

In The Matter Of:
Ford Motor Company vs.
Paice, LLC, et al.

Neil Hannemann
April 27, 2016



Bingham Farms/Southfield • Grand Rapids
Ann Arbor • Detroit • Flint • Jackson • Lansing • Mt. Clemens • Saginaw

Original File HANNEMANN_NEIL.txt
Min-U-Script® with Word Index

Page 1

1 UNITED STATES PATENT AND TRADEMARK OFFICE
 2 BEFORE THE PATENT TRIAL AND APPEAL BOARD
 3 U.S. Patent No. 7,237,634
 4 U.S. Patent No. 7,104,347 to Severinsky, et al.
 5 - - - - - x
 6 FORD MOTOR COMPANY, :
 7 Petitioner, : IPR2015-00790, 2015-00791,
 8 v. : 2015-00784, 2015-00722,
 9 PAICE LLC & ABELL : 2015-00787, 2015-00794
 10 FOUNDATION, INC. : 2015-00795
 11 Patent Owners. :
 12 - - - - - X
 13
 14 Deposition of NEIL HANNEMANN
 15 Washington, DC
 16 Wednesday, April 27, 2016
 17 10:17 a.m.
 18
 19
 20
 21
 22
 23
 24
 25 Reported by: Debra A. Whitehead

Page 2

1 Deposition of NEIL HANNEMANN, held at the offices
 2 of:
 3
 4 FISH & RICHARDSON, PC
 5 1425 K Street, NW
 6 11th Floor
 7 Washington, DC 20005
 8 (202) 783-5070
 9
 10
 11 Pursuant to notice, before Debra A. Whitehead, an
 12 Approved Reporter of the United States District Court
 13 and Notary Public of the District of Columbia.
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25

Page 3

1 A P P E A R A N C E S
 2 ON BEHALF OF PETITIONER:
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 13 Response
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1 this current deposition for all of the IPR matters?
2 **MR. TURNER:** So I plan on just starting
3 with one of them.
4 **MR. LIVEDALEN:** Can you just read them.
5 **MR. RONDINI:** We were going to break it
6 up. I don't know how you want to do that, you know,
7 typically you don't have two attorneys for
8 depositions. So we can make it one continuous
9 transcript, or we can try to break it up by matter.
10 I mean, there is so much overlapping matter with
11 these seven, I don't know what your thoughts are on
12 how you want to handle it.
13 **MR. LIVEDALEN:** For your questions do you
14 have these limited to all I think seven IPRs.
15 **MR. TURNER:** I plan on focusing just on
16 one proceeding.
17 **MR. LIVEDALEN:** Do you want to do that one
18 for the first and then the others?
19 **MR. RONDINI:** Sure.
20 **MR. LIVEDALEN:** Which one is that?
21 **MR. TURNER:** This is the '795.
22 **MR. LIVEDALEN:** Okay.
23 **BY MR. TURNER:**
24 Q. So, Mr. Hannemann, the court reporter has
25 marked as Exhibit 1 through Exhibit 3 documents I

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1 P R O C E E D I N G S
2 N E I L H A N N E M A N N,
3 having been duly sworn, testified as follows:
4 EXAMINATION BY COUNSEL FOR PETITIONER
5 **BY MR. TURNER:**
6 Q. And can you state your name, for the
7 record, please.
8 **A. Neil Hannemann.**
9 Q. And you're familiar with the rules for
10 depositions?
11 **A. Yes, I am.**
12 Q. Just briefly, the reporter can't record
13 gestures, hand nods. So when we ask a question, I
14 ask that you answer with words.
15 If you don't understand a question, please
16 let me know. If you need to take a break, let me
17 know and we can break.
18 And I guess with that, are you feeling
19 well today?
20 **A. I've got a lingering cough, a cold. So I**
21 **might cough occasionally. And it's not great on my**
22 **voice, so the court reporter may struggle. I'm**
23 **quiet anyway, so it may be tough. But I feel fine.**
24 Q. Okay.
25 **MR. LIVEDALEN:** And, for the record, is

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1 expect we will discuss today. So I'll give you
2 these.
3 (Deposition Exhibit 1, Exhibit 2 and
4 Exhibit 3 marked for identification and are attached
5 to the transcript.)
6 Q. Mr. Hannemann, what is Exhibit 1?
7 **A. This is my declaration in the -- this**
8 **matter, Case IPR 2015-00795.**
9 Q. And do you remember which patent this
10 concerns?
11 **A. Yeah. This is Patent 7,104,347.**
12 Q. Thank you. And how about Exhibit 2; do
13 you recognize Exhibit 2?
14 **A. Exhibit 2 is the '347 patent.**
15 Q. So that's the patent at issue for this
16 declaration?
17 **A. Yes.**
18 Q. And we sometimes refer to this patent as
19 the '347 patent.
20 **A. Yes.**
21 Q. What is Exhibit 3?
22 **A. Exhibit 3 is another patent by Kawakatsu,**
23 **4,335,429.**
24 Q. And this is a prior art patent that's, I
25 believe you discuss in your declaration?

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1 A. Yes.
2 Q. And sometimes we refer to this patent as
3 Kawakatsu, the first name of the inventor?
4 A. Yes.
5 Q. All right. So what did you do to prepare
6 for this deposition?
7 **MR. LIVEDALEN:** I just want to instruct
8 the witness not to disclose any communications
9 between he and counsel.
10 **A. So I was here yesterday, I met with**
11 **Mr. Livedalen. We discussed the declarations, went**
12 **through the other materials, prior art. Dr. Davis I**
13 **think was the only one that had written declarations**
14 **on this one, these matters. And to just look**
15 **through those materials.**
16 Q. So you reviewed Dr. Davis' declarations in
17 these IPRs, also?
18 **A. Just referred. I would say, yes, sir, I**
19 **referred to them. I saw them months ago.**
20 Q. Okay.
21 **A. Read them then. And I referred to them**
22 **yesterday just for certain items.**
23 Q. Okay. Do you remember when you started
24 preparing this declaration?
25 **A. Not right offhand, no, I don't.**

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1 Q. Okay. So if you could flip to the last
2 page. So this is, the signature on the last page.
3 Do you recognize this signature?
4 **A. Yes.**
5 Q. Excellent. This is your signature?
6 **A. Yes, it is.**
7 Q. So your declaration was executed on
8 January 26 of this year. So you don't remember
9 exactly when you started preparing this declaration?
10 **A. No. I think on my -- I think I have a**
11 **folder in my computer that's labeled 12/15 of when I**
12 **received materials.**
13 Q. Okay.
14 **A. If that's -- if that's what it was that I**
15 **received the materials. And that would have been**
16 **when I started working on it.**
17 Q. So probably December, right around the
18 holidays?
19 **A. Sounds like it, right.**
20 Q. Nice project for the holidays. Okay.
21 Mr. Hannemann, can you tell, me what is a
22 neighborhood electric vehicle?
23 **A. It's a classification of vehicle.**
24 **Basically the distinctions are it's not allowed to**
25 **go on streets and have a speed limit of over 35**

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1 **miles an hour.**
2 Q. Okay.
3 **A. And I believe that the vehicle itself is**
4 **limited to 25 miles an hour. And it's typically,**
5 **you know, been golf carts, is what it has been, and**
6 **golf carts in retirement communities.**
7 Q. So it's limited to the neighborhood.
8 **A. Yeah.**
9 Q. Low-speed applications. All right.
10 And how about a zero-emissions vehicle;
11 are you familiar with that term?
12 **A. Well, that's a term applied generally to**
13 **electric vehicles.**
14 Q. Okay. All electric vehicles, not limited
15 by certain speeds, certain locations?
16 **A. I think you could probably put that tag on**
17 **any electric vehicle.**
18 Q. Okay. Now, if you could, turn to
19 Paragraph 99 of your declaration, please. And,
20 again, your declaration is Exhibit 1.
21 **A. All right.**
22 Q. So this section I believe you are
23 analyzing the Vittone reference. But could you read
24 Paragraph 99 into the record, please?
25 **A. Sure. "By contrast, road load can be**

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1 **different according to the operating conditions.**
2 **For example, the road load corresponding to a 30**
3 **percent pedal position value for a vehicle going 5**
4 **miles per hour is much different than a 30 percent**
5 **pedal position for a vehicle traveling 50 miles per**
6 **hour. This is because factors such as rolling**
7 **resistance and wind resistance affect the road load,**
8 **but are not indicated by pedal position."**
9 Q. Okay. Can you explain the last sentence
10 in a little more detail.
11 So these factors, rolling resistance and
12 wind resistance, these affect road load. How do
13 these affect road load?
14 **A. Well, the -- they're, if you have a higher**
15 **wind resistance, then the vehicle is going to have a**
16 **higher road load that it's experiencing. And**
17 **likely -- and also rolling resistance, that can**
18 **change with different road surfaces.**
19 **And then, you know, you could also put**
20 **grade resistance in here, which is a little easier**
21 **for most people to understand, that going up a hill**
22 **takes more load than going on level ground.**
23 Q. And these factors, these are affected by
24 the speed of the vehicle. Is that correct?
25 **MR. LIVEDALEN:** Objection. Vague,

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1 compound.
2 **A. Wind resistance is definitely affected by**
3 **the speed. Wind resistance goes up with speed. And**
4 **rolling resistance can, but not by a same amount.**
5 Q. So would you agree, based on this example,
6 that road load is -- sorry. Strike that.
7 So with respect to this example, do you
8 agree that road load is at least partially dependent
9 on vehicle speed?
10 **MR. LIVEDALEN:** Objection. Vague.
11 **A. Yes, it is. It's affected by vehicle**
12 **speed.**
13 Q. So road load is affected by vehicle speed.
14 **MR. LIVEDALEN:** Objection. Asked and
15 answered.
16 **A. That's one factor. And in this example**
17 **also what's -- what I should point out is that the**
18 **30 percent pedal value going 5 miles an hour, it's**
19 **likely that the vehicle will be accelerated. So**
20 **acceleration or deceleration are other factors that**
21 **the vehicle can experience that aren't affected by**
22 **road load.**
23 Q. You said the "acceleration or deceleration
24 are other factors that the vehicle can experience
25 that aren't affected by road load."

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1 Is that correct?
2 **A. Correct.**
3 Q. Okay. Please look at Exhibit 2. And
4 specifically please look at Claim 16 of the '347
5 patent.
6 Can you read Claim 16, for the record,
7 please.
8 **A. "Vehicle of Claim 1 wherein the total**
9 **torque available at the road wheels from said**
10 **internal combustion engine is no greater than the**
11 **total torque available from said first and second**
12 **electric motors combined."**
13 Q. Do you remember analyzing this claim for
14 your declaration?
15 **A. Not particularly. If I did, maybe you**
16 **could point me to somewhere where I did that.**
17 Q. Let's see. So you analyzed this claim in
18 Paragraphs -- starting at Paragraph 83.
19 All right. So Claim 16, can you I guess
20 explain in your own words the limitations of Claim
21 16?
22 **MR. LIVEDALEN:** Is there a -- is that a
23 question? Are you asking him to interpret what the
24 claim means?
25 **MR. TURNER:** Strike that.

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1 Q. Mr. Hannemann, do you remember where in
2 the '347 patent they explain this limitation, the
3 disclosure related to this limitation?
4 **A. Not right offhand I don't.**
5 Q. Please turn to Column 31, Line 39. This
6 is Exhibit 2, the '347 patent.
7 **A. Right.**
8 Q. Okay. Can you read into the record
9 starting at Line 39.
10 **A. And where would you like me to end that?**
11 Q. Let's see. How about Line 51, please.
12 **A. Okay. "Engine 40: 40 to 50 horsepower at**
13 **6,000 RPM, starting motor of 21: 10-15 horsepower**
14 **at approximately 1500 RPM and higher speeds.**
15 Traction motor 25: 50-75 horsepower, from 1500 to
16 6,000 RPM. The same starting motor would be
17 satisfactory for a larger 4,000-pound sedan, but the
18 engine would typically provide 70-90 horsepower at
19 6,000 RPM and the traction motor 75-100 horsepower.
20 In both cases the total power available from the
21 electric motors together should equal and preferably
22 exceeds the maximum power available from the
23 engine."
24 Q. So that last excerpt describes that the --
25 or the total power available from the electric

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1 motors. So it's referring to total power, the claim
2 is total torque.
3 Do you see a difference as far as those
4 two sections of the patent?
5 **MR. LIVEDALEN:** Objection. Compound,
6 vague.
7 **A. Well, yeah, there is a difference. One's**
8 **specifically talking horsepower; the other one is**
9 **talking torque.**
10 Q. All right. Can you look at Figure 10,
11 please.
12 So Figure 10 is on Sheet 5 of the '347
13 patent. It's a little out of order.
14 **A. Oh, okay. I was going to say, it's not**
15 **where I thought it was.**
16 Q. It's on the same sheet as Fig. 6.
17 **A. Okay. Got it.**
18 Q. All right. So, Mr. Hannemann, can you
19 explain what is shown in Figure 10?
20 **A. Well, in the brief description of the**
21 **drawings in the patent, it's stated that Figure 10**
22 **illustrates the preferred torque versus speed**
23 **characteristics of the electric starting and**
24 **traction motors, and of the internal combustion**
25 **engine.**

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