

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ANKER INNOVATIONS LTD.,
Petitioner,

v.

POWERMAT TECHNOLOGIES LTD.,
Patent Owner.

IPR2024-00995 (Patent 9,083,204 B2)
IPR2024-00996 (Patent 8,626,461 B2)

Record of Oral Hearing
Held: November 18, 2025

Before: KEN B. BARRETT, KARA L. SZPONDOWSKI, and
RYAN H. FLAX, *Administrative Patent Judges*.

IPR2024-00995 (Patent 9,083,204 B2)

IPR2024-00996 (Patent 8,626,461 B2)

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The above-entitled matter came on for hearing on November 18, 2025,
commencing at 1:00 p.m.

1 P R O C E E D I N G S

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3 JUDGE BARRETT: Hello, everyone. We are on the record in
4 IPR2024-00995 and IPR2024-00996, Anker Innovations Ltd. v. Powermat
5 Technologies Ltd. I am Judge Barrett and with me today are Judges
6 Szpondowski and Flax.

7 So, let's start with appearances. Who do we have for Petitioner
8 today?

9 MR. STEPHENS: Thank you, Your Honor. Nicholas Stephens on
10 behalf of Petitioner. I'm joined by lead counsel for Anker, Michael
11 Hawkins.

12 JUDGE BARRETT: Welcome. And for Patent Owner?

13 MR. BARROW: Good afternoon, Your Honor. William Barrow
14 from Mayer Brown on behalf of Patent Owner, Powermat. With me are
15 William Brady Nash and So Ra Ko, also from Mayer Brown.

16 JUDGE BARRETT: Welcome, everyone.

17 MR. BARROW: Thank you.

18 JUDGE BARRETT: All right. We set forth the procedure for
19 these two hearings today on our oral argument order. For the first case,
20 IPR2024-00995, we set a time of 30 minutes per side; however, Patent
21 Owner has a LEAP practitioner, and that's an acronym for Legal Experience
22 and Advancement Program. That means Patent Owner will have an
23 additional 15 minutes.

24 So, Petitioner will have 30 minutes total time for its arguments and
25 Patent Owner will have a total of 45 minutes. Of course, you guys know

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1 how this works. Petitioner will go first, may reserve time for rebuttal.

2 Patent Owner may go and reserve time for surrebuttal, and we'll just go

3 around until everybody's done.

4 At that time, I anticipate we may take a short break between cases,
5 if that's all right. And then, for the second case, IPR2024-00996, Petitioner
6 will have 60 minutes total time, and Patent Owner will have 60 minutes total
7 time.

8 We have your demonstrative exhibits pulled up on our computers,
9 and for clarity of the transcript and the record, please read off the slide
10 numbers as you go through your presentation. If you go outside your slides,
11 you want to go into the record, just give us a clear identification of what
12 you're referring to so it's really easy for us to figure out later.

13 These hearings are open for the public. I believe we have an open
14 line. I don't believe we have anything confidential in this case, but if we do,
15 just pause, let me know, and we can close the line, if necessary.

16 So, that was a lot of information. Any questions, concerns,
17 clarifications, change of procedure? Petitioner?

18 MR. STEPHENS: None from Petitioner.

19 JUDGE BARRETT: All right. Patent Owner?

20 MR. BARROW: None from Patent Owner.

21 JUDGE BARRETT: All right. Sounds great. Then with that, we
22 can begin. Petitioner, whenever you're ready. And as you're setting up, how
23 much time would you like to reserve?

24 MR. STEPHENS: We'd like to reserve 10 minutes for rebuttal,
25 please.

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1 JUDGE BARRETT: All right. So that's 20 minutes, correct?

2 MR. STEPHENS: Correct, Your Honor.

3 JUDGE BARRETT: All right. Great.

4 MR. STEPHENS: May it please the Board, my name is Nicholas
5 Stephens from Fish & Richardson, and I'll be presenting today on behalf of
6 the Petitioner, Anker Innovations, Ltd. As I mentioned earlier, I'm joined by
7 lead counsel, Michael Hawkins. It's good to see you all again. I'll turn to
8 Slide 7 of our demonstrative.

9 The '204 patent at issue in this proceeding is a sibling of U.S.
10 Patent 9,048,696 for which we had an oral hearing last month. These two
11 Patents are highly similar. They share a common specification. Their
12 respective claims are directed to similar features.

13 For example, as shown on Slide 7, Independent Claim 1 of the '204
14 patent includes a limitation that refers to a driving voltage oscillating at a
15 non-resonant transmission frequency that's substantially different from said
16 characteristic resonant frequency of the inductive couple. And we
17 addressed in detail a highly similar claim limitation with respect to the '696
18 patent IPR, and also, overlapping the prior applied between these two
19 proceedings.

20 So, while I'll welcome any questions from Your Honors today on
21 any issues that were addressed during trial. I don't intend to go over all of
22 those arguments, many of which were addressed in the prior hearing.
23 Instead, I have a few issues that I'd like to discuss in view of arguments that
24 continue to be raised and a couple new arguments that are unique to the '204
25 patent.

1 Turn to Slide 9, please. On this slide, we have the issues that have
2 been disputed by the Patent Owner. IPR was instituted on two sets of
3 grounds, the Baarman³⁹² ground and the Onishi grounds. Patent Owners
4 disputed fewer issues, I think, with respect to the Baarman³⁹² ground, and
5 so I'll plan to address that first. And specifically, I'll address the
6 construction of substantially different from said characteristic resonant
7 frequency, followed by Baarman satisfaction of this limitation, Element 1.5.

8 Before turning to the construction of incremental value, which is a
9 new term in the '204 patent, and how the prior satisfies the incremental value
10 limitations. Notably, the parties' dispute over the construction of the term
11 "incremental value" doesn't appear to relate to the Baarman grounds. Patent
12 Owner, as we understand, has applied this construction only in an attempt to
13 distinguish the Onishi grounds.

14 Slide 11, please. So as mentioned earlier, Claim 1 of the '204
15 patent includes a limitation that refers to a non-resonant transmission
16 frequency substantially different from said characteristic resonant frequency
17 of the inductive couple. The petition, and Dr. Woods explained that this
18 limitation encompasses the frequencies within one of the near-linear regions
19 of a frequency amplitude graph, like that shown on Figure 6b on the right
20 side of Slide 11.

21 Linear control may be a benefit that flows from operating in near-
22 linear region. But on its own, the term "substantially different from" doesn't
23 require, necessarily, limited linear control or some of the other limitations
24 that we believe Patent Owner is attempting to inject into the "substantially
25 different from" limitation. That said, other limitations in Claim 1 of the '204

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1 patent already expressly address requirements for increasing or decreasing
2 the power by incremental adjustments to the transmission frequency.

3 Before turning to the prior art, I'd like to address the basis for the
4 requirement for a substantially different transmission frequency to
5 encompass the frequencies in a near-linear region of a frequency amplitude
6 graph.

7 So this construction stems from Patent Owner's statement to the
8 Examiner during prosecution, which we have a snippet of on Slide 11.
9 Specifically, the Patent Owner represented to the Examiner that a POSITA
10 would appreciate that the term "substantially different from said
11 characteristic resonant frequency" should be interpreted to mean that the
12 frequency of the driving voltage is selected so as to lie within one of the
13 near-linear regions of a frequency amplitude graph associated with the
14 inductive couple.

15 Now, Figure 6b on the slide from the '204 patent shows an
16 example of frequency amplitude graph. In this graph, transmission
17 frequency is plotted as a function of the operational voltage, that is the
18 operational voltage that's induced in the secondary coil as a function of
19 frequency.

20 And as we'll see, Patent Owner attempts to distinguish prior art
21 based on alleged differences between the units plotted on the Y axis in the
22 prior art and the operational voltage demonstrated in Figure 6b. But under
23 Patent Owner's own construction that it represented to the Examiner during
24 prosecution, this is not a relevant distinction.

25 Patent Owner never represented to the Examiner that the near-

1 linear region must be in a frequency voltage curve. Instead, as we can see,
2 the Applicant clearly stated that the term "substantially different" should be
3 interpreted to mean that the frequency of the driving voltage is selected so as
4 to lie within one of the linear regions of a frequency amplitude graph
5 associated with the inductive couple.

6 Not any particular type of frequency amplitude graph. Not a
7 frequency voltage graph. Not necessarily a frequency power graph or a
8 frequency current graph, which will all be examples of frequency amplitude
9 graphs.

10 So why did they not limit it to voltage? Well, there's two
11 possibilities. One, the Applicant and the Examiner knew at the time that this
12 is simply a distinction without a difference. As Dr. Woods has testified, in
13 Exhibit 1101, his reply declaration at paragraph 23, footnote 1, "Power
14 voltage and current and frequency amplitude graphs are all related."

15 So we would see whether it's a power curve, a voltage curve,
16 current curve, however you want to characterize it, you have a parabolically
17 shaped graph and the near-linear region of those graphs will correspond to
18 each other. So it doesn't really matter what frequency -- which of those
19 three units the graph has plotted.

20 JUDGE BARRETT: Counsel, let me ask you a quick question
21 about Figure 6b of the challenged patent.

22 MR. STEPHENS: Yes.

23 JUDGE BARRETT: The near-linear Region 8, is it your position
24 that that's the range that extends from f_U to f_b ?

25 MR. STEPHENS: That is our understanding of how it's described

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1 in the patent, Your Honor.

2 JUDGE BARRETT: All right. Thank you.

3 MR. STEPHENS: Or Applicant simply intended to apply a
4 broader meaning to the term by not specifying that the frequency amplitude
5 graph should be a frequency voltage graph or any other type of specific
6 graph. Regardless, the prosecution disclaimer that arose from the statement
7 shows that the claim is not limited to a near-linear region and just a
8 frequency voltage graph.

9 Noticeably, the claim language is consistent with an understanding
10 that the frequency amplitude graph can encompass graphs of power transfer
11 and not limited to just a frequency voltage graph. For example, Elements
12 1.7 and 1.8 of the '204 patent recites steps for providing less or more power,
13 not inducing more or less voltage, although that would happen, but
14 providing more or less power by an incremental change to the transmission
15 frequency.

16 The specification of the '204 patent, at times, likewise, refers to
17 incremental changes in power, not voltage, when describing feedback
18 signals sent from the receiver to the inductive power outlet.

19 So if Your Honors have a copy of the '204 patent -- I think that's
20 Exhibit 1001 in this proceeding. I'd refer you to column 22, line 65. And
21 there's a paragraph that extends through column 23, line 7, that explains that,
22 "It is noted that by using the power regulation method described above,
23 when the power received by the load is too high, a series of feedback signals
24 of the first type, SA, will be transmitted until the power is reduced into the
25 acceptable range. Likewise, when the power received by the load is too low,

1 a series of feedback signals of the second type, SB, will be transmitted until
2 the power" -- again, not specifically voltage, power, "is increased into the
3 acceptable range."

4 Turn to Slide 19, please. And as we discussed at the hearing on the
5 '696 patent, Baarman discloses a transmission frequency that's substantially
6 different from the characteristic resonant frequency of the inductive couple.
7 And this is illustrated by Figure 3 here on Slide 19. As we can see from the
8 plot in Figure 3, the power transfer curve in Baarman has a generally
9 parabolic shape, just like Figure 6b of the '204 patent.

10 Power transfer peaks at the characteristic resonant frequency, and
11 as inverter 10 is operated off resonance between frequencies A and
12 frequency B, the power transfer gradually decreases as the frequency
13 increases from B to A or vice versa, you can work up from A to B and the
14 power transfer increases.

15 Paragraph 38 describes Figure 3, which is reproduced here on
16 Slide 19. And noticeably, it explains that a decrease in the operating
17 frequency of the inverter 10 will result in a generally predictable increase in
18 the power transferred from the primary coil 15 to the secondary coil 30.

19 Slide 20, please. The off-resonance operation of Baarman's system
20 is nearly identical to the '204 patent's preferred embodiment. On Slide 20
21 we can see the substantially similar frequency responses between Baarman's
22 Figure 3 and Figure 6b of the '204 patent.

23 And Dr. Woods testified in his declaration submitted with the
24 petition that the similar positions of Baarman's transmission frequencies
25 between A and B and the frequency response curve as the transmission

1 frequency ft and Figure 6b confirm that Baarman392 discloses and renders
2 obvious a transmission frequency in the near-linear region.

3 Now, again, judging from the slides in Patent Owner's
4 demonstratives, we expect that they will argue that comparison of Figure 3
5 in Baarman to Figure 6b of the '204 patent is invalid and that nothing
6 conclusive can be drawn because of the differences in that Figure 3 of
7 Baarman plots power transfer, whereas Figure 6b of the '204 patent plots
8 operational voltage.

9 We disagree with Patent Owner's position for several reasons. To
10 start, I note that this position was first raised in Patent Owner's surreply. It
11 was never argued in the Patent's Owner's response, so we've not had an
12 opportunity, actually, to address this fully in the record, but I would like to
13 offer a few observations, regardless, since it has been raised in the surreply.

14 First, based on the claim construction that we just went over in the
15 prosecution disclaimer, we believe that the argument is immaterial because
16 the claim construction does not require that you operate in the near-linear
17 region specifically of a frequency voltage curve. Again, the Applicant's
18 statement to the Examiner focused on operating in the near-linear region of a
19 frequency amplitude graph.

20 Baarman's power transfer curve is a frequency amplitude graph.
21 That's never been disputed. And the operational frequencies between
22 frequencies A and B include a near-linear region. These frequencies thus
23 fall squarely within the scope of the construction of substantially different.

24 And the descriptions of these features are also remarkably similar
25 in both Baarman and the '204 patent. So, for example, back on Slide 19 we

1 see paragraph 38. And paragraph 38, in describing Figure 3, says that, "A
2 decrease in the operating frequency of the inverter 10 will result in a
3 generally predictable increase in the power transferred from the primary coil
4 15 to the secondary coil 30."

5 And as we looked at earlier in the context of claim construction,
6 the '204 patent at column 22, line 65, to column 23, line 7, refers to increases
7 and decreases in the power, not voltage, as a result of incremental changes in
8 the operating frequency.

9 Second, if the near-linear region were required to be under
10 frequency voltage graph, that graph would look substantially similar to the
11 power transfer curve that's shown in Figure 3 of Baarman. Dr. Woods
12 explained, again, that the near-linear region of a power transfer curve, like
13 Baarman's, also corresponds to the near-linear region of a frequency voltage
14 curve.

15 And again, the reason is that voltage power current are all linearly
16 related, so you might see that the graph may be stretched or compressed, but
17 you will still have the same generally parabolic shape with the near-linear
18 region in the same frequency range.

19 And I would also just note that Baarman itself provides clues as to
20 the relationship -- that linear relationship, between power and voltage or
21 current. So just for the record, I note that paragraph 56 of Baarman explains
22 that as the frequency is increased or decreased, there are corresponding
23 changes in the induced current in the secondary side.

24 So, again, he's talking about power with respect to Figure 3, but he
25 also acknowledges that as the power decreases, there's lower current

1 induced. As the power increases, there's higher current induced.

2 Slide 21, please. And apart from looking at these power transfer
3 curves, there's also substantial evidence in the record that supports the
4 understanding of a POSITA that the transmission frequencies between A and
5 B in Baarman's system would encompass the near-linear region of that
6 curve.

7 So Paragraph 56 of Baarman explains that the charger circuit
8 incrementally increases or decreases the operating frequency across a wide
9 range of frequencies, from a frequency that is quote, near the resonant
10 frequency -- that's what frequency B is showing in Figure 3, to a frequency
11 that's relatively far from resonance. Paragraph 38, likewise, explains that
12 frequency B is somewhat less than the resonant frequency.

13 And the flow chart of the operation of Baarman's system is shown
14 in Figure 7. As the operational algorithm that Baarman employs,
15 incrementally increases and decreases the transmission frequency between A
16 and B. So you're going to cover a wide range of frequencies along the side
17 slope of that power transfer curve between frequencies B and A. That is,
18 between a frequency that's near the resonant frequency and a frequency
19 that's relatively far from the transmission frequency.

20 And significantly, both parties' experts agree that all parabolic
21 frequency curves, like that shown in Figure 3 of Baarman and Figure 6b of
22 the '204 patent, have a near-linear region. That's just an inherent property of
23 the power transfer curve for any inductive couple. Dr. Mercier, Patent
24 Owner's expert, testified to this in his deposition at Exhibit 1102, page 29,
25 line 7 through 15. And Dr. Woods testified to the same at paragraph 60 of

1 his reply declaration, Exhibit 1101.

2 So a POSITA would understand that the near-linear region lies
3 between Baarman's operating frequencies that are near resonance and
4 relatively far from resonance. By incrementally increasing or decreasing the
5 transmission frequency in that range, the operational frequency will
6 necessarily fall within that near-linear region.

7 I'd also like to briefly address Onishi, so forward to Slide 37. And
8 for many of the same reasons that Baarman discloses the transmission
9 frequency that's substantially different from a characteristic resonant
10 frequency of the inductive couple, so does Onishi. As shown Slide 37,
11 Onishi's Figure 4 shows the power transfer curve.

12 Here, there are four frequencies shown. F_0 is the characteristic
13 resonant frequency. F_1 is the off resonant frequency used during normal
14 power transmission. F_2 is a frequency used when transmitting a binary
15 value of zero. And then, f_3 is a frequency used in power-saving mode. In
16 the petition and the reply addressed how each of the frequencies, f_1 , f_2 , and
17 f_3 , would be understood to lie in the near-linear region given how far apart
18 they are from the characteristic resonant frequency f_0 .

19 And noticeably, for Patent Owner's position to prevail, one must
20 assume that none of frequencies f_1 , f_2 , or f_3 is actually in the near-linear
21 region.

22 Patent Owner's critique that Onishi lacked sufficient information
23 about what the Y axis represents, for example, is again, in our view, without
24 merit, because the construction doesn't require a specific unit to be plotted in
25 the frequency amplitude graph. But even if it did, Dr. Woods explained that

1 whether the Y axis in Onishi represents power, voltage or current induced in
2 the secondary coil would be immaterial, because the frequency response
3 would be effectively the same. That's paragraph 23 of Dr. Woods' reply
4 declaration, Exhibit 1101.

5 And Your Honors, I'd like to take -- I'm almost at the end of my
6 direct but I'll go five more minutes, if that's all right.

7 As I mentioned earlier, there is a new limitation in the '204 patent
8 that was not at issue in the '696 patent, and that's recited in Claims 1 and 13,
9 which is a requirement for an incremental value. On Slide 45, the parties
10 have disputed that what term "incremental value" requires. Found in our
11 view has proposed a construction that's overly narrow and invites legal error.

12 It's our understanding of Patent Owner's position; they believe that
13 an incremental value implies the requirement for a series of small
14 adjustments to be made to the transmission frequency. However, if we look
15 at the claim language of Claim 1, there is just a single change required to
16 reduce the power by an incremental value or increase the power by an
17 incremental value.

18 JUDGE BARRETT: Refresh my recollection. Did Petitioner put
19 forth a formal proposed construction of incremental?

20 MR. STEPHENS: It's our position the plain meaning applies here.
21 We do not put forward a construction in the petition; however, in the reply
22 responded to the arguments that were being made and the Patent Owner's
23 response that seem to turn on an implicitly narrow construction of
24 incremental value.

25 I also think the incremental value is addressed in the institution

1 decision, so in the reply we were responding also to Your Honors'
2 comments in the institution decision.

3 Our view is that plain meaning still does apply, but in the plain
4 meaning of that term does not require the series of incremental adjustments,
5 but instead requires a sufficiently large frequency change to achieve a
6 change in power induced in the secondary coil, but not so large to preclude
7 frequency changes within the near-linear region.

8 Again, this construction doesn't seem to impact the Baarman
9 grounds. Patent Owner's arguments on Baarman do not turn on the
10 construction of incremental value. But they have applied it in an attempt to
11 distinguish the Onishi grounds. So if we turn to Slide 47, please, I'd just like
12 to show how Onishi discloses the incremental value limitations.

13 As mentioned earlier, Figure 4 has three operating frequencies, f1,
14 f2, and f3, in Onishi's operation, but when transitioning from the normal
15 power transmission mode to power-saving transmission mode, the system
16 will transition from f1 to f3 or f2 to f3. That would be an incremental
17 change in the frequency by an incremental value and by converse, when
18 going from the power-saving transmission mode to normal power
19 transmission the system shifts from f3 to either f2 or f1. Additionally, the
20 transition from f1 to f2 or f2 to f1 would be another example of an
21 incremental change in frequency.

22 I'm happy to take any questions from Your Honors, otherwise, I'll
23 reserve the balance of my time for rebuttal.

24 JUDGE BARRETT: I think we're okay. So I've got you at seven
25 minutes remaining.

1 MR. STEPHENS: Thank you.

2 JUDGE BARETT: As you're setting up, how much time would
3 you like to reserve?

4 MR. NASH: Let's reserve 15 minutes.

5 JUDGE BARROW: Okay. So that'll leave you 30 minutes
6 remaining.

7 MR. NASH: Correct. Thank you. Your Honors, Brady Nash on
8 behalf of Patent Owner, Powermat. And similar to Petitioner, we realize that
9 the '204 patent in this case is similar to the '696 patent, which the Board has
10 heard and is considering, so rather than step through everything that was
11 discussed in the previous proceedings, I'm going to focus my remarks on a
12 few key details and points that I think are important as it relates to the '204
13 patent, unless there is specific questions that the Board has.

14 And I'd like to first start by looking at Slide Number 14, which is
15 dealing with the claim construction issues for the term "substantially
16 different." Now, Dr. Mercier, the expert for Patent Owner, explained that a
17 person of skill would interpret this claim element to encompass frequencies
18 that lie within near-linear regions of a frequency amplitude graph, and allow
19 for some incremental change in frequency while remaining in the near-linear
20 region of the frequency amplitude graph. And Dr. Mercier further explained
21 that a system that operates at or near the resonant frequency is
22 distinguishable from Claims 1 and 10 of the '204 patent.

23 Now, this construction and this explanation is consistent with how
24 the term "substantially different" is used in the prosecution history, and
25 specifically with reference to Malpas. In Malpas, the --

1 JUDGE FLAX: If that's the case, why should we not just go with
2 how you specifically define this in a prosecution?

3 MR. NASH: So a lot of this exercise is providing context for how
4 the terms are being used in the specification. And understanding, kind of,
5 the central aim of the '204 patent sheds light on how the term "substantially
6 different" and the related incremental value term is being utilized. And in
7 this case, we see that the "substantially different" region is that near-linear
8 region.

9 And a designer of a system, as taught in the '204 patent, is
10 selecting that region to take advantage of the predictability that you get with
11 a linear curve as opposed to a parabolic curve.

12 JUDGE BARRETT: That was not stated in the prosecution
13 history, though, was it?

14 MR. NASH: That was not, but that's tying the '204 patent,
15 specifically, as one of the central aims of the patent is to provide, kind of,
16 that predictability. And a person of skill reading the prosecution history,
17 reading the '204 patent, and reading the claim as a whole, would understand,
18 kind of, this bigger picture of what's actually taught in the '204 patent.

19 Now, Dr. Mercier, if we turn to Slide 18, he testified that while the
20 '204 patent does not use the precise phrase "linear regulation" or "linear
21 control," a person of skill would understand that this is a benefit of the '204
22 patent. Figure 16 here on the right on Slide 18, shows that the power
23 monitory monitors the power received by the electrical load and uses the
24 signal in a feedback loop to adjust the operational frequency by incremental
25 amounts.

1 JUDGE BARRETT: Well, what does that have to do with linear
2 control? That talks about control, I get that.

3 MR. NASH: So, it deals with linear control in the sense of what
4 the substantially different region is, and that's the near-linear region of this
5 parabolic curve. So if we're looking at the linear region and we're operating
6 within that linear region, it's resulting in a linear control or linear regulation.

7 JUDGE BARRETT: Why couldn't the flow chart pertain to the
8 non-near-linear portions of the curve, also?

9 MR. NASH: Well, the way in which it's described in the
10 specification -- so if we look at Slide 19 here, it's describing the specification
11 with reference to a couple of figures. So if we look in the prosecution
12 history, it cites specifically to Figure 6b, which is illustrated here on the
13 right. And figure 6b is illustrating this parabolic curve that has that near-
14 linear region, specifically identified, which is Region 8, and that's bound fU
15 and fb in Figure 6b.

16 Now, the prosecution history on page 62 also references Figure 6a,
17 which is a block diagram of the system and includes Driver 6230. Now, if
18 we're looking at that driver and if we look back on Slide 18, figure 6d is
19 offering kind of an example of how Driver 6230 is being implemented. So
20 these figures and these teachings in the specification are all interrelated.
21 And based on those teachings, it becomes very clear that it's a linear control
22 system.

23 Now, the specification here on Slide 19 notes that if the receive
24 feedback signal is of the first type, Sa, then the transmission frequency is
25 increased by an incremental value $+\delta f_1$. And if the receive feedback signal

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1 is of the second type, S_b , then the transmission frequency is decreased by
2 incremental value of $-\delta f_2$. And this is all kind of getting to why we're in that
3 substantially different region is to allow for those incremental changes in a
4 predictable fashion, which is top of Figure 6d in the '204 patent.

5 JUDGE BARRETT: The flowchart on Slide 18, apparently, the
6 goal is to get within the pre-determined range? Doesn't that apply to the
7 situation where, say, I'm way out on the right end of the curve -- on the tail
8 end of the curve, and I want to get into the near linear region, so I keep
9 moving incrementally until I'm within the pre-determined range?

10 MR. NASH: So, I think that's where we need to look at the actual
11 claims and what's required in the claims. And the claims require the driving
12 voltage is oscillating at a non-resonant transmission frequency substantially
13 different from said characteristic resonant frequency of said inductive
14 couple. So the claims are limiting the '204 patent to that linear region.

15 JUDGE BARRETT: Because it was argued in the prosecution
16 history. I'm struggling here because you're pasting together a lot of different
17 things. You can't point to this in the claims, you can't point to it in the spec,
18 you can't point to it in the prosecution history, and your expert either, so
19 you're pasting all these things together and try to say this means linear
20 control. That was the gist of the invention, if you will.

21 MR. NASH: I respectfully disagree. But again, I think when we
22 look at, again, the claims, it's referring to the substantially different region.
23 And the way in which that region is --

24 JUDGE BARRETT: It's not in the claim, is it?

25 MR. NASH: No, sorry. The non-resonant transmission frequency

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1 that's substantially different. And the way in which the prosecution history
2 represents and discusses substantially different, it specifies that we're within
3 that near-linear region, and provides, I guess, additional clarification
4 explaining that that's the region that we're interested in, and that's the region
5 that a person of skill would understand the '204 patent as being directed
6 towards.

7 So based on all of these factors, a person of skill would interpret
8 the term to encompass frequencies that lie within the near-linear regions of
9 the frequency amplitude graph, which isn't disputed, and would understand
10 that because we're in that region, that it would allow for incremental change
11 in frequency while staying within that near-linear region. Which kind of ties
12 into the next term that's in dispute and that's the "incremental value" term.

13 And here, the parties' primary dispute is whether the plain and
14 ordinary meaning of the term "incremental value" requires a series of
15 adjustments as opposed to simply selecting discrete values.

16 JUDGE BARRETT: Is it Patent Owner's position that it requires a
17 series of values?

18 MR. NASH: So it requires --

19 JUDGE BARRETT: Yes or no question, please?

20 MR. NASH: So, I guess I'm not necessarily understanding the
21 question you're asking because I think we're maybe splitting a hair here with
22 your question. But it requires that the incremental change can occur within a
23 series of changes, and that's, again, because we're in that near-linear region.
24 And I think an analogy that Dr. Mercier provided sheds light on what is
25 going on here.

1 And in this analogy, Dr. Mercier conveyed that incremental value
2 and incremental change is similar to driving a car down a freeway during
3 rush hour traffic. And he explained that a car driving on a freeway would
4 not be effective in navigating traffic if it can only select from one of a small
5 number of discrete speeds, like zero miles per hour, 20 miles per hour, and
6 50 miles per hour. Limited operational parameters like this would likely
7 result in a car accident.

8 Now, in contrast, a car that can incrementally adjust its speed
9 through a series of changes that integer multiples of, say, miles per hour is
10 effective at navigating traffic because a user can adjust their speed based on
11 the environmental needs and things that are happening external to what
12 they're doing.

13 Now, the claims of the '204 patent are no different. They clearly
14 relate to a power transfer system that allows for fine-tuning of the
15 transmission frequency through a series of incremental changes or through
16 those incremental steps. And when we look at the specification -- and here,
17 I'm looking now on Slide 28, we see that there's this feedback loop that's
18 being implemented and being disclosed in Figure 6d, where the frequency is
19 being increased or decreased based on the series of feedback signals that its
20 receiving.

21 So, it's very inherent to the claims and incorporated in the
22 specification that's describing exactly what's going on here.

23 JUDGE FLAX: Just to make sure I'm clear, on incremental value,
24 which is what we're talking about now, are you asking us to interpret the "an
25 incremental value" to mean more than one incremental value?

1 MR. NASH: Not necessarily. We're asking that the term be
2 interpreted according to its plain and ordinary meaning, which excludes just
3 the selection of discrete values. You know, there needs to be kind of this
4 stepping through in order to get from point A to point B. There's going to be
5 fine-tuning and selection of values.

6 JUDGE FLAX: So are you asserting what the word "incremental"
7 means?

8 MR. NASH: In a sense, yes, we are.

9 JUDGE FLAX: And what does "incremental" mean?

10 MR. NASH: Well, so incremental, if you look at some of the
11 dictionary definitions that were provided in Exhibit 2006 and cited in the
12 record in Exhibit 2007, "incremental" is defined as a series of regular
13 additions or contributions. It's an increase or an addition, especially one of a
14 series. So the term "incremental" infers a series of changes. It's inherent to
15 that definition and it's inherent how that term is being described and utilized
16 in the --

17 JUDGE FLAX: Okay. So can I get an analogy where you tell me
18 --

19 MR. NASH: Certainly.

20 JUDGE FLAX: -- how that works? Let's take a -- for an ordinary
21 ruler, one foot. So 1 foot has 12 increments of inches, right?

22 MR. NASH: Correct.

23 JUDGE FLAX: So if I wanted to adjust that length measurement
24 by an incremental value, I could adjust that measurement by an inch?

25 MR. NASH: Yes, potentially.

1 JUDGE FLAX: Or a quarter of an inch?

2 MR. NASH: Certainly.

3 JUDGE FLAX: An eighth of an inch?

4 MR. NASH: Certainly.

5 JUDGE FLAX: Okay. So why does it matter that you're doing
6 these calculations behind the scenes if you can have this region of your
7 graph that you care about, which is the linear region, substantially, where
8 you can make an adjustment within that area? It's some subpart of it? Just
9 like an inch or a quarter inch or an eighth of an inch is a subpart of a foot, if
10 you moved it a bit, any bit, rather than all? Why is that not sufficient?

11 MR. NASH: And again, I think we're maybe talking past each
12 other. I may have misspoken a little bit there earlier. We're not necessarily
13 trying to define what incremental means, we're explaining what doesn't
14 satisfy, kind of, that incremental term.

15 So just a little bit --

16 JUDGE FLAX: (CROSSTALK) --

17 MR. NASH: A little bit of the opposite there. And it's --

18 JUDGE FLAX: Let's go the other way --

19 MR. NASH: And it's --

20 JUDGE FLAX: -- and define what it really does mean?

21 MR. NASH: But I think, coming to your analogy of this --

22 JUDGE FLAX: Okay.

23 MR. NASH: -- ruler, you can't select a different ruler of 24 inches.
24 You can't select -- kind of, jumping around. And it's --

25 JUDGE FLAX: Okay. That make sense that you would not be

1 able to select something that's bigger than the thing that you're dividing up
2 into increments. That makes sense. So what is to stop you from saying that
3 anything that is a part of that whole thing is an increment? Which it looks to
4 be in some of this prior art, that you have little pieces of it where an
5 adjustment is made. Why is that not an increment?

6 MR. NASH: So, in those contexts, the specification -- or, I guess,
7 the prior art in which it's being described, it's unclear if they're going
8 through those series of steps to go from point A to point B, or if they're
9 merely jumping from, like, this analogy that Dr. Mercier provided of going
10 from zero miles per hour to 50 miles per hour, to 20 miles per hour, and
11 they're just selecting these values. There's no change or rate of change. So
12 it --

13 JUDGE FLAX: In the analysis, behind the scenes, of what
14 increments that make up the whole range and then, adjust by one of them?
15 Is that what you're saying?

16 MR. NASH: I'm not sure I'm following your question there.

17 JUDGE FLAX: Well, you're using the speed analogy where --

18 MR. NASH: Yes.

19 JUDGE FLAX: -- where a car is driving and it can adjust its speed
20 to 25 miles per hour or 50 miles per hour. But, you know, if the car can go a
21 maximum of a 100 miles per hour, aren't any of those sub-speeds that are
22 lower than a 100 miles per hour increments, if you changed it. If I'm driving
23 50 and I change it to drive 25, is that not an incremental change? --

24 MR. NASH: I think that's where there's -- there's a difference
25 between just a simple increase in an incremental increase. It's Patent

1 Owner's position that the way in which this term is being construed, and the
2 way in which this term is being implemented in Patent Owner's arguments,
3 is they're reading out the term "incremental" and they're just saying there's
4 an increase.

5 So again, the term "incremental" does have meaning and we can't
6 necessarily read that out of the claim itself. And jumping from, you know,
7 again, with the analogy that Dr. Mercier provided of jumping from zero
8 miles per hour to 50 miles per hour, is an increase. We're not seeing an
9 incremental increase, kind of based on that analogy.

10 JUDGE BARRETT: I find that analogy painful and so I can't say
11 -- we're not talking about a car where you can go -- zero and 60 are your two
12 increments, but in a charging system, maybe it makes sense to go from zero
13 charging to 60 percent. And you're saying that's not an increment?

14 MR. NASH: Well, I think, again, we'd have to look at the specific
15 systems there, and a person of skill would understand what the parameters
16 are and how those are being implemented. So, certainly, it's done in some
17 systems going from zero to 60 percent charge could be an incremental step,
18 but in other applications it may not be. And again, that's where we're -- the
19 focus of the '204 patent is focused on this ability to finely tune and select a
20 transmission frequency to enable an optimization of charging.

21 JUDGE BARRETT: I'm going to go back to a question I asked
22 earlier. Is Patent Owner's construction -- are you asking us to require a
23 series of small adjustments in your (INDISCERNIBLE)?

24 And let me tell you what I'm coming from. In page 5 of Patent
25 Owner's surreply -- you don't need to go there, but it says, "Patent Owner is

1 not arguing that the Board construed the term to require a series of small
2 adjustments." But then, I look at Slide 22 of your demonstrative exhibit, at
3 the bottom, you're saying the issue is whether it requires a series of small
4 adjustments, which seems to -- the Patent Owner's proposed construction.

5 MR. NASH: And I apologize. I think this is kind of a
6 misstatement on the demonstratives. We were certainly wanting to be
7 consistent with our reply and with the briefs that we've presented before the
8 Board. And again, the main issue is kind of this selection of discrete values,
9 is what it's at.

10 JUDGE BARRETT: Let me stop you for moment, because I
11 -- and I apologize if I seem frustrated, but I am. You keep coming back to
12 saying, "Petitioner's wrong", that's why we win. We have to construe these
13 claims and simply saying -- I think Petitioner argued there's no real
14 difference between a discrete change and an incremental change, and you
15 said, "Yes, there is." Like, what's the difference?

16 MR. NASH: Well, a discrete change, again, would be a mere
17 increase. An incremental change is looking, kind of, at that process of
18 maybe getting there. And we're not dealing with just increases. All claim
19 terms are presumed to have meaning, and in this case, the term
20 "incremental" certainly does, and that's based on how the term is being used
21 in the specification. Which again, if we look at Figure 6d, it's receiving a
22 series of feedback signals. It's implementing a series of changes.

23 Now, certainly, the claims don't necessarily require that series of
24 changes, but when we're looking at a system, that system -- a person of skill
25 would recognize whether we're dealing with an incremental change or just

1 merely an increase. And the importance is having an incremental enough
2 change and giving meaning to the claim terms themselves.

3 But if there are no further questions, I'll move on to a few of the
4 other issues kind of with the prior art. And specifically, I want to start with
5 limitation 1.5 in Slide 34.

6 Now, Petitioner's argument that Onishi either alone or in
7 combination with Purdy teaches limitation 1.5 is first and foremost based on
8 an improper visual inspection of Onishi's Figure 4. Limitation 1.5 requires a
9 driving voltage oscillating at a non-resonant transmission frequency
10 substantially different from said characteristic resonant frequency of said
11 inductive couple.

12 And Petitioner asserts the frequencies f_1 , f_2 , f_3 , as illustrated in
13 Figure 4, lie in a near-linear region of the frequency response curve, and are
14 thus, substantially different from the characteristic resonant frequency f_0 .
15 However, closer examination of Figure 4 -- and Onishi demonstrates that
16 this is unsupported by the prior art. In fact, Onishi lacks the specificity
17 required by Element 1.5.

18 So turning now to Slide 35, we see that Figure 4 appears to show
19 points of frequency f_0 , f_1 , f_2 , and f_3 , but this figure lacks labels and renders
20 any interpretation of Figure 4 as being merely speculative. The lack of
21 clarity is further evident by paragraph 181 of Onishi, and the requirement
22 that the relationship f_1 is greater than f_2 , is greater than f_3 , is satisfied.

23 Now, if we're looking at paragraph 181, and we're comparing that
24 with Figure 4, then the X axis in Figure 4 cannot be frequency because that
25 relationship is not satisfied. And this undermines the entirety of Petitioner's

1 argument that Figure 4 is representative of what's being taught in the '204
2 patent.

3 Now, at best, Figure 4 shows a relationship between frequencies,
4 but what that relationship is, is unclear. Nothing indicates that Figure 4 is
5 drawn to scale and nothing indicates that Figure 4 shows the actual locations
6 of frequencies f_1 , f_2 , and f_3 . Moreover, Figure 4 is entirely devoid of
7 guidance as to what the Y axis may be.

8 Now, Dr. Mercier, in Exhibit 1102 starting on page 53, testified
9 that, "It's very unclear to me what Figure 4 is actually representing. Is this
10 voltage? Is this Power? Is this impedance? Is this efficiency? Is this
11 resistance? Is it inductance? I don't know. It's not specified in Onishi."

12 Now, if we turn now to Slide 36, even assuming the Y axis is
13 resonance peak, which is being illustrated here, the application in Figure 4,
14 still does not make any sense because resonance peak is not a variable that
15 varies with frequency. It's a single frequency that is achieved at peak
16 impedance, voltage, current, or some other electrical characteristic, none of
17 which is shown on Onishi in Figure 4.

18 Now, turning now to Slide 37, we see that Dr. Woods -- and this is
19 Petitioner's expert, he testified that, "We don't know exactly what the
20 vertical axis is in Onishi." And turning now to Slide 38, Dr. Woods further
21 testified and acknowledged that Onishi is kind of playing fast and loose here
22 and stated that, a person of skill would understand that the term "resonance
23 peak" to be the title for the entire graph as opposed to a point on the graph.

24 So again, we're seeing this lack of clarity that even Dr. Woods can't
25 reconcile this lack of clarity that's in Onishi.

1 And turning now to Slide 40, Dr. Mercier testified that Figure 4
2 depicts a very confusing curve due to the lack of labels on the respective
3 axes. And this confusion leads to why Petitioner has not shown how
4 limitation 1.5 is met by Onishi. And again, it's hinging on this visual
5 comparison of Figure 6b and Figure 4 of Onishi. And the lack of specificity
6 makes it so you can't have this one-to-one comparison.

7 But even if we were to assume that Figure 4 represents a similar
8 curve as to that which is disclosed in Figure 6b of the '204 patent,
9 Petitioner's position on what is taught by Onishi is inconsistent, turning now
10 to Slide 41. For example, Petitioner asserts that frequencies f1, f2, and f3
11 fall within the near-linear region of the frequency amplitude graph, but they
12 also argue that Onishi only discloses the relative positions of these
13 frequencies.

14 So if Onishi only discloses relative positions of frequencies, it can't
15 be relied on to affirmatively disclose frequencies that lie within any specific
16 region of the frequency amplitude graph.

17 Turning now to Slide 42, we see --

18 JUDGE FLAX: Are all those frequencies in the linear part of that
19 curve? I mean, just the way that they're drawn, they're in the linear part,
20 visibly, no?

21 MR. NASH: I think argument could be made that, you know,
22 frequency f2 is drawn within that linear region. I think frequency f3 and
23 frequency f1, I think they fall outside of that. But when we look at the
24 actual specification of Onishi, it actually provides some guidance as to
25 where these frequencies actually lie on the curve despite, you know, only

1 providing relative positions.

2 And if we look at Slide 42, which is what we're on, it says, "The
3 transmission frequency during power-saving power transmission is set at a
4 frequency apart from the resonance frequency as compared with the
5 frequency during normal power transmission, for example." So frequencies
6 f_1 and f_2 in Onishi represent the normal power transmission frequencies.

7 So we know from Onishi that these are not apart from the
8 resonance frequency, which means their near the resonance frequency. And
9 frequency f_3 is a frequency that's selected for low-power transmission,
10 which indicates that it's down kind of on the lower portion of that curve,
11 where little to no power is being transmitted.

12 So based on Onishi's own disclosure of kind of the relative
13 locations of these frequencies, they appear to fall outside of this linear region
14 because they're either out or near the resonance, which is contrary to the
15 teachings of the '204 patent, or they're further down on that curve at a point
16 where little to no power is being transmitted.

17 JUDGE BARRETT: I'm not making a connection. If little or no
18 power is being transmitted, why does that mean it is not on the near-linear
19 portion of the curve? What's the logical tie?

20 MR. NASH: Well, there's nothing that indicates that it is or isn't.
21 And Petitioner has --

22 JUDGE BARRETT: But you just argued as if that was the holy
23 grail, if it's down on that part of the -- there's not a lot of power transmitted,
24 so therefore --

25 MR. NASH: Well, I think when you look at a curve and if it's

1 representing power and you're going to a point where little to no power is
2 being transmitted, that's going to be on the tail end of the curve. But again,
3 this is -- Petitioner has the burden of proof to demonstrate that Onishi
4 discloses these elements. And Onishi is vague at best as to what's actually
5 being disclosed, and they haven't met that burden of proof.

6 JUDGE FLAX: Isn't the only way we know whether a frequency
7 is substantially different is whether it's on the near-linear part of that curve?

8 MR. NASH: Yes, correct. With the '204 patent, that's what we're
9 looking at. But again, Onishi doesn't have the specificity required to
10 determine where those frequencies are actually being selected or placed.

11 JUDGE FLAX: Following from your opposing counsel's
12 argument, Onishi is displaying on its Y axis power. It's describing power
13 and power is directly proportional to voltage. So isn't this directly
14 comparable to what's shown on your Figure 6a or b?

15 MR. NASH: Well, again, that's where we don't know because,
16 again, according to Dr. Woods, this graph may be representing a resonance
17 peak, which doesn't vary with regards to frequency. We also don't know
18 what those frequency values represent because again, looking at paragraph
19 181 in Onishi, it requires that frequency f1 is greater than frequency f2,
20 which is greater than frequency f3. So if we're looking at that, then the X
21 axis cannot be frequency.

22 And again, these are just the deficiencies in Onishi that render it a
23 reference that doesn't clearly disclose what Petitioner is asserting it does
24 disclose, and they have the burden of proof and they haven't met that burden
25 with regards to, at least, Onishi.

1 JUDGE FLAX: Oh, so your argument is that the frequency f_1 is a
2 higher frequency than f_3 ?

3 MR. NASH: Correct.

4 JUDGE FLAX: Even though the arrow on the X axis is pointing
5 in the direction that it's pointing, which normally would indicate increasing?

6 MR. NASH: Well, correct. If we look at -- again, back on Slide
7 35, if we look at paragraph 181, the relationship f_1 is greater than f_2 , is
8 greater than f_3 needs to be satisfied. And if that is satisfied, then again, we
9 don't know what's being depicted here in Figure 4 because there are no
10 labels. But if that's the case, then it would have to be the Y axis is
11 potentially representing frequency, and the X axis, we don't know what that
12 actually means.

13 JUDGE BARRETT: So just because the greater than, less than
14 symbols are backwards, that would confuse the person of ordinary skill in
15 the art? They wouldn't understand that that applies to the figure?

16 MR. NASH: Well, I think it's when you look at Onishi as a whole,
17 you're seeing all of these deficiencies throughout. And again, Figure 4
18 -- turning back to Dr. Woods' analysis, and this is, again, Slide 38, Onishi is
19 kind of playing fast and loose here. We don't have the specificity required to
20 draw any clear conclusions as to what is actually being taught.

21 And if you contrast that with the '204 patent in Figure 6b, there's
22 very clear parameters as to what we're looking at there. And it defines that
23 we're looking at that near-linear region of the graph. And provides kind of a
24 detailed analysis as to what that actually entails and means.

25 Now, I know I'm kind of running up my time, so I'd like to use

1 another five minutes and cut into rebuttal here to hit on a few additional
2 points.

3 So looking now at Slide 50, and this is with regards to limitation
4 1.7, Petitioner -- again, and they're reasserting this visual inspection of
5 Figure 4 and Figure 6b. And they argue that, in fact, the delta between
6 Onishi's frequencies f_2 and f_3 (and between f_1 and f_2) is shown to be of a
7 similar scale to the incremental increase δf depicted in Figure 6b of the '204
8 patent. And they've drawn this nice image trying to demonstrate that the δf
9 appears to be the same.

10 But this argument is misleading and also factually incorrect. A
11 visual inspection will show that the X axes in Figure 4 and Figure 6b aren't
12 actually aligned, and that the peak of this parabolic curve are different. And
13 Dr. Mercier explained that Figure 6b and figure similar to this, a person of
14 skill would recognize kind of that δf is being an exaggerated incremental
15 frequency drawn for clarity.

16 And looking on Slide 52, if we realign the X axis and bring Figure
17 6b for the peak to align with Figure 4, we see that that scale of the δf is
18 actually significantly smaller than what's being depicted in Figure 4. So
19 again, there's this visual inspection that's going on here and it's not proper
20 based on what's being taught in the specifications.

21 Now, turning now to Ground 2, Baarman392 discloses Figure 3
22 -- and this is Slide 54, and again, Petitioner attempts to rely on this visual
23 comparison between Figure 6b and Figure 3 of Baarman. Now, on its face,
24 Figure 3 of Baarman illustrates a completely different curve than what's in
25 Figure 6b. Figure 6b illustrates the relationship between operational voltage

1 and transmission frequency, and Figure 3 illustrates the relationship between
2 power transfer efficiency and frequency.

3 So we're not talking about power, we're not talking about voltage,
4 we're not talking about current in Figure 3. We're talking about power
5 transfer efficiency.

6 JUDGE BARRETT: Is Figure 3 in Baarman -- would you agree or
7 disagree that that's an amplitude frequency curve?

8 MR. NASH: I'd say it's some sort of frequency curve, but again, if
9 we look at Slide 55 here, Dr. Mercier explains the difference between
10 operational voltage and power transfer efficiency, so you can't compare the
11 two in a one-to-one way. Dr. Mercier explained that power transfer
12 efficiency is a measure of the ratio of power numbers and that formulas exist
13 for converting voltage to power and subsequently, to efficiency.

14 So you have to go through a series of conversions in order to get to
15 a power transfer efficiency curve, as opposed to an operational voltage
16 curve. So again, on their face, these are two different graphs and images and
17 figures.

18 And Dr. Mercier explained that a plot of an operational voltage
19 versus transmission frequency might look quite a bit different than a plot of
20 power transfer efficiency versus transmission frequency, and Petitioner
21 offers no arguments to bridge the gap between these discrepancies.

22 So turning now to Slide 59, even if we were to assume that
23 Baarman's graph can be relied upon, again, we don't have the specificity
24 required in Baarman to draw the same analogies. And again, this is similar
25 to the Onishi grounds. So we know in Baarman is that Figure (sic) B is

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1 somewhat less than the resonant frequency, but a frequency that's somewhat
2 less than is, by definition, not substantially different from the resonant
3 frequency.

4 JUDGE BARRETT: But what definition? You say by -- you
5 throw that around, somewhat less than is, by definition, not substantially
6 different, what's the source for that?

7 MR. NASH: So if we look at Slide 60 with Dr. Woods' testimony,
8 he explains that since Frequency B is not -- or am I looking at the right one?
9 I apologize. I apologize. I don't have it in front of me, but Dr. Woods, in his
10 testimony, testified that being somewhat less than, or being apart from, is
11 indistinguishable. Actually, pardon that.

12 JUDGE BARRETT: Are you referring to the deposition
13 (CROSSTALK) --

14 MR. NASH: I think -- yeah. And I think I may be conflating his
15 testimony with regards to Onishi and Baarman, so I apologize for that right
16 now.

17 JUDGE BARRETT: That was the antonym question?

18 MR. NASH: Correct. Yes. And again, I think may be --

19 JUDGE BARRETT: Yes, I got it. I see your point.

20 MR. NASH: -- mixing that up in my head.

21 JUDGE BARRETT: What you're talking about. Yes. So --

22 MR. NASH: So I apologize if I've misstated something incorrectly
23 there. But really, what's going on here is Petitioner is attempting to basically
24 argue that any frequency that is not on resonance falls within this
25 substantially different linear region and that's just not correct.

1 And I think as we take a closer look at Baarman, we can see that
2 Baarman relies on -- looking at Slide 63, relies on this piece-wise
3 linearization by a software lookup table and that's utilized for predicting
4 different results on a curve that's non-linear. So Baarman is stepping
5 through this non-linear curve in order to get results. So again, we can see
6 that Baarman is outside of that near-linear region of the graph.

7 But unless there are any questions, I'd like to reserve the remainder
8 of my time for rebuttal.

9 MR. STEPHENS: Thank you, Your Honors. I'd just like to
10 address a few points on our rebuttal.

11 JUDGE FLAX: Counsel, what does it mean in Onishi at paragraph
12 181 where it says as is clear in Figure 4 the relationship "f1 is greater than
13 f2, is greater than f3" is satisfied?

14 MR. STEPHENS: Dr. Woods addressed this in his reply
15 declaration at Exhibit 1101, paragraph 48. And what a POSITA would
16 understand from that sentence is that the relationship, f1 is greater than f2, is
17 greater than f3 refers to the power transfer being higher at f1 than the power
18 transfer being higher at f2 and f3. So that's how Dr. Woods understands the
19 disclosure at paragraph 181.

20 Another way that it can be understood, also, the '204 patent tells us
21 this, Baarman tells us this, I don't recall if Onishi expressly states this, but a
22 POSITA would understand, you can operate on either side of the
23 characteristic resonant frequency. So if you just flipped Figure 4, you can
24 also operate on the left side, go up and down the near-linear region on that
25 side. And in that case, that inequality would be satisfied in terms of f1 being

1 greater than f_2 , being greater than f_3 .

2 But I don't think there's any question the x axis in Figure 4 is
3 demonstrating the transmission frequency. And that's, I think, clear from the
4 labels in Figure 4 itself, which indicate that f_0 is the resonance frequency in
5 load connected state, you know, and f_1 , f_2 , f_3 are each transmission
6 frequencies in the normal or power-saving transmission modes.

7 Generally, I'd also direct Your Honors to paragraphs 27 to 48 of
8 Dr. Woods' reply declaration. He addresses many of the points that Patent
9 Owner's Counsel raised during their presentation today. And I think the
10 conclusion he draws is that there really is a substantial overlap between the
11 figures shown in the prior art, in this case, Onishi, Figure 4 and Figure 6b of
12 the '204 patent.

13 With respect to Baarman, I would note that Patent Owner has
14 never disputed that Figure 3 is a frequency amplitude graph, which is all
15 that's required. But as I mentioned in my direct, our conclusion and Dr.
16 Woods' conclusion that the transmission frequencies in Baarman lie in the
17 near-linear region. It's not solely based on just a visual inspection of Figure
18 3.

19 Again, we know from paragraphs 38 and 56 of Baarman that the
20 operating frequencies extend from frequency B relatively close to resonance,
21 to frequency A, the tail-end far from resonance. That's what Baarman says.
22 And Dr. Mercier and Dr. Woods, both agree that the near-linear region lies
23 between those two frequencies. So we know from that operating algorithm
24 that you are going up and down the curve between those two frequencies
25 you're going to pass through the near-linear region.

1 Finally, I just mentioned, like to note as to the construction of
2 substantially different on Slide 11 of our demonstratives. Again, looking at
3 the prosecution history, what did the Applicant state to the Examiner when
4 they were addressing this claim during prosecution. They said the term
5 "substantially different" should be interpreted to mean that the frequency of
6 the driving voltage is selected so as to lie within one of the near-linear
7 regions of a frequency amplitude graph associated with the inductive couple.
8 Nothing more, nothing less.

9 Our position is that this statement should apply in terms of
10 prosecution disclaimer, but in terms of, you know, in trying to say anything
11 more or less in terms of linear controls is required, we think that wasn't
12 clearly raised with the Examiner during prosecution, and therefore,
13 prosecution disclaimer would not apply to that extent.

14 I'm happy to take any further questions. Otherwise, we have
15 nothing further.

16 JUDGE BARRETT: I think we're fine. Thank you.

17 MR. STEPHENS: Thank you.

18 MR. NASH: So I'll be brief, but if there are no specific questions
19 -- but I have a couple of points that I wanted to reiterate. First, in looking
20 Onishi and looking at Baarman, Petitioner is attempting to rely on this visual
21 inspection of these figures. As explained in the papers and explained in
22 argument, that visual inspection is improper when you actually dive into the
23 meat of what these prior references state. There's a lot of ambiguity and lack
24 of clarity and Petitioner has that burden of proof and they haven't satisfied
25 that burden.

1 And the second point is that Onishi and Baarman, despite having
2 frequencies that are represented, those are merely relative positions in
3 frequencies. We don't know where those frequencies lie on the graph.
4 There's no clear indication as to what those frequencies -- or how to
5 calculate where those frequencies would lie, so we're relying on these
6 references to say that they fall within that linear region of the resonance
7 curve is improper without additional support.

8 And then, again, speaking on, at least, the claim construction
9 positions, it's Patent Owner's position that our arguments are supported by
10 the prosecution history and are clearly taught throughout the '204 patent.

11 But if there are no further questions, I will end my arguments
12 there. So, thank you.

13 JUDGE BARRETT: Thank you. That concludes the case -- Mr.
14 Nash, I would like to say, I appreciate you stepping in as a LEAP
15 practitioner. The bench's been hot at times, but that's not necessarily a
16 reflection of your skill set. It's a tough case for both parties, but --

17 MR. NASH: Well, I appreciate that. Thank you.

18 JUDGE BARRETT: Okay. If there's no objection from the
19 parties, do you want to take a -- say, a 10-minute break? All right.

20 (Whereupon, the above-entitled matter went off the record at 2:13
21 p.m. and resumed at 2:25 p.m.)

22 JUDGE BARRETT: All right. We are ready for the second case.
23 That would be 996, I believe. Let's just get right into it. Petitioner,
24 whenever you're ready. And how much time would you like to reserve?

25 MR. STEPHENS: We'd like to reserve 15 minutes, Your Honor.

1 JUDGE BARRETT: All right. So out of 60 minutes which would
2 be 45, correct?

3 MR. STEPHENS: Yes. May it please the Board, Nicholas
4 Stephens on behalf of Petitioner, Anker Innovations. I'm here with lead
5 counsel for Anker, Michael Hawkins.

6 Turning to Slide 5 of petitioner's demonstratives, please. Before
7 turning to the disputed issues, I'd just to briefly orient ourselves around the
8 technology disclosed in the '461 patent. An example embodiment is shown
9 here in Figure 5 from the '461 patent on Slide 5 of the demonstratives. And
10 what's depicted here is an efficiency monitor, 4300, that comprises an
11 inductive power outlet labeled 4210 and an electric device, 4290.

12 The inductive power outlet includes a driver, 4230, that provides
13 AC power to a primary inductive coil, 4220. Now, this cause the primary
14 coil, 4220, to produce an oscillating electromagnetic field, which in turn,
15 induces an oscillating current in the secondary coil, 4260. The power drawn
16 by the secondary coil, P-out, is obtained by an output power monitor, 4124,
17 which communicates this information to a processor, 4162, in the inductive
18 power outlet 4210.

19 The processor, 4162, also obtains the value of power-in, which is a
20 measurement of the input power delivered to the primary coil, 4220. The
21 processor, 4162, then determines an index of power loss by taking either the
22 difference between the power-out and power-in measurements, or by
23 calculating the ratio of power-out divided by power-in.

24 Slide 6. And Figure 7 shows an example process in the '461
25 patent. Figure 7 illustrates how the calculated index of power loss can be

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1 used to determine when to cease power transmission from the primary coil.
2 For example, in Step F, the '461 patent discloses that the primary coil can be
3 disconnected from the power supply if the efficiency quotient Q is below a
4 certain threshold or if the efficiency differential is above a threshold, thereby
5 preventing power leakage.

6 Slide 8, please. The techniques disclosed and claimed in the '461
7 patent, however, were not new or innovative before the 2007 critical date.
8 The Petition demonstrated through Grounds 1A through 3 that the claims
9 would have been unpatentable based on prior combinations of Olson,
10 Stevens, and Jin.

11 Now, with several grounds here, I won't be able to address every
12 detail of these grounds during our direct presentation, but I do hope to, at
13 least, briefly address the main points that have been disputed in the
14 proceeding. I'll begin with claim construction and the proper scope of
15 Limitations 13.1 to 13.2 relating, respectively, to in-power received by the
16 primary coil and output power received by the secondary coil, and then I'll
17 plan to discuss how the prior art satisfies those limitations.

18 Forward to Slide 14, please.

19 JUDGE BARRETT: Counselor, I'm going to kind of throw you
20 off here, but I wanted to get a question out here first. Claim 15, I realize that
21 is directed at the secondary coil as opposed to Claim 13, which is the overall
22 -- both coils together, but at the end of Claim 15 there's a reference to Claim
23 13. Does that pull in all of the limitations of Claim 13 into Claim 15?

24 MR. STEPHENS: Our view is that it does, Your Honor. We
25 believe this is -- you mean unconventional dependent claim, but it does

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1 specifically reference Claim 13, and so, it is pulling in all the limitations
2 from Claim 13 in our view.

3 JUDGE BARRETT: All right. Thank you.

4 MR. STEPHENS: I'd like to begin with the claim construction of
5 Element 13.2, which recites data pertaining to output power received by the
6 secondary coil. I'm taking these out of order because we have presented
7 arguments with respect to Element 13.1, the proper breadth of that claim
8 limitation, also the proper breadth of 13.2 limitation, but I think the
9 examples that I'll highlight with respect to 13.2 really make the issue come
10 alive.

11 Slide 15, please. Patent Owner, like Petitioner, purports to apply
12 the plain and ordinary meaning of Elements 13.2 and 13.1. But Patent
13 Owner's arguments to distinguish the prior art implicitly construe the claims
14 to require, it's our understanding, direct measurements of power received
15 only by the secondary coil.

16 For example, as shown here in Slide 15, in Ground 1A, Patent
17 Owner argues that Olson fails to meet the claim limitations because Olson's
18 power measurement allegedly occurred downstream of the secondary coil as
19 shown by the snip on Slide 31. They argue, power measurements at
20 rechargeable power source 24 are different than power measurements
21 received by the secondary coil because power is transferred to other
22 components between the secondary coil and the rechargeable power source.

23 Slide 16, please. Based on our review of the specification and Dr.
24 Woods' analysis of the specification; however, we can find no support for
25 importing a requirement for directly measuring power received only by the

1 secondary coil. In fact, if you look at the diagrams that's provided in the
2 patent, Figure 2b actually has no measurement circuitry for measuring the
3 power out on the secondary side.

4 Slide 17, please. Now, significantly, Powermat's construction is
5 inconsistent with the '461 patent's description of the total power, P_2 , drawn
6 by the secondary coil, L2. So if we look at Figure 2b, we can see there's a
7 secondary coil, L2, which receives power drawn by the primary coil, L1.
8 Following L2 is a block labeled 2270. That's an AC to DC converter, 2270.
9 In this example in Figure 2b, the AC/DC converter is implemented with a
10 diode and a capacitor that together form a half-wave rectifier.

11 And then, we can see to the right of that half-wave rectifier is a
12 voltage labeled V_{22} of T. To left of the half-wave rectifier is a different
13 voltage, V_2 of T. so V_2 of T is the voltage that's actually across the
14 secondary coil, L2. V_{22} of T is the power that's produced by the half-wave
15 rectifier, so not directly across the secondary coil.

16 But what do we see in the specification? This is shown on Slide
17 17. It says, the specifications states that, "With the ancillary load, 2144
18 connected, the total power of P_2 drawn by the secondary coil, L2, is given
19 by the equation, P_2 of T equals V_{22} of T, times the current.

20 Now, it's notable that they've used not V_2 of T to characterize the
21 total power, P_2 , drawn by the secondary coil, but instead, V_{22} of T, that's
22 the output of the half-wave rectifier. So why is that significant? Well, Dr.
23 Woods explained, as shown on Slide 18, the POSITA would have
24 recognized -- this is according to Dr. Woods, that the AC to DC converter,
25 2270, is a half-wave rectifier.

1 And it's well understood that half-way rectifiers are inefficient
2 because they pass only the positive half-wave portion of the AC wave form
3 induced in a secondary coil as usable DC power. In fact, theoretically, the
4 best efficiency you could obtain from a half-way rectifier is 50 percent. But
5 if you account for a voltage drop across the diode, we have evidence that
6 shows the actual efficiency that you're going to achieve in practice with a
7 half-wave rectifier is 40.6 percent.

8 There's a 60 percent power loss from the power drawn by the
9 secondary coil, L2, through that half-wave rectifier. And yet, the
10 specification says that the power produced by the half-wave rectifier is still
11 an adequate representation of the total power, P2, drawn by the secondary
12 coil, L2.

13 So this is telling us when the claims refer to power out received by
14 the secondary coil, it doesn't have to be a direct measurement directly at the
15 coil, because that's not what's used actually in the equation given to us in the
16 specification. Notably, Patent Owner never cross-examined Dr. Woods on
17 his reply declaration testimony.

18 Slide 19, please. Another problem we find with Patent Owner's
19 implicit interpretation is that it seems to read out the words "pertaining to"
20 recited in Claim 13.2. Again, the claim language refers to a signal detector
21 configured to detect signals carrying data pertaining to output power
22 received by the secondary coil. And we see that, you know, we have
23 dictionary definitions pertaining to have reference or relevance, or to relate,
24 but it certainly doesn't require a direct measurement as has been advanced in
25 the arguments for distinguishing the art in the POR.

1 Slide 20, please. Based on the intrinsic evidence, the plain
2 meaning of Element 13.2, as Dr. Woods explained, encompasses output
3 power measurements that include negligible and/or predictable power losses.
4 So the shorthand that we used in the briefing for this is inconsequential
5 losses. What Dr. Woods has explained, that can encompass -- an
6 inconsequential loss could be a negligible loss, which would be a very small
7 power loss, which is going to be inherent in any measurement.

8 It could also include predictable losses, so we might consider the
9 AC to DC converter in Figure 2b that we just looked at as maybe not
10 negligible because it's a 60 percent power loss, but it's still predictable. So
11 we know that the amount of power that's lost to cross the rectifier, we can
12 account for it in calculating the power that's received by the secondary coil.

13 JUDGE BARRETT: So, just to be clear, you're saying because it
14 can be calculated, therefore, it's pertaining to?

15 MR. STEPHENS: We don't think that our understanding of what
16 power received by either the primary or secondary coil turns only on
17 pertaining to. You'll see that pertaining to language is only in Element 13.2,
18 not 13.1. But it's our position that the power drawn, whether power received
19 by either the primary or secondary coil doesn't require a direct measurement.
20 Pertaining to just enhances our position, we think, on Element 13.2.

21 JUDGE BARRETT: Okay.

22 MR. STEPHENS: And notably, both experts seem to agree on this
23 point. So Dr. Mercier submitted a declaration with the Patent Owner's
24 response where he was very critical of power losses in the prior art across
25 even very small claim elements, small circuitry elements, whether it be very

1 negligible losses. And yet, after we reviewed the specification at his
2 deposition, Dr. Mercier came to the conclusion that, as shown on the right
3 side of Slide 20, I think it's fair to say that the claim language is looking at
4 the output power received by the secondary coil.

5 If there are other things that are negligible, like, they simply just
6 don't matter to the power calculation, then if they happen to be in there and
7 they're negligible, yeah, I think that's fine. That is, we can disregard them.
8 Dr. Woods agreed because as an engineer, we know that to take a power
9 dynamic, there is no perfect measurement of any value. And so, we have to
10 be realistic about what can be achieved.

11 Finally, I'd like to take it just off the slides for a moment. Patent
12 Owner submitted an exhibit, Exhibit 2006, which is a transcript from a
13 hearing in the co-pending litigation between the parties. And if you look at
14 page 22 of that transcript, starting at line 22 --

15 JUDGE BARRETT: Did you brief this page, page 22?

16 MR. STEPHENS: I believe this is in our two-page reply that was
17 submitted after the Patent Owner's surreply.

18 JUDGE BARRETT: Okay.

19 MR. STEPHENS: We can see that what the Patent Owner's
20 counsel told the District Court is that there's no claim language that requires
21 there to be some direct measurement. So they seem to agree with us in the
22 District Court as to how we understand the claim language in the
23 specification, that there is no direct measurement required.

24 JUDGE BARRETT: You say they agreed with you in the District
25 Court. What was your client's position in the District Court?

1 MR. STEPHENS: So we argued two points. The District Court is
2 over kind of a different issue that's not relevant to the prior art here, which is
3 what is a power measurement. We've contended that a power measurement
4 is what it says it is, a power measurement, that is power, and what they seem
5 to be, as I understand it, identifying in the accused product is a current
6 sensor that just measures current. And so, that's not power.

7 Here, in the prior art, Olson, Stevens, Jin, they're all measuring
8 voltage and current, that it's calculating power from those, so that's a
9 different issue. We also did raise to the District Court the fact that there is
10 IPR prosecution disclaimer that applies under the Aylus Federal Circuit
11 precedent. And so we did notify the District Court that they've taken the
12 narrow interpretation of direct measurements being required in the IPR.

13 JUDGE BARRETT: I may be incorrect here, so feel free to
14 correct me, but does your client embrace that position with the District
15 Court?

16 MR. STEPHENS: Yes. So our position has been, I think
17 consistent between both forums, and that we're applying the plain meaning
18 in the IPR, we're applying the plain language in District Court. The
19 distinction, however, is that in District Court, IPR prosecution disclaimer
20 applies, and that's the Aylus case.

21 JUDGE BARRETT: But aren't you -- the second you start talking
22 about prosecution history disclaimer, aren't you changing from plain and
23 ordinary meaning?

24 MR. STEPHENS: We think that the prosecution disclaimer takes
25 out a portion of the claim meaning. So we started with the plain meaning,

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1 they raised arguments in the IPR, and so prosecution disclaimer immediately
2 takes effect. So it's not -- it wasn't, kind of, our choice to get to that position.
3 We've always had plain meaning applies, but when they raised these
4 arguments in the IPR that the claim should be interpreted more narrowly, we
5 have the right to inform the District Court of that under the Aylus precedent.

6 What the Federal --

7 JUDGE BARRETT: And you stipulate that that position is
8 correct? Patent Owner's position?

9 MR. STEPHENS: Our position is that the plain meaning applies
10 and the full breadth plain meaning for this IPR is that direct measurements
11 are not required.

12 JUDGE BARRETT: Okay. I understand your position.

13 MR. STEPHENS: And I think, just to put a final point on that, is
14 that the CUPP case which is also in our two-page paper that was submitted
15 after the surreply, the Federal Circuit explained that IPR prosecution
16 disclaimer doesn't apply in the IPR in which those arguments were made.
17 So that's kind of the distinction here, is that if they argue for a narrow
18 construction in the IPR, it applies immediately to District Court. It doesn't
19 apply in this proceeding.

20 The proper vehicle to narrow claims in an IPR is through a motion
21 to amend, not through, kind of, arguments about what, you know, claim
22 limitations should be interpreted narrowly. Does that answer your question,
23 Judge Barrett?

24 JUDGE BARRETT: I think you should probably just move on.

25 MR. STEPHENS: Okay. 13.1, I'll just touch on this briefly. The

1 language here recites at least one input power monitor configured to measure
2 input power received by the primary coil from the power supply. And for
3 similar reasons here, we can see that the intrinsic evidence doesn't support
4 Patent Owner's implicit interpretation as requiring a direct measurement.

5 Figure -- I'm sorry. I went to the wrong slide here. Backing up to
6 Slide 11, please. So Slide 11 shows Figure 2c of the '461 patent, and again,
7 the specification gives us a power equation that characterizes the power
8 provided to the primary coil, L1. Noticeably, that power equation uses a
9 voltage V1 of T, that is not the voltage that's across the inductor L1. And
10 it's, instead, the combined voltage across L1 and the current monitor.

11 And as Dr. Woods explained in his declaration, which is shown on
12 Slide 12, the effect of a count of calculating power based on the voltage, not
13 just across the primary coil, but also across the current sensor, is that you're
14 going to over-estimate the actual power that was received by the primary
15 coil because the voltage is going to be not just the voltage across the primary
16 coil, but it's also the voltage across the current sensor.

17 JUDGE BARRETT: Did your expert also concede that that would
18 be negligible amount of power difference?

19 MR. STEPHENS: Our expert agrees that it's a small -- yes, we
20 certainly -- we don't dispute that that's small, but I think if you look at Figure
21 2c, and also on the secondary side, the measurement that's taken after the
22 AC to DC converter, we can see that the full breadth of that limitation
23 doesn't require direct measurements. You can account for negligible or
24 predictable losses.

25 JUDGE BARRETT: Well, the argument you started with was

1 regarding language that was data pertaining to. And as you noted, we don't
2 have that language in 13.1. It seems to me to be a little more precise.

3 MR. STEPHENS: I would look again at Slide 17, Your Honor.
4 And I think the specification here is informative. When it says, "The total
5 power of P2 drawn by the secondary coil at L2 is V22 of T," the
6 specification is saying that the power that's drawn by the secondary coil or
7 received by the secondary coil as recited in the claim, can be calculated
8 based on a voltage where 60 percent of the power has been lost after the AC
9 to DC converter.

10 So that's independent of whether we're claiming "pertaining to" or
11 not claiming "pertaining to". This power equation says that we can still
12 carry across the power provided to the coil even when there's a 60 percent
13 power loss across the AC to DC converter.

14 JUDGE BARRETT: Okay. I understand your argument.

15 MR. STEPHENS: I'd like to move to Slide 21, please. And
16 Olson's anticipation of Element 13.1. The Olson prior art reference
17 discloses, generally, an implantable medical device having a rechargeable
18 power source that can be wirelessly charged by inductive coupling. In a
19 schematic diagram of Olson's wireless charger 48 is shown on Slide 22, here
20 in Figure 14. The petition and Dr. Woods explained that Olson discloses an
21 input power monitor that includes current measurable outcome between 226
22 and microprocessor 212.

23 And Olson explains in paragraph 74, reproduced at the top left of
24 the slide, that current measured by current measure block 226 is used in the
25 calculation of power in, along with the voltage of batteries 160. Notably,

1 Olson explicitly -- going on to that paragraph, Olson also explains that
2 power in is used in the calculation of efficiency of power transfer and/or
3 charging efficiency.

4 And Olson explicitly identifies the current measured by current
5 measurement block 226 as the current driving external antenna 52, that's
6 underlined in red at the bottom of paragraph 74. And when they refer to
7 external antenna 52, that's the primary coil 54 when the transmit block is
8 selected to provide power to the primary coil.

9 Dr. Woods explained in his reply declaration how the location of
10 the current measurement block 160 and battery 160 in Olson's charger
11 allows Olson to obtain a power-in measurement that clearly corresponds to
12 the true power received by the primary coil 54.

13 Slide 23, please.

14 JUDGE BARRETT: Before you move on, my take on the claim
15 language is there's also a relative position requirement here, too. We're
16 talking about power received by the coil from the power supply. And so, it
17 seems like the measurement needs to be between those two points?

18 MR. STEPHENS: Yes.

19 JUDGE BARRETT: Is that what is happening in Olson?

20 MR. STEPHENS: It is, Your Honor. So if you look at Slide 22,
21 we have Figure 14. The current measurement block 226 is positioned, you
22 know, clearly before the primary coil 54. But if you trace the total current
23 path, the power originates from those batteries 160 or the wall charger, the
24 desktop charger which is a 10-volt power supply.

25 JUDGE BARRETT: Not the 12-volt supply to the right of 226?

1 MR. STEPHENS: Correct, Your Honor. So the 12-volt supply
2 steps up the voltage that's provided from the batteries or the desktop charger.
3 But the power supply itself, which is used in the calculation of power-in by
4 Olson, they're looking at the power that's measured from the batteries 160
5 for the desktop charger.

6 JUDGE BARRETT: Okay. I understand your position.

7 MR. STEPHENS: Slide 23. And again, Dr. Woods explained that
8 because a direct measurement is not required -- we're looking at Olson's
9 disclosure in paragraph 74 and 75, the power-in equation that's used by
10 Olson is a measurement of the power that's received by the primary coil.

11 JUDGE SZPONDOWSKI: Counsel, I have a question about this.
12 With respect to Exhibit 2006 that we were just talking about, how is your
13 position here not inconsistent with the position taken there? Because it
14 seems like there, the argument was made that when the power is moving
15 through various components, there's power loss; measuring at the beginning
16 of the process is not the same as measuring at the primary coil and that
17 seems inconsistent to me with your position here.

18 MR. STEPHENS: Thank you, Your Honor. I would encourage
19 you to look at the start of the transcript, and I don't have the -- I can pull up
20 the transcript in a moment. But --

21 JUDGE SZPONDOWSKI: Yes, I read the whole transcript.

22 MR. STEPHENS: Okay. So you'll see that the -- Anker's counsel
23 was representing specifically what Powermat -- the Patent Owner's position
24 was in the IPR. And they were saying that because of the arguments that
25 were made in the IPR under the Aylus precedent, IPR prosecution disclaimer

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1 applies in the District Court proceeding.

2 If they argue for a narrow interpretation, as they've done here in
3 the IPR, then under Aylus they are not entitled to recapture the breadth of
4 the claim for purposes of infringement. However, under CUPP, that
5 disclaimer does not apply in this IPR proceeding, so the full breadth of the
6 plain meaning still applies in this IPR, and therefore, there's no requirement
7 for a direct measurement.

8 So that kind of explains, I think, what the positions are in District
9 Court and in IPR. Our position has always been, however, in both
10 proceedings, that the plain meaning should apply until they raised the
11 prosecution disclaimer that, you know, takes away their argument in District
12 Court to argue for purposes of infringement that a direct measurement is
13 required.

14 And again, you'll see that in the transcript, the first couple pages
15 Anker's counsel repeatedly said, "I want to inform you, Judge, of
16 Powermat's position in the IPR." So this wasn't, you know, something that
17 was initially raised by Anker in the District Court.

18 JUDGE SZPONDOWSKI: So then, in the District Court, you
19 were adopting the position taken by Patent Owner in the IPR?

20 MR. STEPHENS: Our position is that prosecution disclaimer
21 applies under the Aylus precedent in District Court. They can't recapture the
22 breadth of the claim that they've argued is narrower in the IPR. That's our
23 position in District Court.

24 JUDGE SZPONDOWSKI: Okay. Thank you.

25 JUDGE BARRETT: If you could go back to Slide 22, please. Let

1 me just tell you how I sort of feel about this and you can react. My take on
2 the claimed invention is, there's a concern over this efficiency of the
3 inductive transfer, coil to coil. And what you just explained on Olson is, it
4 seems like that would be measuring the efficiency of at least the entire
5 primary side, everything. And that doesn't seem to be what the claim was
6 looking for. Was really concerned with the subset of the system, namely the
7 inductive coil. The inductive coupling efficiency, if you will.

8 MR. STEPHENS: Yes. Maybe two points on that. One, we know
9 from, as we just reviewed from the claim construction section, that the
10 power equations given in the '461 patent tell us that they're not necessarily
11 looking at just the power that's delivered to the coils. They are
12 characterizing the power that's been, you know, delivered to the coil after a
13 60 percent power loss. But if we also look at Slide 24, please. I believe
14 paragraph 112 in Olson helps, hopefully, to address this concern.

15 So Olson makes it very clear that what he is concerned about is the
16 efficiency measured coil to coil. In fact, that's a phrase that Olson is more
17 explicit about and, I think, that even the '461 patent says, "For purposes of
18 some embodiments of the present invention, it's preferred that efficiency is
19 measured coil to coil." And going up a couple sentences, we see the
20 disclosure in Olson, "Efficiency is measured by dividing the power in that is
21 the power received by secondary coil 34 by the power out, that is the power
22 transmitted by the primary coil 54." Noticeably, this almost mirrors the
23 claim language.

24 "Efficiency is measured by dividing the power in, that is the power
25 received by the secondary coil." That is the claim language in Element 13.2,

1 and the power transmitted by primary coil 54. The only difference there is
2 that Olson uses the word "transmitted by primary coil 54," where the claim
3 says, "received by primary coil 54."

4 But we actually asked Dr. Mercier, Patent Owner's expert, about
5 this distinction in his deposition and he said that those two words are
6 equivalent, they mean the same thing. And we know that, actually, because
7 the words "received by the primary coil" are never used, actually, in the
8 specification of the '461 patent. The spec uses the same words as Olson
9 here, that says power "provided by the primary coil," or power transmitted
10 by the primary coil.

11 So I think Olson is clear that what he's concerned about is
12 measuring coil-to-coil efficiency. It's really measuring the efficiency of that
13 inductive coupling between the primary and secondary side. On the
14 secondary side, I'd like to talk about Olson's satisfaction of Element 13.2.
15 13.2 recites, again, at least one signal detector configured to detect signals
16 carrying data pertaining to output power received by the secondary coil.

17 In paragraph 75, Olson explains that power out is gauged by the
18 power induced in implantable medical device 16, and it's determined by
19 multiplying the voltage of rechargeable power source 24 by the charging
20 current in implantable medical device 16. Dr. Woods, as shown on slide 27,
21 has explained that the power induced in implantable medical device 27
22 equals the total power that's drawn by the secondary coil.

23 Further, we see on, again, Slide 29, looking at paragraph 112 of
24 Olson, Olson uses the same language as recited in the claims. Efficiency is
25 measured by dividing the power in, that is the power received by secondary

1 coil 34, by the power out. So Olson is looking at coil-to-coil measurements,
2 it's looking at the power received by the secondary coil, 34.

3 I'd like to forward to the Stevens grounds, if there's no further
4 questions on Claim 13 of Olson. And in particular, let's go to Slide 42,
5 please. In Ground 2 and Ground 3, we've relied on Stevens for Element
6 13.1, as well as 13.2. So again, 13.1 recites at least one input power monitor
7 configured to measure input power received by the primary coil from the
8 power supply.

9 The Petition and Dr. Woods explained that Stevens provides an
10 input power monitor in the form of a power measurement unit labeled as 100
11 in Figure 4, or 730 in Figure 12. And Stevens explains that the power
12 measurement unit performs a measurement of the electrical power drawn by
13 the electrical drive unit 14 on receipt of a signal provided by the control unit,
14 16. The power measurement unit provides an output representative of the
15 electrical power drawn by the electrical drive unit, 14, to the control unit, 16.

16 Now, notably, in the next sentenced underlined in red on the top
17 left of Slide 43, the power drawn by the electrical drive unit, 14, is
18 representative of the power drawn by the primary coil, 12. So Stevens'
19 power measurement unit is taking a measurement of the power that's
20 representative of the power drawn by the primary coil, 12.

21 Notably, Stevens was also applied by the Examiner during original
22 prosecution of the '461 patent, or an equivalent publication of Stevens, I
23 should say. And in the reasons for allowance, the Examiner specifically
24 found that Stevens discloses this limitation, as well as limitation 13.2.

25 On Slide 45, I'd just like to note, we have a comparison of the

1 circuit diagrams between Stevens and the '461 patent. And we can see that
2 the power measurement taken in Stevens is very similar to how the power is
3 characterized in the '461 patent, so the power measurement is placed
4 between the power supply and the coil in Stevens, much like the power-out
5 equations are given in the '461 patent.

6 To Slide 46, please. On the secondary side, Stevens provides at
7 least one signal detector that detects signals carrying data pertaining to
8 output power and we can see this by the disclosure on Figure 12. So Figure
9 12 represents what's called the third embodiment in Stevens. Shown in
10 Figure 12, a set of secondary devices, 600, and each of those devices has a
11 load measuring unit, as well as an RFID unit.

12 So the load measuring unit measures the actual power or the total
13 power drawn by the secondary device and it communicates that power
14 information via an RFID unit or other communication links to the charging
15 device. So the RFID unit 710 in the inductive power outlet corresponds to a
16 signal detector that detects signals carrying data pertaining to the output
17 power. That is, the power measurement by load measuring unit 600.

18 Dr. Woods explained at paragraph 58 of his reply declaration, as
19 shown at Slide 48, that the measurement that's taken by Stevens' load
20 measuring unit is a measurement of the power, specifically, as described in
21 Stevens, it's a measurement of the actual load or the total load. And that
22 power information is transmitted to the inductive power outlet. That can be
23 seen by the circuit diagrams on Slide 49, where again, we have the
24 measurement of power in the '461 patent after voltage V22 of T, as well as a
25 measurement of power in Stevens that's similarly positioned.

1 Finally, I'd like to address the next two limitations in the claims,
2 which are 13.3 and 13.4, and these limitations refer to an index of power
3 loss, specifically, the processor is further configured to determine an index
4 of power loss indicative of inefficiency of the inductive couple.

5 And the claim says that the index of power loss can be expressed
6 in two different ways. One is as an efficiency quotient, which is defined as
7 the ratio of the output power to the input power. And the other is an
8 efficiency differential defined as the difference between the output power
9 and the input power.

10 The Petition showed that the index of power loss could be met in
11 three different ways. In Grounds 2 and 3 both cite Stevens for its disclosure
12 of an efficiency differential as an index of power loss. Stevens explains,
13 with respect to the Figure 12 or third embodiment, that if the measured
14 power from the power measurement unit 730 exceeds the sum of the load
15 measures from the secondary device is by more than a shutdown threshold,
16 then the control unit concludes that a substantial parasitic load must be
17 present and places the primary unit in the shutdown mode.

18 So to determine whether the difference exceeds the shutdown
19 threshold, Stevens is calculating an efficiency differential by subtracting the
20 power-out measurement from the power-in measurement. And as Dr.
21 Woods explains, Stephens suggests this is an index of power loss as recited
22 in the claims.

23 In Ground 2, we also cited the Olson reference. The Olson
24 reference shows that the second option in the claim for expressing index of
25 power loss as an efficiency quotient was also well-known to a POSITA.

1 JUDGE BARRETT: So, if I didn't misunderstand and I may have,
2 are you saying Olson is in the alternative? That you don't need it for the
3 combination?

4 MR. STEPHENS: Our combination integrates Olson's teaching so
5 that in the combination, you have the option of calculating an index of
6 power loss, either as disclosed in Stevens or as disclosed in Olson. I think
7 both are demonstrated, I think, to be obvious based on the cited teachings in
8 the Petition.

9 JUDGE BARRETT: On that point, if you could, walk me through
10 your proposed combination. And let's just stick with one ground at a time,
11 please, Stevens plus Olson, let's not bring in the Jin reference yet. Just walk
12 me through the proposed combination and explain why a person of ordinary
13 skill in the art would have made that combination.

14 MR. STEPHENS: Yes. So Ground 2 of the Stevens/Olson ground
15 relies on Olson's teachings to supplement Stevens' capability for determining
16 a power efficiency differential, not just as a difference, but also as a
17 quotient. And so, we were bringing forth the combination that addresses
18 what we think is the full breadth of the claim, where the index of power loss
19 can be expressed either as a differential or as a quotient.

20 We describe multiple -- and this is on Slide 38, I should say. You
21 can see on Slide 38, we identified multiple motivations to combine. And the
22 idea here was that we are bringing in the capability to determine the index of
23 power loss, not just as a difference, but also as a quotient. We'd be applying
24 it in the same manner that Stevens already contemplates. He's saying, let's
25 compare the two. Stevens says you can take the difference, if the difference

1 exceeds a threshold, then we know that there's a parasitic load and we should
2 shut down power transfer.

3 You can do the same as described in Olson. In fact, Olson uses his
4 quotient for the same purpose. Olson says when the power efficiency
5 quotient is below a threshold, just as like as claimed, you can also shut down
6 power. And the reason is clear in Olson because it's a medical device. We
7 don't want to burn the patient or scar the tissue. So we've just demonstrated,
8 either with Stevens or Olson in this combination, you can apply either option
9 against the full breadth of the claim limitation.

10 And I do appreciate the concern here. So I'll just say, you know,
11 kind of backing up, why did we bring Olson into the combination if Stevens
12 also, you know discloses an index of power loss that would satisfy the
13 claim?

14 JUDGE BARRETT: And before you move on to that, what I just
15 heard you say is, basically, if we put these together, we'll have all the claim
16 limitations. But I'm not sure I heard you say why? The reason why a person
17 of ordinary skill in the art. I did hear you reference, I believe, it was Olson,
18 was very specific to an implantable device, which I believe is not the
19 situation in Stevens.

20 MR. STEPHENS: Yes. Dr. Woods and the Petition explains
21 several reasons why. So Slide 38, you know, talks about some of these.
22 One is that using a quotient, Olson says that the ratio of power out divided
23 by power out advantageously works not only at high charging or power
24 transfer levels, but also at reduced charging levels, for example.

25 So there are, kind of, benefits at different scales for using either a

1 quotient versus a differential. A second reason, Olson suggests it was an
2 important measure of effectiveness to use a quotient, especially where the
3 efficiency is measured coil to coil.

4 We also have testimony from -- I don't recall the slide, but in his
5 reply declaration Dr. Woods explained that these are obvious design choices.
6 Both are well-known, both have utility as disclosed in Stevens and Olson.
7 You understand that you can express efficiency in either way, depending on
8 the application.

9 You know, I'd also say, we have a footnote in our Petition,
10 footnote 3, it's on page 23, that explains a bit about why we were bringing
11 Olson into the combination to begin with. Stevens was applied, as we know,
12 during prosecution and the Examiner expressly cited Stevens in his reasons
13 for allowance. He found that Stevens didn't disclose 13.3 or 13.4, that is the
14 index of power loss.

15 But what was notable was that -- and this is at footnote 3 in our
16 Petition, the Examiner and the Applicant never mentioned the third
17 embodiment, that is the Figure 12 embodiment, where the index of power
18 loss is actually discussed. In the office action that preceded the allowance,
19 the Examiner cited other disclosures from Stephens and he apparently
20 believed that Stevens lacked this -- the subtraction, the efficiency
21 differential.

22 So we were concerned that going in with Olson, the Patent Owner
23 believed that with Stevens, Stevens was deficient or that the claim should be
24 interpreted narrowly to require both in a efficiency differential and an
25 efficiency quotient. We don't think it should be interpreted that narrowly,

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1 but if it were interpreted that narrowly, this combination addresses both
2 options.

3 And I see that I'm toward the end of my direct time, so I would like
4 to -- I'll take any questions from Your Honors, otherwise I'll reserve further
5 argument for rebuttal.

6 JUDGE BARRETT: I think we're okay. Thank you.

7 MR. STEPHENS: Thank you.

8 JUDGE BARRETT: How much time would you like to reserve?

9 MR. BARROW: Fifteen minutes, please.

10 JUDGE BARRETT: Okay. So 45 minutes then?

11 MR. BARROW: Yes, correct.

12 JUDGE BARRETT: Okay.

13 MR. BARROW: Thank you, Your Honor.

14 JUDGE BARRETT: Thank you. Whenever you're ready.

15 MR. BARROW: May it please the Board, Bill Barrow on behalf
16 of Patent Owner. So the theme of Petitioner's arguments for all grounds,
17 both in its briefing and as reinforced in its arguments today -- I'm sorry. It
18 looks like my slide --

19 JUDGE FLAX: You know, we do have them right in front of us.

20 MR. BARROW: Okay. Okay. Wonderful.

21 JUDGE FLAX: So you can just tell us where to look.

22 MR. BARROW: Okay. Wonderful. Thank you.

23 JUDGE FLAX: (INAUDIBLE) --

24 MR. BARROW: I think it's my computer. I've seen this before.

25 JUDGE BARRETT: No worries.

1 MR. BARROW: The theme of Petitioner's arguments for all
2 grounds is that location doesn't matter. It doesn't matter where you measure
3 current. It doesn't matter where you measure input power. It doesn't matter
4 where you measure output power. As long as you're measuring something
5 representative of or related to the right parameters, even if in the wrong
6 location, you're within the scope of the challenged claims.

7 That position conflicts with the claims, the specification, the
8 prosecution history, the knowledge of a person of skill in the art. It conflicts
9 with Petitioner's own primary references, Olson and Stevens. It also
10 conflicts with Petitioner's non-infringement arguments from the co-pending
11 litigation. And I'll get to that in a little bit. I was actually at the summary
12 judgment hearing in the co-pending litigation and I hope to provide a little
13 bit of clarity for what was argued by both sides at that hearing.

14 To re-orient ourselves, the '461 patent is generally directed to a
15 system for monitoring efficiency in an inductive power transmission system.
16 It's a concept that's easy to describe, but difficult to implement. Part of the
17 reason for this is that these wireless charging systems have a bunch of
18 different components doing different things and having various impacts.

19 Recognizing this, the '461 patent discloses a precise
20 implementation for an efficiency monitor that is not disclosed in the art,
21 including the art of record in this proceeding. So I'll jump right ahead.
22 Obviously, we disagree with many of Petitioner's positions. Mr. Stephens
23 did an excellent job of going through some of the background here about the
24 '461 patent, so I won't retread that. So I'll just right ahead to the claim
25 construction issues here.

1 To be clear, Patent Owners are not proffering any sort of
2 construction for any term in this particular proceeding. We are interpreting
3 all terms consistent with their plain and ordinary meaning. Petitioner's reply
4 brief, on the other hand, proposes new constructions. In particular, for limits
5 --

6 JUDGE BARRETT: Okay. Counselor, let me just --

7 MR. BARROW: Yes.

8 JUDGE BARRETT: I want to get some clarification.

9 MR. BARROW: Sure.

10 JUDGE BARRETT: Your qualifier "in this proceeding," or
11 whatever it was, begs the question: Are you proposing constructions in the
12 District Court?

13 MR. BARROW: No.

14 JUDGE BARRETT: Okay.

15 MR. BARROW: And I'll clarify a little bit the positions we're
16 taking there, and there's actually some reference to, sort of, the configuration
17 of the accused products there that's alluded to in the Exhibit 2006 transcript,
18 and I'll talk a little bit about that in a moment.

19 So with respect to Limitation 13.1, this requires at least one input
20 power monitor configured to measure input power received by the primary
21 coil from the power supply. Patent Owner has been consistent concerning
22 this, consistent with its plain and ordinary meaning. Limitation 13.1
23 requires that the input power monitor be configured to measure input power
24 received by the primary coil from the power supply.

25 Now, this configuration is very clearly exemplified in Figure 5 of

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1 the '461 patent, where you have an input power monitor in the power outlet,
2 essentially, that's directly adjacent to the primary coil. It is measuring power
3 received by the primary coil. There are no intervening components. It is
4 measuring power received by the primary coil.

5 If we take a look at Figure 2a in the '461 patent, this is consistent.
6 Here, it's a different configuration. We have a current monitor, but it's the
7 same thing. We have a current monitor directly adjacent to and in series
8 with the primary coil. What is being measured? The current received by the
9 primary coil from the power supply.

10 In contrast, Petitioner argues that the required measured input
11 power encompasses measurements that correspond to and reasonably reflect
12 the input power received by the primary coil. Even if the measurement is
13 not direct or is not specifically for the entire input power received only by
14 the primary coil. As an initial matter, these words appear nowhere in the
15 '461 patent.

16 And never mind that Petitioner never bothered to articulate this
17 overly broad, unsupported construction in its Petition, but it's telling. This
18 distorted claim interpretation is necessary for Petitioner to make its
19 argument that the asserted prior art teaches or suggests Limitation 13.1. The
20 problem is that not only is this interpretation belied by the claim language,
21 this interpretation also, in essence, seeks to recapture claim scope that was
22 rendered during prosecution.

23 Now, the current version of Limitation 13.1, which originally
24 appeared in Claim 14, this amendment was made in response to the
25 Examiner's suggestion that an adjustment be made to the input power

1 monitor limitation to provide clarity. The original language was input power
2 "delivered to" the primary coil. Applicant replaced this language with
3 "received by" the primary coil from the power supply.

4 Now, unpacking this a little bit, that there is some difference here.
5 I think they're basically saying the same thing, but I think there's some room
6 for interpretation of what it means when we say "deliver to" the primary
7 coil. It's not as clear where the measurement is taken. Arguably, it could be
8 a little bit higher up on the stream, maybe closer to the power supply, as we
9 have here in Figure 5, where the power supply is on top, then you have a
10 driver beneath, then you have a circuit breaker, then you have a primary coil.

11 But by changing the language to "received by" the primary coil
12 from the power supply, it is unmistakably clear that the input power
13 measurement must occur at the primary coil. That is consistent with Figure
14 5, where the input power monitor is directly adjacent to the primary coil. It
15 is also consistent with Figure 2a, where the current monitor is directly
16 connected to the primary coil and is, therefore, measuring current received
17 by the primary coil from the power supply.

18 JUDGE BARRETT: Counsel, if I could remind you, please read
19 off the slides.

20 MR. BARROW: Oh, sure. Sure.

21 JUDGE BARRETT: Thank you.

22 MR. BARROW: And my apologies for not stating the slide
23 numbers. I wrote that down and forgot to do that. My apologies.

24 JUDGE BARRETT: That's fine. No need to apologize.

25 MR. BARROW: So looking at Slide 13, Patent Owner's

1 interpretation -- which again, is consistent with the plain and ordinary
2 meaning of this term, Patent Owner's interpretation is consistent with
3 Petitioner's on the references. So looking at the Stevens 597 reference as
4 shown here, Stevens emphasizes the need to monitor losses at the primary
5 coil, distinguishing between losses that occur at different locations.

6 Turning to Slide 14, Olson states -- this is paragraph 112, while
7 energy efficiency can be measured at other locations in external antenna 52,
8 and/or implantable medical device 16, for purposes of some embodiments of
9 the present invention, it is preferred that efficiency is measured coil to coil.
10 There will be no preference if location didn't matter, as Petitioner suggests.

11 Petitioner's interpretation is also inconsistent with the non-
12 infringement arguments it has made in the co-pending litigation. And this is
13 something I wanted to get into and I know Your Honors have a number of
14 questions about this. So unfortunately, I don't have a slide here, but I can
15 pull up the transcript itself.

16 JUDGE BARRETT: Before you go too far down this road and --

17 MR. BARROW: Yes.

18 JUDGE BARRETT: -- certainly, my colleagues will have more
19 questions, but for me, I'm going to want to know how does that impact our
20 claim construction analysis? Just because a party takes a different position
21 in another forum, that may be interesting, but I don't know that that's a
22 recognized canon of construction, notwithstanding the prosecution history
23 argument.

24 But I'm an intrinsic evidence kind of guy and then, maybe we can
25 look at extrinsic, but arguments made in another forum, unless you can

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1 really tell me how that affects my analysis, then we might be better using our
2 time elsewhere.

3 MR. BARROW: Understood, Your Honor. And I'm in full
4 agreement with Your Honor on that. So part of the issue here is that
5 Petitioners have argued that we have -- there's a little bit of he said-she said
6 going on, as I'm sure the Board is aware. And so, if Your Honors don't have
7 any questions about that, I'm happy to move on.

8 A couple of quick points. In our view, there's no prosecution
9 disclaimer that has occurred in this proceeding. The arguments that we
10 make here are one hundred percent consistent with the arguments we've
11 made on infringement in the co-pending litigation. If the Board doesn't have
12 any questions about those positions, I'm happy to to move on. I just want to
13 make sure the Board has the information that it needs on this issue.

14 JUDGE SZPONDOWSKI: I would actually like you to just
15 address the statement that was made in the transcript, on page 23, that there's
16 no claim language that requires there to be some direct measurement or there
17 can be nothing in between there. Because that seems at odds with your
18 argument here.

19 MR. BARROW: Right. Understood. Thank you, Your Honor.
20 So -- and I'll bring up the pertinent language. Just give me one moment.

21 JUDGE FLAX: Can you identify the last exhibit?

22 MR. BARROW: Yes, I'm sorry. Exhibit 2006.

23 JUDGE FLAX: Thank you.

24 MR. BARROW: And give me one --

25 JUDGE FLAX: It's lines 2 to 4 of page 23.

1 MR. BARROW: Thank you. All right. So language is
2 highlighted here. This argument was made by Mr. Lindinger on behalf of
3 Powermat. This was addressing a reference design that's included in the Qi
4 wireless charging standard. And one of the bases for Powermat's
5 infringement case is that the accused products are purported to comport with
6 standard and therefore, they infringe by virtue of aligning with these
7 different referenced designs.

8 The particular reference design discussed, and if you may, I'm
9 going to jump ahead and I promise I'll come right back to this. I'm going to
10 go back to page 16, and I'm going to highlight lines 14 to 25. Actually, I'm
11 going to go a little broader. Lines 12 -- I'm going to start with lines 12 to 18.
12 So here -- and I believe this is Mr. Reger's argument. This is one of Mr.
13 Stevens' colleagues. He's explaining the issue or the supposed flaw in
14 Powermat's infringement position with respect to A11a, reference design.

15 And he explains that it shows a power supply, essentially, an
16 inverter, and then beneath that, there's a primary coil. That's the way this
17 figure or the reference design works. It actually mirrors somewhat going
18 back to Slide 11 from our demonstratives, Figure 5 from the '461 patent. So
19 you have power coming in, you have an intervening component, in the case
20 of the reference design, an inverter, and then you have the primary coil.

21 Mr. Reger's argument was, there's some sort of power loss that
22 occurs here, that's why we don't infringe. And they were saying that we're
23 making an inconsistent argument. Mr. Lindinger's argument at -- I
24 apologize. I believe that was page 23, he was arguing that there is no
25 requirement for any direct measurement of -- in between -- that there is no

1 requirement that the power supply, essentially, be connected directly to the
2 primary coil. That was his argument.

3 So he wasn't arguing that there's no direct measurement of power
4 necessary at the primary coil, he was distinguishing between sort of the -- or
5 clarifying that the presence of an intervening component between the power
6 supply and the primary coil in the Qi reference design, A11a, that any power
7 loss associated with that did not pull the product from -- or, you know,
8 render the product incapable of infringing limitation 13.1.

9 Does that address Your Honor's question?

10 JUDGE SZPONDOWSKI: For sure.

11 MR. BARROW: I know it's difficult without the diagram, and my
12 apologies for not having that here.

13 JUDGE SZPONDOWSKI: Yes. I guess, it just seems like that's
14 exactly what Petitioner's position is with respect to Olson. Or that your
15 argument is with respect to Petitioner's position on Olson. Is that while there
16 these other things in between, so it doesn't teach it?

17 MR. BARROW: So, with respect to Olson, just to clarify, our
18 argument is that the measured input power must be the power that's received
19 by the primary coil. And so, either you have to take a direct measurement of
20 that output power, or if you're measuring something else, like current and
21 voltage, you're resulting your calculation to get there has to actually get you
22 there. It can't pertain to the power associated with some other components.

23 JUDGE BARRETT: So your construction would allow for
24 calculations to be included?

25 MR. BARROW: It would not exclude it. It would not exclude it,

1 Your Honor.

2 JUDGE BARRETT: The claim term is measure and, in my mind, I
3 distinguish that from something that is calculatable. But you seem to be
4 embracing that.

5 MR. BARROW: I don't think it's necessarily excluded. So there
6 are a number of equations that Petitioner has proffered here, and the issue
7 isn't necessarily that they're relying on a calculation. It's that the calculation
8 doesn't result in the particular power parameter that's required by the claims.
9 So in the case of input power, we're talking about the input power received
10 by the primary coil. So either you're measuring -- taking direct
11 measurement of that power.

12 Like if we're talking about, okay, you measure voltage and you
13 measure current, well, what current are measuring? What voltage are you
14 measuring? And if you look at what Petitioner's point to in both Olson and
15 Stevens, in particular for limitation 13.1, it doesn't even come close to
16 getting you there.

17 JUDGE BARRETT: And that's because there's --

18 MR. BARROW: They're measuring current at the wrong location.
19 They're measuring voltage at the wrong location.

20 JUDGE BARRETT: Well, I mean that --

21 MR. BARROW: Or there's no disclosure. And that, I apologize,
22 Your Honor.

23 JUDGE BARRETT: Well, so I mean, that feels a little circular.
24 They don't measure in the right position because they're not measuring it in
25 the right place. I was going to say, is it because they're -- well, maybe you

1 just addressed it. You said there's no disclosure, or is it because there's
2 extraneous loads and things like that in there, that affect the power received?

3 MR. BARROW: So it might help if we pull up -- my apologies.
4 Let me put this in the presentation mode. This is Slide 20, and this is Figure
5 14 from Olson. Now, we have current measure block 226, which is
6 described as measuring the current into 12-volt supply. In Petitioner's
7 Petition, it really isn't clear what voltage they're relying on. They talk about
8 12-volt supply. Petitioner earlier mentioned the battery 160. Neither of
9 these measurements occur at the primary coil.

10 So we have the measurement block that's down here in the middle,
11 to the right of it, you have the 12-volt supply. You go up, you have the
12 transmit block. You move forward you have a switch that's connected to a
13 telemetry antenna and the primary coil. So you have some intervening
14 components there. Regardless of where you select the voltage, and I don't
15 think the Petitioner is very clear on this, you multiply this voltage times the
16 current, you're not getting the power received by the primary coil, it's
17 something else. There's something else in there.

18 So that's our point. Like, regardless of whether it's appropriate to
19 measure two things other than power and take them and calculate power, if
20 you're not measuring the right inputs, then you're going to get the wrong
21 output.

22 JUDGE BARRETT: I think I understand what you're saying, but
23 it's still not completely satisfactory to me. And let me take a step back on
24 the calculation thing. I certainly understand you may not be monitoring
25 power, you may be measuring voltage, measuring current, and doing a

1 calculation.

2 In my mind, I was sort of thinking that is measuring power, if you
3 will. But I understand that distinction. I was thinking more of what you
4 were just talking about, is other things between there. Other components
5 that voltage and current are affected.

6 But maybe let me go back to claim construction for a moment,
7 because if -- I want to clarify your position. As I understand Petitioner's
8 position is, if it's negligible losses in between or if it's predictable loads in
9 between, that is still a measurement of the power to the coil -- power
10 received by the coil. And when you started talking about calculations, I
11 thought to a certain extent you were agreeing with Petitioner, but --

12 MR. BARROW: Not on a power loss claim. So we're sticking to
13 the claim language. Limitation 13.1 is very clear. At least one input power
14 monitor configured to measure input power received by the primary coil.
15 We should distinguish that from deliver to the primary coil, right? Which I
16 think is arguably a little bit different, arguably a little bit broader.

17 I think "received by" the primary coil makes it very clear. We're
18 concerned with the power that's actually received by the primary coil. And
19 the '461 patent is actually very very consistent on this in terms of how it
20 reflects it in the figures. The thing that we're measuring is at the primary
21 coil. There's nothing in between. And so, we're actually very consistent on
22 this point, both here and in the District Court case in terms of what we're
23 pointing to for infringement.

24 And one piece that I missed in discussing the reference design,
25 what's pointed to in the litigation as the input power monitor, or as evidence

1 of it, is something that's called a current sense. So it's something measuring
2 current at the primary coil. And that's 100 percent consistent with the '461
3 patent disclosure, which discloses both an input power monitor next to the
4 primary coil, and Figure 2a, which has the current monitor right next to the
5 primary coil.

6 Does Your Honor have any further questions on the claim
7 construction plan?

8 JUDGE BARRETT: I think I understand your position on 13.1,
9 and you can go back to Olson or you can move on to 13.2, whatever you feel
10 comfortable with.

11 MR. BARROW: Thank you, Your Honor. So I'll take a step back,
12 going to limitation 13.2, which requires at least one signal detector
13 configured to detect signals carrying data pertaining to output power
14 received by the secondary coil. It's a similar issue here. It's a little bit
15 different. Essentially, what petitioner is arguing here, is that -- and again,
16 we're on Slide 15.

17 The term "pertaining to" does not require any particular form of
18 measurement of the output power received by the secondary coil. In fact, no
19 measurement is recited at all. So while technically true, there's no
20 affirmative recitation of a measurement requirement. There is a locational
21 requirement, right? So, it wouldn't be enough, for example, to have anything
22 tangentially related to output power received by the secondary coil.

23 What's connoted here is, there's a measurement of something at
24 that location. Maybe it's current, maybe it's voltage, right? And that, itself,
25 would be data pertaining to output power received by the secondary coil.

1 And I'll actually jump ahead and I'll explain why this is a problem --

2 JUDGE FLAX: Counsel, I have a question for you --

3 MR. BARROW: Yes.

4 JUDGE FLAX: -- about Olson.

5 MR. BARROW: Sure.

6 JUDGE FLAX: I understand, based on this paragraph 74, 75,
7 maybe 73, that this measurement block 226, the one that's -- you know,
8 you've highlighted in red, it seems to be the crux of the argument here. That
9 seems to be the only thing measuring anything in Olson. And Olson goes on
10 to describe calculating efficiency of the power transfer, and determining the
11 power in, I guess, to that primary coil using that measurement, that
12 measuring element.

13 So, if that is what is measuring the power into the primary coil,
14 calculating for 12-volt supply and what you get from the batteries, why isn't
15 that measuring the power received by the primary coil? What have I gotten
16 wrong there? Something. Must be something.

17 MR. BARROW: Because, A, it's not measuring the power
18 received by the primary coil. What it appears to be --

19 JUDGE FLAX: But how can it -- let me -- now that you said that,
20 if it is measuring the efficiency and it is saying that's it calculating the power
21 into the primary coil, and that's the only measurement that it's identifying as
22 being made, how is that not measuring the power into the primary coil?

23 MR. BARROW: Because it's not measuring the power received by
24 the primary coil, it's what's required by limitation 13.1. So it might be, to
25 Petitioner's implicit construction, which is something representative of or

1 closely related to. It might be representative of, arguably or related to
2 -- certainly, that's a pretty broad term, related to the power received by the
3 primary coil, but that current measurement block is not at the right location.

4 At a minimum, we have a transmit block, we have a 12-volt supply
5 block, we have intervening components, meaning whatever is measured
6 there, it's going to be different than if you measured it at the primary coil.
7 So the way to align Olson with the requirements of limitation 13.1 would be
8 to -- essentially, you'd have to move that measurement block.

9 I don't know that there's an actual calculation made at the
10 measurement block. I believe any calculations might be made in a
11 microprocessor, but in any event, the measurement block is at the wrong
12 location. And additionally, it's not clear from Petitioner's arguments which
13 voltage it's relying on to multiply that currently.

14 So is it the 12-volt supply? That's essentially what they rely on in
15 their Petition. They're saying the 12-volt power supply, multiplied by, I
16 suppose, this current that's measured at block 226. But Mr. Stephens just
17 stated a few moments ago that this is a step up in voltage. So it's not really
18 clear what we're getting.

19 What is clear, is that we're measuring current at the wrong
20 location, and that any resultant input power that's calculated to the extent
21 that that reads on this limitation, is not representative -- or it is not the input
22 power received by the primary coil. Does that answer Your Honor's
23 question?

24 JUDGE FLAX: I don't know. I'm having a hard time because I
25 understand that this reference cares about the efficiency of power transfer

1 between that primary coil and the other device. I think it was coil. It's not
2 shown in this figure. And to figure that out, it has to know how much power
3 is going into that primary coil. And the only measuring component in this
4 whole thing is 226.

5 MR. BARROW: Well, just because there's something that
6 purports to measure the current that goes into a calculation of input power,
7 does not mean that that measured or calculated power is the power received
8 by the primary coil. It's the power, frankly, received by, perhaps, the
9 primary coil and a bunch of other components, including, for example, the
10 transmit block. That's the problem.

11 And this is really what the --

12 JUDGE FLAX: Is it measuring power that is in the system at
13 some point, which gets converted in some way to different power, that
14 ultimately gets to the primary coil, and they know how those changes occur
15 in the downstream of that current, of that circuit? So that is no longer -- it's
16 not a measurement of what is being received by the primary coil, it's more of
17 a measurement about what's being input into the system at the front end?

18 MR. BARROW: Well, at this particular location, yes.

19 JUDGE FLAX: Yes.

20 MR. BARROW: At this particular location, current measure 226.

21 JUDGE FLAX: And then, based on the components they know
22 exist downstream of the power source, they know how to calculate then,
23 what the actual power received at the primary coil is; is that right?

24 MR. BARROW: I don't think so. I don't think that's -- I'm sorry.
25 Are you characterizing Petitioner's position or the reference?

1 JUDGE FLAX: No, I'm characterizing this reference.

2 MR. BARROW: The reference. No, there is no disclosure of a
3 measurement or calculation of input power actually received by the primary
4 coil. They are measuring in the wrong location.

5 JUDGE FLAX: I understand what you're saying. I'm saying that
6 at that measurement element, some power is received it's measuring.

7 MR. BARROW: Right.

8 JUDGE FLAX: From the batteries.

9 MR. BARROW: Right.

10 JUDGE FLAX: Things happen downstream on the circuit after
11 that --

12 MR. BARROW: Correct.

13 JUDGE FLAX: -- that change the power.

14 MR. BARROW: Correct.

15 JUDGE FLAX: That changed power gets to the primary coil and
16 that's not measured. That's just calculated; is that right? Do my --

17 MR. BARROW: That changed power is not -- I'm sorry. Can you
18 restate that last part of it?

19 JUDGE FLAX: I'm just saying the power that's received in the
20 primary coil is understood by Olson by calculations based on the power
21 input to the system. Things happen between where that power is measured
22 and where the primary coil is that change it in ways that are understood by
23 the calculations, but are not measured. It's only measured prior to the --

24 MR. BARROW: Correct. Correct.

25 JUDGE FLAX: -- modification.

1 MR. BARROW: Correct, Your Honor. Yes.

2 JUDGE FLAX: Okay. All right. I got you.

3 MR. BARROW: Okay. So on limitation 13.2, this is something
4 that, Your Honor, Judge Flax alluded to. Oh, my apologies. Jumping
5 around quite a bit.

6 JUDGE BARRETT: Let me jump in on 13.2 where you left off.
7 You were talking about the location of the output power received by the
8 secondary coil. What is the importance then of “data pertaining to”? Could
9 that mean it's at a different location? I think your position -- Patent Owner's
10 position is it has to be at that position, but it can be other variables.

11 MR. BARROW: Correct.

12 JUDGE BARRETT: And (INAUDIBLE) what about -- I'm not
13 sure if this is Petitioner's position or not, but “pertaining to” actually could
14 refer to a location, you can measure it downstream and it still is pertaining to
15 that coil, because you could do calculations or something like that.

16 MR. BARROW: I think that is outside the scope of limitation
17 13.2. So going to Slide 25, the requirement is that the signal detector be
18 configured to detect signals carrying data pertaining to output power
19 received by the secondary coil. And so this connotes some form of detection
20 or measurement of something at the secondary coil, whether that be current
21 or voltage. So to answer your question, the location matters so you can't do
22 it at some other place.

23 JUDGE BARRETT: That seems to be the conclusion, but how do
24 we get there? As opposed to -- I believe Petitioner was pointing to one of
25 the figures in the specification where there were measurements downstream,

1 but an engineer could calculate back and determine what was the power at
2 the coil. So that might be considered data “pertaining to.”

3 MR. BARROW: So, if I --

4 JUDGE BARRETT: And I hope I was articulate there, at least,
5 somewhat.

6 MR. BARROW: I think I might have an example that might
7 clarify things a bit, Your Honor. Just give me one moment to find the right
8 slide. Okay. So Slide 26. So Olson states that power out is gauged by
9 power induced in an implantable medical device 16, which is shown here on
10 Figure 2.

11 And there's actually very limited detail in Olson about what's in the
12 implantable medical device, which is the secondary device. We get a lot of
13 detail for the charging device, but really don't get a whole lot for the
14 secondary device that's located in somebody's body. And what Olson
15 discloses is multiplying the voltage of the rechargeable power source 24
16 shown here at the bottom right in pink, with the charging current. There is
17 no disclosure of where the charging current is measured. The voltage of the
18 rechargeable power source, we know where that is.

19 But let's think about what we're actually talking about. That's
20 essentially a battery. That's like the battery in your cell phone that you
21 might, you know, charge at night wirelessly, right? And so this clearly isn't
22 what the '461 patent is talking about when it's referring to data pertaining to
23 output power received by the secondary coil.

24 Now, clearly, there's some relation between what's stored and
25 rechargeable power source 24 and what was received by the secondary coil,

1 clearly. Like, everything is stored in there theoretically was received by the
2 secondary coil at some point. But we're just talking about the battery, what's
3 in the battery.

4 And so think about, sort of, the downstream impact on that, like,
5 looking at the claim language. So limitations 13.3 and 13.4, right? If you're
6 calculating the ratio of the battery, what's left in the battery, and the input
7 power, you're not calculating power efficiency. I mean, you're pretty much
8 getting a useless value there.

9 And so, in this sense, this is an example of how location matters.
10 And whatever the appropriate construction of limitation 13.2 is, the
11 calculation of power based on the voltage at the rechargeable power source,
12 which is again, just the battery, how much do we have stored in the battery,
13 times whatever current -- wherever it is, and it's not even disclosed in Olson.
14 It's not talked about, there's no component that's described as measuring it.

15 Clearly, that's not the output power that Claim 13 is concerned
16 about. So hopefully, that clarifies things a little bit, at least in showing that
17 location matters here. Here's an example of where location has a pretty
18 -- basically, has a fatal impact on whether, you know, the reference actually
19 practices this claim limitation.

20 Does Your Honor have any further questions on Limitation 13.2?

21 JUDGE BARRETT: I think we're okay for now.

22 MR. BARROW: Okay. Thank you. Okay. So I'm going to jump
23 ahead to Slide 31. So now, we're addressing Claim 15. And I'd like to, you
24 know, we've been talking about limitation 13.2. 15.2 served the other side
25 of the coin. So Claim 15 is directed to the power receiver and, unlike 13.2,

1 15.2 actually affirmatively requires an output power monitor for measuring
2 the output power received inductively by the secondary coil from the
3 primary coil. So, sort of like the other side of the coin looking at 13.1, but
4 this time, in the context of the power receiver.

5 Turning to Slide 32, and this dovetails with what I just pointed out
6 in Olson with respect to its deficiencies on the secondary device site. That is
7 within the implantable medical device 16. There's no detail there about, you
8 know, where the current is measured. And indeed, there is no description of
9 any calculation of the output power received by the secondary coil in the
10 implantable medical device 16.

11 And so, I'll jump ahead two slides to Slide 34. This is paragraph
12 75 from Olson, and I'll read from -- so the first highlighted portion here.
13 The power out is gauged by the power induced in implantable medical
14 device 16 and is determined by multiplying the voltage of rechargeable
15 power source 24 by the charging current in implantable medical device 16.
16 And this is what I was talking about.

17 The last sentence, this is key. These values are obtained by
18 telemetry from implanted medical device 16. The values being referenced
19 here are the voltage and current. The secondary device is not calculating the
20 power. As we know from the figure that we're looking at from Olson of the
21 -- my apologies, I'm going to jump back here. Slide 22, Figure 14 from
22 Olson, here's our charging device.

23 And we see a telemetry antenna all the way to the right. That's
24 what's receiving the power, that's what's receiving this current, which we
25 have no idea what exactly measures that. And then, presumably, whatever

1 power calculation is made, it's made on this side. So 15.2 is clearly not
2 practiced by Olson.

3 Are there any questions on Limitation 15.2 before I move on? And
4 I'd like to briefly address -- I have few minutes left, the remaining grounds.
5 So this is Slide 37. We're addressing Ground 1b. I'd like to talk a little bit
6 about motivation to combine the Stevens and Olson references. So Olson
7 was brought in here to address the -- call it the ancillary load limitation
8 required by 17.1. So 17.1 recites where in the transmitter comprises -- and
9 this is the transmitter that is transmitting the output power -- I'm sorry. My
10 apologies.

11 So we'll start with what Stevens is about. I mentioned briefly that
12 Olson is grounded in -- actually, we'll jump ahead. Slide 38. Olson is
13 grounded in the medical device context. It's a medical device that's
14 implanted in a body and it can be recharged by a charging device that's
15 outside the body.

16 Stevens deals with something a little bit different. It's concerned
17 with stopping or restricting power transfer, for example, when in the
18 presence of parasitic loads and things of that nature. And what Stevens
19 discusses is using dummy loads and things of that nature for testing
20 purposes, et cetera. These are scenarios that, frankly, aren't going to happen
21 in the Olson context. These are very different chargers or systems with very
22 different needs.

23 Now, sort of jumping ahead to motivation to combine, but in the
24 context of limitation 13.3. So I'm on Slide 43 here. And this is addressing
25 the different ways in which the Stevens reference and the Olson reference

1 calculate power efficiency, for a lack of a better term.

2 And so, the way Stevens does it is, it's looking at power drawn
3 from the primary unit, and comparing that with what's actually required by
4 the secondary devices and seeing if we're pulling a lot more. If we're pulling
5 a lot more, there might be a problem. And it compares that to a threshold.

6 Olson is doing a comparison of power out to power in. It's a ratio.
7 And layering these two things on doesn't really make any sense. And so,
8 combining these references, trying to rehabilitate Olson through the use of
9 Stevens or vice versa, with respect to limitations 13.3 and 13.4, these
10 references really don't play well together.

11 Stevens is concerned with calculating absolute values and
12 comparing that to a threshold. That is very important for safety purposes. If
13 a device is heating up, you want to know exactly how much voltage is there.
14 And ratio isn't necessarily going to get you where you need to go.

15 Then lastly, I'll jump ahead to Slide 53. And this is on the same
16 concept; this is just the motivation to combine Stevens and the Jin reference.
17 So I talked about Stevens. This is Slide 54. Jin is a little bit closer to Olson
18 in a sense that what's being looked at is a ratio, but there's even less detail
19 here than you have in the Stevens reference.

20 Jin calculates transmission efficiency by dividing effective current
21 value of the secondary side times the effective voltage divided by the
22 effective current value of primary side times effective voltage. So aside
23 from the issue, again, of one reference addressing or being concerned with
24 absolute value as compared to the threshold, Jin is concerned with the ratio.

25 The other issue here with Jin, and this gets really more to the

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1 deficiency of the reference with respect to limitations 13.3 and limitation
2 13.4, which is that there's no specificity here provided in Jin with respect to
3 the effect of current value of the secondary side. So the '461 patent, in
4 particular, Claim 13, we're dealing with a ratio or difference based on
5 comparing a particular output power with a particular input power, and
6 there's certain requirements for that, as I've discussed with reference to
7 limitations 13.1 and 13.2, and Jin falls well short of providing or
8 establishing that the requisite output power and input power are what's
9 actually covered by its transmission frequency.

10 So I think I'm coming up on the end of my allotted time, unless
11 Your Honors have any further questions, I'll reserve the rest of my time for
12 the follow up. Okay. Thank you.

13 MR. STEPHENS: Thank you, Your Honors. Patent Owner's
14 counsel characterized our position that location doesn't matter, and I just
15 want to be very clear, that's not our position at all. We've said that a direct
16 measurement is not required, but as explained, you know, in detail in our
17 reply and in Dr. Woods' declaration, we have to be taking a measurement of
18 the power that represents the power received by the coils.

19 And so, under the plain meaning of that claim language, as read in
20 light of the specification, the measurement must be, you know, reflect and
21 closely correspond to the true power received by the coils. If there are
22 negligible or predictable losses included in the measurement, then those can
23 be disregarded. It's not just our expert that said it. Dr. Mercier, Patent
24 Owner's expert, said the same under cross-examination.

25 JUDGE BARRETT: Did the experts both agree on the calculated

1 part? You've got two qualifiers in there. One is if it's basically negligible,
2 but there's others if it's calculatable. And that really bothers me, because
3 then we're back to you're not measuring it, you're measuring some things and
4 then calculating the power, and that seems to deviate, at least from 13.1.

5 MR. STEPHENS: Well, I think the measurement is -- we think the
6 prior art of Olson and Stevens, they're measuring power in and power out. I
7 don't have the language in front of me, but I believe the word measurement
8 is used in both of those prior art references.

9 Dr. Mercier specifically talked about negligible losses can be
10 disregarded. And I think it's instructive, and we have to look at -- again, at
11 the intrinsic evidence in the specification.

12 JUDGE BARRETT: But I'm not asking about the negligible,
13 though.

14 MR. STEPHENS: Sure.

15 JUDGE BARRETT: I'm asking about the calculated, which
16 assumes it's non-negligible. And I think that -- that's what I'm feeling is the
17 difference between the two parties' constructions. Is, I understand Patent
18 Owner would say, if it's a non-negligible load or power drain, what have
19 you, then you're not measuring the power to the coil. And you seem to say,
20 well, if you can measure it, you still were measuring at the coil.

21 MR. STEPHENS: Yes. Well, our view of the claim language is
22 that it would encompass the ability to perform a power calculation based on
23 measurements that may be upstream or downstream of the coil if you were
24 still arriving at a value that closely corresponds and reflects. We don't need
25 to get there, though. I don't think our prior art requires us to do that.

1 When we saw paragraph 112 of Olson, it specifically talks about
2 measuring the power efficiency, coil to coil measurements, based on the
3 power received by the primary coil and the power received by the secondary
4 coil. It mirrors the claim language of the '461 patent.

5 JUDGE BARRETT: Was that argued in the Petition? Because I
6 thought the Petition was focusing on very specific components, not sort of
7 this general statement elsewhere.

8 MR. STEPHENS: It was argued in the Petition, Your Honor. We
9 have multiple cites to paragraph 112 through the Petition.

10 JUDGE BARRETT: Okay. And maybe Stevens, could you
11 reiterate again how it satisfies 13.1?

12 MR. STEPHENS: Certainly, Your Honor. One moment. It's one
13 of the slides. So Stevens -- we'll take a look at Slide 43 of Petitioner's
14 demonstratives.

15 JUDGE BARRETT: Okay.

16 MR. STEPHENS: So Stevens discloses, as shown in Figure 4,
17 there's a power measurement unit 100, and that power measurement unit
18 100, as stated in Stevens, provides an output representative of the electrical
19 power drawn by the electrical drive unit 14 to the control unit 16. But the
20 next sentence is instructive. The power drawn by the electrical drive unit 14
21 is representative of the power drawn by the primary coil 12. And so --

22 JUDGE BARRETT: If we don't adopt your construction, does
23 Stevens still have the limitation?

24 MR. STEPHENS: In our view, Stevens, you know, teaches it
25 within the proper scope. If a direct measurement of only the power received

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1 by the primary coil is required, I mean, that's not what's shown in Stevens.

2 But I will say, the Examiner found that Stevens discloses this limitation.

3 So Exhibit 1002 of the file history, at page 246 -- I'm just going to
4 put this on the screen.

5 JUDGE BARRETT: So you're relying on a finding by the
6 Examiner who allowed the claim?

7 MR. STEPHENS: I think -- yes. And Your Honors, if you would
8 -- I don't have the full exhibit with me, but if you're able to look at Exhibit
9 1002, at page 246, I think it's very interesting, you know, what the Examiner
10 stated about Stevens, which I believe supports our position, that Stevens
11 discloses 13.1 and 13.2.

12 JUDGE BARRETT: Was this in your brief? Was this in the
13 Petition? Reliance on the Examiner for limitation?

14 MR. STEPHENS: We talked about the prosecution history. I'm
15 not sure if we specifically discussed this point, Your Honor. But I do think
16 it does show -- page 246, Stevens was found to disclose the claim limitations
17 corresponding to 13.1 and 13.2, and he says it. And there was discussion
18 about -- in the prior office action about Stevens being applied against these
19 limitations. The Applicant didn't dispute it at that time. And so, the
20 Examiner's findings is at least consistent with our position and with Dr.
21 Woods' analysis.

22 What Stevens found was missing -- if you look at the reasons for
23 allowance, is not those limitations, it was the index of power loss limitation.
24 But as I discussed on direct, I think the problem there was that all of the
25 citations that the Examiner offered in Stevens, he never cited to that third

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1 embodiment where the subtraction or our difference is actually calculated.

2 So it appears to have been overlooked by the examiner.

3 JUDGE FLAX: So Counsel, your opposing counsel made a bit of
4 an issue about reasons for combining Stevens and Olson. Could you review
5 that for us as to why it would make sense to use Stevens' system and then
6 modify it to use, I think, to Olson's calculations, right?

7 MR. STEPHENS: That's correct. So in the combination, and to be
8 clear, the combination allows for both types of efficiency calculations.

9 JUDGE FLAX: Alternatively?

10 MR. STEPHENS: Alternatively, yes.

11 JUDGE FLAX: Okay.

12 MR. STEPHENS. Correct.

13 JUDGE BARRETT: Was it raised -- I hate to keep beating this
14 dead horse, but was it raised as alternatively in the Petition?

15 MR. STEPHENS: The language in the Petition, I believe, was to
16 the extent that Stevens was found not to expressly disclose the limitation.

17 JUDGE FLAX: So what is your response to your opposing
18 counsel's arguments about why it doesn't make any sense to put these
19 references together?

20 MR. STEPHENS: Yes, Your Honor. Let me --

21 JUDGE BARRETT: Or it would help me if you take a step back
22 and first, again, explain the combination, and then go into the reason to
23 combine. I know you've already gone through some of this today, but if you
24 could, just walk us through it from step 1, please.

25 MR. STEPHENS: So, yes. We think the combination, in terms of

1 what's being modified, is fairly straightforward. Stevens says you can
2 subtract to determine whether the input power largely exceeds the output
3 power. Olson provides another option, which is you could take the quotient.
4 So we're just saying, you can apply the quotient and do the same
5 functionality that's given in Stevens if the quotient falls below a threshold, as
6 taught in Olson, then you would take the same action that was described in
7 Stevens, which is to shut down the power.

8 So in either case, whether you're taking the subtraction or the
9 quotient you're comparing that difference or quotient to a threshold and then
10 making a decision whether to maintain power or cut off power. And the
11 reasons to combine are given in the Petition. Olson describes several
12 reasons why a quotient, in particular, is useful for his application. And those
13 are still applicable to Stevens because what we're looking at is, is there a
14 power leakage? That's the same problem in both references.

15 If the different exceeds a threshold, you know that there's a
16 significant parasitic load or a power leakage from the primary to the
17 secondary. You get that same information from a quotient. And so, those
18 are just two different ways of characterizing whether there's a substantial
19 parasitic load. That is, whether there's a significant power loss or power
20 leakage in the coupling from the primary to the secondary.

21 JUDGE FLAX: If I agree with you that element 13.4 requires at
22 least one of those to calculate one or the other, do you need Olson?

23 MR. STEPHENS: We think that Stevens would disclose every
24 claim element. Now, if the claim is construed narrowly to require both, then
25 we could turn to Olson in ground 2 or Jin in ground 3.

1 JUDGE FLAX: Is there anything about the disclosures of Stevens
2 that you highlighted here today -- I don't know what part of Stevens it is, but
3 you have it on Slide 43. It's one of those cites, I think, below the three, I
4 guess, maybe column 18, where it says the power measurement unit 100
5 performs a measurement of the electrical power drawn by the electrical drive
6 unit 14.

7 MR. STEPHENS: Mm-hm.

8 JUDGE FLAX: And that electrical drive unit 14 is between the
9 measurement unit and the coil.

10 MR. STEPHENS: Yes.

11 JUDGE FLAX: And then it says the power drawn by that
12 electrical drive unit that is between the two is representative of the power
13 drawn by the primary coil 12. So is there anything about it being
14 representative that is incomplete? That doesn't get you to it being element
15 13.1, where it has to measure input power received?

16 MR. STEPHENS: No. And the reason is, one, we note, as you
17 mentioned Stevens says that that is the power that's representative of the
18 primary coil. But it's also consistent with how the power is characterized in
19 the specification. We think that Patent Owner is trying to read this claim
20 language divorced from the specification. But if you go to the specification,
21 it never talks about, you know, directness of power measurements being
22 critically important. There's no description of that at all.

23 In fact, the language received by the primary coil in element 13.1,
24 it's not used in the specification once. This was a claim language that was
25 suggested by the Examiner during an interview for, purportedly, clarity

1 reasons, but it wasn't to overcome the art. There's no indication in the file
2 history that it was made to narrow the claim in some way or distinguish it
3 from what Stevens is doing or what the examples in the '461 patent are
4 doing.

5 And we know that because the Examiner said that Stevens still,
6 even with the received by the primary coil language, it still discloses that
7 limitation in his view. I think what was happening in the file history was
8 that there were other limitations added that secured allowance, those were
9 13.3 and 13.4 that were identified in the reasons for allowance.

10 But if you were to say that received by the primary coil somehow
11 requires a direct measurement, there's no disclosure that's unsupported in the
12 specification. The best we have is Figure 5 of the patent, which is a block
13 diagram that just says, power in, which is the power in is power provided to
14 the primary coil, not power received by the primary coil.

15 JUDGE BARRETT: You're over your time. If you'd like to take a
16 minute to wrap up.

17 MR. STEPHENS: Just one moment, Your Honor. The last point
18 I'd just like to make, on the language of "pertaining to" in 13.2, I just want to
19 be clear that our position about what's required by a power measurement
20 does not turn on the language "pertaining to". "Pertaining to" expands the
21 scope of element 13.2, and in our view, allows for values to be detected by
22 the signals that might not necessarily be the power out measurement itself.

23 It could be -- you might calculate power out at the secondary side
24 and then calculate some indication, like a classification or something, that
25 would still pertain to the power. But we think that 13.1 and 13.2 can be read

1 together in light of the specification, not to require direct measurements.

2 MR. BARROW: Okay. Just a few follow-up points if the Board is
3 ready. Thank you. So first, Mr. Stephens mentioned that Petitioner's new
4 argument, which as Your Honor mentioned, was now that the examiner
5 apparently believed that Stevens disclosed limitation 13.1. This is an
6 argument that's not presented within the papers. We've not had an
7 opportunity to brief it. Needless to say, that it's Patent Owner's position that
8 this does not satisfy petitioner's burden of establishing that Stevens, indeed,
9 practices or rather, discloses limitation 13.1.

10 And on that point --

11 JUDGE FLAX: Counsel.

12 MR. BARROW: Yes.

13 JUDGE FLAX: Unless I'm looking at the wrong thing, Petition, at
14 page 42, says, "Stevens discloses element 13.1."

15 MR. BARROW: Yes. Now, what I'm stating is that their
16 argument is that the fact that the Examiner believed it --

17 JUDGE FLAX: Oh.

18 MR. BARROW: -- it to be present. It's my apologies if I was --

19 JUDGE FLAX: Okay.

20 MR. BARROW: -- incorrect, Your Honor.

21 JUDGE FLAX: Sorry. I was confused.

22 MR. BARROW: Probably on me. That notwithstanding, I would
23 like to address 13.1 with respect to Stevens. It won't take long. You
24 probably anticipate what the argument is looking at the figure. We have
25 power management unit 100, you have a primary coil 12, and in between

1 them, you have electrical drive unit 14. Power measurement unit is not
2 measuring power at the primary coil. And there's no other indication in
3 Stevens --

4 JUDGE FLAX: Well, based on your arguments earlier, it doesn't
5 have to measure it at the primary coil, because you told us earlier that the
6 location is not the critical thing. It's measuring the power into it, received at.

7 MR. BARROW: Received at the primary coil. No, you're
8 absolutely correct. Yes.

9 JUDGE FLAX: So what about my question to your opposing
10 counsel earlier about Stevens saying that the power drawn by that electrical
11 drive unit that is intervening between the measuring device and the coil? It
12 says that it's representative of the power drawn by that coil. So why is that
13 not the right measure?

14 MR. BARROW: Well, that might comport with Petitioner's
15 implicit construction, which wasn't disclosed in the Petition. But that's not
16 what the claim language requires. The claim language requires that the input
17 power measurement is taken -- that it pertains to the input power received by
18 the primary coil. There is a location requirement there.

19 And it's clear from this figure, Figure 4 in Slide 47, whatever
20 measurement is taken, it's taken at the electrical drive unit. It's not taken at
21 the primary coil. It's in the wrong location.

22 JUDGE FLAX: You and I spoke earlier, and I sort of agreed with
23 you, I think, about Olson. And that things are happening on the other side of
24 that measurement device in Olson that are changing the power that's
25 received by the coil. And so, it is in that case arguably not measuring the

1 power received by the coil. It's measuring something other --

2 MR. BARROW: Correct.

3 JUDGE FLAX: -- than that. But in this case, it seems -- in
4 Stevens, it seems pretty direct that it's saying that that measurement is
5 representative of the power drawn by that primary coil. So why should we
6 not take Stevens at its word that that's what it's doing?

7 MR. BARROW: I'm not saying that Stevens is inaccurate in that
8 respect. That Mr. Stephens was lying when he wrote that. What I am saying
9 is that representative of that input power received by the primary coil is not
10 the same as the actual power received by the primary coil. "Representative
11 of" is an incredibly broad term and it's actually included in Petitioner's
12 implicit or new construction, it is hopelessly broad.

13 You know, I used to prosecute patents. I never would have written
14 a claim that said, you know, "closely related to" or something to that effect,
15 which is literally in their construction, right? So representative of power
16 received by the primary coil, that's not enough. It doesn't comport with
17 limitation 13.1.

18 I'll tell you what is representative of power received by the primary
19 coil, power delivered to the primary coil, but that was the prior version of
20 Claim 13. The new version -- the amended version is input power received
21 by the primary coil. Representative of is necessarily broader and as a result,
22 Stevens fails to disclose the necessary specificity to satisfy limitation 13.1.

23 And this is the issue here. There is no new claim construction.
24 We're arguing this from the claim language. Of course, looking at the
25 figures, looking at the prosecution history, it's Petitioner that is distorting

1 what we're proposing and claiming that we're presenting some new claim
2 construction argument, while attempting to broaden the scope of 13.1 and
3 13.2. So this works under their broadened construction, which includes the
4 language, I think, "representative of" or "closely related to," something to
5 that effect. That works.

6 But that's not the claim. They don't get to amend the claim. And
7 the claim language requires that the input power monitor be configured to
8 measure input power received by the primary coil from the power supply.
9 For the same reasons that Olson is deficit, Stevens is also deficit.

10 The only difference here is that there's a little more stuff in
11 between the primary coil and the thing that's purporting to do the
12 measurement. And also, is measuring current as opposed to power.

13 Does Your Honor have any additional questions on this point?

14 JUDGE FLAX: I have a question for you on limitation 13.4. Is
15 your position that those calculations are two things in the alternative? Or
16 that they're each required? Meaning, the efficiency quotient Q and the
17 efficiency differential Delta, are they alternatives or are they both required?

18 MR. BARROW: By limitation 13.4?

19 JUDGE FLAX: Yes, sir.

20 MR. BARROW: They are in the -- can you just give me one
21 minute?

22 JUDGE FLAX: Yes.

23 MR. BARROW: In the alternative, Your Honor. So I have a few
24 other points, if Your Honor has any further questions?

25 JUDGE FLAX: I don't. Please go ahead.

1 MR. BARROW: Thank you. So going back to the motivation to
2 combine Stevens and Olson on the limitation 13.4 issue, which the panel
3 questioned Petitioner's counsel on, I just want to address the difference
4 between the quotient in the context of Olson versus Stevens differential
5 calculation.

6 The point I want to emphasis is just that, you know, if we're
7 concerned about a parasitic load, if we're concerned about the safety, turning
8 off the device before something bad happens, something overheats,
9 something blows up, something melts, who knows, the ratio isn't going to
10 get it done.

11 It might do it sometimes, but as Dr. Mercier pointed out in his
12 declaration, you could have a scenario -- and I'm sure Your Honors
13 recognize this, you could have a comparison of two really high voltages and
14 you're not going to end up with a very high ratio number. You're just going
15 to end up with something low.

16 Conversely, you could have two really low numbers that
17 nevertheless, end up resulting in a higher ratio when there really isn't a
18 problem with that particular parasitic load. So the devil's in the details.
19 Stevens is directed to a very specific implementation and layering on the
20 Olson ratio would render Stevens ineffective for its stated purpose.

21 And a couple of other points. Petitioner's counsel stated that
22 there's no disclosure of direct measurement. And I'm not sure I would
23 characterize Patent Owner's position that there's direct measurement
24 required. I'd have to think about that, because we haven't proffered the
25 claim construction other than plain and ordinary meaning.

1 But I would like to direct your attention to -- and please bear with
2 me for a moment. Figure 5 of the '461 patent, this is Slide 11, the input
3 power monitor is positioned right next to the primary coil. So the concept of
4 a direct measurement is actually supported by Figure 5. The same thing in
5 Figure 2a. Current monitor is directly adjacent and in series with the
6 primary coil. That supports the concept of a direct measurement.

7 So Petitioner attempts to dismiss this amendment as almost
8 improper by almost insinuating some sort of a belated written description
9 argument or something like, which, obviously, isn't proper here. But the
10 amendment is clearly supported and perhaps, more aligned with what's
11 actually in the figures of the '461 patent.

12 Bear with me, let me just go through my notes to see if I have
13 anything left. So the last point I want to make, Your Honor, and this is in
14 the context of limitation 13.2. So let me re-orient us here. Slide 15, I think,
15 is adequate for my purpose.

16 So Petitioner's counsel spoke about this "pertaining to" language,
17 and the Patent Owner's issue with Petitioner's interpretation of 13.2 in its
18 analysis is, again, it's about location. They're ignoring the fact that there's a
19 location requirement that is included in this limitation. 13.2 states at least
20 one signal detector configured to detect signals carrying data pertaining to
21 output power received by the primary coil.

22 Output power received by the primary coil. This is similar to 13.1.
23 The only difference is that the signal detector is receiving something, right?
24 But there's this location requirement embedded in the stuff that it's detecting.
25 The stuff that's coming in. And as I stated before, it's not enough that there

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1 is something that's simply related to output power. There are a lot of things
2 in these systems that are related to output power.

3 And as I explained in the context of Olson, if you're not precise,
4 you're not thinking about location, well, you could end up measuring
5 something that we actually don't care about and that is improper to be
6 included in the calculation of index of power loss per limitations 13.3 and
7 13.4.

8 So that's our --

9 JUDGE FLAX: So you're saying that Petitioner is advocating now
10 for a claim construction?

11 MR. BARROW: Of 13.2?

12 JUDGE FLAX: Mm-hm.

13 MR. BARROW: I would say they are -- first, they are reading out
14 the location requirement and as stated here -- let me blow this up. I'm
15 actually having trouble reading it. They state that the term "pertaining to"
16 does not require any particular form of measurement of the output power
17 received by the secondary coil. In fact, no measurement is recited at all.
18 The first portion of that is not precise enough.

19 There is some sort of measurement or detection requirement of
20 something at the secondary coil pertaining to the output power, right? So we
21 can't just say, "Oh, this is somehow related to output power." I mean, in
22 some sense, everything is related to output power in these systems, right?
23 We have to draw the line somewhere.

24 And if we don't draw that line, you end up with the Olson scenario
25 where you have your output power that's calculated in the charging circuit,

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1 and where you're measuring what's in the battery, as opposed to the output
2 power received by the secondary coil. And then, by extension, your index of
3 power loss is not an index of power loss. It's, essentially, a worthless result.
4 It's input power divided by whatever you're fortunate enough to have left in
5 your battery.

6 JUDGE FLAX: So on the issue of claim construction, tell me if
7 you agree with my understanding, is that neither party -- or both parties, let's
8 say, have advocated for no claim construction expressly in the sections of
9 their briefs and say, claim construction and they said no. But --

10 MR. BARROW: Your Honor is absolutely correct.

11 JUDGE FLAX: Okay.

12 MR. BARROW: In Patent Owner's response, we have the claim
13 construction section and we basically said, it's not necessary to construe
14 anything.

15 JUDGE FLAX: Okay.

16 MR. BARROW: In a reply, Petitioner's, in our view, proposed
17 -- and attempt to say that we proposed the claim construction by virtue of
18 our arguments. We believe they effectively proposed broadening claim
19 constructions, which we believe are improper.

20 JUDGE FLAX: Okay. So if we agree with both of your opening
21 briefs, that no express claim construction is required in this case, you would
22 agree with that?

23 MR. BARROW: Correct.

24 JUDGE FLAX: And I think opposing counsel might agree with
25 that, I don't know. He's nodding his head, let the record reflect. Okay.

1 MR. BARROW: Does that mean we're disregarding the reply and
2 sur-reply?

3 JUDGE FLAX: I just, you know, when the parties begin by saying
4 we don't need to construe claims, and end with, "Oh, maybe, claims get
5 construed," that's not sort of the progression that we're hoping for in --

6 MR. BARROW: Right.

7 JUDGE FLAX: -- these cases.

8 MR. BARROW: Right. I --

9 JUDGE FLAX: I wanted to clarify what your position is.

10 MR. BARROW: I understand that and I appreciate that for next
11 time. I will say we -- just to reiterate, we have not proffered a construction.
12 We do not believe it is appropriate -- or rather, necessary to construe any of
13 the terms for the '461 patent.

14 JUDGE FLAX: Thank you. All right.

15 MR. BARROW: Thank you.

16 JUDGE BARRETT: So, unless I'm mistaken, that's it, correct?
17 Thank you both for your arguments today. It's been very interesting. The
18 cases are submitted and we'll get decisions out in due course. Thank you.

19 (Whereupon, the above-entitled matter went off the record at 4:33
20 p.m.)

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