

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

INDUCTEV, INC.,) Case IPR2023-00105
)
Petitioner,)
)
v.) U.S. Patent
) No. 10,027,184
WITRICITY CORPORATION,)
)
Patent Owner.)
-----)

REMOTE PROCEEDINGS OF THE
VIDEOTAPED DEPOSITION OF MARK ALLEN, PH.D.
WEDNESDAY, SEPTEMBER 11, 2024

REPORTED BY NANCY J. MARTIN
CSR. NO. 9504, RMR, RPR
PAGES 1 - 57

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- - -
Wednesday, September 11, 2024
- - -

Remote Videotaped Deposition of MARK ALLEN,
PH.D., beginning at 10:04 a.m., before Nancy J.
Martin, a Registered Merit Reporter, Certified
Shorthand Reporter. All parties appeared remotely.

A P P E A R A N C E S :

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I N D E X

TESTIMONY OF MARK ALLEN, PH.D. PAGE

BY MR. LAWSON 5

BY MR. ZUCKER 51

E X H I B I T S

NUMBER DESCRIPTION PAGE

Exhibit 1 U.S. Patent US 10,027,184 B2 9

Exhibit 2 PETITION FOR INTER PARTES REVIEW/OF U.S. PATENT NO. 10,027,184 11

Exhibit 3 DECLARATION OF DR. MARK ALLEN IN SUPPORT OF/PETITION FOR INTER PARTES REVIEW/OF U.S. PATENT NO. 10,027,184 11

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Exhibit 5 U.S. Patent Application No. US 2010/0084918 A1 12

1 PHILADELPHIA, PENNSYLVANIA,
2 WEDNESDAY, SEPTEMBER 11, 2024; 10:04 A.M.

3
4 MARK ALLEN, PH.D.,
5 having been sworn/affirmed,
6 was examined and testified as follows:

7
8 EXAMINATION

9 BY MR. LAWSON:

10 Q. Okay. I am Lance Lawson with the law firm
11 Burr Forman, representing the patent owner, WiTricity
12 Corporation in the matter.

13 Mr. Allen, could you state your full name and
14 your current principal address for the record, please.

15 A. Home address?

16 Q. Please.

17 A. My full name is Mark George Allen. I live at
18 2037 Spruce Street in Philadelphia.

19 Q. Okay. Very good.

20 And, Dr. Allen, you understand you're here
21 today to testify about the expert report that you
22 submitted regarding the '184 patent in what's been --
23 the number is IPR2024-0015; is that correct?

24 A. Yes.

25 Q. Okay. And I know you've been -- you've

1 testified -- we meet again. We had a deposition back
2 in May in a related IPR proceeding. So I know you've
3 had significant deposition experience, but still, it's
4 helpful to go over the ground rules, make sure
5 everybody is on the same sheet of music.

6 As you know, I will ask you this morning a
7 series of questions, and you have to answer those
8 questions to the best of your ability.

9 Do you understand that?

10 A. Yes.

11 Q. Okay. And the only time that you would not
12 be -- well, strike that.

13 As we go through, when I ask questions, your
14 counsel may make objections on the record, but after
15 he makes those objections, you still have a duty and
16 responsibility to answer the questions to the best of
17 your ability unless he specifically instructs you not
18 to answer the question. That would be around, you
19 know, attorney-client privileged communications
20 grounds.

21 Do you understand that?

22 A. Yes.

23 Q. Okay. And this deposition I think will only
24 go about two or three hours at the max, but if there
25 comes a time when you need to take a break -- we'll

1 probably go about 45, 50 minutes, and we'll take a
2 break. If you need to take a break, let me know.
3 I'll try to accommodate it as soon as I can. If I'm
4 in the middle of a line of questioning, I may need to
5 follow up on a couple of things, but I'll try to
6 accommodate you as reasonably as possible.

7 Is that fair?

8 A. Yes. Thank you.

9 Q. Okay. And we also have the court reporter,
10 although she can hear your -- she's taking down your
11 answers, and she might be able to see you through the
12 video, but you have to respond to my questions orally,
13 with an oral answer, so she can transcribe your
14 response.

15 Do you understand that?

16 A. Yes.

17 Q. Okay. And are there -- is there any reason
18 that you would not be able to testify truthfully
19 today?

20 A. No.

21 Q. Are you are not on any medication or anything
22 that would hinder your ability to testify truthfully
23 and understand questions; is that correct?

24 A. That's correct.

25 Q. Dr. Allen, what did you do to prepare for

1 your deposition today?

2 MR. ZUCKER: You can answer the question, but
3 I'll just caution you not to reveal the substance of
4 any of your communications with counsel.

5 THE WITNESS: Understood.

6 So I reviewed my declaration that I prepared
7 for this -- I'll call it the '184 patent. I spoke
8 with counsel about that declaration in order to sort
9 of refresh my memory because it was written some time
10 ago, and then I looked over it one more time earlier
11 this morning.

12 BY MR. LAWSON:

13 Q. Okay. I'm sorry. When did you meet with
14 counsel?

15 A. Yesterday.

16 Q. Okay. And approximately how long did you
17 meet with counsel?

18 A. It was approximately seven hours, but that
19 was split over two declarations because I believe
20 we're going to also talk about a separate one today.

21 Q. Okay. That would be the, I think,
22 '654 patent; correct? A separate proceeding?

23 A. I believe that's correct, yes.

24 MR. LAWSON: All right. Very good. I think
25 we've got the exhibits and I'd like to enter the first

1 five exhibits. I think we can get them all entered,
2 if that's possible on your end, and I can tell you
3 which ones will be in the order that we should mark
4 them.

5 THE WITNESS: Okay.

6 MR. LAWSON: Okay. If you click on the
7 marked folder, you should see all of those exhibits
8 introduced.

9 THE WITNESS: Let me try and get to that.

10 (Pause.)

11 BY MR. LAWSON:

12 Q. Okay. I have them, Dr. Allen.

13 Do you have Exhibits 1, 2, 3, and 5?

14 A. I see them displayed. Should I try to click
15 on one to see if it opens?

16 MR. LAWSON: Sure. Let's start with
17 Exhibit 1. Why don't you open up Exhibit No. 1. It
18 should be the patent at issue here, the '184 patent.
19 U.S. Patent No. 10,027,184.

20 (Deposition Exhibit 1 was marked for
21 identification.)

22 THE WITNESS: It did open. Yes, I see it.

23 BY MR. LAWSON:

24 Q. You're able to see that?

25 A. It's a little small, but I do also have a

1 hard copy of it. So I might look at that, depending
2 on what we do.

3 Q. Yeah. And I guess I'll just ask you, do you
4 have -- those materials, you say you have a copy of
5 it. Is that a clean copy? Do you have a copy that
6 doesn't have any markings on it?

7 A. No. It's a clean copy.

8 EXHIBIT TECH: If I could help you guys out
9 for a moment. I'm just going to share my screen.

10 In the upper left-hand corner of the exhibit,
11 you should see a number of symbols. There's a zoom
12 in, zoom out, plus and minus. So as you zoom in and
13 zoom out, you can do that locally if you want.

14 THE WITNESS: That is helpful.

15 BY MR. LAWSON:

16 Q. You can also refer to your paper copy,
17 Dr. Allen. That would be fine too.

18 THE WITNESS: Excuse me. How do I go back to
19 the list of exhibits?

20 (A discussion was held off the record.)

21 MR. LAWSON: We'll stay on the '184 patent.

22 Q. Dr. Allen, do you recognize that as the U.S.
23 Patent No. 10,027,184 that you studied and was the
24 subject of your expert report in this matter?

25 A. Yes.

1 MR. LAWSON: Okay. Can we open Exhibit
2 No. 2, which should be the petition in the matter,
3 again, IPR2024-00105 regarding the '184 patent.

4 (Deposition Exhibit 2 was marked for
5 identification.)

6 THE WITNESS: Yes, I see it.

7 BY MR. LAWSON:

8 Q. Okay. And you're familiar with that
9 document, the petition? Have you seen that document
10 before?

11 MR. ZUCKER: Objection. Foundation.

12 THE WITNESS: I don't believe I authored this
13 document, no.

14 BY MR. LAWSON:

15 Q. Have you seen it before?

16 A. I've seen a lot of documents. Probably I
17 have seen some form of this document in the past.

18 MR. LAWSON: Okay. All right. We'll go
19 to -- now, if you would go to Exhibit No. 3, which
20 should be -- it's entitled "Allen Declaration," but
21 Dr. Allen, it should be your declaration in this
22 matter.

23 (Deposition Exhibit 3 was marked for
24 identification.)

25 THE WITNESS: This one I recognize, yes.

1 BY MR. LAWSON:

2 Q. Okay. And is this the declaration you
3 submitted in this matter that contains all of your
4 opinions?

5 A. Yes, I just went down to the last page. It's
6 the one with my signature on this.

7 Q. I believe that's on Page 130 of the --

8 A. Yes, it is.

9 Q. -- of the document.

10 Okay. And you signed that on October 23 --
11 is that correct? -- 2023?

12 A. Yes.

13 MR. LAWSON: All right. We'll come back to
14 that shortly, but I'm going to go ahead and get these.
15 Exhibit No. 4, again for the record, is just a
16 placeholder.

17 (Deposition Exhibit 4 was marked for
18 identification.)

19 MR. LAWSON: I'd ask you now, Dr. Allen, if
20 you would open what is marked Exhibit No. 5, and it
21 says, "Fells," which was Exhibit 1005 from the
22 petition.

23 Q. I'd ask you if you recognize that.

24 (Deposition Exhibit 5 was marked for
25 identification.)

1 THE WITNESS: I do, yes.

2 BY MR. LAWSON:

3 Q. Okay. What is it?

4 A. It's one of the previous patents that I
5 looked at while preparing my declaration.

6 Q. Very good. If you go back to your
7 declaration, can you tell me how did you go about
8 preparing, reviewing, and signing the declaration in
9 this matter?

10 A. Sorry. I'm getting back to it. Yeah.
11 Okay. I'm sorry. Could you repeat that?

12 Q. Who prepared the initial draft of your
13 declaration?

14 A. So it was a collaborative effort between
15 myself and the attorneys in this case. There were
16 some parts that I prepared; there were other parts
17 they prepared. We edited it together, but, you know,
18 ultimately at the end, I had the final edit over what
19 I signed.

20 Q. Do you understand approximately how much time
21 you spent preparing your declaration in this matter?

22 A. Probably 20 hours, I would say.

23 Q. All right. And do you know when you began
24 preparation of your declaration, the materials, and
25 things that went into your declaration?

1 A. I don't recall exactly, but I believe it was
2 summertime last year, 2023, roughly.

3 Q. Okay. Well, do you have a copy -- I know you
4 said you have a copy of your declaration. Do you also
5 have a copy of the Fells reference with you? It's one
6 you'll need to keep open on your screen.

7 A. I do have a copy of the Fells reference, yes.

8 Q. Okay. Also, is that a clean copy that
9 doesn't have markings and doesn't have notes on it?

10 A. That is correct, yes.

11 Q. We'll start by asking a series of questions.
12 We may get to the petition also, but it will be about
13 your declaration and your opinions that you've
14 authored in this case, and specifically about -- the
15 first several questions are going to be about the
16 Fells reference. So if you keep these close to you,
17 then we can move along and it will be quicker.

18 If you would, go to -- well, your
19 declaration, Page 28, 29 at Paragraph 67 of your
20 declaration.

21 A. Yes, I see it.

22 Q. Okay. You're referring to Figure 1 of Fells;
23 is that correct?

24 A. Yes.

25 Q. Okay. And I'm just going to read from your

1 declaration. Just tell me if you -- and I'll ask you
2 if I've read it correctly.

3 It states, "The 'wireless power supply...
4 takes electrical power and transmits this power to a
5 portable device.'" And it's Fells at Paragraph [189].

6 "More specifically, 'the charger takes an AC
7 from the mains,' which is 'rectified using mains
8 rectifier to produce DC power', Fells [189]. That DC
9 power 'is down-converted to a lower voltage,' and then
10 down-converted voltage 'is used to drive inverter.'"
11 And that's Fells [189].

12 Then you state inverter -- "The inverter
13 'generates an AC voltage which is applied to [a] tank
14 circuit,' or resonator, made of 'capacitor 114 and a
15 primary coil 112.'" Again, that's all Fells [189].

16 Did I read that correctly?

17 A. Yes.

18 Q. Okay. When you say, "tank circuit" or
19 "resonator," what are you referring to?

20 A. So the tank circuit is the combination of
21 capacitance and inductance in the system that
22 resonates.

23 Q. Okay. Does -- in this figure that you're
24 discussing there, does the tank circuit receive the AC
25 voltage from the inverter to generate an oscillating

1 magnetic field?

2 A. So I don't see where I talked about an
3 oscillating magnetic field, but the inductor in this
4 circuit should generate an oscillating magnetic field.

5 Q. Does the AC electrical mains input supply
6 power used by the inverter, and that's via the mains
7 rectification the DC converter to generate the AC
8 voltage?

9 MR. ZUCKER: Objection. Form.

10 THE WITNESS: I'm sorry. Could you repeat
11 that?

12 BY MR. LAWSON:

13 Q. Yes. Does the AC electrical mains input
14 supply input supply power used by the inverter to
15 generate the AC voltage?

16 A. Ah. I understand.

17 So, first, there is a conversion of the mains
18 input, which is presumably AC at some low frequency,
19 into DC, which then is converted using the inverter to
20 the AC that's used to drive the tank circuit.

21 Q. Okay. So the inverter requires AC electrical
22 mains input to generate the AC voltage; is that
23 correct?

24 A. Well, requires DC input from the converter
25 which gets its power from the rectified power of the

1 mains. So it's short of a chain.

2 Q. Okay. All right. Let's go to Paragraph 69
3 of your declaration, if you would, please.

4 A. Yes. I'm there.

5 Q. Okay. So here in Paragraph 69 you're talking
6 about -- you state, "Fells' Figure 2 describes a
7 version of the wireless power supply that is similar
8 to Figure 1, but adds 'a switch...an energy storage
9 unit...and a sense circuit,'" and that's Fells
10 Paragraph 191.

11 Did I -- did I read that correctly?

12 A. Yes.

13 Q. Okay. You state that -- this is with regard
14 to Fells Figure 2. "These added components allow the
15 wireless power supply to enter a 'standby' mode, also
16 called 'Ultra Low Power or ULP mode' in which the
17 switch" --

18 THE WITNESS: I'm sorry. I think you're
19 frozen.

20 MR. ZUCKER: Yeah. We may have lost Lance
21 for a moment there.

22 BY MR. LAWSON:

23 Q. --"is open, so that no power is drawn
24 from" --

25 Did I read that correctly?

1 A. Would you mind rereading that? We lost you
2 for a moment.

3 Q. Okay. "These added components allow the
4 wireless power supply to enter a 'standby' mode, also
5 called an 'Ultra Low Power or ULP mode' in which the
6 switch SW1 'is open, so that that power is drawn from
7 the mains.'" That's Fells Paragraph [191].

8 Did I read that correctly?

9 A. That is correct.

10 Q. Are you there?

11 A. I am here, yes.

12 Q. Okay. I didn't hear you. So I was --
13 okay. We'll go back there, and you state, "In ULP
14 mode 'the only power drawing element is the sense
15 circuit 206'"; correct?

16 A. Yes, that's what I've written.

17 Q. Then you state that -- in Paragraph 70 you
18 state that "The sense circuit 'detects when an object
19 is placed in (or removed from) proximity of the
20 wireless power supply.'" And "If an object is placed
21 nearby or removed from the power supply, switch S1 is
22 closed 'allowing the circuits in the wireless power
23 supply 200 to receive power.'" And, again, Fells
24 [191].

25 Did I read that correctly?

1 A. Yes.

2 Q. Okay. Do you -- in your opinion do the mains
3 rectification, the DC to DC converter, the inverter
4 and tank circuit in Figure 2 of Fells, generally
5 operate in the same manner as Figure 1 to receive the
6 AC electrical mains input and generate an oscillating
7 magnetic field that you testified to earlier?

8 A. So I believe Figure 1 was prior art.

9 Q. Right.

10 A. Figure 2 is the Fells patent. So if you're
11 asking about the -- the sort of power flow, then I
12 believe that, yes, the mains input, rectification,
13 converter, and inverter are similar, and then, of
14 course, there's addition of these other components
15 that improve over Figure 1.

16 Q. Okay. And then in referring now to Figure 2,
17 okay, Fells, when it's in the standby mode, in which
18 the switch SW1 is open, can the AC electrical mains
19 input supply the power to the tank circuit so that the
20 tank circuit is able to generate an oscillating
21 magnetic field? This is with the switch open.

22 MR. ZUCKER: Objection. Form.

23 THE WITNESS: So I don't know, but I could
24 easily imagine that with the switch open, the energy
25 storage element could supply energy to the DC to DC

1 converter to power the power train, but I don't know
2 if it does.

3 BY MR. LAWSON:

4 Q. Okay. And were the tank circuits in Figure 2
5 generating oscillating magnetic field when it's in the
6 standby mode?

7 A. When it's -- I'm sorry. When it's in the
8 standby mode?

9 Q. Right.

10 A. So when it's in the ultra low power mode, I
11 would imagine not in order to conserve power.

12 Q. Okay. Again, when we're in the standby mode
13 with switch SW1 open -- strike that.

14 Okay. When the sense circuit detects an
15 object, is the wireless power supply in the standby
16 mode with switch SW1 open?

17 A. I'm sorry. I didn't quite catch that. Could
18 you repeat it?

19 Q. When the sense circuit detects an object, you
20 said -- in Paragraph 70 you said it "detects when an
21 object is placed in" or from "the proximity of the
22 wireless power supply."

23 Do you see that, in Paragraph 70?

24 A. Yes.

25 Q. Okay. When a sense circuit detects an

1 object, is the wireless power supply in the standby
2 mode with switch SW1 open?

3 A. So prior to the detection of such an object,
4 switch SW1 is open. When I -- can be open --
5 right? -- if it's not operating. And then with an
6 object placed nearby, then the switch SW1 closes.

7 Q. Okay. So when the tank circuit -- excuse me.
8 When that switch is open, before it's closed, the tank
9 circuit then is not generating an oscillating magnetic
10 field before an object is detected by the sense
11 circuit; correct?

12 A. As I recall, there's an operational mode that
13 I discuss where there is periodic check for -- by the
14 control circuit to ensure that there is not foreign
15 objects or other sorts of things around, and that
16 could happen while there is an oscillating magnetic
17 field generated.

18 Q. Okay. Now, if you could turn to Fells,
19 Figure 40 in Fells. Just let me know when you're
20 there.

21 A. Yes, I see it.

22 Q. Okay. Do the mains rectification, the DC, DC
23 converter, inverter and -- generally operate in the
24 same manner as you described with regard to Figure 1?
25 So it receives the AC input and generates an

1 oscillating a magnetic field?

2 A. I'm sorry. You cut out in the middle of that
3 question.

4 Q. It seems like I'm having a hard time hearing
5 my question -- my connection.

6 Did the mains rectification in Figure 4, the
7 DC converter, the inverter, and the tank circuit
8 generally operate in the same manner as in Figure 1?

9 A. So -- okay. I understand your question. So
10 I believe that the answer is in one operational mode,
11 yes, with the addition of extra components and onboard
12 energy storage.

13 Q. Okay. And regarding Figure 40 again, and now
14 referencing in Figure 2, does the wireless power
15 supply in Figure 40 have the same standby mode as in
16 Figure 2?

17 A. You mean does it have the same capability to
18 enter a standby mode?

19 Q. Right.

20 A. It seems like it would have the capability,
21 depending on how the control module is configured.

22 Q. Okay. In -- so when it's in -- assuming it's
23 in the standby mode where a switch SW -- again, we're
24 talking about Figure 40.

25 In a standby mode where switch SW1 is open,

1 can the AC electrical mains input supply power to the
2 tank circuit so that it generates an oscillating
3 magnetic field?

4 A. When switch SW1 is open, the mains input
5 would not be supplying power to the wireless power
6 supply.

7 Q. Okay. And when the tank circuit is in
8 standby mode, can it generate an oscillating magnetic
9 field?

10 A. If it's in the -- if the purpose of the
11 standby mode is ultra low power mode, I would think
12 that the designers would not want that. I suppose
13 it's possible that the onboard energy storage could
14 supply energy to the power train to generate an
15 oscillating magnetic field, but I think that would
16 defeat the purpose of having the low power mode or
17 ultra low power mode.

18 Q. Okay. Is the wireless power supply in the
19 standby mode when the proximity detector detects an
20 object? In Figure 40 again.

21 MR. ZUCKER: Objection. Form.

22 THE WITNESS: So it could be. It could also
23 be operating, delivering power.

24 BY MR. LAWSON:

25 Q. It could be delivering power when it's in

1 standby mode?

2 A. I'm sorry. Perhaps I missed your question.

3 Q. Do you need me to repeat the question?

4 A. Please.

5 Q. So the question is can a tank circuit
6 generate an oscillating magnet field in Figure 40 when
7 it's in the standby mode?

8 A. So in the standby mode the switch will be
9 open.

10 Q. Right.

11 A. We won't have power being drawn from the
12 mains. It would be possible to configure the circuit
13 in such a way that the energy storage supplied the
14 energy to allow that magnetic field to be generated.
15 I don't think that that's what -- that's the intended
16 operation of ultra low power mode.

17 Q. Okay. If you could turn to -- in your
18 declaration to Paragraph 118, if you would, please.

19 Please let me know when you're there.

20 A. Yes, I see it.

21 Q. And there, Dr. Allen, you state that "A
22 POSA" -- which for the court reporter means person of
23 skill in the art -- "would have recognized that the
24 version of Fells' power supply shown in Figure 40 is
25 the same as the power supply shown in Figure 2, merely

1 replacing the label 'Sense Circuit' with label
2 Proximity Detector' to reflect that the sense circuit
3 is 'act[ing] as a proximity detector" in sum 4002.

4 And it cites to Fells Paragraph [288] in
5 Figure 2 and Figure 40. Did I read that correctly?

6 A. Yes.

7 Q. Okay. So I just want to confirm here. Is it
8 your opinion that Figure 40 and Figure 2 illustrate
9 the same circuit except for the relabeling the sense
10 circuit 206 as proximity 4002?

11 A. So in Figure 2 we have a more general
12 description of the circuit where I could be sensing
13 lots of different things.

14 In Figure 40 we have a more specific
15 situation where the sensor is sensing proximity. But,
16 otherwise, I would imagine that, yes, these are doing
17 the same thing.

18 Q. Okay. If you look at Figure 2, is the sense
19 circuit 206 connected directly to the primary coil LP,
20 which is labeled No. 212?

21 A. So I see a wire or what I presume to be a
22 wire connecting the block labeled sense circuit
23 element 212. So I would presume it is connected.

24 Q. Okay. And if you turn now to Figure 40, is
25 the proximity detector in Figure 40 connected directly

1 to the primary coil LP, which is labeled, again,
2 No. 212?

3 A. So there's -- there is no wire or symbol
4 extending from proximity detector to element 212.
5 There is an indirect connection through the other
6 element to the circuit, presumably.

7 MR. LAWSON: Okay. I think right now,
8 Counsel, this would be a good time to take a short
9 break, probably about 5 to 10 minutes. We'll come
10 back at -- it's almost 10:45 eastern. Maybe we'll
11 come back at 10:55.

12 Does that work for you, Dr. Allen?

13 THE WITNESS: Yes. Thank you.

14 MR. ZUCKER: Okay. Let's go off the record.

15 (A recess was taken from 10:44 a.m.
16 to 10:57 a.m.)

17 BY MR. LAWSON:

18 Q. Dr. Allen, if you would go to Paragraph 120
19 of your declaration, please.

20 A. Yes, I have it.

21 Q. Here you state -- in the first sentence of
22 Paragraph 120, it states, "First, Fells states that
23 its 'proximity detector' may be a 'Hall effect
24 sensor,' which measures 'a change in voltage in
25 response to a change in magnetic fields,'" and citing

1 to Fells at Paragraph [289].

2 Do you see that?

3 A. I do.

4 Q. Okay. From Fells -- if you go to Fells at
5 [289], we've got -- let me know when you're there.

6 A. Yes, I found it.

7 Q. In Fells [289] it states that "Another type
8 of proximity detector 4002 is a Hall Effect sensor, in
9 which there's a change in voltage in response to a
10 change in magnetic field." It says, "The presence of
11 a ferrite core or other material with similar
12 properties within the portable device may result in
13 altering the magnetic field."

14 Did I read that correctly?

15 A. From the Fells patent, yes.

16 Q. Yeah. Okay. Paragraph [289] of Fells;
17 correct?

18 A. Correct, yes.

19 Q. Okay. So in Fells, what generates the
20 magnetic field that the hall effect sensor responds
21 to?

22 MR. ZUCKER: Objection. Form.

23 THE WITNESS: I don't believe it's stated in
24 Paragraph [289]. One possibility could be the
25 magnetic field of the inductor.

1 BY MR. LAWSON:

2 Q. You said it could be the magnetic field of
3 the inductor?

4 A. That's one possibility, yes.

5 Q. Okay. And if it's the magnetic field of the
6 inductor, which inductor are you -- when you say it
7 could be the possibility of the magnetic field of the
8 inductor, which inductor are you talking about, just
9 to be clear?

10 A. So if I go to Figure 40 of Fells, the
11 inductor labeled 212.

12 Q. Okay. And is that the oscillating magnetic
13 field from the inductor, which is 212, is that
14 oscillating magnetic field generated by the tank
15 circuit from the AC voltage that's generated by the
16 inverter?

17 A. So if the hall sensor is sensing the magnetic
18 field and perturbances in the magnetic field generated
19 by the inductor --

20 Q. Right.

21 A. -- 212, then yes, it's the inductor that's
22 generating the oscillating magnetic field.

23 Q. Okay. And in that case, what does the hall
24 effect sensor do in response to the presence of a
25 portable device that results in altering the magnetic

1 field?

2 MR. ZUCKER: Objection. Form. Foundation.

3 THE WITNESS: What does the hall effect
4 sensor do. Are you asking sort of how it would
5 operate?

6 BY MR. LAWSON:

7 Q. Well, you just said that the magnetic field
8 from the tank circuit is receiving the AC voltage
9 generated by the inverter; right?

10 A. Yes. Element 212 in Figure 40 is receiving
11 AC power from the inverter. Yes, that's correct.

12 Q. Okay. So what happens in the circuit -- in
13 that case, what happens in the circuit -- well, strike
14 that.

15 Let me ask this question: What does the hall
16 effect sensor do in response to the presence of a
17 portable device in Fells that results in altering the
18 magnetic field? What's the response in the hall
19 effect sensor? How does it affect the circuit?

20 A. So the hall effect sensor presumably is
21 feeding information about the presence of the -- of
22 the external object to the control unit, which is then
23 controlling what happens in the power chain of the
24 wireless power supply.

25 Q. Right. Isn't that when they close switch

1 SW1?

2 A. That could be one operational mode.

3 Q. Okay. Let's go to Paragraph 121 of your
4 declaration.

5 A. Yes, I have it.

6 Q. I'm just going to read from it for the
7 record. Paragraph 121 says, "Second Fells' 'proximity
8 detector' can be an 'inductor proximity sensor'...
9 'formed using another coil in the wireless power
10 supply 200 which is independent of the coil used to
11 transfer power.'" And it's citing Fells
12 Paragraph [288] and [289].

13 "Fells also refers to this as a 'inductive
14 bridge,' which a POSA" -- person of skill in the
15 art -- "would have understood to be a well-known
16 circuit used to measure the unknown inductance of an
17 object." You cite there Fells [291].

18 A. Yes.

19 Q. Okay. Did I read that correctly?

20 A. Yes.

21 Q. Okay. So is your opinion that what Fells
22 refers to as an "inductive proximity center" will be
23 understood by a person of skill in the art as an
24 inductive bridge?

25 A. I think that's one implementation, yes.

1 There are others, like flux gate sensors or others,
2 inductive sensors that could be used.

3 Q. You said "flux gate sensor"; right?

4 A. Yes.

5 Q. And "others"? What others?

6 A. Probably a flux gate would be one of the
7 better devices to use. I don't have an exhaustive
8 list of magnetic proximity sensors available. Sorry.

9 Q. Okay. Well, what makes Fells -- the Fells
10 inductive proximity sensor, what makes it an inductive
11 bridge?

12 A. So you could -- it's an implementation of how
13 you could build such a sensor where you have multiple
14 elements that are connected together, and you detect
15 any change in one of the elements through an imbalance
16 in currents or voltages that flow in the circuit to
17 which that sensing element is connected.

18 Q. You said measuring changes to any one of the
19 elements; is that correct?

20 A. Typically, one of the elements is the one
21 that's sensitive to changes, and the others are not.
22 But you could have multiple elements, I suppose, that
23 could change.

24 Q. Okay. In the same paragraph, 121 of your
25 declaration, Dr. Allen, you also state -- actually,

1 it's the next sentence -- "A person of skill in the
2 art, POSEA, would have understood that as a matter of
3 basic electronics, a coil used as an 'inductive
4 proximity sensor' constitutes a 'magnetic field
5 sensor' because inductors respond to changes in
6 magnetic fields."

7 Did I read that correctly?

8 A. Yes.

9 Q. Can you explain, in your opinion, how is a
10 coil used as an inductive proximity sensor?

11 A. So there are many ways one could do that. A
12 few off the top of my head, if you have a convarying
13 flux near the coil, a voltage will be induced across
14 the coil.

15 If you have a material with different
16 magnetic permeability that comes close to the coil,
17 there will be a change in the inductance of the coil.
18 There are probably several other methods.

19 Q. Okay. In the same vein, are there uses of a
20 coil that would not constitute a magnetic field
21 vector?

22 A. Could one use a coil for purposes other than
23 sensing magnetic fields? Is that your question?

24 Q. Yes.

25 A. Yes.

1 Q. Okay. What would that be?

2 A. Well, for example, perhaps you want an
3 inductor as a circuit component that is fixed and
4 doesn't interact with anything outside of the circuit.
5 You might choose to fashion it so that it is
6 deliberately insensitive to external effects.

7 Q. Okay. And in that case, it would not be a
8 magnetic field sensor; is that correct?

9 A. If you were trying to isolate the part from
10 any external magnetic fields, you're trying as hard as
11 you can for it not to be an external magnetic field
12 sense.

13 Q. And with regard to inductive proximity
14 sensors, are there any inductive proximity sensors, in
15 your opinion, that do not constitute a magnetic field
16 sensor?

17 A. So an Eddy-current sensor, I suppose, could
18 be something loosely like that. Although instead of
19 directly sensing a magnetic field, it generates a
20 magnetic field in the presence of a conductor that is
21 then sensed. So it's sort of an indirect measure.

22 Q. Any others, as you sit here today, that you
23 can think of?

24 A. I'm sure there are many. There's a whole
25 field associated with these, but off the top of my

1 head, that's what comes.

2 Q. When you say, "there's a whole field related
3 to these," can you be a little more detailed in
4 exactly what you mean?

5 A. To sensing of, for example, structural
6 integrity of parts, sensing proximity of, you know,
7 how close something is to something else, things like
8 that.

9 Q. But my question is related to are there
10 inductive proximity sensors that do not constitute --
11 that are not a magnetic field sensor? You know, when
12 you talked about something regarding the Eddy-current
13 sensor; is that right?

14 A. That's the one that comes to mind right now.
15 I'm sure there are others.

16 Q. But as you sit here today, you can't think of
17 any others?

18 A. As I sit here today, no.

19 Q. But it's your opinion there are a number of
20 other devices that would be -- or sensors that would
21 be an inductive proximity sensor, but it's not a
22 magnetic field sensor; correct?

23 MR. ZUCKER: Objection. Form.
24 Mischaracterizes prior testimony.

25 THE WITNESS: So if I were to think about,

1 for example, something that would change the coil
2 confirmation of an inductor by being close, that would
3 be presumably a change in inductance that I can
4 measure without the presence of an external magnetic
5 field. So maybe that's another example of such a
6 device.

7 I would not construct a device to do it that
8 way, but I suppose one could if there were special
9 circumstances.

10 BY MR. LAWSON:

11 Q. Okay. Turning to Paragraph 121, you state,
12 "The coil is placed 'in the vicinity of the wireless
13 power supply,' and when a 'device or foreign object
14 has been placed' in that area, the magnetic field will
15 change, resulting in a change to the coil's own
16 inductance. That inductance can be measured, thereby
17 indicating 'that a device or foreign object has been
18 placed' or 'removed from the wireless power supply.'"
19 And you cite to Fells [288], [289].

20 Do you see that?

21 A. I do.

22 Q. Did I read that correctly?

23 A. Yes.

24 Q. Okay. Okay. In that statement in
25 Paragraph 121 that I just read you, what generates

1 "the magnetic field" that will change?

2 A. So I think there are two possibilities. One
3 is that it is the -- sorry. I have to go back and
4 look here. It's the inductor 212 in Figure 40.

5 Another possibility is that it could be the
6 magnetic field generated by the sensor itself that is
7 altered by the presence of a foreign object or a
8 device.

9 Q. Okay. And how would the inductors be
10 measured if it is the magnetic field from the
11 inductor?

12 A. I'm sorry. Which inductor? The inductor 212
13 in Figure 40?

14 Q. Right.

15 A. How would the magnetic field be measured?

16 Q. How would the inductance be measured?

17 A. "How would the inductance be measured."

18 So typically we measure the voltage and/or
19 current across or through the -- the sensing inductor
20 or sensing coil perhaps.

21 Q. Here, the sensing coils, that's the sensor --
22 correct? -- if I'm understanding correctly?

23 A. So I'm referring to, in the same paragraph in
24 my report, the coil that is placed in the vicinity of
25 the wireless power supply.

1 Q. Okay. In the last sentence of your
2 Paragraph 121, Dr. Allen, you state that "The
3 '184 patent describes the same type of coil-based
4 magnetic field sensor, describing that sensors for
5 magnetic field 'may comprise loops of wire...that
6 generate an electrical signal proportional to the
7 amount of magnetic flux crossing its surface." And
8 you cite to Paragraph -- excuse me, '184 patent at
9 Column 2, Lines 20 to 42.

10 Did I read that correctly?

11 A. Yes.

12 Q. Okay. My question is does the inductive
13 proximity sensor of Fells generate an electrical
14 signal proportional to the amount of the magnetic flux
15 crossing its surface?

16 A. So one implementation of such a sensor could
17 operate that way, yes.

18 Q. Okay. In that case, does the electrical
19 signal represent the change in the coil's own
20 inductance that can be measured in the indicated
21 device or foreign object has been placed or removed
22 from the wireless power supply?

23 A. I'm sorry. I didn't quite --

24 MR. ZUCKER: Objection. Form.

25 BY MR. LAWSON:

1 Q. Yeah. One implementation of a sensor could
2 operate that way; right? In response to my last
3 question; right? You said that the inductive
4 proximity center Fells, does it generate an electrical
5 signal proportional to the amount of magnetic flux
6 crossing the surface.

7 And you answered one implementation of Fells
8 could operate that way; correct?

9 A. That is correct, yes.

10 Q. Okay. So when it's operating that way, does
11 that electrical signal that we just talked about
12 that's proportional to amount of magnetic flux, does
13 that represent the change in the coil's own inductance
14 that could be measured --

15 A. It's probably -- go ahead. I'm sorry.

16 Q. No. Go ahead.

17 A. It's more precise to say the flux linkage has
18 changed, which is related to the inductance.

19 Q. The flux linkage, you say; right?

20 A. Yes.

21 Q. Now, scroll down to Paragraph 131 of your
22 declaration, Dr. Allen.

23 A. Yes, I see it.

24 Q. If you go down to the last sentence that
25 begins on Page 63, it goes to the top of Page 64. It

1 states -- you state in your declaration that a person
2 skilled in the art "would have understood that the
3 Hall Effect sensor generates a 'change in voltage...
4 in response to a change in magnetic field' because the
5 sensor was within the wireless energy transfer
6 system's magnetic field."

7 Did I read that correctly?

8 A. Yes.

9 Q. And on Paragraph -- the next paragraph,
10 Paragraph 132, okay -- and I'm going to quote you
11 again. You state that a person of skill in the art's
12 "understanding of this is confirmed by Fells'
13 diagrams, which show Fells' proximity detector located
14 near to (and within the same circuit as) primary coil
15 Lp 212. Because primary coil Lp 212 produces a
16 magnetic field that could be negatively impacted by
17 foreign objects, the sensors that make up the
18 proximity detector must be within that magnetic field
19 in order to detect those foreign objects."

20 And you refer to Fells Figure 40 and
21 Figure 2, and you annotate and reproduce them below in
22 your declaration; correct?

23 A. Yes.

24 Q. And did I read that Paragraph 132 correctly?

25 A. Yes.

1 Q. Okay. Is it -- if you look at Figure 40,
2 Dr. Allen, is it your opinion that Figure 40 of Fells
3 shows the proximity detector within the wireless power
4 supply's magnetic field because the proximity detector
5 is located near to and within the same circuit as
6 primary coil 212?

7 MR. ZUCKER: Objection. Form.

8 THE WITNESS: So the proximity detector
9 should be within the area that primary coil 212
10 generates its magnetic field so it can perform its
11 function, which is to tell whether there are any
12 objects within that area of the primary -- of the
13 magnetic field where the primary coil is generating
14 magnetic field.

15 BY MR. LAWSON:

16 Q. Okay. So I take it your answer is you're
17 saying that the proximity detector is within the
18 wireless power supply's magnetic field; is that right?

19 A. In order to function, it should be within
20 that same area where the magnetic field is generated.

21 Q. Okay. I'm not asking if it's in the same
22 area. I'm asking is it within the magnetic field of
23 the primary coil Lp 212?

24 A. So if the magnetic field -- if Lp 212 is
25 generating a magnetic field, then it is within that

1 magnetic field.

2 Q. Okay. And is the capacitor 214 within the
3 magnetic field?

4 A. I don't know if it would be or not. It's
5 less critical that to perform its function it would be
6 within the area where the magnetic field is projected.

7 Q. But you annotate it, and you put your
8 annotation there with a box around it; is that
9 correct?

10 A. So, yes. In Paragraph 132 of my report, I
11 did annotate that.

12 Q. Right. And 212 is within that box that you
13 annotated on the Figure 40; is that correct?

14 A. It is.

15 Q. Okay. But you're not sure whether or not
16 it's in the magnetic field of Lp 212?

17 A. 212 is in the box.

18 Q. So is it -- is it in the magnetic field?

19 A. Is 212 in its own magnetic field?

20 Q. So is it within the magnetic field of the --
21 excuse me.

22 Is the capacitor 214 in the magnetic field of
23 Lp 212?

24 MR. ZUCKER: Objection. Form.

25 THE WITNESS: So in order to perform its

1 function, it does not have to be, but it is
2 conceivable that it is. I have built such systems
3 where that has been the case.

4 BY MR. LAWSON:

5 Q. Okay. But in cells, in Figure 4 you're not
6 sure; is that correct? Is that your testimony here
7 today, that you're not sure whether in Figure 40,
8 going by the cells, whether capacitor 214 is within
9 the magnetic field of Lp 212?

10 MR. ZUCKER: Object to form. Asked and
11 answered.

12 Sorry, Mark. Please give me a minute.

13 BY MR. LAWSON:

14 Q. You can answer.

15 A. So there is no text that I can point to that
16 talks about whether 214 is in the magnetic field of
17 Lp. It is certainly plausible that it is.

18 Q. Okay. Similarly, is the inverter, which is
19 labeled No. 210, is that within the magnetic field of
20 Lp 212?

21 A. I'd give the same answer. I have no -- I
22 cannot point to any text stating that it is.

23 Q. What about the other components of the
24 wireless supply? Is the DC to DC converter in the
25 magnetic field of Lp 212?

1 A. I think functionally, as you move further
2 away from the coil, there's less and less rationale
3 for trying to locate parts within -- within the
4 magnetic field of LP.

5 Q. But as you sit here today, you don't know
6 whether Fells -- the DC converter in Fells Figure 40
7 is within the magnetic field of Lp 212; correct?

8 A. I don't know if Fells' implementation would
9 have the DC to DC converter within the magnetic field
10 developing.

11 Q. And similarly, as you sit here today, do you
12 know whether the control unit disclosed as No. 208 in
13 Figure 40, is that within the magnetic field of
14 Lp 212?

15 A. I don't know that it's unlikely because the
16 magnetic field of LP could potentially disturb the
17 control circuitry.

18 Q. And, similarly, what about the mains
19 rectification? As you sit here today, do you know
20 whether Fells discloses whether the mains
21 rectification is within the magnetic field of Lp 212?

22 A. I don't recall any specific text in the
23 patent discussing that.

24 Q. And does Figure 40 disclose or show the
25 magnetic field generated by Lp 212?

1 A. I don't believe so, no.

2 Q. Okay, Dr. Allen. Can you now turn to
3 Paragraph 246 of your declaration, please.

4 Just let me know when you get there.

5 A. Yes, I found it.

6 Q. You got there quicker than I did.

7 (Pause.)

8 BY MR. LAWSON:

9 Q. Okay. In Paragraph 246 of your declaration,
10 you also include, again, Figure 40 from Fells; is that
11 correct?

12 A. Yes.

13 Q. Beginning in Paragraph 246 of your
14 declaration, Dr. Allen, you state that, "Fells teaches
15 that its resonant tank circuit as well as its control
16 unit in proximity detector (the claimed foreign object
17 debris detection system) are integrated into a
18 'wireless power supply' enclosure, as shown by the
19 dotted lines in figure below."

20 Did I read that correctly?

21 A. Yes.

22 Q. And then you copy and paste Figure 40 from
23 Fells into Paragraph 246; correct?

24 A. Yes.

25 Q. Okay. And then the second sentence after the

1 Figure 40 from Fells, Dr. Allen, you state a person of
2 skill in the art "would have understood that the
3 dotted lines in Fells' diagrams indicate an
4 'integrated' system that a" person of skill in the art
5 "would have understood to be logically implemented
6 within a single closure encompassing the components
7 within those dotted lines."

8 Did I read that correctly?

9 A. Yes.

10 Q. Okay. In that last sentence, what did you
11 mean by "logically implemented"?

12 A. Well, if I think about the way I might build
13 such a system, I would imagine a box that I could plug
14 into the wall and that I could charge something by
15 bringing it into proximity of the box.

16 Q. Okay. Is it your opinion that the dotted
17 lines in Figure 40 is an enclosure of the wireless
18 power supply in Figure 40 of Fells?

19 A. So I think that's what someone of ordinary
20 skill would interpret it, and for the reasons I just
21 said.

22 Q. Okay. Well, let's go back to Figure 1 of --
23 we talked about at the beginning.

24 A. Yes, I have it.

25 Q. Okay. The dotted line -- in Figure 1, are

1 the dotted line boundaries that are shown closures of
2 the wireless power supply 102 and portable device 104,
3 is that shown -- are they shown as an enclosure?

4 MR. ZUCKER: Objection. Form.

5 THE WITNESS: So if I think about looking at
6 Figure 1, I think about two objects. One here, which
7 is the wireless power supply in a box that I plug into
8 the wall, and then there's another thing, device,
9 which is also a box that I bring in proximity to the
10 first box and get charged. So these two things would
11 be enclosed.

12 BY MR. LAWSON:

13 Q. So to answer my question, is it your
14 testimony that the dotted lines in Figure 1 are
15 separate enclosures?

16 A. I believe that that's the way a person of
17 ordinary skill in the art would interpret Figure 1.

18 Q. Okay. Can you turn to Figure 23, please.

19 A. Yes, I have it.

20 Q. Okay. And the dotted lines shown in
21 Figure 23, in your opinion, is also showing a closure?

22 MR. ZUCKER: Objection. Form.

23 Sorry. Go ahead, Mark.

24 THE WITNESS: I'd have to go back and look at
25 what Figure 23 of Fells refers to, but if it's

1 referring to a system that is similar to Figure 2,
2 then, once again, I have a box. If I'm a person of
3 ordinary skill, I have a box that I will plug into the
4 wall and bring in something in close proximity to that
5 box. So yes.

6 BY MR. LAWSON:

7 Q. Turn to Figure 4 of Fells.

8 Let me know when you're there.

9 A. Yes, I see it.

10 Q. In Figure 4, is the dotted line boundary that
11 is shown an enclosure of the sense circuit 206?

12 MR. ZUCKER: Objection. Form. Foundation.

13 THE WITNESS: So I believe, if I remember
14 correctly, Figure 4 describes one way that the sense
15 circuit could be implemented using a microprocessor
16 and what have you. It would be a subcomponent of the
17 entire system, if I'm remembering correctly.

18 And so in that case, you know, thinking about
19 the function of the overall system, it's less critical
20 that that would be an enclosure. I could think about
21 it being an enclosure within an enclosure for
22 shielding reasons, things like that, but in thinking
23 about the function of a box I'd plug into a wall and
24 bring something close by, it's not necessarily the
25 case that I'd have to have a box within a box because

1 functionally that may or may not be necessary.

2 BY MR. LAWSON:

3 Q. How about for the dotted line on the boundary
4 on Figure 5 around the sense circuit in Fells?
5 Figure 5 in Fells.

6 A. I think I would have the same response as for
7 Figure 4.

8 Q. If you'd turn to Figure 6.

9 A. Figure 6, again, I would have to go back to
10 be sure and look at what Figure 6 refers to, but it
11 appears to be describing a subcomponent of the
12 wireless power system. And so if that is the case,
13 then my thought would be the same.

14 Q. Turn to Figure 7.

15 A. Yes, I see it.

16 Q. If you look at the dotted lines that are
17 shown for closure of the ULP circuit 700, in the main
18 circuit 704. Are those dotted line enclosures?

19 MR. ZUCKER: Objection. Form. Foundation.

20 THE WITNESS: So, again, I would have to go
21 back and look at Figure 7 and what it refers to
22 because Figure 7 seems to be an intermediate case
23 where it describes a portion of the main circuit and
24 then a portion of the ULP circuit. And, you know,
25 without going back and looking, I can only give an

1 indefinite answer, but to me it would make sense to
2 imagine all of this enclosed within one box if I were
3 a person of ordinary skill.

4 BY MR. LAWSON:

5 Q. Okay. Let's go down to Figure 12, please,
6 Dr. Allen.

7 Let me know when you're there.

8 A. Yes, I see it.

9 Q. Okay. I draw your attention to the existing
10 power unit there. Is the dotted line boundary that's
11 shown for the main circuit 704, is that an enclosure?

12 MR. ZUCKER: Objection. Form. Foundation.

13 THE WITNESS: I would not be able to offer an
14 opinion without studying the text that describes
15 Figure 12.

16 BY MR. LAWSON:

17 Q. So as you sit here today, as a person of
18 skill in the art, you're looking at a diagram of
19 Figure 12, and you're not able to tell me whether
20 those dotted lines represent an enclosure?

21 MR. ZUCKER: Same objections.

22 THE WITNESS: So, again, I, as well as a
23 person of ordinary skill, would review Figure 12 in
24 the context of -- in the context of its description
25 before coming to that conclusion.

1 BY MR. LAWSON:

2 Q. Okay. Why don't you read Fells in Figure 12
3 and tell me whether those dotted lines are an
4 enclosure.

5 A. I don't believe I'd be prepared to do that
6 analysis in real time.

7 Q. And why is that?

8 A. Why? Because it will take time.

9 Q. How much time do you think you would need,
10 Dr. Allen?

11 A. I don't know.

12 MR. LAWSON: Okay.

13 Counsel, I think this is a good stopping
14 point. We've been going for about 50 minutes. I've
15 got 11:42. Why don't we come back at 11:55.

16 Dr. Allen, is this a good time for you to
17 take a short break?

18 THE WITNESS: Great.

19 MR. LAWSON: Okay. All right.

20 (A recess was taken from 11:42 a.m.
21 to 11:55 a.m.)

22 MR. LAWSON: Dr. Allen, thanks for your
23 testimony.

24 At this time we do not have any further
25 questions for the witness on direct.

1 MR. ZUCKER: Thanks. I have just a couple of
2 questions for Dr. Allen.

3

4

EXAMINATION

5

BY MR. ZUCKER:

6

7

8

Q. Dr. Allen, do you recall that earlier today
counsel asked you about Figure 2 of the Fells
reference?

9

10

A. Yes. There were several questions associated
with it, but yes.

11

12

13

Q. I think one of the questions he asked was
whether the inductor 212 could generate an oscillating
field when the switch 1 is open.

14

Do you see that?

15

A. I do.

16

17

Q. So would you look at Paragraph [255] of Fells
for me, please.

18

A. Yes, I see it.

19

20

21

22

Q. And it says, "Figure 22 shows an alternative
embodiment in which the energy storage unit 204 is
also used to power the main circuit 704 for a period
of time."

23

Do you see that?

24

A. I do.

25

Q. And so how, if at all, does that change or

1 confirm your opinion about whether the inductor can
2 generate an oscillating magnetic field while switch 1
3 is open?

4 A. I think what I had said before is that the
5 energy storage unit could operate in that way. And so
6 what's written in Paragraph [255] confirms that.

7 Q. And would you turn to Fells Paragraph [190],
8 please.

9 A. I see it.

10 Q. It says, "The following embodiment
11 descriptions are not intended to limit the scope of
12 the invention that is described, but rather to enable
13 a person skilled in the art to make and use the
14 invention."

15 Do you see that?

16 A. I do.

17 Q. And so do you have an opinion on whether a
18 person of ordinary skill would understand that
19 explanation from Fells Paragraph [255] to apply to
20 what's shown in Figure 2?

21 A. Yes, I believe such a person would apply that
22 understanding.

23 MR. ZUCKER: Thank you. Those are all the
24 questions I have for Dr. Allen.

25 MR. LAWSON: Okay. I just need five minutes

1 to consult my counsel to see whether we've got any
2 redirect on Dr. Allen based upon that testimony.

3 So it is 11:58. Why don't we come back at
4 12:05 Eastern.

5 Does that work?

6 MR. ZUCKER: Sure thing.

7 MR. LAWSON: All right. Thank you.

8 (A recess was taken from 11:58 a.m.
9 to 12:05 p.m.)

10 MR. LAWSON: Dr. Allen, at this time,
11 WiTricity does not have any questions for the witness
12 on redirect.

13 (Witness excused.)

14 (Deposition concluded at 12:05 p.m.)

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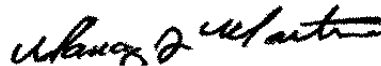
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I do hereby certify that the aforesaid testimony was taken before me, pursuant to notice, at the time and place indicated; that said deponent was by me duly sworn to tell the truth, the whole truth, and nothing but the truth; that the testimony of said deponent was correctly recorded in machine shorthand by me and thereafter transcribed under my supervision with computer-aided transcription; that the deposition is a true and correct record of the testimony given by the witness; and that I am neither of counsel nor kin to any party in said action, nor interested in the outcome thereof.



Nancy J. Martin, RMR, CSR

Dated: September 13, 2024

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David Zucker, Esq.

david.zucker@lw.com

September 13, 2024

RE: Inductev, Inc. v. Witricity Corporation

9/11/2024, Mark Allen, PhD, U.S. Patent No. 10,027,18
(#6905736)

The above-referenced transcript is available for
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Inductev, Inc. v. Witricity Corporation

Mark Allen, PhD , U.S. Patent No. 10,027,18 (#6905736)

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Mark Allen, PhD

Date

Inductev, Inc. v. Witricity Corporation

Mark Allen, PhD, U.S. Patent No. 10,027,18 (#6905736)

ACKNOWLEDGEMENT OF DEPONENT

I, Mark Allen, PhD, do hereby declare that I
have read the foregoing transcript, I have made any
corrections, additions, or changes I deemed necessary as
noted above to be appended hereto, and that the same is
a true, correct and complete transcript of the testimony
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Mark Allen, PhD

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Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

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THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS

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Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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