resonator has to have both of those things that you've shown that in the
5 prior art?

6 MR. DAVIS: That's right. And that's how it's mapped in the
7 petition as well.

8 JUDGE WEINSCHENK: Okay.

9 MR. DAVIS: Turning to slide 7, which is claim construction.
10 This is the claim term network of capacitors. Petitioner submits that the
11 term should be given its plain meaning, which is any circuit topology,
12 including one or more capacitors, whereas Patent Owner's construction is a
13 circuit topology of passive components, including one or more capacitors
14 that provides two or more degrees of freedom.

15 We'll start with Petitioner's construction. We think that this is a
16 very straightforward claim construction for the term. Turning to slide 8, we
17 again have the claim language. What I want to point out here is Claim 17 is
18 a system claim. It recites structural requirements. It describes what the
19 system is. It does not describe what the system does. There are, for
20 example, no functional requirements of the network of capacitors. It merely
21 needs to have a network of capacitors that's connected to the multi-turn
22 inductor.

23 Turning to slide 9, Petitioner's construction comes directly from
24 the definition that is in the '719 patent specification. The '719 patent, and
25 this is the '719 patent at 5232 through 38 states, it will be appreciated that a
26 network of capacitors, as used herein, may in general refer to any circuit

1 topology, including one or more capacitors. That is directly Petitioner's
2 construction. Any circuit topology, including one or more capacitors. This
3 is also the, I think, plain understanding of what a network of capacitors is.
4 And we know from the Parkervision case from the Federal Circuit that these,
5 the use of the terms as used herein, and refer to signal that this is, in fact, a
6 definitional statement.

7 Turning to slide 10. There's no dispute among the experts that this
8 is, in fact, the intended definition of network of capacitors. This is --

9 JUDGE LEE: Mr. Blake, it's Judge Lee. I have a question for
10 you. Earlier you mentioned that the Petitioner would like the term to be
11 construed according to its plain meaning, right?

12 MR. DAVIS: That's right.

13 JUDGE LEE: And here you've shown us intrinsic evidence that
14 looks essentially like a definition for the term. So, I'm a little confused.
15 Which is it? You know, plain meaning is plain meaning, and if there's a
16 special definition for something, it's not plain meaning. It's meaning
17 according to the definition given in the spec. So, can you clarify, which is
18 it? I mean, is it plain meaning, or is it the meaning is defined in this spec?

19 MR. DAVIS: In this instance, they are one in the same. And that
20 is where what a POSA would understand a network of capacitors to be
21 would be one or more capacitors that are connected in some manner. We
22 actually, if you turn to slide 19, we can actually see this in what Patent
23 Owner submitted as extrinsic evidence of the meaning of the term, where,
24 and this is Frederick Terman's seminal textbook, the Radio Engineer's
25 Handbook for more than 50 years, a network is understood to be made up of
26 resistances, inductances, capacities, and mutual inductances that are

1 connected together in some manner. Here, we have a network of capacitors.
2 Again, that would be understood to just be one or more capacitors that are
3 connected together in the same manner.

4 JUDGE LEE: Well, yeah, I don't know. Maybe I'm a bit of a
5 wordsmith here, but it's not really exactly the same because the definition in
6 the spec allows for one or more, right? So, it's pretty broad. You can have
7 one. Whereas if there's no definition, you just go by the plain meaning, and
8 it's a network of capacitors, you might want to say, well, you've got to have
9 at least two because of the word plural. So, I mean, facially, it's not
10 identical. So, for you to say they're the same, I'm not sure there's evidence
11 to say they're absolutely the same. So, if we were to write up a decision, I
12 don't know. I don't know if I were to write it, according to plain meaning, it
13 allows for just one capacitor. I'm not sure that's the case. But if we go by
14 the definition, it allows for one capacitor. So, I'm not sure your answer
15 really gives me satisfaction. I still don't know which is which.

16 MR. DAVIS: So, I -- to the extent that there is a difference
17 between the plain meaning and what that definition is in the patent, it should
18 be given the meaning that it is defined in the patent, which is because it does
19 use these clear definitional as used herein and refer to terms.

20 JUDGE LEE: Why not just say that the patent defines the meaning
21 and you go by that? And you kind of made it a little more messed up and
22 complicated and to go -- you want plain meaning, as well as the definition if
23 the two don't match up.

24 MR. DAVIS: So, I think that for purposes of the prior art, this
25 may be a distinction without a difference, simply because for purposes of the
26 prior art and the dispute at hand, each of the prior art references in both in

1 Grounds 2 and 4, they do disclose a plurality of capacitors. I think under the
2 definition in the patent specification where it includes one, I think that still I
3 think would be the plain meaning. Again, maybe it's not the plain meaning
4 separate and apart from the specification, but the plain meaning is always
5 read in view of the specification. I think that this provides that additional
6 insight into what the plain meaning would be as read by a person of ordinary
7 skill in the art in view of the specification.

8 JUDGE LEE: Yeah, I think you're right. I understand where
9 you're going, but you're not willing to just tell us now that you're going to go
10 by the meaning given in the spec. You still want to at this point want us to
11 consider both? It'd be easier if you just say, yeah, it's defined in the spec and
12 that's the meaning you want.

13 MR. DAVIS: We are happy to go with the meaning that's defined
14 in the specification. I think that's what's been set out in our briefing as well
15 and our reply brief is that that is the intended definition of the term. And I
16 think that's something that's agreed upon by the experts as well.

17 JUDGE LEE: Great. So, I take that as a yes, we just --

18 MR. DAVIS: Yes.

19 JUDGE LEE: Okay. Thank you.

20 MR. DAVIS: Turning to slide 11. This is again, actually looking
21 at this definitional statement from the specification. In addition to
22 explaining that the network of capacitors refers to any circuit topology
23 including one or more capacitors, it goes on to say that includes without
24 limitation, any of the circuits specifically disclosed herein using capacitors.
25 One of those examples would be Figure 36 figure. Figure 36 discloses, it
26 specifically states at the '714 patent, column 10, lines 11 through 14, that

1 36(a) through (d) are depicting four topologies of networks of fixed and
2 variable capacitors. As shown in Figure 36, we have capacitors, they can be
3 in parallel, they can be in series, they can be a combination of the two. The
4 term is very broad.

5 We think that it's telling. If we turn to slide 12, even in the Patent
6 Owner's response, there was really no dispute that in the '719 patent, a
7 network of capacitors is generally referred to as a circuit topology including
8 one of our capacitors. Again, that is our construction, Petitioner's
9 construction. We think that the dispute can stop there. But, of course,
10 Patent Owner has proposed an alternative. If we go to slide 13, we see from
11 Patent Owner's response that at page 14, their construction is a circuit
12 topology of passive components, including one or more capacitors that
13 provides two or more degrees of freedom. Really sort of the problem with
14 this construction, you know, we don't agree that you would need to have the
15 passive components, but for purposes of the prior art, really the dispute
16 relates to the two or more degrees of freedom. We think that has a number
17 of problems.

18 Turning to slide 14, the first problem is it's simply unsupported by
19 the intrinsic evidence. The words degree of freedom, they don't appear
20 anywhere in the specification or in the prosecution history. That seems to be
21 an interpolation that was made by Patent Owner's expert, but it doesn't find
22 any support in the actual description, let alone what the patentee intended
23 network of capacitors to mean.

24 Turning to slide 15, a second problem is that the Patent Owner is
25 simply reading in functional requirements into the claim that don't exist. We
26 see that in the Patent Owner response at page 12, where Patent Owner is

1 saying that the reason there are two degrees of freedom is to control or
2 regulate both the real and imaginary components of the complex impedance.
3 Nothing in the claim says anything about a complex impedance. Doesn't say
4 anything about real and imaginary components and reading in these
5 functional requirements into a structural claim that merely recites a network
6 of capacitors is improper. We know that from the Schwing case. If you
7 have structural language, it's generally improper to construe those to have
8 functional requirements.

9 Turning to slide 16. When we look at the evidence that Patent
10 Owner does cite in support of its construction, it's for something different
11 entirely. What Patent Owner is reciting and what they are alleging that the
12 claim should be limited to are the circuits of Figures 30 through 35. Those
13 circuits are matching circuits or impedance matching. They are not
14 described as network of capacitors. At the bottom of slide 16 we have the
15 descriptions of Figures 30, 31, 32 and 33. Again, all of them say topologies
16 and matching circuits. Patent Owner also realized in Figures 34 and 35,
17 those aren't on the slide, but for just the record and for the Board's -- if they'd
18 like to look at it, Figures 34 and 35 describe the exact same way at column
19 962 through 1010.

20 So, we think that the construction is unsupported by the intrinsic
21 evidence, and that the intrinsic evidence that they're pointing to is not for the
22 right -- doesn't map to the claim language. But I think even more
23 problematic for Patent Owner's construction is that it reads out preferred
24 embodiments. And so, if we can go to slide 17, it not only reads out for
25 embodiments it reads out one of the only embodiments that uses the words
26 specifically network of capacitors which is Figure 36. And we have Dr.

1 Horenstein's deposition at 92, 18 through 21, where he concedes that Figure
2 36 would not satisfy Patent Owner's construction of network of capacitors.
3 We know from the Federal Circuit's Medtronic decision and its progeny that
4 a construction that reads out preferred embodiments is almost never correct.
5 It is absolutely not correct here.

6 For those reasons, we think that the construction that is -- or the
7 definition that is in the specification at 5238 through 52, lines 32 through 38
8 of the '719 patent is the definition of a network of capacitors. And we think
9 that should be adopted and Patent Owner's construction should be rejected.

10 So, now getting into the substantive grounds. First, if we can go to
11 slide 21, I'll start with Ground 2, which is based on the Cook '554 reference,
12 rendering Claim 17 obvious. There's two disputes with respect to Ground 2.
13 As I mentioned earlier, the first one is going to relate to Dynamic
14 Drinkware, and specifically the first prong of Dynamic Drinkware. Because
15 we are relying on Cook '554's provisional application, which was filed six
16 months before the '719 patent's earliest provisional application.

17 And then the second dispute relates to the network of capacitor's
18 term and we'll show that it's undisputed that Cook '554 discloses it under
19 Petitioner's construction, and also discloses it under Patent Owner's too.

20 Turning to slide 23. As we all know, Dynamic Drinkware, it has
21 two prongs. The first prong, the provisional application needs to provide
22 sufficient support for at least one claim of the prior art reference. We have
23 that in the Cook Provisional provides sufficient support for Claim 17 of
24 Cook '554. And then, as to the second prong of Dynamic Drinkware
25 requires that the Cook Provisional provides sufficient support for the cited
26 subject matter of Cook '554 used to invalidate the claim at issue, Claim 17 of

1 the '719 patent. There is no dispute with respect to Claim 17 of the '719
2 patent that all of the evidence that's cited from Cook '554 is supported by the
3 provisional. So, the second prong is met. The only dispute relates to this
4 first prong, and only one limitation of Claim 17 of Cook '554.

5 In the interest of time, I'm going to just jump to that one disputed
6 limitation instead of running through all of the disputed ones, or the
7 undisputed limitations. But slides 24 through 28 of Petitioner's
8 demonstratives go through and provide exemplary evidence showing where
9 the undisputed limitations are met as well, which are of course described in
10 more detail in the papers.

11 Jumping to slide 29, we can see the one limitation that Patent
12 Owner challenges and that is Claim 17, the final limitation recites varying
13 the impedance value of the power converting circuit to tune the resonant
14 frequency of the resonant circuit based on the received power level. There's
15 no dispute that Cook Provisional provide support for varying the impedance
16 value and tuning the resonant frequency, Patent Owner only disputes
17 whether or not that is based on the received power level. The Cook
18 Provisional does disclose that it is tuning that parameter based on the
19 resonant -- or sorry, tuning that resonant frequency based on the received
20 power level. We can see that, for example, on the right side of slide 29, we
21 have

22 Figure 4-12 of the Cook Provisional, which is on page 47 of the
23 Cook Provisional.

24 JUDGE WEINSCHENK: Mr. Davis, --

25 MR. DAVIS: Yes, Judge.

26 JUDGE WEINSCHENK: -- this is Judge Weinschenk. Isn't the

1 voltage and current on the right side of Figure 4-12 the output power and not
2 the received power? I think Patent Owner has pointed out that what you're
3 receiving could have some losses across that circuit such that the output
4 power would not be the same.

5 MR. DAVIS: And there are two answers to that for why the Patent
6 Owner is wrong. So first, it is correct that V and I on the right side are going
7 to be the output power. No dispute there. However, what the claim recites
8 is that you're tuning the resonant frequency of the resonant circuit based on
9 the received power level. And the received power level is going to even at
10 the output, is going to be based on the received power level at the input
11 because that is the only power that is received by the system. I think even
12 Patent Owner concedes that the -- all that is going to happen in the middle is
13 that there's going to be some amount of dissipation of that power as a result
14 of losses. But that doesn't mean that the output power would not still be
15 based on the received power level at the resonator?

16 JUDGE WEINSCHENK: So, if I understand you correct, Mr.
17 Davis, that you're saying that because the output power is related to the input
18 or received power, that determining or tuning the resonant frequency based
19 on the output power would still sort of indirectly be based on the received
20 power level?

21 MR. DAVIS: That's correct. And that's one --

22 JUDGE WEINSCHENK: But the power levels, Mr. Davis, could
23 be different, right? The received power level could be different than the
24 output power level, and that would affect the calculation and how you're
25 varying the impedance. So, it's not really based on the received power level,
26 and it's based on the output power, which could be a different level than the

1 received power.

2 MR. DAVIS: So, I think that in either sense they would be still
3 based because there's only one source of power, and so, the output power
4 would still be based on the received power level. I think so that's the first
5 reason. I think the second reason is if you look at the Cook Provisional at
6 page 31, we also see expressly that the Cook Provisional explains that the
7 receiver's control system may determine the model parameters, again the
8 model parameters undisputed that that includes the resident frequency using
9 specific measurements, e.g., antenna current and voltage. And then the
10 second one is input power. So, to the extent that input power is specifically
11 required, the Cook Provisional discloses that too.

12 JUDGE WEINSCHENK: Okay, Mr. Davis I'm assuming that
13 when it says antenna current and voltage that would be sort of the received
14 current and received voltage from the antenna that you could use to then
15 calculate the input power. Is that correct?

16 MR. DAVIS: That's right. And, and we do also see that in even
17 the Figure 4-12, we were talking about the I and the V on the right side, but
18 there is also an antenna current sense even on the left side, which is going to
19 be directly based on the received power level. And so, again, there are
20 multiple ways that the Cook Provisional is describing that you can base the
21 resident tuning on, one of which is in fact the resident power. But there are
22 multiple ways that satisfy the final limitation of Claim at 17 which is the
23 based on the received power level requirement.

24 JUDGE WEINSCHENK: Okay. I just want to be clear though, at
25 least for Figure 4-12 you don't dispute that the power level that coming in
26 from the antenna, the actual level would be different than the output power

1 level? And I know you're arguing they're related, but they would be
2 different levels, correct?

3 MR. DAVIS: They could be. I don't think that that's actually
4 disclosed in the Cook Provisional. I don't know that that is what the Cook
5 Provisional is envisioning as what is, why it's based on it. I think that just as
6 a matter of general principles, there can be losses in a circuit. And so, based
7 on that, the received power level could be different.

8 JUDGE WEINSCHENK: Okay. Thank you, Mr. Davis.

9 MR. DAVIS: So, with that we think that the Cook Provisional
10 discloses every step -- provides sufficient support for every step of Claim 17
11 of Cook '554. And with that, because the second prong of Dynamic
12 Drinkware, there's no dispute, then Cook '554 is prior art as of its provisional
13 date and is therefore prior art to the '719 patent.

14 So, now jumping into the second dispute that Patent Owner has
15 raised which relates to the actual substantive limitations. Turning to slide
16 31. The only limitation that Patent Owner disputes is the requirement of at
17 least one of the resonators includes a coil that is connected to a network of
18 capacitors, all of the remaining limitations of the claim are -- it's not
19 disputed that those are met. Again, I'm not going to run through each of
20 those limitations. They're described in the papers. We also include some
21 exemplary references in slides 32 through 36 and 44 through 46. But again,
22 I'm going to skip those in the interest of time unless the Board has any
23 questions.

24 Going to slide 37. So, this final limitation of Claim 17, it requires
25 at least one of the resonators satisfies the network of capacitors. That could
26 be either the source or the device resonator. For purposes of Cook '554, it

1 actually discloses it on both sides. Both the source resonator, which would
2 be at in Figure 13, as well as the receiving side resonator, the second
3 resonator in Figure 15. Each of those satisfies a network of capacitors, in
4 particular, it includes the capacitor that is within the box of the antenna unit,
5 but it's also connected to an additional bank of capacitors that is in the tuning
6 circuits in Figures 13 or Figure 15, respectively.

7 JUDGE WEINSCHENK: Mr. Davis, this is Judge Weinschenk. I
8 think we touched on this before. Is it your position that the source resonator
9 that's claimed in Claim 17 is mapped to both this antenna unit and the tuning
10 network in the Cook '554 reference? Does the source resonator include the
11 tuning network?

12 MR. DAVIS: Yes, it does. And that's how it's mapped in the
13 petition as well. And that's, you can see that from the highlighting that
14 we've provided, but yes, the tuning circuit specifically affects the resonant
15 frequency. The capacitors would be in parallel with the -- or actually I think
16 they're in series with the other capacitor of the tuning circuit. And so, they
17 all provide part of the resonant circuit itself.

18 JUDGE WEINSCHENK: Right. So, within the source resonator
19 you have a coil that's connected to the tuning network, which is a network of
20 capacitors?

21 MR. DAVIS: That's right. And we can actually see this even
22 more clearly on slide 38 which shows Figure 16 of Cook, which is an
23 exemplary sort of zoomed in view of what this tuning circuit would look
24 like, where it includes the tuning capacitors that are at the bottom. Those are
25 directly connected to the antenna loop/ coil, and then there would also be
26 that additional capacitor that's at the top of Figure 16. Under Petitioner's

1 construction and the intended definition of the patent, this discloses the final
2 limitation of Claim 17 of the '719 patent. In Patent Owner's sur-reply this is
3 undisputed. The Patent Owner's sur-reply states, for example, that the
4 tuning capacitors component is in series is comprised of multiple capacitors.
5 So, there are one or more capacitors. And those capacitors are connected,
6 respectively, to the bottom of the antenna loop/coil and ground. And so, we
7 have a network of capacitors that is connected to the loop, the multi-turn
8 loop.

9 Turning to Patent Owner's construction, slide 40. Cook '554, we
10 don't think that Patent Owner's construction is correct, but even if it were, it
11 would still be disclosed by Cook '554. And we see that on slide 40, for
12 example, Cook '554 explains at 17, 35 through 38 that the tuning circuit, it
13 doesn't have to be only capacitors, it could be both capacitors, tunable
14 capacitors, as well as and tunable inductances. And again, that's Cook '554
15 and 17, 35 through 38.

16 JUDGE RAEVSKY: Mr. Davis, this is a Judge Raevsky. I'm
17 wondering would that provide -- how would that provide a second degree of
18 freedom? Because isn't inductance just another form of reactance?

19 MR. DAVIS: So, that's something that Dr. Allen addresses, and he
20 explains that, in fact, having both tuning capacitors as well as a tunable
21 reactance would in fact provide two degrees of freedom because they're two
22 things that you can adjust. It's also something that we see in Patent Owner's
23 expert. He agreed that a circuit that is going to include tunable inductances
24 is also going to provide part of a network of capacitors. And so, we don't
25 think that that's disputed among the experts.

26 I think the other component of this, if we go to slide 42 is that

1 Cook '554 specifically discloses that one of the functionalities of these
2 various tunable components is going to be for impedance matching, which
3 again is something that Patent Owner has alleged is sort of the purpose of
4 using -- having two degrees of freedom is to do impedance matching. That
5 is not a functional requirement of the claim. It shouldn't be read into the
6 claim, but even if it were read into the claim, it's again something that 554
7 expressly discloses.

8 JUDGE RAEVSKY: So, you don't view Patent Owner's
9 construction as requiring one of the degrees of freedom to be a tunable
10 resistance?

11 MR. DAVIS: No. There is nothing in Patent Owner's construction
12 that states that. And I believe that this might be something that they raise in
13 their sur-reply, which is, I have on, if we can turn to slide 43. And in slide
14 43, we see in Patent Owner's sur-reply that they dispute whether Cook '554
15 discloses Patent Owner's construction because Cook's circuit doesn't adjust
16 the resident frequency without adjusting the load resistance presented to the
17 power stage. We think that this is in large part an admission that under the
18 actual terms of Cook '554 -- of Patent Owner's construction, that Cook '554
19 discloses each of the requirements of the construction. And this is just an
20 additional sort of moving the goalposts. We think it's wrong for three
21 reasons. The first is that the alleged distinction of without adjusting load
22 resistance, again, it's not in the claims, and so it's not relevant. The second is
23 that it's not required by Patent Owner's construction, and so the Board
24 should consider it. And then the third reason is it's not supported by the
25 evidence either. Patent Owner's sur-reply cites to Dr. Horenstein's
26 declaration at paragraphs 40 and 45. Neither of those paragraphs say

1 anything about adjusting a load resistance, and it certainly is not addressing
2 Cook '554 or Figure 16 at all.

3 And with that, it's our position that Cook '554, it discloses every
4 limitation of the claims. The vast majority of those are undisputed. As to
5 the one disputed limitation, Cook '554 discloses it, both under the intended
6 definition of the network of capacitors, as well as under Patent Owner's
7 construction as well.

8 JUDGE WEINSCHENK: Mr. Davis, this is Judge Weinschenk.
9 As I understand your argument here under Patent Owner's construction is
10 that it seems like you're relying on a tunable capacitor and a tunable inductor
11 to get to the two degrees of freedom. Is that right?

12 MR. DAVIS: That's right. It also refers to it -- there's also in
13 Figure 16, turning to slide 41, it refers to it as a tunable reactance.

14 JUDGE WEINSCHENK: I guess my question for you is, I think
15 Patent Owner's construction, and I know you dispute it, but it requires the
16 network of capacitors to provide two degrees of freedom. If you're relying
17 on, for example, an inductor or a reactance to provide the second degree of
18 freedom, how is it then that the network of capacitors is providing both
19 degrees of freedom?

20 MR. DAVIS: And it's a good question. This is one of perhaps the
21 oddities of Patent Owner's construction, but under Patent Owner's
22 construction, the network of capacitors is not actually limited to capacitors.
23 It could include any type of passive elements, which could in fact include
24 inductors. We have that specifically from Dr. Horenstein on slide 40,
25 Exhibit 1035 at 96, 2 through 11. He says that his understanding of a
26 network of capacitors does in fact include a circuit that includes inductors.

1 JUDGE WEINSCHENK: Okay. I see. Their construction says
2 that topology of passive components, including a capacitor, which I guess
3 leaves open the door for an inductor to be included in there.

4 MR. DAVIS: That's right, Your Honor.

5 JUDGE WEINSCHENK: Okay. Mr. Davis, just so you know,
6 you have about three and a half minutes remaining. Sorry, I missed your
7 five minute warning there by a bit, but.

8 JUDGE LEE: It's Judge Lee. I have a quick question for you, Mr.
9 Blake. The claim has a limitation the resonator has to include something,
10 right? So, when you decide how to map an element into that limitation,
11 what is the process? How do you actually decide whether this component is
12 a part of the resonator? Is it because the spec says so, or is it because you
13 can arbitrarily just draw a circle around any part of a drawing and say, well,
14 that's a part of the resonator?

15 MR. DAVIS: Yeah, so this really isn't sort of an arbitrary box
16 drawing exercise. For purposes of the prior reference it does disclose that
17 the tuning circuit is going to be providing the capacitance where you have
18 the -- what a resonator is is you oscillate between two forms of energy. An
19 inductance and a capacitance is a typical example. And the tunable
20 capacitors are going to provide part of that capacitance that is in the
21 resonator itself. That's why in this --

22 JUDGE LEE: I don't want to use up your time, but that's good
23 enough for me. Thank you.

24 MR. DAVIS: Perfect. So, I'll quickly just address Ground 4. The
25 dispute is largely the same, other than there is no Dynamic Drinkware where
26 issue. Patent Owner's arguments are very similar. If I can go just very

1 quickly to slide 56. We see Lee under -- again, none of the limitations, none
2 of the motivations to combine are challenged by Patent Owner, except for
3 the network of capacitors limitation. And Lee discloses the network of
4 capacitor limitation under either construction. On slide 56 we can see that
5 from Lee's Figure 12. Under Petitioner's construction, Lee has a network of
6 capacitors which will include 32b, as well as 30a, I'm sorry 32a, and the
7 capacitors 32b those form a network of capacitors.

8 JUDGE WEINSCHENK: Mr. Davis, this is Judge Weinschenk.
9 While you're on this slide, this is a similar question we talked about for the
10 previous ground. Did you in the petition map the resonator such that it
11 includes the network of capacitors 32b somewhere?

12 MR. DAVIS: Yes, in each instance. The figure that is shown
13 here, which has the pink box around all of those elements that comes from
14 the petition itself.

15 JUDGE WEINSCHENK: But is there some text you can point me
16 to where you said that the resonator includes those capacitors 32b?

17 MR. DAVIS: I don't have that page cite on me. But when I come
18 back on rebuttal I'd be happy to direct Your Honor to that.

19 JUDGE WEINSCHENK: Okay, thank you.

20 MR. DAVIS: And then just quickly addressing Patent Owner's
21 construction, turning to slide 59. So, Lee discloses the network of capacitors
22 that we were just talking about the capacitors 32a and 32b. Lee also
23 discloses that there's an additional component, which would be this
24 impedance matching network. Again, that is also connected to the coil
25 directly connected. You can see that from the top line that extends from the
26 coil on the left to the impedance matching network on the right, also on the

1 bottom. And we know that this impedance matching network would
2 disclose 17[e] under Patent Owner's construction.

3 Turning to slide 60. Patent Owner's expert agrees that the degrees
4 of freedom in an impedance matching network are provided by two or more
5 independent reactive elements. That's Dr. Horenstein's declaration at
6 paragraph 45. And he also notes this in his deposition that an impedance
7 matching network requires providing two degrees of freedom and Dr.
8 Horenstein agreed, generally it does.

9 And with that, each of the other limitations of Claim 17 are
10 undisputed as to Ground 4 and the combination of the Lee and Cook '523.
11 And for that reason, we under either Ground 2 or Ground 4, Claim 17 of the
12 '719 patent is invalid.

13 JUDGE WEINSCHENK: All right. Thank you, Mr. Davis. You
14 went over by just about a minute. So, you have 19 minutes for your rebuttal.

15 MR. DAVIS: Perfect. Thank you, Your Honors.

16 JUDGE WEINSCHENK: All right. Mr. Lawson, whenever you're
17 ready, you can begin. Just let me know how much time you would like to
18 reserve for your sur-rebuttal.

19 MR. LAWSON: Yes, thank you, Your Honor. We'd like to
20 reserve 20 minutes for rebuttal.

21 JUDGE WEINSCHENK: All right, great. Thank you, Mr.
22 Lawson.

23 MR. LAWSON: Your Honor, we'll turn to Patent Owner's
24 demonstrative exhibits, if you would, please.

25 And we'll begin -- there, if we start with, you see that slide 2 talks
26 about the background of the '719 patent, and we get to slide 2, excuse me,

1 slide 3, and Petitioner's counsel was correct that the main issue for decision
2 here, and that it's not what Patent Owner believes is clearly not disclosed in
3 the prior art, is the network of capacitors as disclosed and required by the
4 Claim 17. It's also worth noting here at the clause before that requires really
5 what the patent has talked about here is having a resonant circuit with this
6 high Q values, the high energy, high Q values greater than 100, and that
7 Claim 17 requires that with this network of capacitors. So, and as discussed
8 and as shown in our papers, we believe that the network capacitors should be
9 construed to mean a circuit typology of the past components, including one
10 or more capacitors that provides this two or more degrees of freedom.

11 And we go that it's -- we note for Your Honors again, that the
12 question to what I believe is Judge Lee, Petitioner now agrees that the
13 specification actually is the -- it defines what network and capacitors is in
14 accordance with the Phillips and the long line of cases with Phillips, of
15 course, the specification is most often the best place to define the meaning of
16 the claim terms. And what we would direct your attention to, Your Honors,
17 is to, and we cite here the '719 patent, 43 to 65, column 43 to 65 and 44 to
18 46. It also talks about the magnetic resonator. It also includes the
19 capacitance that may be realized using the network that's used to control or
20 regulate the complex impedance. And that will become important as we
21 discuss it.

22 So, if we go to slide 6, we talked -- the network, therefore it
23 requires this two or more degrees of freedom to control or regulate the real
24 and imaginary components of its complex impedance in the circuit. And this
25 is explained by Dr. Horenstein at paragraphs 41 and 42 of his declaration.
26 But also, Your Honor, importantly, at the '719 patent in the specification,

1 paragraph 45, if you go, excuse me, it's column 45, I'll direct your attention
2 to that, 45 at lines 58 to 61. And going there at lines, it began at line 58 in
3 column 45, it's the specification quotes, and I quote, excuse me, since there
4 may be typically be two tuning objectives, matching or controlling both the
5 real and imaginary part of the impedance level $Z_{sub 0}$ at the desired
6 frequency, there may be two variable elements in the matching circuit. For
7 inductive elements, the matching circuit may need to include at least one
8 variable capacitive element. Then it goes on to state beginning at line 64, a
9 low, a quote, a low loss inductive element may be matched by topologies
10 using two variable capacitors or two networks of variable capacitors. Okay.
11 And this column in column 45, if you go up to the reason for having these
12 two degrees of freedom, the patent, the specification explains it.

13 If you look at the same column 45, at lines 46 through 53, it states,
14 and I'm beginning at line 47, where quotes, may be chosen and this topology
15 is circuit matching, quote, may be chosen so that the field pattern of the
16 associated resonant mode, and thus its high Q are preserved upon coupling
17 of the resonator to the external impedance. Otherwise, inefficient coupling
18 to the desired resonator mode may occur. This is potentially due to the
19 coupling of the undesired resonant modes, resulting in the ineffective
20 lowering of the resonant Q, end quote.

21 JUDGE WEINSCHENK: Mr. Lawson, this is Judge Weinschenk.

22 MR. LAWSON: Yes, Your Honor.

23 JUDGE WEINSCHENK: I believe on your slide 7, you have the
24 quoted portion that you're referring to in column 45 of the challenged patent,
25 and I believe you just read lines 63 to -- or 64 to 66, and it talks about, you
26 know, a low loss inductive element may be matched by topologies using two

1 variable capacitors or two networks of variable capacitors. Here, in this
2 claim, it only recites a single network of capacitors. So, aren't you referring
3 to a portion of the spec that would be requiring more than what you've got
4 recited in the actual claim? You don't have two networks of capacitors
5 recited in your claim, you just have one.

6 MR. LAWSON: Right, Your Honor. What this sentence is saying
7 is that you really need -- you have to have two tunable elements, right. And
8 that's what it's saying above that on beginning on lines 58 talking about the
9 two tuning objectives matching or controlling both the real and imaginary
10 part. In this line 64 to 65 he's saying those topologies may be used by with
11 two variable capacitors or two networks of variable capacitors. The point
12 here is that both of them have to be -- you have to have -- that the circuit has
13 to have two separate tuning capabilities and that's why the --

14 JUDGE WEINSCHENK: Yes. And I guess, Mr. Lawson, I
15 understand your point. Sorry, this is Judge Weinschenk. I understand your
16 point that this specific portion of the specification may be talking about
17 having two tunable elements. But you've claimed something broader and
18 that your Claim 17 doesn't actually recite two tunable elements, it recites a
19 single network of capacitors, not two variable networks of capacitors. So,
20 why should we take this specific embodiment here and import that into the
21 claims which seem to be broader?

22 MR. LAWSON: Well, Your Honor, because this here says that it
23 talks about having the two tuning objectives that you have to be able to
24 control. And then we end and then we'll take it down if we'll go down to the
25 where we show where they define it in the patent where we've defined it at
26 column 52 when both parties agree that that's the definition of the network

1 of capacitors.

2 Okay. So, if you go to column 52 at -- I'm getting there. Column
3 52 at lines 32 through 38, that's where it defines the network of capacitors
4 and how that it's defined in the patent. And if you recall, on -- and we go to
5 that Petitioner's, slide 9, where they quote the same language, and he quoted
6 that we also, that WiTricity and Patent Owner cites the same section for the
7 definition of the network of capacitors. You go to Petitioner's slide 9, you'll
8 see they only cite the first part of the network of capacitors, right? The first
9 part of the phrase, where it says network capacitors, as used herein, they
10 generally refer to any circuit topology, including one or more capacitors.

11 Okay.

12 You recall, they also said that the circuits for Figures 30 to 35
13 weren't appropriate because they were circuits, but right here, the definition
14 actually requires the circuit topologies. It says including one or more
15 capacitors, but they don't include the rest of the sentence that states
16 including without limitation any of the circuits specifically disclosed herein
17 using capacitors or any other equivalent or different circuit structures unless
18 another meeting is explicitly provided, otherwise clear from the context. So,
19 say, including as disclosed herein. If we go back to Patent Owner's
20 demonstratives.

21 JUDGE RAEVSKY: Counsel, this is Judge Raevsky. Doesn't that
22 or kind of undermine your position in that sentence? Because it could
23 include either capacitors or any other equivalent or different circuit. So, it
24 doesn't really matter, does it, if it includes equivalent circuits, because it
25 could just include capacitors, which is what a Petitioner maps the prior art
26 to.

1 MR. LAWSON: Well, and that's why when we go to, when we
2 show figures, if we go to the beginning of paragraph 52, okay, line 60, if you
3 go to paragraph, excuse me, column 52, at the beginning of that paragraph
4 that defines the network of capacitors, it starts with explaining Figure 30.
5 And it states there at line 16, Figure 30, lines 16 to 20. And I'm at a Patent
6 Owner's demonstrative at slide 11. Okay. It says Figure 30 shows the six
7 examples of directly coupled impedance matching circuits where the main
8 two elements are capacitors and six examples of directly coupled impedance
9 matching circuits where the two elements are one capacitor and one
10 inductor.

11 So, the point here in Patent Owner's definition says that the
12 network capacitor must include at least one capacitor and two degrees of
13 freedom. And that point is that the capacitor, it has to have one capacitor in
14 at least two degrees of freedom. And that's what Figures 30 show, and also
15 Figures 31 through 35. And, Your Honor, it's worth also noting in this
16 column 52 where we have the definition and Petitioner has now admitted
17 that the definition of in the network and capacitors is in the specification
18 because it's no longer going with an ordinary meaning, they said it's in the
19 specification as defined in this column 52. Okay. Column 52 starts with
20 explaining Figure 30. The definition of network and capacitors says in the
21 same paragraph as disclosed herein and then the next four columns in the
22 patent give very detailed examples of using, explaining, and showing
23 Figures 30 through 35 and how each of those figures has a network of
24 capacitors that includes at least one capacitor and at least two degrees of
25 freedom.

26 And I'll stay right here on Figure 30. If you see, Your Honors,

1 Figure 30 at slide 11, it's got Figures 30(a) to (f), okay? And we'll go just
2 Figure (a). It has the two capacitors and you'll see that the line going
3 through them means that is a variable capacitor. And Dr. Allen agrees with
4 that and there's no dispute among the parties that the line through the
5 capacitors means it's a variable element, okay?

6 It's also very interesting that the Petitioners also didn't note the
7 Smith chart that accompanies Figures 30 through 35 on each of the figures
8 with Smith's art showing the two degrees of freedom and that's explained in
9 very great detail by Patent Owner's expert Dr. Horenstein in his declaration.
10 Okay. But that shows -- so if you look at 30(g), that's showing the tuning
11 element, the two half circles there are showing the two separate and variable
12 tuning elements in the circuit. Okay?

13 If you go down to now to slide 12, okay, you also will see, which
14 is Figure 30(h) through (m), okay, and each of these, as disclosed and
15 explained in column 52, but each of these circuits, you know, Figure (h)
16 through (m), have two degrees of freedom. Each of them has a capacitor, at
17 least one capacitor, and then each of them has the second degree of freedom
18 as an inductor. So, in this -- and that's what you see with the -- if you look at
19 Figure 30(h), for example, the C1 shows the capacitor with the arrow
20 through it, means it's a variable capacitor and tunable. And then you see the
21 L, which is the symbol for an inductor, and it has an arrow through it, which
22 also means that it's variable and tunable. And that's what the definition of a
23 network of capacitor is, and that's what's shown in Figures 30(h) through m,
24 each one of those is a circuit with a network of capacitors that has at least
25 one capacitor and has at least two degrees of freedom.

26 If we go down to the next slide, Figure 13, that's Figure 31, okay,

1 excuse me, slide 13 showing Figure 31. Again, Figure 31, very similar to
2 Figure 30, and consistent with Patent Owner's definition, it's showing a
3 network of capacitors. Each of these figures has at least one capacitor and
4 has at least two degrees of freedom. You'll see, let's just take Figure 31(a),
5 shows figures -- it's got capacitors C1, C2, and C3, and each of them have
6 lines to show that they're variable capacitors, okay. And Figure 31(d), again,
7 is the Smith chart, and it shows at least two degrees of freedom in there
8 showing that the half circle to the left of that circle is showing the one
9 tunable element, and the half circle to the right is showing the second
10 tunable element, okay.

11 Similar, you go down to -- you go to Figure 30, each of these
12 figures in Figure 31, so Figures 31(a) through (g) has the same at least one
13 variable capacitor, in fact, all three of them have three variable, excuse me,
14 most of them have three variable capacitors, but if you look at Figure 31(e),
15 it has two variable capacitors and one variable inductor. And again, which is
16 consistent with Patent Owner's construction and the networking capacitors
17 must include at least one capacitor and at least two degrees of freedom. And
18 each of those arrows, again, show that it's a variable tunable element.

19 We go down to the next slide, slide 14, on Patent Owner's
20 demonstratives, it shows Figure 32. Figure 32, Figure 32(a), for example. It
21 shows two variable capacitors in that circuit. The Smith chart, 32(d), again,
22 shows the two variable tunable elements with the two --you see the two half
23 arcs that are separately tuning to get the match that's preferred for the
24 particular circuit for its particular purposes. Okay? So, Figure 30(a) has two
25 variable capacitors. Okay. If we go down to Figure 32(e), for example,
26 again, that has a variable capacitor and a variable inductor. Both have the

1 arrow through them again showing that it's variable. So again, it's consistent
2 with the Patent Owner's construction. It's required by the specification that a
3 network of capacitors have at least one capacitor and two degrees of
4 freedom.

5 We'll see the same thing with Figure 33. If you look at Figure
6 33(a), it has two variable capacitors, okay? And you have to look at Figure
7 33(g) is, again, another representation of a Smith chart that, again, shows the
8 two degrees of freedom, the two tunable elements.

9 Figure 33(e), for example, also has more than one variable
10 capacitor. It has more than two degrees of freedom, or more than two
11 variable capacitors, but it has at least two degrees of freedom, which is,
12 again, consistent with Patent Owner's definition as required by the
13 specification that the network of capacitors have at least one capacitor and
14 two degrees of freedom. We'll see the same thing.

15 JUDGE WEINSCHENK: Mr. Lawson?

16 MR. LAWSON: Yes, Your Honor.

17 JUDGE WEINSCHENK: This is Judge Weinschenk. I just want
18 to confirm something. I think we talked with Petitioner's counsel about this,
19 and they said that your proposed construction of network of capacitors is
20 such that it could include a variable capacitor and a variable inductor to
21 provide the two degrees of freedom, and that would meet your construction.
22 Is that right?

23 MR. LAWSON: That's correct, Your Honor.

24 JUDGE WEINSCHENK: Okay.

25 MR. LAWSON: And that's exactly --

26 JUDGE WEINSCHENK: Could you tell me why, for example, in

1 the Cook '554 reference that discloses an embodiment that has a variable
2 capacitor and a variable inductor. Why doesn't that meet your construction
3 then?

4 MR. LAWSON: Okay, Your Honor, none of the examples in
5 Cook '554 in any of the figures disclose a network that has two degrees of
6 freedom. And so, if I'm not sure which figure that you're referring to, but
7 they only show, and it would go down, I can get to, we can go to patent --
8 well, we can get to our --

9 JUDGE WEINSCHENK: Yeah, I may have misspoke. So, for
10 example, if you look at the Cook '554, Figure 16, you've got a tunable
11 capacitor and a tunable reactants. Why doesn't that meet your construction?
12 And that seems to be you would have two tunable elements there.

13 MR. LAWSON: We'll go to -- we have Figure 16 here, Your
14 Honor. If we go to Patent Owner's slide 39, it shows Figure 16 of the -- of
15 Cook '554, okay? That is -- that does not disclose two degrees of freedom.
16 That Figure 16 shows a capacitor bank that gives you one degree of
17 freedom, okay, and it's just blading in great detail in -- it's actually capacitor
18 banks are explained or disclosed in the specification, but it's clear that a
19 capacitor bank is only one degree of freedom because it only provides one
20 capacitance. And in this picture, Figure 16, you have one -- so, you have
21 one degree of freedom with the capacitor bank, and then the tunable
22 reactance is actually just a -- again, is another capacitance attitude, and this
23 system in series only gives you one capacitance, okay? And it's worth
24 noting that none of the other botches on the circuit have a line through them
25 that would show that it's a variable or intended to be a variable element.
26 And so --

1 JUDGE WEINSCHENK: Does the tunable reactance 1620 not
2 provide a second degree of freedom separate from a tunable capacitor?

3 MR. LAWSON: With the tunable reactance there, it's just because
4 it's in series with in reactance, it acts as just another addition to the
5 capacitance with the capacitor bank, so it really only gives one resistance in
6 that network as disclosed. So, it's only allowing adjustment of the resonant
7 frequency, and it doesn't allow you to adjust the load resistance presented to
8 the power stage to a matching value. And that's explained in detail in Dr.
9 Horenstein's declaration and explains the Smith chart in the matching
10 impedance at paragraphs 50 to 58, and in a particular paragraph 58 discusses
11 Figure 16 of Cook '554.

12 JUDGE WEINSCHENK: I just want to make sure, this is Judge
13 Weinschenk again, that I'm understanding. Is the issue that you need two
14 different tunable elements and you also need them in parallel and not in
15 series? Is that like an additional requirement?

16 MR. LAWSON: No, it has to be variable, Your Honor. It's a good
17 question. But it has to be variable as disclosed and explained in the '719
18 patent. And it's very clear that that has to be, that those two elements have
19 to be variable in a way that's matching the impedance, that the second
20 adjustment is matching the impedance in the network and that's what it's
21 used for and that's what was explained in, if you go back to columns 45,
22 lines 58 through 66, that explains the exact purpose of having the two
23 tunable elements from the two degrees of freedom and the matching. And
24 that's here in Figure 16. Again, Your Honor, it's that the tunable reactance,
25 there isn't a variable element. And if it was, it would have the arrow through
26 it as the other, as the arrows are in the other circuits as disclosed in the '719

1 patent. And a person of skill in the art would understand that. And that's
2 what Dr. Horenstein explains in his declaration at paragraphs 50 to 58.

3 JUDGE LEE: Mr. Lawson, it's Judge Lee. Is there a more
4 understandable way of articulating this degree of freedom? You keep
5 mentioning it so many times, but never really explain it.

6 MR. LAWSON: Right.

7 JUDGE LEE: The way I understand it is that the capacitors
8 capacitance value represents its degree of freedom. So, this is its
9 capacitance and that is its degree of freedom. So, by you're saying it's got to
10 have two degrees of freedom, are you just saying this capacitor is variable,
11 so it has, it may have this capacitance or it may have that capacitance and
12 hence therefore two degrees of freedom?

13 MR. LAWSON: It's a very good question, Your Honor. The
14 difference is, is that a capacitor by itself that isn't variable doesn't provide a
15 degree of freedom. It has to be variable. So, for example, the capacitor in
16 Figure 16 at the top, the principal anti-reactor capacitor, that's not a variable
17 capacitor.

18 JUDGE LEE: But it has at least one degree of freedom because it
19 has capacitance. That has one degree, that -- the six capacitance.

20 MR. LAWSON: Actually, Your Honor, as a person of skill in the
21 art would understand, it does -- it does not have a degree of freedom because
22 that, that capacitor is not variable. The degree of freedom is one that is an
23 element that's variable. It's a tunable element that's variable. And I
24 juxtapose that capacitor, that single capacitor 1610 in Figure 16, with the
25 capacitor bank at the bottom and it even has the title tuning capacitors. One
26 can tune the capacitor bank because it can provide variable capacitance by

1 switching on and off the different number of capacitors.

2 JUDGE LEE: So, okay. All right. I'm following you. So, two
3 degrees means how many capacitance values may there be, if you have just
4 two degrees?

5 MR. LAWSON: You have to have variable, two variable degrees.

6 JUDGE LEE: Well, that's not really explaining it because what if
7 you have three degrees and you're still going to tell me it's variable? If I say
8 five degrees, you still tell me variable. So, that's not precise enough. What
9 exactly do you mean? If you want two degrees, how variable must it be? If
10 you want five degrees, how much more variable must it be?

11 MR. LAWSON: Well, Your Honor, if I understand your question,
12 the patent defines a network of capacitors, and it's how Patent Owner is
13 defining -- proposing -- proposed definition is that the network capacitor
14 includes it, at least two degrees of freedom. So --

15 JUDGE LEE: Yeah, I'm trying to understand what that is. You're
16 not really clarifying it. And the way I make sense of it is each capacitance
17 the capacitor network takes on is a degree of freedom. If you have only one
18 value, that's one degree. If you can take on two values, that's two degree.
19 They can vary between five different things and it has five degrees. Am I
20 wrong?

21 MR. LAWSON: Just, yes, it's not exactly correct. The capacitors
22 have to be -- the capacitors or the inductors have to be variable. Okay. And
23 so, the reason the capacitor bank again in Figure 16 is a variable capacitor, it
24 allows you to tune. Okay, because you can change the capacitance of the --

25 JUDGE LEE: Yes, I understand that. But you're not making a
26 distinction between the numbers of degrees, which is what my question is

1 driving at. I understand it has to be variable, but what's the difference
2 between two degrees versus three degrees versus four degrees and five
3 degrees, and just one degree?

4 MR. LAWSON: Well, Your Honor, if you go up several of the
5 figures, if we go back up to our Figures, again 31 to 35, or Figures 30 to 35.
6 I'll go back up. They show there are several that show three degrees of
7 freedom. And of course the definition is it is at least two or more.

8 JUDGE LEE: So, is it three degree means it can take on three
9 different values? Is that what you have?

10 MR. LAWSON: It means, Your Honor, you would have three
11 variable elements. So, if we go up to, let me get to those slides. I'll show
12 you the example. So, if you look at, Your Honor, if you look at Figure 34.

13 JUDGE LEE: What slide number is that?

14 MR. LAWSON: It will be slide number 17 on Patent Owner's. I'm
15 at slide 17. And you will see that the, for example, Figure 34(a) has four
16 variable capacitors with the lines different.

17 JUDGE LEE: So that's four degrees?

18 MR. LAWSON: And you see, you'll see the Smith chart looks at
19 at least the lines are tunable. So, you get four degrees of freedom. And so,
20 therefore it's tunable by at least four variable elements. And you see the
21 Smith chart, how that goes down and there's at least three, you can probably
22 see it. It might be four. And they're showing that it's not just this simple
23 two degrees of freedom. It's showing at least three degrees of freedom in the
24 Smith chart. And that's juxtaposed, if you go back up to just Figure 33, or
25 let's just go to Figure 30 at slide 11. Slide 11, Patent Owner's slide 11.
26 You'll see Figure 30(a), for example, it has two variable capacitors. So, two

1 tunable elements.

2 JUDGE LEE: So, can I just understand it as equivalent to saying
3 the number of variable capacitors? If it's two degrees, that means you have
4 at least two variable capacitors. If it's three, it means you have three variable
5 capacitors?

6 MR. LAWSON: Variable, yeah, well, it could be a variable
7 capacitors or variable inductors, but you have to have at least one variable
8 capacitor.

9 JUDGE LEE: Okay. Thank you.

10 MR. LAWSON: Okay. If we go down now, we'll back to, and
11 that's what we're showing in Figures 35, 31 through 35. Okay. And it's also
12 telling, if we go, Your Honors, to when -- if you go to when the Petitioner
13 discussed Figures 30 through 35, they said in their slides, they only state,
14 they only go to -- if you go to Petitioner's slide, slide 9, again, they only
15 talked about the first part of the definition, okay. And then when they went
16 to, they showed -- if you go to Petitioner's slide 16, and it's a title matching
17 networks are not claimed, and they talk about Figures 30, and they got
18 figures, you know, they -- they're citing to the descriptions of Figures 30
19 through 33, but only in column 10, of -- which is the very introduction part
20 of the specification, okay.

21 In the patent, in columns 52 through 56, the patent gives -- the
22 specification gives a much more detailed explanation of what those figures
23 are, okay. So, we'll go, for example, Your Honors, if you go to the patent,
24 the '719 patent at column 53, we've already discussed Figure 30. If you go
25 to column 53, line 1, it discusses Figure 31. It states that, in a quote, Figure
26 31 shows three examples, A to C, of directly coupled impedance matching

1 circuits where the two tunable elements are capacitors. And in three
2 examples, E to G of directly coupled impedance matching circuits, where the
3 two tuner elements are one capacitor and one inductor. And that's consistent
4 with Patent Owner's definition that the network of capacitors has to be at
5 least one capacitor, but with two degrees of freedom. And so, it could be at
6 least one capacitor that has a degree of freedom, and at least another
7 capacitor or an inductor with a degree of freedom.

8 Importantly, it also states that for the topologies there for Figure
9 31, as you will go to -- so, let's go down to Figure 32. The Figure 32 says
10 similar definition. Figure 32 at lines -- so, it's column 53 at lines 52 begins
11 and it states Figure 32 shows three examples A to C of directly coupled
12 impedance matching circuits, where the two tunable elements are capacitors,
13 and three examples, E to G, of directly coupled impedance matching
14 circuits, where the two tunable elements are one capacitor and one inductor.
15 And you also, if they explain these -- they explain that the Smith chart
16 applies to each of these.

17 WEINSCHENK: Mr. Lawson, this is Judge Weinschenk. You
18 have about five minutes remaining before you cut into your rebuttal time.

19 MR. LAWSON: Okay.

20 JUDGE WEINSCHENK: In the interest of time, can I ask you
21 about a different issue just to make sure we have time to cover it?

22 MR. LAWSON: Yes, Your Honor. Can I make one last point on
23 where we are right now, and I'll take your question? I would just say that,
24 quickly, if I may.

25 JUDGE WEINSCHENK: Please, go ahead.

26 MR. LAWSON: Each one of the figures, 30 -- in columns 52 to

1 56, that explain in detailed Figures 30 through 35, not only do they show at
2 least two degrees of freedom, but they also explain that they are in
3 accordance with the Smith charts that's disclosed with each figure. So, for
4 example, for Figure 32, if you go to column 53, at lines 16 through 18, it
5 explains that the -- show by the area enclosed by the bow lines on the Smith
6 chart of Figure 32. And then it gives you an example of a formula that
7 applies. But each of those figures comes with the Smith chart that shows
8 how you have the two separate variable of capacitors and/or inductors,
9 which give you the two degrees of freedom. Your Honor, I'm sorry. Thank
10 you for your indulgence.

11 JUDGE WEINSCHENK: Oh, no problem. I have a question.
12 You made an argument about whether the Cook '554 reference is prior art or
13 not. And specifically you argued that the provisional does not provide
14 support for the limitation in Claim 17 of Cook '554 that requires varying the
15 impedance value of the power converting circuit to tune the resident
16 frequency of the resident circuit based on the received power level. I think
17 you were focused on that last part about whether the power level was the
18 received power or the output power.

19 MR. LAWSON: Yes, Your Honor.

20 JUDGE WEINSCHENK: My question for you is if you turn, I
21 don't know if you have it handy or not, but if you look at the provisional
22 which is Exhibit 1006 on page 31, Petitioner cited to this portion that states,
23 the receiver's control system may be determined the model parameters using
24 specific measurements, e.g. antenna current and voltage, input power. Why
25 doesn't that reference to input power and antenna current and voltage
26 disclose the received power level that's in Claim 17? Am I missing

1 something there?

2 MR. LAWSON: Well, Your Honor, because I think it's talking
3 about and showing, when they're showing that they're showing Figure 412 of
4 the received subsystem that was discussed with -- by Petitioner. And I think
5 Your Honor made the point that V and I, which the Patent Owner shows in
6 its briefing and in the declaration by Dr. Horenstein, that the V and I are,
7 that is what power is what's delivered to the load. And that load is then the
8 power that's delivered to load is what's actually then going through their
9 frequency generation in the control. So, it's not -- Claim 17 requires that the
10 power be from the received unit. And then the (INDISCERNIBLE) is
11 corrected from that. But as you can see in that figure, it's actually from the
12 power that's delivered to the load.

13 JUDGE WEINSCHENK: Yeah. And I understand your point
14 about that figure, but we don't have just that figure alone, right? There is
15 this statement in here on page 31 that talks about determining the model
16 parameters using input power, and that's a direct quote, input power. So,
17 even if the figure doesn't show input power, there's a disclosure in another
18 part of the reference of the provisional that talks about input power. Is there
19 something, some reason that specific sentence doesn't meet the limitation in
20 Claim 17?

21 MR. LAWSON: Well, Your Honor, what we would say is that the
22 figure in Figure 412 that it shows is that's what the specification is
23 explaining there. Of course, they have the parameters, some parameters that
24 have the power that's delivered to the antenna current that goes through the
25 feeder cable. You have the, it can be adjusted because you have a capacitor
26 that's connected to the resonator. I think we would submit that that's

1 probably what they're talking about.

2 JUDGE WEINSCHENK: Okay. Thank you, Mr. Lawson. You're
3 about 30 seconds away from your rebuttal time. But you can obviously use
4 some of it if there's some points that you wanted to make here that I took
5 away from you.

6 JUDGE LEE: Mr. Lawson, it's Judge Lee. Do you want to
7 respond to the opposing counsel's argument in his last time up, which he said
8 based on is broad, and therefore if it's anywhere on the chain of passage it
9 still meets based on?

10 MR. LAWSON: Well, Your Honor, what we would say and we
11 made that argument there that it would, really what they're talking about
12 what was what's connected to and inside with the resonator and that's why
13 those -- the figure in Figure 412 has the boxes and drawn a line around it.
14 And that's what we would say it was this disclosure required by that Claim
15 17. And so, it's not part of the resonator. It's part of a different part of the
16 network.

17 JUDGE LEE: No. I mean, the based on -- based on the input
18 power, you know, they're saying if you're a transfer station, the input power
19 ends up somehow as the output power. So, the output power is still based on
20 the input power. That's what I mean, you know, based states on all the way
21 back to the very beginning. It could be based on wherever the power came
22 from ad infinitum of the chain.

23 MR. LAWSON: Yeah, well, we think what -- we disagree with
24 that reading, of course. What Petitioner admitted was it's not directly
25 connected to the the load based upon that power. It's only indirectly related
26 at best. And what we would submit, Your Honor, is that is not what the

1 claim requires, it's not what's disclosed.

2 JUDGE LEE: Even with the word term based on, which seems
3 pretty broad, based on doesn't mean immediately from. I mean, couldn't that
4 be a couple of degrees removed?

5 MR. LAWSON: Well, Your Honor, what we would submit, I
6 think one of Your Honors had discussed it, is that if you're going to make
7 that argument, you would have to make the voltage that's in the voltage
8 sense that's on the right of the figure would have to be with the current sense
9 there for it to be based upon the input power. Of course, part of the -- said
10 anything -- all those things that have it could be indirectly related at some
11 point, but that's not what was claimed and that's not what was disclosed, is
12 what we would submit, Your Honor.

13 JUDGE LEE: Thank you.

14 MR. LAWSON: The other two elements with things we would
15 like to say to point out to Your Honors is regarding getting Petitioner's
16 Grounds 2 and 4 and quickly address those. As we've shown that the
17 network of capacitors requires two degrees of freedom. We would direct
18 Your Honors to slide 38 of Patent Owner's demonstratives. That's Figures
19 13 and Figures 15 of Cook '554. And you will note, Your Honors, that in
20 each of those figures, the resonator only has a capacitor connected to it
21 directly. And that capacitor is not variable. As you see, there's no line
22 through it. Okay. So, there's -- the only in this circuit typology in the figure,
23 Figure 13, and Figure 15, that have a line through it showing there's any kind
24 of variability is on the tuning network. And so, the circuits disclosed in
25 Figures 13 and Figures 15 only have one degree of freedom. Because there's
26 only one variable element and that's the tuning and matching network there

1 that is shown by, if you see, if you look, you see closely the tuning network
2 in Figure 13 and the tuning and matching network in Figure 15 have an
3 arrow through the box indicating to a person of skill in the art that that is a
4 variable element. None of the other elements in the figures show any kind
5 of variability, including the capacitor. So, each of those figures only shows
6 one degree of freedom.

7 Similar to slide 39, we've already discussed that that only shows
8 one degree of freedom. And that's why I'm showing.

9 JUDGE WEINSCHENK: Mr. Lawson, this is Judge Weinschenk.

10 MR. LAWSON: Yes, Your Honor.

11 JUDGE WEINSCHENK: Can I interrupt you for a second? I
12 believe you made an argument here that the tuning network is not part of the
13 resonator, or that Petitioner didn't argue that it is. But I look back at their
14 petition. It certainly seems like they've identified the source resonator as
15 including both the antenna unit in this figure and the tuning network. Am I
16 missing something? It seems like they've argued that both of those things
17 are part of the resonator.

18 MR. LAWSON: Your Honor, even if we accept that it's part of the
19 resonator, and that's why we did for the purpose of what I just explained,
20 even if one assumes that the tuning network is part of the resonator in
21 Figures 13 and 15, you still only have one degree of freedom in that
22 network.

23 JUDGE WEINSCHENK: Okay. I understand. Thank you.

24 MR. LAWSON: And again, it's worth highlighting the fact that
25 when it's variable, you put it up -- the disclosure will include an arrow
26 through it as disclosed in Figures 13 and 15. And in Figure 16 in the same

1 patent, Cook '554, none of the elements there have an arrow through them
2 showing that, so there none of the other elements are variable. The only
3 variable -- variability in Figure 16 is the capacitor bank because you can
4 switch the capacitance by turning on and off, switching on and off
5 capacitors. So, that gives you one degree of freedom, not two. And it's
6 exactly what's shown in Figures 13 and 15 of Cook '554. And that's what's
7 explained.

8 And if we go to Lee, similar, Lee, if we would direct your
9 attention, Your Honors, to slide 43 of Patent Owner's presentation. That's
10 Figure 13 of Lee, which shows the circuit that they're relying on. Lee, like
11 Cook '554, shows a capacitor bank. And so, 32(b) in Figure 13 is a capacitor
12 bank. And you can see that you can switch on and off the four separate
13 capacitors there. And that gives you a variable capacitor. You also see the
14 impedance network that they attach to it at 37(a) does not have an arrow
15 through it. So, it may be somehow some type of impedance, but it's not a
16 variable impedance. Okay? As we've discussed, a person of skill in the art
17 understands on these circuits, if it's variable and tunable, it will have an
18 arrow through it. And Figure 13 in Lee, just like Figures 13 and 15 in Cook
19 '554, don't have the arrows through it indicating and showing that they're not
20 variable.

21 Let's see, I want to make -- look at my notes, make sure there's any
22 other point I want to make for Your Honors. The other point, I would think
23 it -- I would go to Petitioner's slide 14, demonstrative slide 14. Okay. This
24 is where Petitioner makes the point that the specification in the '719 patent
25 doesn't actually use degrees of freedom. We make two points on that, Your
26 Honors. Number one -- at least two points, but number one is patent and

1 Petitioner discussed this. Patent Owner's technical expert, Dr. Allen, agreed
2 with using the term of art degree of freedom about the tunable and variable
3 elements. There's no question that a person of skill in the art understands
4 that the degrees of freedom means the variable element. It could be a
5 variable capacitor or a variable inductor. Number two is, while the patent
6 doesn't state degrees of freedom, there's 15 citations to the Smith chart in the
7 '719 -- in the specification of the '719 patent. Each showing it's in each of
8 those citations to the Smith chart are related to Figures 30 to 35 where it
9 shows at least two degrees of freedom. And it's explained in detail in
10 columns 52 to 56. With that, Your Honor, I would save my rest of my
11 remaining time for rebuttal.

12 JUDGE LEE: Mr. Lawson, it's Judge Lee. I have one additional
13 question. Do you want to say anything about some of these dependent
14 claims where a tunable capacitor is expressly recited, like Claim 2 and Claim
15 5? Because, you know, according to your position, the capacitor network
16 has to already have a variable capacitor, which is not consistent with the fact
17 that, say, Claim 5 expressly recites, includes at least one tunable capacitor.

18 MR. LAWSON: Well, as I'm reading Claim 2, Your Honor, it
19 says wherein the first network capacitor includes at least one tunable
20 butterfly capacitor. So, it's explaining that it includes a variable.

21 JUDGE LEE: A particular type of butterfly, yeah. So, that doesn't
22 work. What about Claim 5? Claim 5 doesn't say a butterfly capacitor. It
23 says a tunable capacitor.

24 MR. LAWSON: Right, and I think that Claim 5 is disclosed --
25 excuse me, Claim 2 is talking about a particular type of a variable capacitor.

26 JUDGE LEE: Right, so we can forget that. What about Claim 5?

1 Claim 5 just says the first network capacitors and the second network
2 capacitors includes at least one tunable capacitor. But why does it say that if
3 you're right that the independent claim already includes, requires at least one
4 tunable capacitor?

5 MR. LAWSON: I have to read. Which claim are you referring to,
6 Your Honor? I'm sorry.

7 JUDGE LEE: Claim 5. Claim 5.

8 MR. LAWSON: The system of Claim 3, right? Claim 5. Yes,
9 Your Honor, I just think that that claim there is just making it, the
10 independent claim making it in their claim which is not related to Claim 17
11 at all, is the first point I would make. And it's the second that word,
12 capacitor, includes at least one tunable capacitor. I guess just making clear
13 that that network and capacitor includes a tunable capacitor.

14 JUDGE LEE: Yeah, but same term is in Claim 1, network of
15 capacitors. We can't have different meanings between different claims for
16 the same term.

17 MR. LAWSON: Well, Your Honor, well, the definition of the
18 network of capacitor includes that it has to include at least one capacitor and
19 at least two degrees of freedom. So, it's possible you could have the network
20 that would have the two degrees of freedom could be, you have a capacitor
21 with two degrees of freedom or tunable inductors. That would be possible.

22 JUDGE LEE: But you told me earlier, in the context of Claim 17,
23 it has to have at least one tunable capacitor.

24 MR. LAWSON: It has to have at least one capacitor and at least
25 two degrees of freedom. That's the definition. And the figures shown in 30
26 to 35 show at least one tunable capacitor, at least one --

1 JUDGE LEE: Oh, okay. So, you say it doesn't even have to have
2 one tunable capacitor then?

3 MR. LAWSON: That's correct. It would have to have a capacitor
4 and it would have to have at least two tunable elements. That's correct.

5 JUDGE LEE: All right. Thank you.

6 MR. LAWSON: Thank you, Your Honor. Subject to Your
7 Honors' questions, I would save the remainder of my time for rebuttal.

8 JUDGE WEINSCHENK: Thank you, Mr. Lawson. You've got
9 about eight minutes remaining, but I know we've asked you a lot of
10 questions. So, if you need a little extra time on sur-rebuttal, we can certainly
11 accommodate that.

12 MR. LAWSON: Thank you, Your Honor.

13 JUDGE WEINSCHENK: All right. Mr. Davis, whenever you're
14 ready, you've got 19 minutes for your rebuttal.

15 MR. DAVIS: Thank you, Your Honors. And where I'd like to
16 start is Judge Weinschenk, you had a question about in Ground 4, whether
17 there was textual support for the second resonator, including the tunable, the
18 bank of capacitors 32(b). And so, I wanted to provide that. So, petition at
19 74, discussing that resonator element, we state the receiving coil and a
20 tunable capacitive element that corresponds to the claimed second resonator.
21 That's one instance where we use those -- that sort of textual description.
22 We also have it on the top of page 76, where we have describing Figures 12
23 to 13 embodiment showing exemplary second resonator with plurality of
24 capacitors. And then, of course, we have the actual figure where we've
25 mapped the bank of capacitors as part of the second resonator and
26 highlighted it accordingly.

1 With that, I'd like to address some of the points I think Patent
2 Owner made and some of the questions posed to a Patent Owner. So first,
3 for the construction of network of capacitors, I think, and this was to Judge
4 Lee's point, the parties now agree that the definition of the term comes from
5 the specification and it is column 52, lines 32 through 38, is that intended
6 definition that applies.

7 I think what we, when we look at this, the definition, the only
8 portion of it that is actually limiting is the portion where it says any circuit
9 topology, including one or more capacitors. The rest of the sentence, which
10 Patent Owner stated hadn't been addressed, none of those provide additional
11 requirements because the second portion after the comma says, including
12 without limitation any of the circuits specifically disclosed herein using
13 capacitors. So, that's just providing non-limiting examples of what a circuit
14 topology, including one or more capacitors could include. And then as
15 Judge Raevsky pointed out, the clause that comes directly after that comma
16 is or any other circuit -- other equivalent or different circuit structures. So,
17 that is not actually a limitation on this. The only thing that is required of a
18 network of capacitors is that it is a circuit topology, including one or more
19 capacitors. And I think there's no dispute that both Cook '554 in Ground 2
20 and also Lee and Cook '523 in Ground 4, in fact, disclosed that under that
21 construction from the specification.

22 Another thing that I heard from Patent Owner is that the reason
23 why we were saying Figures 30 through 35 don't apply is because they're
24 circuits. And I just wanted to make sure to clarify it's because those are
25 describing matching circuits. While those may of course contain networks
26 and capacitors because they are circuit topologies that include one or more

1 capacitors, the reason why it's not limiting is because the Claim 17 does not
2 require impedance matching or a matching circuit. I think this goes to what
3 Judge Lee just pointed out. There's no doubt that the Patentee knew how to
4 claim an impedance matching circuit and a matching circuit because we do
5 see that in Dependent Claims 3 and 4, where you have in Claim 3 two
6 networks of capacitors, which together form an impedance matching
7 network, and then Claim 4, providing further limitations on the impedance
8 matching network. The fact that an impedance matching network is not
9 recited in Claim 17 indicates that those terms have, of course, different
10 meanings. A network of capacitor is not the same as an impedance
11 matching network.

12 I think another question that the Board had for Patent Owner is,
13 what exactly can you expand on what the meaning of degrees of freedom,
14 what does that mean? And I think there was a lot of struggle from Patent
15 Owner to describe it. And I think that the reason why there's so much
16 trouble describing what it is is because it doesn't actually appear in the
17 patent. It is something that has just been sort of created for purposes of this
18 IPR petition, but it doesn't actually find any support. I think that's also
19 where the lines keep moving for what it is, because it doesn't have that
20 actual support in the specification, which I think when we look at Phillips,
21 that's really what Phillips was warning against when relying on expert
22 testimony to define terms to provide support that isn't actually in the patent
23 documents themselves, is they can be moved by, you know, the litigation
24 process rather than what the patentee actually was describing. I think we
25 have a very clear description in 52, lines 32 through 38 what the patentee
26 intended when he said network of capacitors. And that is that it is any

1 circuit topology, including one or more capacitors. Of course that can
2 include 30 through 35, but you don't stop at 30 to 35. And I certainly didn't
3 hear anything from Patent Owner that actually explains why does it start at
4 30 and end at 35. Why doesn't it include any of the other circuit disclosures
5 of circuits that are in the specification? And the answer is, it's arbitrary.
6 And that arbitrary is not a reason for construing the claims in the narrow
7 way that Patent Owner proposes. The way that it should be construed is
8 exactly how the patentee did, which is 52, 32 through 38.

9 The next thing I want to address is Patent Owner agreed that a
10 circuit that has a variable capacitance, or I think it was a tunable capacitance
11 and a tunable inductance satisfies PO's construction. Patent Owner agreed to
12 that. I'd like to just direct the Board to slide 40 of Petitioners' slides where
13 Cook '554, in fact, discloses that the resonant antenna system is
14 automatically tunable, can use tunable capacitors and tunable inductances.
15 Cook '554 therefore discloses Patent Owner's construction as it's written
16 because it has two degrees of freedom as Patent Owner conceded.

17 I think that Patent Owner made a distinction between tunable and
18 variable. Frankly, I don't know that I see a difference. I can also tell you
19 that Cook '554 doesn't see a difference. Cook '554 also uses the words
20 variable inductance and variable capacitance. That's, for example, Cook
21 '554 at column 19, lines 10 through 14 describes the variable capacitance
22 and variable inductances. You also don't even have to look that far into
23 Cook '554, you can actually just look at the abstract, where it says that the
24 antenna unit can include a variable inductance and a variable capacitance.
25 So, if there was any need for there to be two degrees of freedom, Cook '554
26 discloses it.

1 I want to go to direct the Board's attention to Patent Owner's slide
2 38. I think that Patent Owner discussed that the source resonator does not
3 have the tuning network, and likewise that the second resonator does not
4 have the tuning and matching network. I didn't hear any reason for that,
5 other than the fact that just sort of the say so of Dr. Horenstein, but I think,
6 as we discussed, or as I discussed in our opening remarks, it's been mapped
7 as part of the source resonator, and part of the second resonator as including
8 that tuning circuit. That's been true since the petition. And there is a reason
9 for including it is because it actually provides a capacitance to the resonance
10 circuit itself and affects the resonant frequency of that circuit. So, it is, in
11 fact, part of the source and source resonator for the tuning network, and the
12 source resonator in Figure 15 as part of the second resonator.

13 I think also there's sort of a very sort of myopic focus on these
14 figures. As I just mentioned, Cook '554 goes on to explain what is in these
15 figures. And it explains, even if you were to assume that for example, the
16 tuning and matching network 1530 are the only elements that include
17 tunable elements, the description in the patent describes that that can include
18 both tunable, tunable capacitance, as well as a tunable inductance, which
19 again satisfies Patent Owner's two degrees of freedom construction.

20 And then the last thing that I'd like to address is the Cook
21 Provisional. And I think in the Cook Provisional, there's no response from
22 Patent Owner that even if you require the input power directly for the
23 measurements and the adjustment of the resident frequency to be based on
24 the input power directly, that the Cook provisional expressly discloses that
25 on page 31. And we think that is dispositive of the Dynamic Drinkware
26 dispute, and therefore Cook '554 is prior art. And with that, if the Board has

1 any questions, I'm happy to answer it. Otherwise --

2 JUDGE LEE: Mr. Blake, it's Judge Lee. Thank you for saying
3 that. But I want to explore the other theory that the based on going back a
4 little further up the chain, you know, how far do you get to rely on the
5 breadth of based on to go back? I mean, I have an example, like if I were to
6 say the limitation requires something to be based on the number of people in
7 the USPTO building. That's the limitation, right? Let's say the art is based
8 on the number of people in the hearing room. And are you going to be able
9 to say, well, the number of people in the hearing room, obviously, and
10 logically, that's, in turn based on the number of people in the PTO building.
11 So, it meets it just by saying, being based on the number of people in the
12 hearing room. Do you see what I'm saying?

13 MR. DAVIS: I hear what you're saying. I think that in the context
14 of the Cook Provisional, the reason why it is based on is because they are
15 directly correlated. There is no alternative source of power. And so, by
16 measuring differences in the output power, you are actually going to be
17 based on what is being received because that's the only source. And so, it's
18 the direct correlation.

19 JUDGE LEE: I see. So, you're saying it doesn't work in my
20 example, because there are other rooms where people could go, but where
21 there's the hearing rooms, the only room in the PTO building, then you get to
22 say what you say. Is that the answer?

23 MR. DAVIS: That's right. I think in your example, perhaps if
24 there was an additional caveat that the number of people in the entire
25 building is fixed per square meter. And then you know, based on the
26 number of people in the room, how many are in the building, maybe that

1 could be based on that. But again, it would need to have some sort of a
2 direct relationship in order for it to be based on. And I think again, just
3 turning to what the Cook Provisional says, sort of getting outside of those
4 hypotheticals, we do know that the Cook Provisional, that the, one, that
5 Cook Provisional expressly discloses that it can be based on the input power
6 to the extent that's specifically required. But also if the measurement was
7 done at the input to the load. That would also be based on the received
8 power because again, the only power that's going to the load is going to be
9 from the received power at the antenna unit itself.

10 Again, this is the -- even if you look at the Cook Provisional the
11 box that we're talking about right now is the power converter units. I think,
12 maybe another example that perhaps applies would be, I take a device, and I
13 plug it into the wall. And then the power from the wall gets converted into
14 DC voltage. And that then the device is powered. I think that most people
15 would think, yeah, the device is powered based on the electricity coming
16 from the wall, even though it got converted in the middle. And I think that's
17 probably an applicable analogy here. Just because it got converted in the
18 middle does not mean that it's no longer based on what's coming from the
19 wall.

20 JUDGE LEE: Thank you.

21 MR. DAVIS: If -- with that, I have nothing further, and I
22 appreciate the Board's time.

23 JUDGE WEINSCHENK: Thank you, Mr. Davis. Mr. Lawson,
24 whenever you're ready. As I mentioned, you have about eight minutes if
25 you need a little more time let us know.

26 MR. LAWSON: Yes, Your Honor. I would direct Your Honors'

1 attention to Patent Owner's slide 26. Again, this goes to column 52, where
2 the patent and specification now Petitioner has agreed and has stated twice,
3 it agrees that this is where the patent defines the term network capacitors.
4 Again, we're highlighting that. It states there what defines the network of
5 capacitors, refers to any circuit topology, including the one or more
6 capacitors, but included without limitations, the circuit specifically disclosed
7 herein using the capacitors or any other equivalent or different circuit
8 structure. The beginning of this paragraph introduces Figure 30 and gives us
9 the examples of those circuit topologies. And the next five full columns, 52
10 to 50, excuse me, 52 to 56, explain in great detail what the patent and
11 specification is stating about what a network and capacitor is here where the
12 purpose, and we talked again and I'll go back to it, but the purpose is to
13 preserve the high Q value that's also in the Claim 17. And again, nowhere in
14 Cook '554, nowhere in Cook '523, nowhere in Lee do they disclose in
15 talking about the Smith chart and the two degrees of freedom in order to
16 match those circuits. Columns 52 to 56, where it explains Figures 30 to 35,
17 where it's also defined what a network and capacitor is, shows what it
18 means.

19 And I would say, Your Honors, one way, one of Your Honors has
20 asked a way to explain it, and maybe I can. It's not just a circuit that's
21 disclosed in Figures 30 to 35, but it's also the topologies. So, it's talking
22 about, and a way to explain the way they do the topologies here is it's not
23 just -- it's the two degrees of freedom in the topology, but it also has to be
24 that those two degrees of freedom and the way they're shown in the circuits
25 are both in parallel and serial. And you'll see that in those figures, each of
26 those circuits that's shown in Figures 30 to 35. And what I mean by that is a

1 good example of that, Your Honor, is to think of the way the streets are in
2 D.C. Some of the streets are numbered streets, and some of the streets are
3 lettered streets. If you're going down one of the numbered streets, that's -- it
4 can be a degree of freedom. Okay. But if you've got to get over to a point
5 where you want to match, you're going to go to 36th and K, that intersection,
6 you then have to go down to get to 36, and then get on to K to get to the
7 intersection of 36 and K. That's one way to think about those types, the
8 degrees of freedom and the way they're shown in the circuits and the
9 topology in Figures 30 to 35.

10 JUDGE RAEVSKY: Mr. Lawson, this is Judge Raevsky. This
11 has come up before, and I apologize if I missed your answer. I just can't
12 remember your position. Could you help me understand why you're drawing
13 the line at Figures 30 to 35 and not including Figure 36, which just shows
14 capacity?

15 MR. LAWSON: Yes, if you -- yes, Your Honor. If you go to --
16 we have a slide in our presentation. Bear with me one moment. Thank you.
17 It's our Patent Owner slide 24, and it shows Figure 36. Figure 36 essentially
18 shows it's just an example of a variable, one single variable capacitance. It's
19 a way to connect a -- if you look at Figure 36(a), for example, it's got a
20 variable capacitor and then another capacitor, that is just a single one degree
21 of freedom, a one variable capacitor, and it only gives you one capacitance.
22 What Figure 36 is showing is how you can use a capacitor in Figures 30 to
23 35 as one of those variable capacitors. Okay. That's what figure 36 is
24 showing. And I would take, Your Honors, if you go to Figure 30 -- if you
25 go to the patent where it discusses Figure 36, it talks about -- and I'll get to
26 them. That is it's column 57, Your Honor, of the '719 patent at lines 34

1 through 40, and it particularly talks about the capacitor and capacitance in
2 the singular. And I quote from line, beginning at line 36, Figure 36 shows
3 four examples of a variable capacitance, comma, using networks of one
4 variable capacitor and the rest fixed capacitors. It says using these network
5 topologies, fine tuneability of the total capacitance value may be achieved.

6 If you recall, we talked about the -- with the two degrees of
7 freedom, we're also talking about the matching, fine tuning, the inductance,
8 and the resistance, not just the capacitance. Okay. This is -- Figure 36
9 makes very clear it's not the full circuit. It's giving an example of one
10 variable capacitor that gives you a single variable capacitance. And that
11 Figure 36, the examples 36(a) through (d), could be used and plugged in for,
12 if you will, in the variable, in the variable capacitors that are shown and
13 disclosed in Figures 30 through 35. That's the --

14 JUDGE RAEVSKY: I think we're probably going to have to agree
15 to disagree. I just can't see how we read column 52 differently because it
16 does say there could be one or more capacitors. So, it seems like you're
17 reading in there has to be two capacitors. I just can't understand how we
18 reconcile your position with column 52.

19 MR. LAWSON: Well, Your Honor, each of the figures show that
20 it's got to have one or more -- each of the figures in 30 through 35 that are
21 disclosed have at least one capacitor. So, you have one or more capacitors
22 in the network. It has to have at least one capacitor. But the other element
23 can be an inductor. The second element could be a capacitor, but could also
24 be an inductor. And that's what's disclosed and explained. And if you go to,
25 you know, the patent in the columns that describe, if we go again back up
26 top of column 53, where it describes Figure 31, again, it says, and I go to

1 column 53, line 1, Figure 31 shows three examples of directly coupled
2 impedance matching circuits where the two tunable elements are capacitors.
3 And in the same sentence, in three examples, E to G of directly coupled
4 impedance matching circuits where the two tunable elements are one
5 capacitor and one inductor. And so, the network of capacitors always has to
6 include at least one capacitor, but it has to have two degrees of freedom.
7 And that's consistent with all of the figures. And they're, I think if they're
8 approximately 50 figures, and it disclosed in Figures 30 through 35, all of
9 the examples show that. Everyone has at least one capacitor. In each of
10 them, the topologies show they have at least two degrees of freedom. And
11 so, and one of those degrees of freedom can be an inductor. And that's what
12 they show. It could be two capacitors, but it could be a capacitor and an
13 inductor. But it always has to be at least one capacitor, as defined in the
14 specification, have at least one capacitor, and it has to have the two degrees
15 of freedom, as disclosed to each of those circuits, each of those
16 approximately 50 circuits in Figures 30 to 35 shows those two degrees of
17 freedom, show those topologies, show the two degrees of freedom, and they
18 show at least one capacitor.

19 JUDGE WEINSCHENK: Mr. Lawson, just so you know, you're at
20 about 10 minutes now, so I've given you a little extra time. I'll give you a
21 few more minutes here if you have any points you want to hit before we
22 wrap this up.

23 MR. LAWSON: Your Honor, I guess we would go back to, when
24 we go back to the definition of the patent and go back to, again, they pointed
25 out, he didn't understand where if we go to, again, where we talk about the
26 two degrees of freedom and the capacitor or the inductor, and the reason for

1 that is disclosed in columns 45, in particular lines 58 through 66, and the
2 purpose of that is disclosed in lines 46 through 53. It's to preserve, because
3 of the two degrees of freedom, it preserves the impedance or preserves the
4 high Q value that's part of the claim. And that's why it requires that
5 specifically disclosed here, introduces the two degrees of freedom here at
6 lines 58 through 66. And then it's specifically, to Your Honor's point, and
7 Petitioner agrees, it specifically discloses the definition of a network of
8 capacitors in columns 52. And again, all the -- in columns 52, that
9 paragraph where we have the definition for network of capacitors begins
10 with the description of Figures 30. And the next five columns, explain in
11 detail Figures 30 through 35. Every one of them has a network of
12 capacitors. Every one of those network of capacitors has at least one
13 capacitor, and they have at least two degrees of freedom. And that's what
14 the specification is required for network of capacitors, as required by Claim
15 17 in the '719 patent, and as intended by the specification.

16 So, to your questions, Your Honor, that would be -- I hope that
17 answered your question.

18 JUDGE WEINSCHENK: Thank you, Mr. Lawson. Anything
19 else, Judge Lee or Judge Raevsky? All right. Well, thank you all for your
20 time. I want to thank both the attorneys who presented here today, as well as
21 the other attorneys who worked on this case, and the party representative
22 who's on the line. We know a lot of time and effort goes into preparing for
23 these hearings, and we certainly appreciate all that effort. It's very helpful to
24 us, and thank you for answering all of our questions.

25 So with that, we're going to adjourn this hearing in the 1182 case.
26 We'll take the case under advisement, and we're off the record.

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Patent 8,461,719 B2

1 (Whereupon the above-entitled matter went off the record at 12:04
2 p.m.)

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