

FORD MOTOR COMPANY v. PAICE L.L.C., ET AL.

NEIL HANNEMANN (875)

April 30, 2015

Prepared for you by



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<p>1 UNITED STATES PATENT AND TRADEMARK OFFICE 2 BEFORE THE PATENT TRIAL AND APPEAL BOARD 3 -----x 4 FORD MOTOR COMPANY, : 5 Petitioner, : 6 vs. : IPR2014-00875 7 PAICE LLC & ABELL FOUNDATION, : 8 INC., : 9 Patent Owner. : 10 -----x 11 12 13 Deposition of NEIL HANNEMANN 14 Washington, DC 15 Thursday, April 30, 2015 16 9:53 a.m. 17 18 19 20 21 22 23 Job No.: 78417 24 Pages: 1 - 113 25 Reported by: Janet A. Hamilton, RDR</p>	<p>1 A P P E A R A N C E S 2 ON BEHALF OF PETITIONER: 3 FRANK A. ANGILERI, ESQUIRE 4 JOHN P. RONDINI, ESQUIRE 5 BROOKS KUSHMAN, PC 6 1000 Town Center 7 22nd Floor 8 Southfield, Michigan 48075 9 (248) 358-4400 10 -and- 11 THOMAS W. YEH, ESQUIRE 12 LATHAM & WATKINS, LLP 13 555 Eleventh Street, NW 14 Suite 1000 15 Washington, DC 20004 16 (202) 637-2200 17 18 ON BEHALF OF THE PATENT OWNER: 19 BRIAN J. LIVEDALEN, ESQUIRE 20 FISH & RICHARDSON 21 1425 K Street, NW 22 11th Floor 23 Washington, DC 20005 24 (202) 783-5070 25</p>
Page 2	Page 4
<p>1 Deposition of NEIL HANNEMANN, held at the 2 office of: 3 4 5 Fish & Richardson, PC 6 1425 K Street, NW 7 11th Floor 8 Washington, DC 20005 9 (202) 783-5070 10 11 12 13 14 15 16 17 18 19 Pursuant to Notice, before Janet A. Hamilton, 20 Registered Diplomat Reporter and Notary Public in and 21 for the District of Columbia. 22 23 24 25</p>	<p>1 C O N T E N T S 2 EXAMINATION OF NEIL HANNEMANN PAGE 3 By Mr. Angileri 5 4 5 6 E X H I B I T S 7 (Attached to the transcript) 8 HANNEMANN DEPOSITION EXHIBIT 9 Ex. 1 Declaration of Neil Hannemann in 5 10 Support of the Patent Owner's Response 11 Case IPR 2014-00875 12 Patent 7,559,388 13 Ex. 2 United States Patent No. 7,559,388 5 14 Severinsky, et al. 15 Ex. 3 Electric Vehicle Association of the 65 16 Americas (EVAA) 12th International 17 Electric Vehicle Symposium 18 Poster Sessions 19 Ex. 4 Abstract: Hybrid Power Unit Development 81 20 For Fiat Multipla Vehicle 21 Ex. 5 Equation 3 91 22 Ex. 6 Pages 76, 77 and 78 of Dr. Stein's 104 23 declaration 24 Ex. 7 United States Patent 4,335,429 104 25 Kawakatsu</p>

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1 PROCEEDINGS
2 -----
3 (Hannemann Deposition Exhibit No. 1 and
4 Exhibit No. 2 were pre-marked for identification and
5 are attached to the transcript.)
6 NEIL HANNEMANN,
7 a witness herein, being duly sworn, testified as
8 follows:
9 EXAMINATION BY COUNSEL FOR THE PETITIONER
10 BY MR. ANGLERI:
11 Q Good morning.
12 **A Good morning.**
13 Q Would you please state your full name for
14 the record.
15 **A Neil Hannemann.**
16 Q Mr. Hannemann, has your experience changed
17 since the depositions that we had a couple of weeks
18 ago?
19 **A You're talking like work experience?**
20 Q Sure.
21 **A Not -- not significantly, no.**
22 Q Anything relevant to your technical
23 expertise change since then?
24 **A No.**
25 Q Any -- has your experience changed in any

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1 way relevant to these proceedings since your
2 depositions a couple of weeks ago?
3 **A You mean experiences I may have had between**
4 **the two depositions. Is that what you, like work I**
5 **may have done between depositions?**
6 Q That would be one example.
7 **A Yeah. In that example, no, I haven't done**
8 **anything relevant between the depositions.**
9 Q Has it changed in some other way?
10 **A I was just trying to imagine other ways that**
11 **you might be talking about, and I, I can't come up**
12 **with any.**
13 Q Okay. What did you do to prepare for this
14 deposition?
15 MR. LIVEDALEN: I would caution the witness
16 not to reveal any communications between him and
17 counsel.
18 **A Yeah. I've been basically -- I've been here**
19 **the last three days meeting with counsel.**
20 Q Today is April 30th. So the last three days
21 you're talking April 27 through 29?
22 **A That's correct.**
23 Q With whom did you meet?
24 **A I met with Brian Livedalen and Pete -- I**
25 **always get this pronunciation wrong.**

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1 MR. LIVEDALEN: Guarnieri.
2 **A Pete Guarnieri. The primary ones, and Linda**
3 **Kordziel was also in the meetings at times.**
4 Q Anyone else that you can think of?
5 **A No. That was it.**
6 Q Or is there anyone else who you can't
7 remember their name?
8 **A No. It was really the, just the three**
9 **people.**
10 Q Did you review any documents in these
11 meetings?
12 **A Yes, we did.**
13 Q Did any of them refresh your recollection on
14 anything?
15 **A Well, I guess every time I review a document**
16 **it's refreshing my memory, so I would say yes.**
17 Q What documents did you review?
18 **A They were all either the, my declaration,**
19 **the patents at issue or the prior art references.**
20 Q So basically the declaration and the things
21 you cite in the declaration?
22 **A Yes.**
23 Q Anything else?
24 **A No. I think that was pretty much it.**
25 Q The court reporter's marked as Exhibit 1 --

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1 well, she's marked two exhibits, Exhibit 1 and Exhibit
2 2.
3 **A Okay.**
4 Q Can you please tell us what is Exhibit 1?
5 **A Well, Exhibit 1 is my declaration and**
6 **IPR2014-00875 relating to patent 7,559,388, and**
7 **Exhibit 2 is a copy of the patent 7,559,388.**
8 Q How much time did you spend preparing
9 Exhibit 1?
10 **A Um, boy, I don't really recall. It was back**
11 **in probably March or February.**
12 Q Did you work with Fish & Richardson
13 attorneys in preparing Exhibit 1?
14 **A Yes, I did.**
15 Q Would you turn to page 13, paragraph 35.
16 **A Okay.**
17 Q Can you read into the record, the sentence
18 starts on line 7 says "as noted in the '388 patent"?
19 **A Just the first, that sentence?**
20 Q Just that sentence, yeah.
21 **A Yeah. "As noted in the '388 patent, these**
22 **prior systems fail to understand that the vehicle**
23 **operational mode should preferably be controlled in**
24 **response to the vehicle's actual torque requirements,**
25 **i.e., the road load, which provides superior**

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1 **performance in terms of both vehicle response to**
2 **operator commands and dual efficiency under the widely**
3 **varying conditions encountered in the real world**
4 **driving situations."**
5 Q That statement that you quote about superior
6 performance, do you have any basis to support that
7 statement?
8 **A I don't have any test data, but the '388**
9 **patent is based on a, a, you know, a road load based-**
10 **system and the others aren't, and I guess, you know,**
11 **that, you know, particular element could give superior**
12 **performance.**
13 Q Are you offering an opinion that a road
14 load-based system provides superior performance to
15 other systems?
16 **A The -- I believe the patent gives that, that**
17 **statement, that's --**
18 Q Are you, Mr. Hannemann, offering an opinion
19 that a road load-based system offers superior
20 performance to other systems?
21 **A I would just defer to any statements about**
22 **that that are in the patent.**
23 Q Do you have any opinion that a road
24 load-based system provides superior performance to
25 other systems?

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1 MR. LIVEDALEN: Asked and answered.
2 **A Yeah. That's not -- that's not something I**
3 **analyzed. I -- I'm just going off material in the**
4 **patent.**
5 Q Can you provide any support for the
6 statement that a road load-based system provides
7 superior performance to other systems other than just
8 quoting the '388 patent?
9 **A I would say the '388 patent is sufficient**
10 **for that.**
11 Q You can't cite anything else that supports
12 that statement; correct?
13 **A Well, I haven't, like I say, I haven't**
14 **analyzed that as part of this case. So I haven't done**
15 **the research to go cite a different reference other**
16 **than what I've looked at for this case.**
17 Q Further down, can you read the next sentence
18 into the record, please? Starts with "additionally."
19 **A "Additionally this failure to recognize**
20 **benefits of using road load to select vehicle mode**
21 **also led prior art systems to incorrectly cite other**
22 **system components such as the battery and motors which**
23 **similarly resulted in operating the engine under less**
24 **efficient conditions."**
25 Q Are you offering an opinion on the benefits

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1 of using a road load -- strike that. Are you offering
2 an opinion on the benefits of using road load to
3 select vehicle mode?
4 **A Not what's beyond stated in the patent, no.**
5 Q Well, what's -- what's stated in the patent?
6 **A Well, it's the -- what I cite is column 13,**
7 **lines 33 and 49 in the patent.**
8 Q So are you offering an opinion that the road
9 load -- strike that. Are you offering an opinion that
10 using road load to select vehicle mode provides
11 benefits?
12 MR. LIVEDALEN: Objection. Asked --
13 Q Or are you just quoting the patent?
14 MR. LIVEDALEN: Objection. Vague. Asked
15 and answered.
16 **A Well, I am -- this is my analysis of the**
17 **patent, and that's a statement the patent makes, and I**
18 **don't have any reason to disagree with that statement.**
19 Q Do you have any reason to agree with it?
20 **A Well, I -- I do agree with it, yes.**
21 Q Why? What basis do you have for agreeing
22 with it?
23 **A Well, it's just discussing some general**
24 **concepts that someone of skill in the art would**
25 **understand are technically correct.**

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1 Q Where does it discuss -- are you talking
2 about column 13, lines 33 to 49, the ones you cite?
3 **A Yes.**
4 Q Have you done any test data to address
5 whether those statements are correct or not?
6 **A I haven't done any testing, no.**
7 Q Yeah, that was a bad question. The question
8 is, have you done any testing to address whether those
9 statements in the patent are correct?
10 **A Correct. I have -- I've not done any**
11 **testing.**
12 Q Have you done any independent analysis to
13 determine whether those statements in the patent are
14 correct?
15 **A No. My -- my work here was to respond to**
16 **the declaration of either Dr. Stein or Davis. So I**
17 **didn't do any independent work.**
18 Q Likewise, when you talk about prior art
19 systems incorrectly sizing system components, do you
20 have any support for that statement other than the
21 patent?
22 **A I'm basing that statement on the patent.**
23 Q And you have no other support; correct?
24 **A Correct.**
25 Q So for all these statements about the '388

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1 patent being superior to other modes or providing
2 benefits, you rely solely on the '388 patent for those
3 statements; correct?
4 **A Well, I wouldn't say all the other comments,**
5 **but if they're all in the same section, it's my**
6 **analysis of the patent, so it's based strictly on the**
7 **patent.**
8 Q Could you turn to page 16, paragraph 40.
9 **A Okay.**
10 Q Do you see it?
11 **A Yes.**
12 Q There's a portion of a dashed line that's
13 labeled engine torque output. Do you see that?
14 **A Yes.**
15 Q And did you add some cross-hatching between
16 the engine torque output and the road load?
17 **A Yeah. That's not in the original graph.**
18 Q Why did you add that cross section?
19 **A Well, that's the, the difference in, you**
20 **know, a limited torque output and the road load.**
21 Q The line for engine torque output that's
22 being pointed to, and that's at the bottom of your
23 cross-hatching; right?
24 **A Yes.**
25 Q Is that a linear -- is that line generally

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1 linear?
2 MR. LIVEDALEN: Objection. Vague.
3 **A It is shown in this graph as linear. I**
4 **would -- based on the, what I understand of the**
5 **control strategy in the patent, I don't think it**
6 **necessarily has to be linear.**
7 Q Why is that?
8 **A I think that the patent which is determining**
9 **the road load, if the amount of road load changes**
10 **during a certain time period, then it may change its**
11 **control strategy. The control strategy may change the**
12 **engine output torque.**
13 Q Can you give me an example what you're
14 talking about in connection with this portion of the
15 curve that where you've got the cross-hatching?
16 **A Well, if -- I mean you can see in what's**
17 **referenced as area F that's near the top portion of**
18 **that what appears to be a straight line does turn into**
19 **a curve line. So if that, that kind of curve**
20 **character, you know, of the, of the road load were in**
21 **a mode similar to the mode that's referred to in the**
22 **cross-hatched area, then it's possible the engine**
23 **output torque could also not follow the linear**
24 **characteristic that it has here.**
25 Q So you're saying that if the road load is

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1 nonlinear, the engine output torque threshold will be
2 nonlinear?
3 MR. LIVEDALEN: Objection. Mischaracterizes
4 previous testimony.
5 **A Well, the patent does state that it's**
6 **limited to a threshold, and so it wouldn't exceed the**
7 **threshold, but it may be possible that it's lower than**
8 **the threshold.**
9 Q What is the "it" in your last answer?
10 **A The engine torque output.**
11 Q In the portion of the graph where you have
12 the cross-hatching, is the engine torque output box
13 pointing to a section of a line where the engine
14 torque output is limited to a threshold?
15 **A In this part of the graph, yes, that's --**
16 **that is the threshold limit.**
17 Q What does figure 7C show in paragraph 40 of
18 your declaration?
19 **A So figure 7, there's a general description**
20 **in the patent of what figure 7 is which states figure**
21 **7 comprising figures 7A through C and extending over**
22 **two sheets is a timing diagram showing road load,**
23 **engine torque output, the state of charge the battery**
24 **bank and engine operations as functions of time, thus**
25 **illustrating a typical control strategy employed**

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1 **during low speed city driving, highway cruising and**
2 **extended high load driving.**
3 Q What is 7C?
4 **A Well, this general description I just read**
5 **describes A through C.**
6 Q You cannot elaborate on that?
7 **A Well, let me see if the patent elaborates on**
8 **it anywhere.**
9 Q Can you elaborate on it separate from
10 looking at the patent?
11 Mr. Hannemann, did you hear my question?
12 **A Yeah and --**
13 Q The question was, can you elaborate on
14 figure 7C separate from reading what the patent says
15 about it?
16 **A And, no, I'd rather read from the patent,**
17 **so, for accuracy.**
18 Q Does figure 7C mean anything to you separate
19 from reading the patent?
20 **A Well, I -- I think that it's most accurate**
21 **to refer to the patent for that reference.**
22 Q That wasn't my question. I can read the
23 patent. I can't go into your brain. What does figure
24 7C mean to you?
25 MR. LIVEDALEN: Objection. Asked and

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