

UNITED STATES PATENT AND TRADEMARK OFFICE

DELTRAN USA, LLC,)
)
 PETITIONER,)
) IPR NO.
 VS.) 2024-01219
)
 THE NOCO COMPANY,)
)
 PATENT OWNER.)
 _____)

REMOTE PROCEEDINGS OF THE DEPOSITION OF
C. ARTHUR MacCARLEY, Ph.D.
FRIDAY, OCTOBER 3, 2025

JOB NO. 7599916
REPORTED BY KIMBERLY EDELEN,
CSR. NO. 9042, CRR, RPR.

1 REMOTE PROCEEDINGS OF THE DEPOSITION OF
2 C. ARTHUR MacCARLEY, Ph.D., TAKEN ON BEHALF
3 OF THE PATENT OWNER, AT 8:58 A.M. PDT, FRIDAY,
4 OCTOBER 3, 2025, BEFORE KIMBERLY A. EDELEN,
5 CSR NO. 9042, CRR, RPR.

6
7
8 REMOTE APPEARANCES OF COUNSEL

9
10 FOR THE PETITIONER:

11 FOX ROTHSCHILD LLP
12 BY: CHETAN CHANDRA, ESQ.
13 2020 K STREET NORTHWEST
14 SUITE 500
15 WASHINGTON, D.C. 20006
16 202.461.3100
17 CCHANDRA@FOXROTHSCHILD.COM
18 FOX ROTHSCHILD LLP
19 BY: RYAN N. MILLER, ESQ.
20 2001 MARKET STREET
21 SUITE 1700
22 PHILADELPHIA, PENNSYLVANIA 19103
23 215.299.2000
24 RMILLER@FOXROTHSCHILD.COM
25 FOX ROTHSCHILD LLP
BY: NICHOLAS ALMERINI, ESQ.
212 CARNEGIE CENTER DRIVE
SUITE 400
PRINCETON, NEW JERSEY 08540
609.896.3600
NALMERINI@FOXROTHSCHILD.COM

(APPEARANCES CONTINUED ON FOLLOWING PAGE)

1 REMOTE APPEARANCES OF COUNSEL (CONTINUED)
2 FOR THE PATENT OWNER:

3 JONES DAY

BY: JACK GRAVES, ESQ.

4 90 SOUTH 7TH STREET

SUITE 4950

5 MINNEAPOLIS, MINNESOTA 55402

612.217.8867

6 JGRAVES@JONESDAY.COM

7 JONES DAY

BY: JOSEPH M. SAUER, ESQ.

8 901 LAKESIDE AVENUE

CLEVELAND, OHIO 44114

9 216.586.3939

JMSAUER@JONESDAY.COM

10
11
12
13
14
15
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E X H I B I T S

REFERENCED EXHIBITS PREVIOUSLY MARKED

NO.	PAGE	DESCRIPTION
EXHIBIT 1005	20	UNITED STATES PATENT APPLICATION PUBLICATION NO. US 2013/0154543 A1
EXHIBIT 1008	44	UTILITY MODEL PATENT
EXHIBIT 1057	11	DECLARATION OF C. ARTHUR MACCARLEY, PH.D., P.E. IN SUPPORT OF PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

QUESTIONS INSTRUCTED NOT TO BE ANSWERED

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REMOTE PROCEEDINGS

FRIDAY, OCTOBER 3, 2025; 8:58 A.M. PDT

THE REPORTER: Pursuant to Business and Professions Code 8016(b)(1) and (2), my name is Kim Edelen and my CSR number is 9042.

Dr. MacCarley, would you raise your right hand, please.

Do you solemnly swear the testimony you're about to give shall be the truth, the whole truth and nothing but the truth?

THE WITNESS: I do.

THE REPORTER: Thank you.

EXAMINATION

BY MR. GRAVES:

Q Okay. Good morning, sir.

Could you please state and spell your name for the record.

A My full legal name is Carl, C-a-r-l, middle name Arthur, A-r-t-h-u-r, but I go by Art, and my last name is M-a-c-C-a-r-l-e-y.

Q Is it all right if I call you Dr. MacCarley today?

1 A Yes, of course. You can call me Art if you
2 wish.

3 MR. CHANDRA: Mr. Graves, before we get too
4 far, the real time link I have isn't showing the
5 current dialogue, so I just want to make sure that
6 that's all corrected.

7 We need to go off the record, I think, Kim.

8 MR. GRAVES: Yeah. Can we go off the
9 record for a second and figure that out.

10 (Off the record from 8:59 - 9:01 a.m.)

11 MR. GRAVES: Going back on the record here.

12 BY MR. GRAVES:

13 Q Dr. MacCarley, you were previously deposed
14 before in connection with this IPR proceeding on
15 May 13th, 2025; is that correct?

16 A I can't confirm exactly the date, but yes,
17 I was confirmed -- excuse me, I was deposed before,
18 and that sounds about the right date.

19 Q Okay. So you're familiar with how this
20 goes, but I'd like to start again by going over a
21 few ground rules before we start.

22 A Uh-huh.

23 Q Do you understand that the testimony you're
24 providing today is under oath?

25 A I do.

1 Q And is there anything that would prevent
2 you from giving truthful and accurate testimony
3 today such as medications you might be taking or
4 anything else?

5 A No.

6 Q So that the court reporter can accurately
7 report what you're saying, can we agree not to speak
8 over one another so we have an accurate record?

9 A I'll do my very best.

10 Q And can you agree to give audible answers
11 instead of a gesture, head nod or other non-verbal
12 answer?

13 A I will.

14 Q And will you agree to let me know if you
15 don't understand one of the questions that I ask you
16 today?

17 A Of course, yes.

18 Q We can take a break today any time that's
19 needed, but I ask that you answer any pending
20 question before we go on a break.

21 Can you agree to that?

22 A I agree.

23 Q Okay. And today we're discussing
24 inter partes review proceeding 2024-01219 for
25 U.S. Patent No. 11667203.

1 Is that your understanding?

2 A That sounds correct, yes.

3 Q And is it okay if we refer to this patent
4 as the "'203 patent"?

5 A Of course.

6 Q And you have submitted two declarations in
7 this proceeding: One declaration in support of the
8 petition and one declaration in support of
9 petitioner's reply; is that right?

10 A That's correct.

11 Q So you mentioned before that you were
12 previously deposed in relation to this same IPR
13 proceeding back in May of 2025.

14 Between that deposition and today, have you
15 been deposed in any other cases?

16 A Yes, I have.

17 Q And which cases were those?

18 A Well, I believe there's a parallel
19 proceeding between NOCO and ADC, also known as
20 Winplus, very similar topics, same patents in play.
21 I was deposed in that case.

22 I was also deposed for a case involving my
23 client Tesla, Tesla Motors, very close to that time.
24 I think it was within two or three days of that.

25 Q And about when did the Tesla proceeding

1 deposition take place based on your recollection?

2 A Recollection is -- gosh. I'm reluctant to
3 tell you. I would prefer to check my calendar.

4 Is this a ballpark thing or do you want an
5 exact date?

6 Q Just a general ballpark would be fine.

7 A It's in the same vicinity of time as the
8 others, but I'll say June.

9 Q And were you deposed in -- besides any
10 deposition in the related ADC proceedings and the
11 Tesla case, did you -- were you involved in any
12 other depositions between your last deposition in
13 this case and today?

14 A No.

15 Q Okay. Did you speak to anyone in
16 preparation for your deposition today, either in
17 person or telephonically?

18 A You're not restricting it to just today, I
19 assume.

20 I have spoken fairly extensively with
21 Mr. Chandra, who is the lead attorney on the case
22 for Fox Rothschild. But he is also, when he was
23 present, Mr. Miller, at meetings, and occasionally
24 Mr. Almerini. But other than that, no one.

25 Q Okay. So you didn't speak to anyone who

1 was not a lawyer in preparation for today's
2 deposition?

3 A I believe my wife knows I am being deposed
4 right now, so she had to know about it. But other
5 than that, no.

6 Q And you didn't have any substantive
7 conversations with your wife?

8 A No. She's not an attorney.

9 Q What did you do to prepare for your
10 deposition today besides having those conversations?

11 A Well, in the past two days, I've had --
12 I've spent some time in Zoom calls with Mr. Chandra.
13 And at the first meeting, Mr. Almerini was --
14 actually, he was present for both. Mr. Miller was
15 present just for the first meeting part of the time.

16 Did that answer your question?

17 Q Yes.

18 Did you review any materials in preparation
19 for today's deposition?

20 A All of those meetings related to
21 preparation for this deposition, and I said we did
22 cover materials related to it.

23 Q About how long did you spend preparing for
24 today's deposition?

25 A Well, let's see, Thursday, it was about six

1 hours. Going back, Wednesday, I think it was also
2 about six hours.

3 Q So about 12 hours total?

4 A Yeah, cumulative.

5 Q Okay. If you could reference your reply
6 declaration, which is marked as Exhibit 1057.

7 A Okay. I have it open.

8 Q Okay. And bear with me while I upload the
9 '203 reply declaration.

10 Okay. So I've uploaded Exhibit 1057 from
11 IPR Proceeding 2024-01219 for the '203 patent.

12 Is what you're viewing in front of you a
13 copy of your reply declaration in this proceeding?

14 A Yes. Exhibit 1057.

15 Q And are there any markings or comments or
16 other notes on that reply declaration?

17 A No. Per Mr. Chandra's direction, it is --
18 there may be a lead mark on a corner. Other than
19 that, it's a clean copy.

20 Q Do you have any notes or other personally
21 prepared materials in front of you?

22 A No. I want to -- I did, on Mr. Chandra's
23 recommendation, just print verbatim the end of the
24 '203 patent, the claims so I could quickly access
25 them.

1 Q But there's no notes or anything marked on
2 that?

3 A No. No. In fact, this is it. Two pages.

4 Q And are there any messaging applications or
5 other communication methods presented in front of
6 you at this time?

7 A My phone is on but it is -- I mean, it's
8 operational but it's -- it's in its locked screen.
9 So I haven't -- if I have an urgent notification, if
10 my dog gets out or something, I might -- I would see
11 that. Other than that, there would be no -- no
12 possibility of communication.

13 Q Okay. And can you let me know if -- today
14 if you receive any sort of communication on that
15 phone?

16 A I will.

17 Q Okay. So going back to your reply
18 declaration, can you please turn to Page 73 based on
19 the numbering in the footer.

20 A Now, there's two numbers in the footer. I
21 assume you're referring to the Bates number?

22 Q To the lower number where it says "Page 73
23 of 73."

24 A Okay. That would be the last page in Bates
25 numbering, and it's the signature page, yes.

1 Q And is that your signature on Page 73?

2 A It is.

3 Q And you signed that on September 2nd, 2025;
4 is that right?

5 A That's what it says, yes.

6 Q And when did you start working on this
7 declaration?

8 A Oh, gosh. I could tell you an exact
9 number. In fact, I think I best. So if you give me
10 a moment, I'm going to have to...

11 MR. CHANDRA: Art --

12 Sorry, Mr. Graves, could you repeat the
13 question. I'm not sure --

14 You shouldn't be referencing other things
15 unless Mr. Graves -- unless it's a record in this
16 proceeding. I don't want you pulling up your
17 billing notes or anything like that.

18 BY MR. GRAVES:

19 Q Dr. MacCarley, you're not referencing
20 anything on your computer, correct?

21 A I wasn't. I'm glad you interrupted me
22 because to give you the exact date, I was going to
23 open my calendar.

24 Q Based on just your recollection without
25 referencing anything off the top of your head, when

1 did you start working on this declaration?

2 A Well, from the very beginning. And this is
3 two rounds through -- I think the duration has been
4 about a year, so -- not quite a year, actually.
5 Probably late 2024.

6 Q About how many hours did you spend working
7 on this declaration?

8 A Let's see, this and the previous, the main
9 declaration, not the reply declaration, which is
10 what we're looking at now, gosh, I'll bet
11 cumulatively probably, through all meetings and work
12 on the side, probably as much as 120 hours.

13 Q Did you write this declaration yourself?

14 A Not entirely.

15 Q Can you elaborate on that?

16 A Everything in it are my thoughts. I take
17 full responsibility for them.

18 However, this is a legal document, and I --
19 Mr. Chandra and possibly Mr. Miller, on their side,
20 did do editorial passes at it multiple times in
21 preparation for submission.

22 Q Are there any changes you'd like to make to
23 this reply declaration at this time?

24 A Not at this time, but I would like to
25 reserve the opportunity to do so if in the course of

1 our discussion I encounter something that I realize
2 at that moment is incorrect.

3 Q Understood.

4 So is it my understanding that you have
5 some printed exhibits with you today and some
6 exhibits accessible on your computer; is that right?

7 A Yes. I have -- on my computer desktop, I
8 have this declaration, I have a copy of the first,
9 the original declaration, I have the patent owner
10 response, I have, let's see, Dr. Fayed's
11 declaration, Exhibit 203.

12 It looks like I still have the claim
13 construction document. I don't think we'll need it
14 but there it is.

15 And since you will be no doubt referencing
16 every one of the prior art references, I have PDF
17 copies of each of these closed. If necessary, I can
18 open them quickly.

19 Q And on any of these documents, are there
20 any notes? Highlighting? Comments?

21 A On the prior art documents?

22 Q On any of the documents that you just
23 referenced.

24 A Oh, gosh, I don't believe so. But we're
25 talking about one, two, three, four, five, six,

1 seven, eight -- nine documents. Gosh, I'm not going
2 to swear to that, but I made a distinct effort to
3 make sure that these were clean copies.

4 They were obtained recently from the
5 Kiteworks archive that is -- most law firms use
6 that, and this is the one operated by
7 Fox Rothschild.

8 MR. CHANDRA: Okay. Mr. Graves, we
9 intended for him to have clean copies. I would like
10 to make sure that that's the case. You know, I
11 don't want to go further and if there are any stray
12 notes, we do not want him to be accessing those.

13 So I'd like to ask if we can go off the
14 record and he can close all those documents and
15 stick to just what you put in the file share so we
16 can all be sure we're working off the same copies.

17 THE WITNESS: Okay.

18 I have all of these closed. To the very
19 best of my knowledge, they are clean copies because
20 I downloaded them from that archive just recently.
21 If I -- if I open them and accidentally see
22 something, I will alert you right away and I will
23 quick go back to the archive and download it.

24 MR. CHANDRA: At this point, let's just use
25 what he uploads to the folder and not rely -- if

1 you're not 100 percent sure, then let's just use
2 what he publishes in there.

3 THE WITNESS: Okay. Are you suggesting
4 that I go back to the archive and download
5 everything again?

6 MR. GRAVES: Can we go off the record for a
7 second.

8 (Off the record from 9:16 - 9:37 a.m.)

9 BY MR. GRAVES:

10 Q Welcome back, Dr. MacCarley.

11 If I could just ask who you spoke to over
12 the break.

13 A I lost one of your words I think due to a
14 glitch. Could you repeat the last five words you
15 said.

16 Q Yes.

17 During that ten-minute break that we just
18 took, did you speak to anyone?

19 A I spoke with Mr. Chandra.

20 Q And what was the substance of that
21 conversation?

22 MR. CHANDRA: Objection. Art, so that's
23 privileged information. I'll instruct you not to
24 answer.

25 But I'll put on the record we only

1 discussed the handling of exhibits to instruct
2 Mr. MacCarley to only use the exhibits that are
3 uploaded to the exhibit link.

4 THE WITNESS: I confirm that.

5 BY MR. GRAVES:

6 Q Did you speak with Mr. Chandra about any of
7 the substance of the documents?

8 A No.

9 Q Did you review any other materials during
10 the break?

11 A No.

12 Q What do you have accessible in front of you
13 in terms of notes, exhibits, paper copies?

14 A Okay. Well, the only paper copy I have, as
15 I pointed out before, was just a paper copy of the
16 claims from '203. And I probably won't even look at
17 it.

18 What I have open in front of me is the PDF
19 of Exhibit -- our Exhibit 1057 that...

20 Q And you downloaded that from what I
21 introduced in this case?

22 A That's correct.

23 Q And do you have any e-mail or other
24 messaging apps open in front of you on your
25 computer?

1 A No.

2 Q Okay. So I would like to start by
3 discussing your position on step 252 of Richardson.

4 Could you, again, pull up that reply
5 declaration, Exhibit 1057.

6 A Okay. I have it.

7 Q Okay. And can you turn to Paragraph 7,
8 which starts on Page 14 of 73, and let me know when
9 you're there.

10 A I -- I am on Page 14 of 73.

11 Q And can you read Paragraph 7 to yourself in
12 its entirety and let me know when you've finished.

13 A I will, uh-huh.

14 (Brief pause.)

15 THE WITNESS: All right. I've completed
16 it.

17 BY MR. GRAVES:

18 Q And in this Paragraph 7, you describe how
19 step 252 of Richardson functions when in auto mode
20 versus manual mode; is that right?

21 MR. CHANDRA: Objection. Document speaks
22 for itself.

23 THE WITNESS: That is the focus of this
24 paragraph. That is correct.

25 \\\

1 BY MR. GRAVES:

2 Q So is it your opinion that step 252 of
3 Richardson operates differently depending on which
4 mode Richardson's system is in?

5 A If you can give me a moment.

6 Q Please take your time.

7 A I would like to access the Richardson
8 patent.

9 Q Sure.

10 I can -- I can upload that and introduce
11 that if you need to reference that. That's not a
12 problem.

13 A Okay. I have a -- I have a clean copy in
14 front of me, but if you feel more comfortable using
15 yours, that's fine, too.

16 You should be aware --

17 MR. CHANDRA: Let's use the ones he
18 uploads, please.

19 THE WITNESS: Okay.

20 BY MR. GRAVES:

21 Q Okay. So I just introduced Exhibit 1005
22 into the system, and it is the Richardson
23 publication, which is Publication
24 No. US 2013/0154543.

25 Is that what you see?

1 A I haven't completed the access and download
2 yet. I'm still working from my own clean copy. But
3 if you prefer as --

4 MR. CHANDRA: No. Sorry.

5 Art, only use the copies that he's uploaded
6 to Exhibit Share.

7 THE WITNESS: Okay.

8 MR. CHANDRA: Do not open any other copies.

9 THE WITNESS: Okay. I'm going back to that
10 link.

11 BY MR. GRAVES:

12 Q Dr. MacCarley, can you agree to let me know
13 when you open any documents today from any source?

14 A Yes, of course. That -- that was why I
15 mentioned I would like to open the Richardson
16 patent.

17 Gosh, I'm going to have to open my e-mail
18 again, because I didn't retain the link and I have
19 to look at it again. That is the only e-mail I will
20 access.

21 MR. CHANDRA: Do you want to take five
22 minutes off record while he fixes this? I'm not
23 sure what's going on.

24 MR. GRAVES: Yeah. Kim, we can go off
25 record for another five minutes here.

1 (Off the record from 9:33 - 9:47 a.m.)

2 MR. GRAVES: Okay. Let's go back on the
3 record.

4 BY MR. GRAVES:

5 Q Okay. Dr. MacCarley, it's my understanding
6 that the technical difficulties you were
7 experiencing have been resolved at this point?

8 A At this moment.

9 Can you hear me clearly without an echo?

10 Q I can hear you clearly.

11 A Okay.

12 Q And during this last break, did you speak
13 to anyone about the substance of this case?

14 A I spoke very briefly to Mr. Chandra, simply
15 concerned that I was taking too long, basically.

16 Q Okay. So you didn't speak about the
17 substance of Richardson or any other exhibit or your
18 reply declaration?

19 A No. No discussion of substance.

20 Q Okay. And do you have a copy of your reply
21 declaration pulled up in front of you at this point?

22 A Yes.

23 Q Okay. Can we go back -- I believe we were
24 discussing Paragraph 7. Could you go back to
25 Paragraph 7 on Page 14 of 73.

1 And can you let me know when you're there.

2 A Yeah. I'm in Paragraph 7, 14 of 73. And
3 it would probably be best for you to repeat your
4 question.

5 Q Sure.

6 Maybe we could just start by having you
7 read the last sentence of this paragraph into the
8 record.

9 A Okay. The last sentence is "A POSITA would
10 further understand Richardson teaches that when in
11 auto-mode, step 252 only returns a 'yes' if an
12 appropriate battery is present (as opposed to in
13 manual mode which allows the jump starter to be used
14 if a battery is not present or if the battery is
15 under 10 volts)."

16 Q So it is your opinion that step 252 of
17 Richardson operates differently for manual mode
18 versus auto mode, correct?

19 MR. CHANDRA: Objection. The document
20 speaks for itself.

21 THE WITNESS: The outcomes could be
22 different. I'd be more careful about characterizing
23 it operates different.

24 BY MR. GRAVES:

25 Q Okay. So if you can now reference

1 Richardson, which is marked as 1005, can you pull
2 that up, please.

3 A Okay. I have it now.

4 Q So I'd like to discuss some aspects of the
5 depicted flowchart of Richardson as well as the
6 related description.

7 Could you turn to Figure 5 on Page 9 of
8 Richardson and let me know when you're there.

9 A I'm there.

10 Q Okay. And step 252 is depicted towards the
11 bottom of Figure 5; is that correct?

12 A Yes, sir.

13 Q And step 252 is where Richardson's system
14 is performing a check using the vehicle battery
15 voltage; is that right?

16 MR. CHANDRA: Objection. The document
17 speaks for itself.

18 THE WITNESS: Stated inside the decision
19 diamond is "Vehicle Volts within Correct Range?"
20 which means a decision is being made based upon
21 whether the measured-vehicle voltage is within the
22 correct range appropriate for that battery.

23 BY MR. GRAVES:

24 Q And Richardson explains that step 252 is
25 checking whether a measured difference in voltage is

1 outside of a predetermined range, correct?

2 MR. CHANDRA: Objection. Document speaks
3 for itself.

4 THE WITNESS: Yes, that is correct.

5 BY MR. GRAVES:

6 Q And to trigger step 252 occurring, the
7 manual or auto button must first be pushed at
8 step 248, right?

9 MR. CHANDRA: Same objection.

10 THE WITNESS: Allow me to give you a bit
11 more elaborate answer on this one.

12 This is, as stated in the figure, I mean
13 your contention that it must be pressed first
14 because it appears sequentially just ahead of
15 block 252, it is checked in 248, which would apply
16 that at some time at or before that a manual or auto
17 button was pushed.

18 But I will say that technically, in my
19 opinion, it isn't actually necessary. Nevertheless,
20 the ordering of those two decision diamonds is
21 irrelevant to the function. Either way, to the
22 outside observer, the system would work exactly the
23 same.

24 BY MR. GRAVES:

25 Q So it's your understanding that the manual

1 or auto button does not need to be pushed with
2 respect to step 252?

3 MR. CHANDRA: Objection. Misstates his
4 testimony.

5 MR. GRAVES: Sorry.

6 (Off the record from 9:53 - 10:17 a.m.)

7 BY MR. GRAVES:

8 Q Okay. Dr. MacCarley, welcome back.

9 Can you confirm that your technical
10 difficulties have been resolved and that you have
11 the two exhibits that have been introduced at this
12 point available to you?

13 A I have both exhibits that you have labeled
14 Exhibit 1 and 2. And I believe the technical
15 difficulties have been eliminated, but we will see.

16 Q Okay. And during those breaks, did you
17 speak to Mr. Chandra or any other of your side's
18 attorneys?

19 A I did -- I did speak briefly to
20 Mr. Chandra, and there was no discussion of content
21 whatsoever. He was advising me to do what you just
22 advised me, that in parallel, pull up a phone
23 connection. But it looks like we have the problem
24 solved now.

25 Q So you didn't discuss the Richardson

1 reference in any way?

2 A No. No content discussion at all.

3 Q Okay. I'd like to get us back to where we
4 were before we started having technical
5 difficulties. I believe we were discussing Figure 5
6 of Richardson.

7 Could you pull that up.

8 A I have it. And if you want to repeat the
9 question, it's fine, but I think I know what you
10 were going for.

11 Q I'll go ahead and repeat it.

12 So to trigger step 252 occurring in
13 Figure 5 of Richardson, the manual or auto button
14 must first be pushed at step 248, correct?

15 A Either at or before 248. 248 is just a
16 check of the state of the manual or auto button. It
17 is not an indication that the button has to be
18 pushed at that point.

19 Q So 248 is just checking to make sure that
20 it has been pushed at some point prior?

21 A That's correct.

22 Q Okay. And to proceed to step 252, a manual
23 or the auto button has to be pushed, one of the two,
24 correct?

25 A Based upon what I see in the flowchart,

1 that is correct.

2 Q Okay. So could you first please explain
3 your understanding of how step 252 functions when
4 Richardson's system is in auto mode.

5 A Well, basic function is the same. It's
6 going to be comparing the vehicle battery voltage
7 with a specified range of voltages that are
8 considered acceptable based upon the setting of the
9 charging voltage, which is an option that
10 Richardson, and probably Richardson alone, allows.

11 That does not necessarily mean that the
12 comparison range for manual and auto are the same,
13 however.

14 Q And it is your position that when in auto
15 mode, step 252 only proceeds if an appropriate
16 non-dead battery is detected, right?

17 MR. CHANDRA: Objection. Misstates his
18 testimony.

19 THE WITNESS: Yeah. That would only be in
20 auto mode because manual is not -- for lack of a
21 better word, it's not so picky.

22 Let me state that I can go back to the very
23 paragraph you pointed to and it has -- it says that
24 very specifically.

25 \\

1 BY MR. GRAVES:

2 Q Okay. Please, which paragraph are you
3 referring to?

4 A I'm still on your Paragraph 7. It says --

5 Q To the reply declaration?

6 A In my reply declaration, 1057. And I'm
7 going to -- starting with the sentence "Then, in
8 paragraph 49, Richardson" --

9 I'll allow you to get to that first.

10 Q I'm there.

11 A -- "Richardson teaches that manual mode may
12 be used when 'the battery voltage of the vehicle is
13 below 10 volts, or if the vehicle battery is not
14 connected,' including when the 'vehicle battery is
15 extremely low or completely dead.'"

16 Q That's describing how Richardson -- your
17 opinion of how Richardson functions in manual mode,
18 correct?

19 A It is -- well, the scope of that statement
20 is a little bit broader than just that one decision
21 diamond. But what it makes clear is that manual
22 mode allows the charge of that to start, to
23 continue, even if the battery is dead, if it is
24 disconnected or if it is outside the range for, in
25 this case, manual mode.

1 Q And where does -- that understanding of
2 step 252, where is that confirmed in Richardson?

3 MR. CHANDRA: Objection. Vague.

4 MR. GRAVES: Let me restate the question.

5 BY MR. GRAVES:

6 Q Is your understanding of how step 252
7 operates in auto mode depicted anywhere in Figure 5?

8 MR. CHANDRA: Objection. Vague.

9 THE WITNESS: A control process is shown,
10 but there is not a separate -- there is not a
11 bifurcation of what happens in manual or in auto
12 mode, because either way, it's going to enter
13 decision diamond 252 after one or the other button
14 has been confirmed to have been pushed.

15 And at this point, the vehicle battery
16 voltage will be compared with the voltage that is
17 correct for that class of batteries. Because
18 Richardson allows 6, 12, 24, 48 volts, you name it,
19 and it's important that that voltage match or at
20 least be within the range.

21 Logically, you would not want to connect a
22 24-volt charge battery source to a 12-volt nominal
23 battery no matter what condition it's in.

24 BY MR. GRAVES:

25 Q Does Figure 5 include anything in the

1 drawing that would suggest that step 252 operates
2 differently for manual mode versus auto mode?

3 A Well, could you repeat the first part of
4 the question. I think it's critical here.

5 Does anything -- please continue.

6 Q Yeah.

7 So looking at Figure 5 --

8 A Uh-huh.

9 Q -- is there anything there that
10 demonstrates that step 252 operates differently for
11 manual mode versus auto mode?

12 A Okay. With the important caveat that you
13 directed me to look only at Figure 5, then there is
14 nothing that discusses the bifurcation as a result
15 of being either in manual or auto mode.

16 That will come, by the way, right after
17 this on the next page in step 258.

18 Q Okay. Is there anything in the written
19 description of Richardson that confirms that
20 step 252 operates differently depending on the mode?

21 MR. CHANDRA: Objection. Vague.

22 THE WITNESS: I would appreciate if you
23 could narrow the question, because you could -- when
24 you say "if there was anything," in order for me to
25 answer that adequately, I may have to read -- my

1 memory isn't good enough to remember every single
2 phrase within the reference.

3 I can -- could you constrain the question a
4 bit more.

5 BY MR. GRAVES:

6 Q Yes, I can rephrase. And let me make this
7 simple.

8 How do you know that step 252 operates
9 differently in manual mode versus auto mode?

10 MR. CHANDRA: Objection. Misstates his
11 testimony.

12 THE WITNESS: Okay. Now I'm going to
13 answer in the context that you wrote the -- stated
14 the question without direct reference to any more of
15 the text than I just read that you pointed out in
16 Paragraph 7 distinctly.

17 It doesn't say you can't. It doesn't say
18 you can. But there is a statement that says -- oh,
19 boy. This may take some time, because I have no
20 annotations in this and that would have been helpful
21 in describing the process.

22 What I'm about -- just generically, what
23 I'm about to locate for you is a statement that
24 makes it clear that it doesn't say you can't. It
25 allows, by use of the appropriate article of speech,

1 that there is no constraint on whether it is one or
2 multiple possible ranges.

3 And that's what I'm searching for.

4 Oh, gosh...

5 MR. CHANDRA: Before -- I think I lost
6 track of the question, what question is pending.

7 Dr. MacCarley, you should look at what you
8 need to look at, but if we have a question before,
9 answer. I don't know what we're answering anymore.

10 BY MR. GRAVES:

11 Q I can read the question back from the
12 record.

13 The question, Dr. MacCarley, is: How do
14 you know that step 252 operates differently in
15 manual mode versus auto mode?

16 MR. CHANDRA: I'll restate my prior
17 objection that it misstates his testimony.

18 THE WITNESS: Give me a moment.

19 (Brief pause.)

20 THE WITNESS: Okay. All right. This may
21 not be the only reference to it, but the first one
22 that I found is in Paragraph 34 of Richardson,
23 bottom of -- bottom of the column. It says "If the
24 difference between the voltage selected and the
25 voltage measured is not within a predetermined range

1 and tolerance 252, a 'Wrong Selector Volts' message
2 is displayed on the LCD 46 and further operation is
3 prohibited until the correct voltage is selected at
4 which point processing returns to the main
5 processing loop."

6 Now, I'd like to draw your attention to "is
7 not within a predetermined range and tolerance."
8 "A" does not mean -- "A" is an indefinite article.
9 It means that there could be different ranges in
10 this case. It's referring to one of these but it is
11 not restricting it to only one.

12 BY MR. GRAVES:

13 Q Is it possible that it restricts it to only
14 one predetermined range?

15 A Not within the normal rules of English.

16 Q So it's your understanding that when
17 something says "a predetermined range," that that
18 means multiple predetermined ranges?

19 MR. CHANDRA: Objection. Objection.
20 Misstates his testimony and also asked and answered.

21 THE WITNESS: I'll repeat the answer.

22 "A predetermined range" does not mean that
23 there could only be one possible range. It says one
24 of these is being compared. And the dependency of
25 which one is the basis of that comparison in this

1 case -- and now I'm extrapolating outside this
2 paragraph -- it is determined by the state of the
3 system whether it is in manual or auto mode.

4 BY MR. GRAVES:

5 Q Does Richardson describe multiple
6 predetermined ranges anywhere?

7 A I will answer that question without doing
8 what I feel obliged, which would be a global search,
9 which would take a lot of time, and say "not to my
10 recollection."

11 They don't specifically say this range
12 here, this range here, but they're not precluding it
13 either. They're making it clear by their choice of
14 wording of the comparison statement that I just read
15 you that it is not restricted to one particular
16 range.

17 Q Do you want to take the time to search the
18 document to see if it describes multiple ranges or
19 are you confident in that statement?

20 MR. CHANDRA: Objection. Vague, also
21 misstates his testimony.

22 THE WITNESS: It would be very helpful, I
23 think, to me and to everyone else if you have a
24 particular location already in mind, could you
25 identify that, please, and I will comment on it.

1 BY MR. GRAVES:

2 Q Well, I'm just trying to understand how you
3 know that step 252 operates differently for manual
4 mode versus auto mode.

5 MR. CHANDRA: Objection. Misstates his
6 testimony.

7 THE WITNESS: I -- I was pointing to this
8 sentence because it allows the possibility that it
9 is operating differently in manual or auto mode, the
10 difference being it's using a different voltage
11 comparison range.

12 MR. GRAVES: Okay. Off the record.

13 (Off the record from 10:35 - 10:49 a.m.)

14 BY MR. GRAVES:

15 Q Okay. Dr. MacCarley, before we had
16 technical difficulties again, I believe we were --
17 actually, first, let me just ask you: Did you speak
18 to anyone about any substance of Richardson or any
19 other document in this case during the break?

20 A No.

21 Q Okay. And before we were interrupted by
22 technical issues, I believe we were discussing the
23 last sentence of Paragraph 34 of Richardson; is that
24 correct?

25 A Among other things, yes, I think that was

1 the focus of our conversation.

2 Q Okay. And you stated that -- and I'm
3 reading from the record here -- "I was pointing to
4 this sentence because it allows the possibility that
5 it is operating differently in manual mode or auto
6 mode."

7 Do you recall making that statement?

8 A Yes.

9 And maybe I should clarify one word. When
10 I say "operating," since that seems to be a hot
11 button here, we'll say it is using different voltage
12 comparison ranges, to be more specific.

13 Q Okay. So the predetermined voltage range
14 for auto mode is different from the predetermined
15 voltage range for manual mode; is that your
16 position?

17 A It could be. I'm not saying it is, but it
18 is allowing that possibility.

19 Q But it's also possible that they might be
20 the same predetermined range?

21 MR. CHANDRA: Objection. Vague.

22 THE WITNESS: Within -- within the latitude
23 of the word "possible," yes, it could be the same.
24 It could be two. It could be more than that. I'm
25 simply clarifying what the sentence says.

1 BY MR. GRAVES:

2 Q But based on your understanding of
3 Richardson as a whole, not just a sentence, is it
4 possible that step 252 could be applying the same
5 predetermined range for both manual mode and auto
6 mode?

7 MR. CHANDRA: Objection. Misstates his
8 testimony.

9 THE WITNESS: Frankly, I feel like I'm kind
10 of repeating myself now, but yes, that is a
11 possibility.

12 BY MR. GRAVES:

13 Q And is there any other section of
14 Richardson that you can point to that discusses the
15 use of multiple ranges?

16 A I think the last thing you requested before
17 we had yet another round of technical difficulties
18 was that I comprehensively search the document, and
19 I'm prepared to do that. I -- maybe -- I don't want
20 to speak for you.

21 Is this something you would like me to do
22 now?

23 Q I just want to know if you're aware, based
24 on your understanding of Richardson, of anywhere
25 elsewhere it describes multiple predetermined ranges

1 being applied at step 252.

2 MR. CHANDRA: Objection. Vague.

3 THE WITNESS: It's also not what I said. I
4 didn't -- I mean, I'm sorry to be picking on
5 subtleties. I didn't say specifically it talks
6 about two ranges or that it doesn't disallow it.

7 The sentence makes clear that it could be
8 one or it could be the other or it could be the
9 other other.

10 BY MR. GRAVES:

11 Q I understand that.

12 I'm just asking if you're familiar with any
13 statement in Richardson that does positively discuss
14 two different ranges being applied at step 252?

15 MR. CHANDRA: Objection. Vague, also asked
16 and answered. I think this is the fourth time
17 you've asked the same question, and he's responded
18 in turn every time.

19 BY MR. GRAVES:

20 Q You can go ahead and answer.

21 A I -- I am prepared to do a comprehensive
22 search because you asked a global question. I
23 wouldn't -- I actually -- I am prepared to give you
24 an answer from memory, but this is a critical issue
25 and I would rather be precise.

1 Would you like me to do that now? It will
2 take some time.

3 Q I'd like you to answer from memory first.

4 A Okay. From memory, I'm not aware of any
5 section within Richardson in which he specifically
6 says one range for manual, one range for auto. I'm
7 pretty confident of that recollection.

8 However, the admission of possible ranges
9 often comes down to subtleties in the wording of
10 sentences, such as the ones that I just -- am
11 multiply quoting to you, and that is what I would
12 search for.

13 Q Okay. So if we could go back to Figure 5
14 of Richardson.

15 A Okay.

16 Q Will you let me know when you're there.

17 A I am there.

18 Q If step 252 determines that the vehicle
19 voltage is within a correct range, where does
20 Richardson's system progress to at the next step?

21 A Well, it depends on the outcome of the
22 decision. I'll first answer what happens if the
23 comparison is positive, that is, the
24 vehicle-measured battery voltage is within the
25 prescribed range for --

1 (Clarification by the Reporter.)

2 THE WITNESS: -- for the particular mode
3 that it is in. And I apologize. I started talking
4 fast, and I will make sure I don't do that again.

5 Let's see. I'm going to follow the yes
6 outcome of it, as I was saying, that that would
7 indicate that the measured-vehicle battery voltage
8 is within the range.

9 And in this case, it could be different
10 between manual and auto, or to follow your more
11 probing question, it doesn't necessarily require
12 that. Richardson is allowing that as a possibility
13 by the construct of the sentence and sentences, I
14 believe, that discuss what's happened.

15 And to this I want to add, please be
16 cognizant of the fact that Richardson's flowchart
17 here is for one particular exemplary embodiment, and
18 he goes out of his way to state that's just one. It
19 could be different.

20 But following the yes path out of 252 to a
21 page connector E which takes you now to Figure 6,
22 the next step says -- now it looks at whether it is
23 in auto or manual mode. Having already passed a
24 voltage comparison test, it wants to make sure that
25 it is directing it appropriately to the action

1 appropriate for either manual or automatic mode.

2 It happens in 258. And to the right, it
3 goes manual, it goes to an operational block 332,
4 display manual mode, to another decision diamond.

5 Maybe I'll roll back and speak with what
6 happens if 252 resulted in a no.

7 BY MR. GRAVES:

8 Q That's not necessary.

9 A Please repeat.

10 Q It's not necessary to discuss the no
11 situation.

12 A Okay.

13 Q So looking at step 258 on Figure 6, based
14 on the flowchart stemming from there, steps 332 and
15 334 occur only if operating in manual mode, right?

16 A That is what is specified in the flowchart.

17 Q And steps 260, 262, 264, 265 and 267 occur
18 only if operating in auto mode, correct?

19 A You said 262 which would be -- 260, yes.
20 262 series, yes. And 264, yes. 265, yes. There.

21 MR. GRAVES: Okay. I think now might be a
22 good time to take maybe a real break for you,
23 Dr. MacCarley, where you're not scrambling with
24 technical issues. So why don't we take --

25 Can we go off the record here, Kim.

1 (Off the record from 11:00 - 11:27 a.m.)

2 BY MR. GRAVES:

3 Q Welcome back, Dr. MacCarley.

4 Before we get started again, can I just
5 ask, did you speak with anyone about the substance
6 of your testimony during the break?

7 A No, I did not.

8 Q Did you discuss Richardson or any other
9 document that we've been addressing today during the
10 break?

11 A I did not, no.

12 Q Did you review any notes or other materials
13 relevant to the case during the break?

14 A No. No, I was scrambling to get various
15 options for communication to work.

16 Q I appreciate the effort, and hopefully
17 things work smoothly from here on out.

18 A And I -- I sincerely appreciate your
19 tolerance. This is really unacceptable.

20 Q It happens.

21 Okay. So I'd now like to discuss the
22 grounds involving the Yu reference. If you could
23 reference the English translation of Yu, which I
24 will upload in a moment here.

25 A Okay.

1 Q So, Dr. MacCarley, let me know when you
2 have access to Exhibit 1008.

3 A Okay. I'm still getting it, and I have it.
4 I have it now.

5 Q Okay. Great.

6 Can you turn to Paragraph 27 of Yu and let
7 me know when you're there.

8 A Okay. I'm there.

9 Q Okay. And can you read this second
10 sentence of Paragraph 27 out loud.

11 A "A signal is provided to the microprocessor
12 42 through the external battery voltage detection
13 circuit 45, so the external battery voltage can be
14 displayed on the display module 5 to facilitate
15 understanding of the external battery condition."

16 Q Okay. So based on this statement, you
17 anticipate that a user will rely on the displayed
18 external battery voltage measurement in some manner,
19 right?

20 MR. CHANDRA: Objection. Misstates the
21 document. And to the extent you're quoting his
22 testimony, it misstates his testimony.

23 THE WITNESS: I would parse the word "rely"
24 because I certainly don't rely on it.

25 And I need to ask, this is in the context

1 of Yu's patent; is that correct?

2 You're not asking about our situation?

3 BY MR. GRAVES:

4 Q I'm just trying to understand how you
5 interpret the phrase "to facilitate understanding of
6 the external battery condition."

7 A Well, the succinct answer is it is what it
8 is -- what it says: It will -- maybe in simpler
9 language, it is providing unspecified, well, voltage
10 among other things, but there may be other elements
11 of the external battery condition that are not
12 relevant to this discussion.

13 So it's telling you about what shape the
14 battery is in, basically.

15 Q So based on that, you expect its user to be
16 able to understand and somehow use the display
17 measured, correct?

18 MR. CHANDRA: Objection. Misstates his
19 testimony and the document.

20 THE WITNESS: If -- I'm going to attempt to
21 clarify your question rather than get into another
22 cycle of repeat it.

23 When you said "use" this information, they
24 could use it because they want to know something
25 about the battery or whether it's still -- you know,

1 they need to take it to Pep Boys and get a new one.

2 Whether it is necessary that they observe
3 the display, use that information to make some
4 condition change, such as overriding its automatic
5 function, I -- I could allow that as a possibility,
6 but it's certainly not -- not in any way saying that
7 that has to occur.

8 Are you still there?

9 BY MR. GRAVES:

10 Q I'm still here.

11 A Thank you.

12 Q But -- so Yu displays this measurement
13 value?

14 MR. CHANDRA: Objection. Vague.

15 THE WITNESS: The very last word you said
16 got garbled. Yu displays this word what?

17 BY MR. GRAVES:

18 Q So Yu displays this measurement value of
19 the external battery voltage, correct?

20 A According to the sentence, yes.

21 Q And why would Yu display this measurement
22 value if it was not intended to be relied on in some
23 way by a user of the device?

24 MR. CHANDRA: Objection. Misstates the
25 document and calls for speculation.

1 THE WITNESS: Well, for the same reason I
2 just mentioned, and forgive the injection of humor
3 about Pep Boys, but maybe the battery is best --
4 don't even waste time on it, replace it.

5 BY MR. GRAVES:

6 Q So in that situation, a user would look at
7 this value and they would have an understanding of
8 the external battery based on what's presented to
9 them, correct?

10 MR. CHANDRA: Objection. Misstates his
11 testimony.

12 THE WITNESS: Well, I'm not sure if
13 everyone does it, but those who are reasonably savvy
14 in automotive technology, especially automotive
15 electronics, like myself, I kind of pathologically
16 watch battery voltages to give me an indication of
17 the condition of the battery.

18 And I watch the open circuit voltage of the
19 battery decline over the life of the battery, and it
20 sort of gives me a trajectory as to whether the
21 battery is in need of replacement.

22 But that's just -- that's just one thing.
23 There may be -- I can think of scenarios where
24 knowledge of the battery voltage would be useful to
25 determine, say, the minimum voltage necessary for it

1 to actually operate the starter, because that -- as
2 the voltage declines, it works, it works, it works,
3 and then one day it -- you just hear click, click,
4 click from the starter solenoid.

5 I've tried to use two examples. Is that
6 sufficient for an answer to your question?

7 BY MR. GRAVES:

8 Q Yeah, that's sufficient.

9 Could you now turn to Paragraph 27,
10 starting on Page 30 of 73 in your reply declaration.

11 A I'm sorry. I have -- I'm waiting for it to
12 load.

13 All right. Could you -- I'm in
14 Exhibit 1057. Could you direct me to the paragraph
15 and sentence again.

16 Q Yeah. It's Paragraph 27, starting on
17 Page 30 of 73.

18 A 27. I'm at that paragraph. I've started
19 to read it.

20 Q Okay. Can you reread Paragraph 27 in its
21 entirety to yourself, and let me know when you're
22 finished.

23 A Okay. I will do so, making a note that
24 it's quite a long paragraph so this may take...

25 Q Take your time.

1 (Brief pause.)

2 THE WITNESS: Okay. I'm done.

3 BY MR. GRAVES:

4 Q Okay. And do you see the sentence near the
5 middle of the paragraph that says "Critically,
6 regarding the second condition, if the vehicle
7 battery voltage is not within the normal range,
8 pressing the JUMP button will do nothing - the
9 microprocessor will not close the relay"?

10 A I do.

11 Q And there you describe how if the vehicle
12 battery voltage is not within the normal range, then
13 pressing the jump button will not close the relay,
14 right?

15 A A POSITA would understand this makes
16 sense -- that would be a fair interpretation of what
17 I said, yes.

18 Q So if Yu's system is disconnected from a
19 vehicle battery, it is your position that the
20 microprocessor will automatically prevent the
21 contact relay from closing, correct?

22 MR. CHANDRA: Objection. Misstates his
23 testimony. Also objection. Potentially outside the
24 scope. I'm not sure where that is.

25 THE WITNESS: Yeah. I don't -- I don't

1 believe I opined on that in my declaration. I will
2 attempt to address the question, though.

3 BY MR. GRAVES:

4 Q Well, let me ask a different question.

5 A I'd like to -- I believe using the figure
6 itself would verify that.

7 MR. CHANDRA: Art, let him ask his
8 question.

9 THE WITNESS: Go ahead.

10 BY MR. GRAVES:

11 Q If Yu's system is connected to a battery
12 with a voltage that is not within a normal range, is
13 it your position that the microprocessor will
14 automatically prevent the contact relay from
15 closing?

16 A Well, the relay checks -- this is why I was
17 going up to -- here's what -- can I refer you to
18 just a couple pages up, a copy of Figure 1 from Yu?

19 Now, it shows that the microprocessor
20 receives inputs, essentially control inputs from
21 four places. One is the input button, but it also
22 receives information from the internal battery
23 voltage detection circuit. So it is asking to be
24 made aware of the battery voltage, the external
25 verse the polarity check and the external battery

1 voltage detection circuit.

2 This would suggest that it doesn't really
3 reveal the algorithms that are being used, at least
4 not completely enough, but the microprocessor is
5 examining the battery voltage and its decision as to
6 whether the relay switch is -- whether the relay is
7 closed or not. It could. It almost -- logically it
8 would depend upon the internal battery voltage
9 detection circuit which is sensed from block 43.

10 Q Okay. So going back to your statement in
11 Paragraph 27, you're stating here that "if the
12 vehicle battery voltage is not within the normal
13 range," then "the microprocessor will not close the
14 relay," right?

15 A Yeah, I have to go outside that paragraph
16 to answer that question authentically. If you roll
17 up just a little bit to the prior paragraph, 26,
18 where I say "Specifically, Yu explains that."

19 And if you go down to -- it talks about
20 what would happen if the -- if a reverse voltage was
21 detected, it would prevent the wrong polarity
22 connection if the output terminal is connected to
23 the external battery of the wrong polarity.

24 And now, to answer your question, "The
25 microprocessor 42 will detect the external battery

1 voltage and simultaneously display this voltage on
2 an LCD. If the external battery voltage is within
3 the normal range, then the JUMP button" will be --
4 in addition to the other control conditionals, the
5 jump button would be allowed to close -- to cause
6 the closure of the relay.

7 Q Okay. I'm asking about a situation where
8 the measured-vehicle battery voltage is not within
9 the normal range.

10 In that situation, will the microprocessor
11 prevent the relay from closing?

12 A I'm going to slightly violate normal logic.
13 I think that Yu did that. The sentence "If the
14 external battery voltage is within the normal range,
15 then the JUMP button of the input buttons 6 can be
16 pressed to close the relay," which suggests strongly
17 that if it is not in the correct range, it would not
18 be allowed to close the relay.

19 Q And a vehicle battery that is completely
20 dead would not produce a voltage within the normal
21 range, right?

22 MR. CHANDRA: Objection. Outside the
23 scope, also misstates testimony.

24 THE WITNESS: That's more a general
25 technology question. And it does depend upon the

1 definition of "dead." "Dead" usually doesn't mean a
2 completely zero voltage. It means maybe down to
3 2 volts or something like that.

4 But -- so to answer your question, it would
5 read zero volts, that's not necessarily correct.
6 It -- if that -- if 2 volts, which is unlikely, if
7 it was allowed in the specified range, which, by the
8 way, Yu does not pin down, then it would be allowed
9 to connect, but most likely to -- that range would
10 exclude 2 volts and it would not be allowed to
11 connect.

12 BY MR. GRAVES:

13 Q So could you just clarify that a little bit
14 when you said there that if a battery is so dead
15 that it's at 2 volts, that would be outside of the
16 range of Yu or it's not clear?

17 MR. CHANDRA: Objection. Misstates his
18 testimony.

19 THE WITNESS: No. I said -- let me say
20 this again.

21 Yu does not specify the acceptable range.
22 I threw out 2 volts as an example, one that
23 reasonably matches what Richardson discusses.

24 I can tell you if a battery is down to
25 2 volts, it's dead. I mean, your likelihood of

1 getting a charge back on it that will stay more than
2 a very short period of time is very low because that
3 kind of means that one of the six 2-volt cells in a
4 LED-acid battery, only one of them is functioning.

5 The -- so that bottom limit to the
6 acceptable range is -- is an open statement. Yu
7 doesn't pin it down, but it does make clear it is
8 within the normal range. So we have to define
9 "normal." Presumably since this is microprocessor
10 controlled, that is easily programmable.

11 BY MR. GRAVES:

12 Q And so let's say that there is a vehicle
13 battery voltage that is below that minimum range,
14 whatever it is --

15 A Correct, yes.

16 Q -- you wouldn't be able to jump-start a
17 battery below that specified range, correct?

18 MR. CHANDRA: Objection. Vague, compound.

19 THE WITNESS: Okay. When I say
20 "specifically" in the declaration, which is the
21 answer to your question, I believe, I'm going back
22 now to Paragraph 27, "Critically, regarding the
23 second condition, if the vehicle battery voltage is
24 not within the normal range, pressing the JUMP
25 button will do nothing - the microprocessor will not

1 close the relay."

2 BY MR. GRAVES:

3 Q So if Yu is being -- Strike that.

4 What will happen in Yu if the
5 measured-vehicle battery voltage is not within the
6 normal range?

7 MR. CHANDRA: Objection. Asked and
8 answered.

9 THE WITNESS: I -- I concur with
10 Mr. Chandra's statement. That was the answer to my
11 last question.

12 I can repeat it if you'd like. I'm sorry.

13 BY MR. GRAVES:

14 Q Please repeat it.

15 A If it's outside that range, as stated here,
16 "A POSITA would understand it makes sense since a
17 user" -- well, excuse me. I'm starting too early.

18 "Indeed, Yu does" -- first of all,
19 repeating, "Indeed, Yu does not suggest or describe
20 that his system informs the user what the 'normal
21 range' is."

22 And then turning two sentences above that,
23 "if the battery" -- "if the vehicle battery voltage
24 is not within the normal range" -- normal range has
25 a lower and an upper bound, just as a reminder --

1 "pressing the JUMP button will do nothing - the
2 microprocessor will not close the relay."

3 Q So outside of that normal range, Yu cannot
4 be used to jump-start a vehicle, correct?

5 MR. CHANDRA: Objection. Misstates his
6 testimony and asked and answered.

7 THE WITNESS: Since it can't close -- since
8 the microprocessor will read it as outside the
9 normal range and will not close the relay, that
10 would be a reasonable conclusion.

11 BY MR. GRAVES:

12 Q Okay. Can you now turn to Paragraph 41 on
13 Page 39 of 73 in your reply declaration.

14 Let me know when you're there.

15 A Okay. I am there.

16 What happened? Oh, no.

17 Q Is everything okay?

18 A I'm working on two computers, my elbow hit
19 the advanced key on my other keyboard. I'm sorry.

20 Back to Paragraph 41. Is that correct, 41?

21 MR. CHANDRA: Sorry. I just want to make
22 sure. On the bottom of Page 28 -- or 38, correct?
23 38 of 73?

24 THE WITNESS: I'm at the bottom of Page 38,
25 that's correct.

1 MR. CHANDRA: Okay.

2 BY MR. GRAVES:

3 Q That's correct.

4 And on the section of Paragraph 41 that is
5 on Page 39, if I could direct your attention there.

6 A Uh-huh.

7 Q And here you were discussing the
8 Voltaic V39 USB Battery bank of Exhibit 1061; is
9 that correct?

10 A Yes. I refer to the V39 Battery bank,
11 power bank or power module. They go by a lot of
12 different commercial names.

13 Q And near the bottom of Page 39, do you see
14 the sentence where you state that "The advertised
15 charge time is 10 hours in direct sun from 8-watt
16 solar panels"?

17 A I see it, yes. That's a quote.

18 Q So the advertised charging time of the V39
19 device being listed at ten hours, that is when the
20 system is receiving 8 watts of charging power from
21 the solar panels, right?

22 A Right, the solar panels that are apparently
23 sold as a package and with the power bank.

24 MR. GRAVES: Now might be a good time for
25 maybe a two-minute break here.

1 MR. CHANDRA: Make it five so it's
2 effective.

3 MR. GRAVES: Sure. Do a five-minute break.
4 (Off the record from 11:53 - 12:00 p.m.)

5 BY MR. GRAVES:

6 Q Dr. MacCarley, welcome back.

7 Can I just ask, did you communicate with
8 anyone about the substance of your testimony during
9 the break?

10 A No, not at all.

11 MR. GRAVES: Okay. No further questions at
12 this time. I'll pass the witness.

13 MR. CHANDRA: Okay. Thank you.

14 I'd like, I'll say, 20 minutes just to get
15 my notes together; is that all right? I'll have a
16 few questions for him.

17 MR. GRAVES: Sure.

18 MR. CHANDRA: Okay. We'll go back off the
19 record.

20 (Off the record from 12:00 - 12:20 p.m.)

21

22 EXAMINATION

23 BY MR. CHANDRA:

24 Q All right. I have a few questions for you.
25 I don't think this will take too long so bear with

1 me.

2 Do you recall Mr. Graves asking you about
3 Paragraph 7 of your reply declaration?

4 A Yes.

5 Q Do you mind opening your reply declaration,
6 turning to Page 14 of 73 where Paragraph 7 occurs.

7 A Yeah. Give me a moment.

8 Q Sure. Let me know when you're there.

9 A I'm at Paragraph 7 of my reply declaration.

10 Q Thank you.

11 What is the heading of this section?

12 A Well, it says -- the heading of this, call
13 it a subsection, is "Even under NOCO's construction,
14 Richardson's step 252 teaches Limitation1[G],"
15 referring to Claim 1[G] in the NOCO patent.

16 Q And if we go back to Paragraph 7 -- let me
17 know when you're there.

18 A I'm there.

19 Q Does the first sentence read, "When in
20 'auto' mode, Richardson's device closes the contact
21 relay only when an appropriate battery is present
22 (i.e., step 252 is satisfied), just as required by
23 limitation 1[G]."

24 Did I read that --

25 A That is correct. I see it.

1 Q And this is still your testimony today?

2 A Yes.

3 Q If we go down to Paragraph 8 of your
4 declaration --

5 A I'm there.

6 Q -- it states "A POSITA would therefore
7 understand that when Richardson's system is used in
8 auto-mode (i.e., auto-mode is selected at step 248)
9 to jump start a vehicle, at step 252 Richardson's
10 system detects that an appropriate, non-dead vehicle
11 battery is present before closing the contact relay
12 at step 268. This is exactly the function and
13 timing that NOCO alleges is required by
14 limitation 1[G]."

15 Did I read that right?

16 A Yes, you did.

17 Q Is that still your testimony today?

18 A Yes.

19 Q Go down to Paragraph 10. It states
20 "Accordingly, Limitation 1[G] is clearly taught by
21 Richardson's 'auto' mode and a petition and my
22 opinions rely on this mapping of Richardson."

23 Did I read that right?

24 A You're reading that correctly. I could
25 elaborate, but that's up to you.

1 Q Is that sentence still your opinion?

2 A Yes.

3 Q If we could take a look at Richardson
4 Exhibit 1005.

5 Do you still have that up?

6 A No. I'll have to bring it back up.

7 Q Okay. Take your time. Let me know when
8 you're there.

9 A Richardson is up. Do you have a paragraph?

10 Q Let's go to Figure 5.

11 Do you remember being asked about this
12 figure?

13 A Yes, a few times. I'm going to Figure 5.

14 Q Looking at the bottom portion of
15 Richardson's Figure 5, does Richardson -- does this
16 figure of Richardson show step 248 occurring before
17 step 252?

18 A It does.

19 Q If you go down to Paragraph 34 of
20 Richardson -- sorry, 35. It will be on Page 4.

21 A Top of Page 4, left column. Yeah.

22 Q That's correct.

23 The first two sentences state "If the
24 selected voltage is within the correct range 252,
25 then the system determines which button was selected

1 258. If the Auto button 42 was pushed, a
2 ninety-second count down timer is started and
3 displayed 260 on the LCD 46."

4 Did I state that correct?

5 A Yes.

6 Q Is that second sentence talking about auto
7 mode?

8 A Well, it has to be because the second
9 sentence says "If the Auto button 42 is pushed," and
10 then it talks about the "ninety-second count down
11 timer," et cetera.

12 Q In the first sentence, "If the selected
13 voltage is within the correct range," is that what
14 you describe as an appropriate battery for the
15 selected voltage for Richardson's jump-starter?

16 MR. GRAVES: Objection. Leading.

17 THE WITNESS: I believe that is
18 Richardson's intent with this sentence.

19 BY MR. CHANDRA:

20 Q If you could go down to Paragraph 49 of
21 Richardson on Page 5 in the left-hand column.

22 A I'm there.

23 Q The first sentence says "If in manual mode,
24 the jump starter may be used when the battery
25 voltage of the vehicle is below 10 volts, or if the

1 vehicle's battery is not connected."

2 Did I read that correctly?

3 A Yes. And with the emphasis on "if in
4 manual mode."

5 Q So is this talking about manual mode?

6 A Obviously.

7 Q And if a vehicle's battery is not
8 connected -- sorry. Strike that.

9 In the instance when a vehicle battery is
10 not connected --

11 Do you have that in your mind?

12 A Yes.

13 Q -- would that be an appropriate battery for
14 a selected voltage range?

15 MR. GRAVES: Objection. Leading.

16 THE WITNESS: No. If no battery was
17 connected, that certainly would not be within the
18 appropriate voltage range for comparison.

19 BY MR. CHANDRA:

20 Q I want to go back to your declaration, if
21 we can, down at Page -- sorry, Paragraph 26, which
22 is on Page 29 of 73.

23 A Still scrolling.

24 Okay. I'm there now.

25 Q Great.

1 Do you remember being asked about your
2 opinions about Yu?

3 A A number of questions related to Yu, I do.

4 Q That first sentence of Paragraph 26 states
5 "Yu essentially teaches that three conditions must
6 be met for the microprocessor to close the relay and
7 initiate jump starting: (1) the connection must be
8 correct polarity; (2) the connected vehicle battery
9 voltage must be within a 'normal range,' and (3) the
10 JUMP button must be pressed."

11 Did I read that correctly?

12 A You read it correctly.

13 Q Is that still your opinion?

14 A Yes.

15 Q If any of those conditions are not met,
16 will Yu's microprocessor close the relay?

17 MR. GRAVES: Objection. Leading.

18 THE WITNESS: No.

19 BY MR. CHANDRA:

20 Q So if Conditions 1 and 2 are not met, will
21 pressing the jump button close the relay?

22 MR. GRAVES: Objection. Leading.

23 THE WITNESS: I'll take it as 1 or 2, the
24 connection has to be the correct polarity and the
25 battery must be within normal range, which is

1 actually a superset of the polarity issue.

2 So, no, that would not allow it to be
3 connected.

4 BY MR. CHANDRA:

5 Q If you scroll up one page in your
6 declaration, you have a statement and a Figure 1.

7 A I see that.

8 Q Do you see that?

9 A Uh-huh.

10 Q Do you remember talking about this, I
11 think?

12 A Yeah. I actually introduced it as a part
13 of an answer, but yes.

14 Q It says "Input buttons" on the bottom of
15 that figure.

16 A Uh-huh.

17 Q What are the input buttons?

18 A I believe this refers to either the -- the
19 equivalent -- one is referred to as a jump button.

20 Q Okay. Okay. So a jump button is one of
21 the input buttons?

22 A Yes. I'd have to search further to see if
23 it defines what the other one is. I'm sorry.

24 Q The input button shows a line going up to
25 the microprocessor, right?

1 A It does. Uh-huh.

2 Q What does that mean? What do you
3 understand that to mean, the line from the input
4 buttons to the microprocessor?

5 MR. GRAVES: Objection. Leading.

6 THE WITNESS: Well, as a -- as a matter of
7 standard practice, a single line is carrying a
8 signal, possibly multiple signals, it could be a
9 bus, that is taking the state of the various input
10 buttons and providing them as inputs to an interface
11 port on the microprocessor as -- to be used by the
12 program that is running on the microprocessor.

13 BY MR. CHANDRA:

14 Q So one of those input signals to the
15 microprocessor would be a result of pressing the
16 jump button; is that --

17 MR. GRAVES: Objection. Leading.

18 THE WITNESS: Well, yeah. That's my
19 understanding.

20 BY MR. CHANDRA:

21 Q If Conditions 1 and 2 are not satisfied --
22 or 1 or 2, if either of them were not satisfied,
23 what would pressing the jump button do?

24 I'm sorry. If it helps, I'm referring to
25 Paragraph 26 again.

1 A In Figure 1, you're referring to the
2 conditions in blocks 44 and 45 and asking if an
3 input of a jump button contained in block 6 could
4 activate the relay.

5 I'm very confident of -- I could find it,
6 but it's obvious that if 44 and 45 conditions, if
7 the external battery was reversed or its external
8 battery voltage detection circuit that provides the
9 input so that the microprocessor could determine
10 whether the voltage is in acceptable range or not,
11 both those conditions have to be met in order for
12 the jump button to have any effect at all.

13 MR. CHANDRA: If you give me two minutes
14 off the record, I'm just going to check with my
15 colleagues and then I'm probably done, but give me
16 two minutes.

17 MR. GRAVES: Okay.

18 (Off the record from 12:34 - 12:37 p.m.)

19 MR. CHANDRA: Going back on the record.

20 BY MR. CHANDRA:

21 Q Art, I have a couple more questions.

22 Looking at your reply declaration on
23 Page 40 of 73, Paragraph 42.

24 A You got a little garbled. Did you say
25 Page 34?

1 Q Sorry. 40 of 73.

2 A Okay. I'm on 40 of 73. And what paragraph
3 again?

4 Q Yeah.

5 So we're going to look at the sentences
6 that appear right after that screenshot of the
7 V39 Universal USB Battery, the sentence starting
8 with "Indeed."

9 Do you see that?

10 A Yes.

11 Q It states, "Indeed, as seen above, the
12 website states that the 'included battery charges
13 efficiently from solar and stores power for use
14 anytime. When not in the sun, it can be charged
15 using the USB Power Cable or optional AC travel
16 charger or DC car charger, making it just as useful
17 on the grid as off.'"

18 Did I read that correct?

19 A Yes.

20 Q If you look at that figure, I believe
21 Mr. Graves asked you -- or had you read from the
22 paragraph above which quotes the charge time
23 paragraph, (as read): In direct sun fully charges
24 in 10 hours from 8 watts of solar panels.

25 A Yes. At the bottom of Bates Page 39.

1 Q Have you ever used solar panels before?

2 A Quite a bit, yes. I do a lot of work in
3 that area.

4 Q So you're familiar with the electronics of
5 solar panels?

6 A Yes, I am.

7 Q Are solar panels efficient charging
8 sources?

9 MR. GRAVES: Objection. Leading.

10 THE WITNESS: Well, the current state of
11 the art is about 22 percent conversion of incident
12 sunlight to electric energy.

13 So, you know, in the overall scheme of
14 energy conversion methods, that's not terribly
15 efficient. But that's pretty darn good when the
16 sunlight is coming for free and all you need is more
17 solar panels to create more power.

18 BY MR. CHANDRA:

19 Q You mentioned "incident sunlight."

20 What did you mean by that?

21 A The amount of solar energy that is
22 convert -- that is incident upon the sun-facing
23 surface of the solar panels that the solar panels,
24 via a photovoltaic conversion process, will turn
25 into the direct current.

1 Q In your experience with solar panels, is
2 incident -- sorry. I'm going to use your word --
3 incident sunlight constant?

4 MR. GRAVES: Objection.

5 THE WITNESS: Not at all. It varies, of
6 course -- it's pretty much zero at night. It might
7 pick up some ground color light, but nothing useful.

8 I mean, the standard of the industry is,
9 just so everybody is operating from the same
10 baseline, the belief that you have about 1 kilowatt
11 of incident solar energy per square meter of panel.
12 And that is -- it's used as the test standard.

13 It obviously is going to vary with,
14 especially, latitude, not so much longitude, but --
15 and you're not going to get your average over any
16 period of time. You're not going to get as much in
17 England as you would in, say, Albuquerque,
18 New Mexico.

19 MR. CHANDRA: Thank you.

20 I pass the witness.

21

22 FURTHER EXAMINATION

23 BY MR. GRAVES:

24 Q Okay. Dr. MacCarley, just to confirm,
25 during the last break, the one that lasted 20

1 minutes, did you communicate with Mr. Chandra or
2 anyone else?

3 A No, I did not.

4 MR. GRAVES: Then I have no further
5 questions for you today. Thank you for pushing
6 through those technical difficulties.

7 MR. CHANDRA: Thank you, Mr. Graves.

8 THE REPORTER: Mr. Chandra, did you want a
9 rough of this?

10 MR. CHANDRA: Yeah, that would be nice.

11

12 (Whereupon, at 12:42 p.m., the deposition of
13 C. ARTHUR MacCARLEY, Ph.D. was concluded.)
14

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1 STATE OF CALIFORNIA)
2 COUNTY OF LOS ANGELES) ss.
3

4 I, Kimberly A. Edelen, C.S.R. No. 9042, in and
5 for the State of California, do hereby certify:

6 That prior to being examined, the witness named
7 in the foregoing deposition was by me duly sworn to
8 testify the truth, the whole truth and nothing but
9 the truth;

10 That said deposition was taken down by me in
11 shorthand at the time and place therein named, and
12 thereafter reduced to typewriting under my
13 direction, and the same is a true, correct and
14 complete transcript of said proceedings;

15 That if the foregoing pertains to the original
16 transcript of a deposition in a Federal Case, before
17 completion of the proceedings, review of the
18 transcript { } was { } was not requested.

19 I further certify that I am not interested in
20 the event of the action.

21 Witness my hand this 10th day of October,
22 2025.

23 

24 _____
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October 10, 2025

To: Chetan Chandra, Esq.

Case Name: Deltran USA LLC v. The NOCO Company

Veritext Reference Number: 7599916

Witness: C. Arthur MacCarley , PhD Deposition Date: 10/3/2025

Dear Sir/Madam:

Enclosed please find a deposition transcript. Please have the witness review the transcript and note any changes or corrections on the included errata sheet, indicating the page, line number, change, and the reason for the change. Have the witness' signature notarized and forward the completed page(s) back to us at the Production address shown above, or email to production-midwest@veritext.com.

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DEPOSITION REVIEW
CERTIFICATION OF WITNESS

ASSIGNMENT REFERENCE NO: 7599916

CASE NAME: Deltran USA LLC v. The NOCO Company

DATE OF DEPOSITION: 10/3/2025

WITNESS' NAME: C. Arthur MacCarley , PhD

In accordance with the Rules of Civil
Procedure, I have read the entire transcript of
my testimony or it has been read to me.

I have made no changes to the testimony
as transcribed by the court reporter.

Date C. Arthur MacCarley , PhD
Sworn to and subscribed before me, a
Notary Public in and for the State and County,
the referenced witness did personally appear
and acknowledge that:

They have read the transcript;
They signed the foregoing Sworn
Statement; and
Their execution of this Statement is of
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I have affixed my name and official seal
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DEPOSITION REVIEW
CERTIFICATION OF WITNESS

ASSIGNMENT REFERENCE NO: 7599916

CASE NAME: Deltran USA LLC v. The NOCO Company

DATE OF DEPOSITION: 10/3/2025

WITNESS' NAME: C. Arthur MacCarley , PhD

In accordance with the Rules of Civil Procedure, I have read the entire transcript of my testimony or it has been read to me.

I have listed my changes on the attached Errata Sheet, listing page and line numbers as well as the reason(s) for the change(s).

I request that these changes be entered as part of the record of my testimony.

I have executed the Errata Sheet, as well as this Certificate, and request and authorize that both be appended to the transcript of my testimony and be incorporated therein.

Date C. Arthur MacCarley , PhD

Sworn to and subscribed before me, a Notary Public in and for the State and County, the referenced witness did personally appear and acknowledge that:

They have read the transcript;
They have listed all of their corrections in the appended Errata Sheet;
They signed the foregoing Sworn Statement; and
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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.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

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

COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

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