1
IN THE UNITED STATES DISTRICT COURT
2 FOR THE DISTRICT OF DELAWARE
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4
MICROCHIP TECHNOLOGY : C.A. No. 17-1194
5 INCORPORATED, :
:
6 Plaintiff, :
:
7 vs. :
:
8 APTIV SERVICES US, LLC, :
:
9 Defendant. :
10 - - -
11 TRANSCRIPT OF PROCEEDINGS
12 TESTIMONY/CHARGE CONFERENCE
13 VOLUME 4
14 - - -
15 Date: Monday, April 11, 2022
16 Time: 8:30 a.m.
17 Place: J. Caleb Boggs Federal Building
844 N. King Street
18 Courtroom 6B
Wilmington, Delaware 19801
19
20 Before: HONORABLE JOSHUA D. WOLSON, JUDGE
21
Reporter: Rose A. Tamburri, RPR, CM, CRR
22 Notary Public of Delaware
- - -
23 VERITEXT LEGAL SOLUTIONS
MID-ATLANTIC REGION
24 1801 Market Street, Suite 1800
Philadelphia, Pennsylvania 19103

1 Your Honor. 11:40:36
2 THE COURT: Okay. Anything 11:40:36
3 further? 11:40:38
4 MR. WIENER: No further questions, 11:40:42
5 Your Honor. 11:40:44
6 THE COURT: Okay. All right. 11:40:45
7 Mr. Voto, you can step down. 11:40:46
8 THE WITNESS: Leave the binders 11:40:46
9 here? 11:40:47
10 THE COURT: No, take those with 11:40:47
11 you and give them back to the lawyers. 11:41:01
12 (Whereupon, the witness was 11:41:01
13 excused.) 11:41:22
14 THE COURT: Before you start, just 11:41:22
15 to clarify, I think where we were this 11:41:33
16 morning, that's the point at which plaintiff 11:41:36
17 is resting; is that correct? You have held it 11:41:38
18 open for that? 11:41:42
19 MR. SLAYDEN: Yes, Your Honor. 11:41:43
20 THE COURT: All right. Okay. 11:41:43
21 (Brief pause.) 11:41:43
22 MS. LI: Good afternoon. Aptiv 11:41:46
23 calls as its next witness, Michael Dreon. 11:41:48
24 THE COURT: Mr. Dreon, come on up. 11:41:50

1 THE COURT CLERK: Please state and 11:42:24
2 spell your name for the record. 11:42:25
3 THE WITNESS: Michael Joseph 11:42:27
4 Dreon, M-I-C-H-A-E-L, J-O-S-E-P-H, D-R-E-O-N. 11:42:29
5 - - - 11:42:31
6 ...MICHAEL DREON, after having 11:42:31
7 first been duly sworn and/or affirmed, was 11:42:31
8 examined and testified as follows... 11:42:31
9 - - - 11:42:31
10 THE COURT: You can have a seat. 11:42:49
11 THE WITNESS: Thank you. 11:42:49
12 - - - 11:42:49
13 DIRECT EXAMINATION 11:42:49
14 - - - 11:42:50
15 BY MS. LI: 11:42:50
16 Q. Good morning, Mr. Dreon. 11:42:51
17 Could you please introduce 11:42:52
18 yourself to the jury. 11:42:52
19 A. Hello, I am Michael Dreon. 11:42:53
20 Q. Now, could you tell them a little bit 11:42:55
21 about yourself? 11:42:58
22 A. Yes. I grew up in Pittsburgh, 11:42:58
23 Pennsylvania and attended the University of 11:43:03
24 Pittsburgh for electrical engineering. During 11:43:06

1 my time at the University of Pittsburgh, I 11:43:08
2 enrolled in a co-op program and I started 11:43:11
3 working with Packard Electric, which was to 11:43:15
4 become part of Aptiv Corporation, and so I 11:43:20
5 have been with Aptiv Corporation for 33 years. 11:43:22
6 I currently reside in Michigan. 11:43:26
7 Q. Now, you said a co-op program. Can 11:43:30
8 you explain to us what that is? 11:43:32
9 A. Yes. So it's a program offered by 11:43:33
10 the university where you can work one semester 11:43:35
11 in industry and then come back and go back to 11:43:38
12 your studies, and you do that back and forth 11:43:42
13 to gain practical experience. 11:43:45
14 Q. Did you enjoy that? 11:43:47
15 A. Yes, it was quite interesting to 11:43:48
16 learn about real-world problems. 11:43:51
17 Q. Now, you mentioned Packard Electric. 11:43:53
18 Does that relate to Aptiv? 11:43:55
19 A. It does. It's quite a complex 11:43:58
20 history. Packard Electric, at the time, was 11:44:00
21 part of General Motors. General Motors was a 11:44:04
22 pretty vertically integrated company at the 11:44:07
23 time, meaning they owned a lot of their supply 11:44:10
24 base, so for wiring, they went to Packard 11:44:12

1 Electric, which they owned; for HVAC systems, 11:44:14
2 they went to Harris Radiator, with they owned. 11:44:17
3 But they decided over time that 11:44:20
4 they didn't want to be as vertically 11:44:22
5 integrated, so they combined those separate 11:44:24
6 divisions together which would become the 11:44:26
7 Allied Component Group, and in 1999, they spun 11:44:28
8 all those suppliers off to become Delphi 11:44:32
9 Corporation. That allowed Delphi to then 11:44:35
10 compete for business from all of the vehicle 11:44:38
11 manufacturers. 11:44:40
12 As you may recall, during the 11:44:43
13 recession in the early 2000s, many of the 11:44:46
14 automakers and the suppliers went into 11:44:49
15 bankruptcy, Delphi included, and so Delphi 11:44:51
16 restructured itself and really focused on more 11:44:55
17 the higher tech industries and components of 11:44:57
18 their -- of the company. And we came out of 11:45:03
19 bankruptcy and rebranded ourselves as Aptiv. 11:45:07
20 Q. And you have been at 11:45:11
21 Aptiv/Delphi/Packard Electric this entire 11:45:13
22 time? 11:45:15
23 A. I have, yes. 11:45:15
24 Q. What has made you stay all of these 11:45:16

1 years? 11:45:19
2 A. Yeah, so Aptiv, and all the prior 11:45:19
3 divisions, offered a lot of variety and work. 11:45:23
4 I am trained as an engineer, but I also enjoy 11:45:27
5 working the business. So I've had the 11:45:30
6 opportunity to do both engineering jobs and 11:45:32
7 business jobs, including working in the 11:45:34
8 operations and sales and business planning. 11:45:36
9 And so the variety has been quite 11:45:40
10 interesting for me, and they've been a pretty 11:45:42
11 good employer. I like working for them and 11:45:46
12 they have treated me well. 11:45:49
13 Q. Now, I'd like to talk a little bit 11:45:50
14 about what Aptiv does. Could you give us a 11:45:52
15 general overview of the sort of products you 11:45:54
16 have, groups you have? 11:45:57
17 A. Yeah. We are a technology company, 11:45:58
18 so we're supplying technology to the 11:46:01
19 automotive manufacturers. We have two 11:46:04
20 divisions within Aptiv; we have the active 11:46:06
21 safety and user experience and we have the 11:46:09
22 connection systems, and we like to brand 11:46:13
23 ourselves and market ourselves as supplying 11:46:16
24 the brains and the nervous system to the 11:46:19

1 vehicles. 11:46:21
2 And so on the brain side, we 11:46:21
3 supply products that would have the computers 11:46:24
4 and sensors that do features like adaptive 11:46:27
5 cruise control, and then we have the 11:46:33
6 connection system side which supply all the 11:46:35
7 wires that connect the sensors to the 11:46:38
8 computers throughout the vehicle. So that 11:46:41
9 would include the wires, the connectors and 11:46:44
10 the terminals for the products. 11:46:46
11 Q. Where does the dual role hub fall in 11:46:50
12 the brains of the nervous system? 11:46:53
13 A. Yeah, that business resides in the 11:46:54
14 connection systems business. 11:46:56
15 Q. How come it's not in the user 11:46:59
16 experience side of things? 11:47:01
17 A. A little bit from a historic 11:47:03
18 standpoint, when USB was first introduced, it 11:47:06
19 was really just a simple connection from the 11:47:09
20 head unit to the -- where the user would put 11:47:11
21 their phone or a memory stick. But as they 11:47:16
22 wanted to add more ports in a car, it then had 11:47:21
23 to have a USB hub added to it. 11:47:25
24 And then as charging standards 11:47:27

1 changed and they wanted to increase the 11:47:30
2 charging rates and put more power to the 11:47:33
3 phones, that box became quite complicated and 11:47:35
4 had electronics in it. 11:47:40
5 But historically, it came from the 11:47:42
6 connection system and it still resides there. 11:47:43
7 Q. And do you work with the dual role 11:47:46
8 hub at Aptiv? 11:47:49
9 A. I do. 11:47:49
10 Q. Can you tell us a little bit about 11:47:50
11 what your job is? 11:47:51
12 A. Yeah. My current role is Director of 11:47:53
13 Product Line for the consumer connectivity 11:47:56
14 business. That business has two product 11:48:00
15 lines, the media modules, which are USB hubs, 11:48:03
16 and also wireless charging. Those are the 11:48:06
17 wireless charging mats that you would put your 11:48:09
18 phone on and conductively charge your phone. 11:48:12
19 Q. Have you always been in the 11:48:15
20 connectivity side of the business? 11:48:16
21 A. No. I have had a variety of 11:48:18
22 different roles throughout my career with 11:48:19
23 Delphi/Aptiv, but that's where I have been for 11:48:24
24 the last seven years. 11:48:26

1 Q. And what drew you to connectivity 11:48:27
2 seven years ago? 11:48:33
3 A. Yeah, so Aptiv had made an 11:48:33
4 acquisition of a new company called Unwired, 11:48:36
5 and I thought that was a pretty interesting 11:48:39
6 development. And so I inquired about it and I 11:48:42
7 was able to get a position on the Aptiv side 11:48:46
8 to help integrate that business into the 11:48:50
9 business processes of Aptiv, but also to -- I 11:48:52
10 found the product very interesting. I could 11:48:58
11 tell that it was going to have a meaningful 11:49:00
12 impact in the market and I wanted to be part 11:49:03
13 of that. 11:49:06
14 Q. And the product you are talking about 11:49:06
15 is a dual role hub? 11:49:09
16 A. It is, yes. 11:49:11
17 Q. So let's talk about dual role hub a 11:49:12
18 little bit more. Who are Aptiv's customers 11:49:15
19 for the dual role hub? 11:49:17
20 A. So we supply to the vehicle 11:49:19
21 manufacturers. You've heard about The Big 3, 11:49:21
22 so Ford, Chrysler, General Motors, but we also 11:49:23
23 supply all over the world. 11:49:26
24 Q. Are there specific features of the 11:49:28

1 hub that your customers care about? 11:49:31
2 A. Yeah, we've talked about them. The 11:49:33
3 three main features of the OEMs, from a 11:49:35
4 functional standpoint, are interested in is 11:49:37
5 that it has a single connection to the head 11:49:39
6 unit, that any downstream port can enable 11:49:42
7 Apple CarPlay, and whenever CarPlay is being 11:49:48
8 utilized, the other ports are still active for 11:49:51
9 data communication. 11:49:54
10 Q. What about features not related to 11:49:56
11 CarPlay, any of those you care about? 11:49:58
12 A. Yes, absolutely. So you've seen 11:50:01
13 examples of these products. They come with a 11:50:04
14 cosmetic component, and so that's very 11:50:08
15 important to our customers. These are 11:50:09
16 integrated into the dashboard and the look and 11:50:11
17 feel of the vehicle, and so the color of it, 11:50:14
18 the texture of it, it's very important, as 11:50:16
19 well. 11:50:20
20 And the example you see, they are 11:50:21
21 also illuminated, and so the illumination and 11:50:22
22 matching the colors and the intensity within 11:50:26
23 the dashboard is very important to CarPlay. 11:50:29
24 MS. LI: Your Honor, I am marking 11:50:34

1 Exhibit 124, which is in the binder. 11:50:35
2 (Whereupon, Trial Exhibit 124 was 11:50:35
3 introduced.) 11:50:35
4 BY MS. LI: 11:50:35
5 Q. Could you please turn to that, Mr. 11:50:37
6 Dreon. 11:50:38
7 A. Yes. 11:50:38
8 Q. Just let me know when you're there. 11:50:41
9 A. I have it. 11:50:44
10 Q. Great. 11:50:45
11 What is Exhibit 124? 11:50:45
12 A. That's a customer presentation we 11:50:46
13 made to Volkswagen. 11:50:48
14 MS. LI: All right. I offer 11:50:51
15 Exhibit 124. 11:50:53
16 MR. ADAMS: No objection, Your 11:50:55
17 Honor. 11:50:56
18 THE COURT: It's received. 11:50:56
19 MS. LI: Let's go to Slide 13 of 11:50:59
20 this exhibit. 11:51:01
21 BY MS. LI: 11:51:01
22 Q. Are these some of the hub examples 11:51:05
23 you were talking about? 11:51:08
24 A. Yes, this is a slide demonstrating to 11:51:09

1 Volkswagen a variety of different products 11:51:12
2 that we were supplying with the cosmetic 11:51:15
3 illumination on it. You can see many of these 11:51:18
4 have rings around them that would light up 11:51:22
5 whenever we -- whenever the car is turned on. 11:51:24
6 The two in the middle are sort of 11:51:28
7 unique because those were laser etched, so the 11:51:30
8 front surface is painted and then laser 11:51:34
9 etched, and then it's actually illuminated 11:51:36
10 from behind. So a lot of complexity in the 11:51:39
11 cosmetic component. 11:51:41
12 Q. Now, I'd like you to turn to 11:51:43
13 previously marked Exhibit 18 in your binder. 11:51:45
14 A. Yes. 11:51:49
15 Q. What is Exhibit 18? 11:51:50
16 A. This was a presentation that we made 11:51:52
17 to the judges of the PACE Award. 11:51:54
18 MS. LI: I offer Exhibit 18. 11:51:57
19 MR. ADAMS: No objection, Your 11:51:59
20 Honor. 11:52:00
21 THE COURT: It is admitted. 11:52:00
22 BY MS. LI: 11:52:03
23 Q. What is the PACE Award? 11:52:04
24 A. Yeah, so the PACE Award is an award 11:52:06

1 that the Automotive News, in conjunction with 11:52:08
2 one of the sponsors, Ernst & Young, developed 11:52:12
3 to recognize innovations in the auto industry. 11:52:15
4 These are innovations that have made a real 11:52:18
5 impact to the features that consumers would 11:52:22
6 use. 11:52:25
7 Q. Can you give us some examples that 11:52:25
8 are one of the things? 11:52:28
9 A. Yes. One of the innovations that 11:52:31
10 Aptiv came up with is adaptive cruise control, 11:52:33
11 so this is when you're in cruise control, if 11:52:36
12 it senses an object, it will actually slow 11:52:38
13 down and maintain the speed of the object in 11:52:40
14 front of it. 11:52:43
15 Another example is Keyless Go from 11:52:44
16 Siemens. This is where your key fob, which 11:52:50
17 you normally would use to unlock your car, 11:52:53
18 once you enter your car, it would sense it and 11:52:55
19 you can actually just push a button on your 11:52:58
20 car and start it. I've sure you've seen that 11:53:00
21 in some vehicles. 11:53:03
22 So these are very noteworthy 11:53:04
23 innovations that have made a real impact to 11:53:06
24 the customers. 11:53:09

1 Q. And did Aptiv win the PACE Award for 11:53:10
2 the dual role hub? 11:53:13
3 A. We did. 11:53:14
4 MS. LI: Now I am going to mark as 11:53:16
5 Exhibit 369 a physical copy of the PACE Award 11:53:20
6 and I am going to offer it, if I don't break 11:53:22
7 it first. 11:53:26
8 (Whereupon, Trial Exhibit 369 was 11:53:26
9 introduced.) 11:53:26
10 MR. ADAMS: No objection, Your 11:53:28
11 Honor. 11:53:28
12 THE COURT: Okay. It will come 11:53:28
13 in. 11:53:30
14 MS. LI: Okay. We will leave that 11:53:31
15 here for now. 11:53:32
16 BY MS. LI: 11:53:36
17 Q. Let's turn to Slide 31 of this 11:53:37
18 presentation. 11:53:39
19 Now, this refers to FCA; is that 11:53:39
20 Chrysler? 11:53:43
21 A. Yes, it is. 11:53:44
22 Q. And what is this slide showing? 11:53:45
23 A. Yeah, so an important part of the 11:53:47
24 PACE Award and the judging is that nothing you 11:53:51

1 just innovated and came up with an interesting 11:53:56
2 invention that sits on the shelf. They want 11:53:59
3 to know that it actually made an impact. And 11:54:01
4 so they want to know are customers using it. 11:54:03
5 And this particular slide was 11:54:06
6 showing how we had -- were able to sell this 11:54:08
7 innovation to Chrysler. 11:54:12
8 Q. And it says on the third bullet here, 11:54:14
9 "Delphi's dual role hub will be on these 2016 11:54:17
10 and 2017 MY FCA programs." 11:54:20
11 What does that mean, 2016 and 2017 11:54:23
12 MY FCA programs? 11:54:26
13 A. Yeah, so that refers to model years, 11:54:28
14 so those are the model years of the programs. 11:54:30
15 So typically, a vehicle model year would come 11:54:32
16 out the year before, so that would be in 2015 11:54:35
17 and 2016 calendar year. 11:54:38
18 Q. And what's the program? Is that just 11:54:41
19 like a car model? 11:54:43
20 A. Yeah. In this case, it's like a car 11:54:44
21 line, so you can see some of the cars here 11:54:46
22 like the Dodge Charger and the Dodge 11:54:51
23 Challenger featured. 11:54:54
24 Q. Now, did Aptiv win the future leader 11:54:55

1 for these? 11:55:00
2 A. No, we won some of them, but not all 11:55:01
3 of them. 11:55:04
4 Q. How come only some of them? 11:55:04
5 A. Yeah, so in the sourcing process, and 11:55:06
6 you've heard some reference to the vehicle 11:55:09
7 manufacturer comes out with a specification 11:55:12
8 and then we have to meet that specification. 11:55:14
9 So Chrysler was making some changes to update 11:55:16
10 them -- the hubs and they had a unique 11:55:21
11 requirement where they required the use of 11:55:23
12 Microchip hub, and so in their specification, 11:55:27
13 they said we want you to supply the hub, but 11:55:29
14 it has to use a Microchip IC. 11:55:32
15 Q. Why was that unique? 11:55:35
16 A. Yeah, we usually don't see that 11:55:37
17 specified by the vehicle manufacturers. 11:55:39
18 Typically they would just say we need these 11:55:41
19 features and these functions, and it's up to 11:55:43
20 the supplier, like Aptiv, to decide how they 11:55:48
21 actually do that. 11:55:50
22 Q. So you got the specification and it's 11:55:51
23 got Microchip's chip in it. What did you do 11:55:54
24 next? 11:55:56

1 A. Yeah, so we needed to develop a 11:55:57
2 proposal to come back to Chrysler, so we would 11:56:00
3 try to go get those ICs from Microchip to say 11:56:03
4 hey, we want to build this into our proposal 11:56:07
5 to our customer and so we need the pricing, we 11:56:09
6 need to know the technical details of that 11:56:12
7 chip to be able to do that. 11:56:14
8 We were not able to get that from 11:56:16
9 Microchip, so we were sort of at a little bit 11:56:18
10 of a problem being able to quote this business 11:56:22
11 to Chrysler. 11:56:24
12 Q. You said ICs; are ICs the chip? 11:56:25
13 A. Yes, integrated circuit, chip. 11:56:28
14 Q. And you said that you were not able 11:56:31
15 to get this information. So you went to 11:56:33
16 Microchip and asked? 11:56:34
17 A. Yes. 11:56:36
18 Q. And they said no? 11:56:37
19 A. Yeah, we were not able to get the 11:56:40
20 information to quote the Microchip solution 11:56:42
21 for Chrysler. 11:56:46
22 Q. All right. 11:56:46
23 Were you here for Mr. Obolsky's 11:56:47
24 testimony last week? 11:56:50

1 A. I was, yes. 11:56:51
2 Q. Do you recall when he said when Aptiv 11:56:52
3 wins, Microchip loses? 11:56:55
4 A. I do, yes. 11:56:58
5 Q. Did you understand him there to be 11:56:59
6 referring to Aptiv's sales of the dual role 11:57:01
7 hub? 11:57:04
8 A. Yes. 11:57:04
9 Q. So does that statement make sense to 11:57:06
10 you, when Aptiv wins by selling its dual role 11:57:08
11 hub, Microchip loses? 11:57:11
12 A. No, it's really not a fair comparison 11:57:13
13 because we're at different parts of the supply 11:57:16
14 chain, so we work directly with the vehicle 11:57:18
15 manufacturers and, you know, I don't see 11:57:21
16 ourselves as the competitors against 11:57:25
17 Microchip. 11:57:27
18 Q. You said you are in different areas 11:57:28
19 of the supply chain. Can you expand on that a 11:57:30
20 little bit more? 11:57:32
21 A. Yeah. So we are a direct supplier to 11:57:33
22 the vehicle manufacturers and so we have to 11:57:35
23 supply complete solutions, and those complete 11:57:38
24 solutions are made up of a variety of 11:57:41

1 components that come from a -- many different 11:57:44
2 suppliers. 11:57:49
3 When we needed to perform the hub 11:57:49
4 function, and in this case for Chrysler, we 11:57:52
5 needed to utilize the Microchip part. We 11:57:56
6 would go to Microchip and get -- and try to 11:58:00
7 get that. So we're not directly competing, 11:58:03
8 they are suppliers with us. 11:58:09
9 Q. Got it. 11:58:09
10 You are not selling your Boston 11:58:10
11 chip to other hub makers? 11:58:11
12 A. No. We don't supply our Boston chip 11:58:13
13 to any other automakers -- automakers or 11:58:16
14 suppliers like Aptiv. 11:58:20
15 Q. And, in fact, you were willing to buy 11:58:20
16 Microchip's chip from them and they said no? 11:58:22
17 A. Well, there was discussions of could 11:58:26
18 we work together, and I think we were open to 11:58:30
19 that at the time and we would be willing to 11:58:34
20 buy the Microchip solution if it met all the 11:58:37
21 functional requirements, as well as the 11:58:39
22 pricing needs. 11:58:41
23 Q. Now, we also heard from Mr. Obolsky 11:58:44
24 last week, and from Mr. Voto this morning, 11:58:46

1 about this meeting in October of 2015 between 11:58:49
2 Aptiv and Microchip. 11:58:52
3 Do you remember that? 11:58:53
4 A. I do. 11:58:54
5 Q. Were you at that meeting? 11:58:55
6 A. I was. 11:58:57
7 Q. Do you recall Mr. Obolsky's testimony 11:58:58
8 about the notes from that meeting? 11:59:02
9 A. I do, yes. 11:59:04
10 Q. Did they seem accurate to you? 11:59:05
11 A. Yes. 11:59:07
12 Q. All right. 11:59:08
13 I know it was quite awhile ago, so 11:59:09
14 I don't expect you to remember a lot, but can 11:59:12
15 you tell us generally what happened at the 11:59:15
16 meeting? 11:59:16
17 A. Yes. So a little bit of context. I 11:59:16
18 was still relatively new to the business. I 11:59:19
19 came in in March and I think this meeting 11:59:21
20 occurred in the fall, October timeframe. So I 11:59:23
21 was still learning the business. 11:59:27
22 This was the first time I had met 11:59:30
23 with Microchip, and the meeting was called 11:59:32
24 really to discuss what they have been 11:59:35

1 developing and talk about future features. We 11:59:39
2 were interested in type C at that point and 11:59:42
3 how we would implement the next generation of 11:59:45
4 the connector, so we talked about those kinds 11:59:47
5 of things, the features. 11:59:50
6 Q. And what were you talking about 11:59:51
7 developing specifically? 11:59:54
8 A. Can you -- 11:59:57
9 Q. Was it related to CarPlay? 11:59:58
10 A. Yeah, we talked about a new chip that 12:00:00
11 Microchip had come out with that did CarPlay. 12:00:03
12 Q. And what was your reaction to that? 12:00:06
13 A. Yeah, so by that time, we were 12:00:10
14 already in production with CarPlay with 12:00:12
15 General Motors and, you know, my feeling was 12:00:14
16 that they finally figured out how we were 12:00:18
17 doing it and came out with their own chip. 12:00:20
18 Q. But you were still willing to work 12:00:22
19 with them going forward? 12:00:24
20 A. Yes. Again, Aptiv is not a chip 12:00:25
21 developer and it's quite costly, it's a lot of 12:00:29
22 engineering resources, there is a lot of risks 12:00:33
23 associated with it. You know, we like to rely 12:00:36
24 on our supply base to do that innovation, and 12:00:39

1 so we were open to working with Microchip. If 12:00:41
2 they had features that could be at a 12:00:44
3 competitive price, we would be willing to work 12:00:48
4 with them. 12:00:50
5 Q. Were you still feeling like you were 12:00:51
6 willing to work with them at the end of the 12:00:52
7 meeting? 12:00:54
8 A. No. The meeting sort of changed by 12:00:55
9 the end. 12:00:58
10 Q. What happened at the end? 12:00:59
11 A. Well, at the end, they brought up 12:01:00
12 that they felt that we may be infringing on 12:01:03
13 their patents and we told them we didn't think 12:01:07
14 we were. And it sort of ended on a sour note. 12:01:10
15 Q. Now, I want to go back to the 12:01:15
16 Chrysler bid. 12:01:16
17 Were you able to quote Microchip's 12:01:17
18 chip in your proposal to Chrysler? 12:01:19
19 A. We were not. 12:01:21
20 Q. Did you submit a proposal anyway? 12:01:22
21 A. We did. We ended up submitting a 12:01:24
22 proposal that used our Aptiv solution. 12:01:27
23 Q. And you mentioned that you were 12:01:31
24 awarded for some programs. What was your -- 12:01:33

1 what was your understanding of why you got 12:01:36
2 those programs? 12:01:40
3 A. So, the electrical functionality is 12:01:41
4 one part of it, but the particular programs 12:01:43
5 that we were awarded had very complex cosmetic 12:01:47
6 requirements. In fact, the one had a door 12:01:51
7 that when you opened it, the illumination 12:01:53
8 changed, so it actually illuminated through 12:01:57
9 the door. 12:01:59
10 And so Chrysler wanted to work 12:02:00
11 with Aptiv because we have a lot of 12:02:02
12 capabilities in that area. And so they were 12:02:04
13 willing to allow a deviation from the 12:02:07
14 Microchip requirement to use our chip. 12:02:10
15 Q. Do you remember which programs those 12:02:15
16 were? 12:02:17
17 A. Yeah, it was the Jeep Wrangler and 12:02:17
18 the Jeep Cherokee, I believe. 12:02:19
19 Q. All right. 12:02:20
20 Now, I want to talk a little bit 12:02:21
21 about Microchip's damages expert, Dr. Becker. 12:02:23
22 Do you remember hearing from him 12:02:26
23 last week? 12:02:27
24 A. I do. 12:02:28

1 Q. Do you recall his testimony that 12:02:29
2 there are just, like, two or three out of 12:02:32
3 hundreds and hundreds of models of the dual 12:02:34
4 role hub that Aptiv data center does not use 12:02:37
5 for CarPlay? 12:02:40
6 A. I do. 12:02:41
7 Q. What data did Aptiv provide about 12:02:41
8 which of its models are and are not used for 12:02:43
9 CarPlay? 12:02:46
10 A. Yeah, so there are rare instances 12:02:47
11 where we know specifically that the vehicle 12:02:50
12 manufacturer is not implementing CarPlay. The 12:02:53
13 references that Dr. Becker made were to Tesla; 12:02:57
14 we supply hubs to Tesla, but Tesla never 12:03:03
15 implemented CarPlay. 12:03:06
16 We also supply a USB port with our 12:03:07
17 hub chip in it that was used on a video module 12:03:11
18 for Chrysler, I believe it was, and they never 12:03:14
19 implemented it for CarPlay; it was just a 12:03:19
20 video input. 12:03:21
21 And then I think the third example 12:03:22
22 was with the customer, Renault, their head 12:03:24
23 unit, which was supplied by TomTom was never 12:03:29
24 updated to do CarPlay. So we were aware of 12:03:31

1 those instances. 12:03:34
2 Q. Did you also provide information 12:03:35
3 about the earliest point a customer could have 12:03:36
4 used the dual role hub for CarPlay? 12:03:39
5 A. Yeah. So in the data I provided when 12:03:41
6 we started to supply the chips, or supply the 12:03:44
7 total module to the vehicle manufacturer, and 12:03:47
8 based on that, we knew the earliest that they 12:03:52
9 could have implemented CarPlay, but we didn't 12:03:55
10 know exactly when or if they ever implemented 12:03:57
11 CarPlay. 12:04:00
12 Q. So you provided information on 12:04:01
13 hundreds of hundreds, Dr. Becker said, 12:04:04
14 hundreds and hundreds of models? 12:04:06
15 A. Yes, we supply a lot of part numbers. 12:04:07
16 Q. Do you have information about whether 12:04:10
17 those other hundreds and hundreds, excepting 12:04:13
18 the three we just talked about, were, in fact, 12:04:17
19 used by your customers to do CarPlay? 12:04:19
20 A. No, we don't know when or if they 12:04:20
21 ever implemented CarPlay on those products. 12:04:23
22 Q. And who decides whether to support 12:04:26
23 CarPlay in a car? 12:04:28
24 A. The vehicle manufacturer. 12:04:29

1 Q. Can you do CarPlay in a car with just 12:04:31
2 the dual role hub? 12:04:34
3 A. No. We are just part of a system. 12:04:35
4 So, you've seen the system many times. So 12:04:37
5 there's the head unit, there is the cabling 12:04:42
6 that goes to our hub assembly and there is our 12:04:44
7 hub assembly. 12:04:48
8 So we are just part of the system. 12:04:49
9 You can't do CarPlay with just our hub. 12:04:51
10 Q. Does the head unit need to have any 12:04:53
11 particular features to work with the dual role 12:04:55
12 hub to do CarPlay? 12:04:57
13 A. Can you restate that? 12:05:00
14 Q. Sure. 12:05:02
15 Does the head unit need to have 12:05:02
16 any particular features to work with the dual 12:05:04
17 role hub to do CarPlay? 12:05:07
18 A. Well, the head unit has to be 12:05:08
19 designed for CarPlay, so you can't just take a 12:05:10
20 head unit that hasn't been developed 12:05:14
21 specifically for CarPlay and do CarPlay. The 12:05:16
22 head unit has to have the software to talk to 12:05:19
23 the Apple phone and then receive messages from 12:05:22
24 the Apple phone so it can display the icons 12:05:25

1 and you can push the icons and enable the 12:05:28
2 features on the phone. So the head unit has 12:05:31
3 to be specifically developed for CarPlay. 12:05:34
4 Q. And who is responsible for putting 12:05:36
5 that whole system together, the head unit, 12:05:38
6 dual role hub, the connection? 12:05:40
7 A. The vehicle manufacturer determines 12:05:42
8 what the requirements are for each of the 12:05:46
9 components and works with the supplier of each 12:05:48
10 of those components, and then is ultimately 12:05:51
11 responsible for knowing that it functions all 12:05:54
12 together. 12:05:58
13 Q. Now, the examples we just talked 12:05:58
14 about, Tesla, Renault, the Chrysler video 12:06:00
15 module, were those examples where the 12:06:04
16 customers chose not to support CarPlay? 12:06:07
17 A. Yeah, those particular systems, in 12:06:10
18 the case of the video, didn't have CarPlay 12:06:14
19 ever considered and the other ones, they did 12:06:16
20 not implement CarPlay. 12:06:18
21 Q. So what if the carmaker wants to do 12:06:20
22 CarPlay, and is there a reason they might not 12:06:23
23 be able to, even if they have the dual role 12:06:25
24 hub? 12:06:27

1 A. Yeah. So the vehicle manufacturer 12:06:28
2 has to eventually get Apple certified; I think 12:06:30
3 you heard some reference to that. So once 12:06:35
4 they have a system that's developed to their 12:06:37
5 specifications, they need to go to Apple and 12:06:39
6 get approval. And if they don't get approval 12:06:43
7 from Apple, Apple could make them not provide 12:06:47
8 that feature in the car. 12:06:51
9 Q. So say Ford gets Apple certified. 12:06:53
10 Does that mean Chrysler can go to Apple and 12:06:58
11 say hey, can I get automatically certified, 12:07:00
12 too? 12:07:02
13 A. No. The systems at the OEMs are all 12:07:03
14 very different, even down to the vehicle 12:07:06
15 level. So in many cases, each individual 12:07:08
16 vehicle has to be approved by Apple, certified 12:07:12
17 by Apple. 12:07:16
18 There are some instances where the 12:07:17
19 vehicle systems could be very similar, so it 12:07:21
20 is using the same head unit, very similar 12:07:24
21 cabling and the same hub assembly, and in 12:07:27
22 those cases, they could get Apple 12:07:29
23 certification for multiple vehicles, but never 12:07:32
24 across vehicle manufacturers. 12:07:35

1 Q. And you said you sell lots of 12:07:37
2 different models of the dual role hub. Do you 12:07:39
3 track if or when the customers for those 12:07:41
4 particular models get Apple certified? 12:07:43
5 A. No, we don't know when they submit 12:07:46
6 for Apple certification or if they even ever 12:07:50
7 get Apple certification. 12:07:53
8 Q. All right. 12:07:54
9 Let's go back to Exhibit 18, which 12:07:55
10 was the PACE Award certification, and let's 12:07:58
11 turn to slide 24. 12:08:01
12 What is this slide showing? 12:08:03
13 A. Yes, so part of the PACE Award, they 12:08:08
14 want to understand how the innovation came 12:08:12
15 about and what was the process to go from the 12:08:16
16 conception of the innovation to making it 12:08:20
17 commercially viable, and this is the summary 12:08:24
18 of that process. 12:08:26
19 Q. If we look at Box 1 here, it says, 12:08:28
20 "Identified industry relevant issues with 12:08:30
21 integrating iPhone into vehicle 12:08:33
22 architectures." 12:08:36
23 What relevant issues are you 12:08:36
24 talking about there? 12:08:38

1 A. Yeah, so the relevant issues that we 12:08:39
2 identified was the need to supply a hub that 12:08:43
3 had a single upstream port to the head unit 12:08:46
4 that allowed for any downstream port to do 12:08:50
5 CarPlay, and then while one of those ports was 12:08:53
6 in CarPlay mode, that the other port was still 12:08:55
7 able to communicate data to the head unit. 12:09:00
8 Q. And did you address all of those 12:09:03
9 issues with the dual role hub? 12:09:05
10 A. We did, yes. 12:09:07
11 Q. Was anyone else at the time 12:09:07
12 addressing all of those issues? 12:09:09
13 A. No. 12:09:11
14 Q. So was it a big deal that you did? 12:09:12
15 Did you get any feedback from your customers? 12:09:14
16 A. Yeah. All the customers were very 12:09:17
17 excited. I came into the group in March, and 12:09:19
18 one of my roles was to promote this to other 12:09:23
19 customers globally, and many of the customers 12:09:26
20 that we went into were very excited to see 12:09:30
21 this. They were facing the same problem and 12:09:33
22 same challenges. 12:09:36
23 In fact, I went to Korea to 12:09:37
24 promote this to Hyundai and we set up a 12:09:40

1 meeting with four or five engineers, and when 12:09:43
2 we turned -- we showed up for the meeting, 12:09:47
3 there were 25 engineers in the meeting excited 12:09:50
4 to see this innovation. 12:09:54
5 And when we demonstrated it and 12:09:56
6 showed the three key features to them, they 12:09:57
7 didn't believe that we had done it. There was 12:10:00
8 a lot of skepticism and, quite frankly, they 12:10:03
9 did not believe we had a solution. 12:10:05
10 Q. So you did a demo and they thought it 12:10:07
11 was great? 12:10:07
12 A. Yeah, we did the demo, and even after 12:10:11
13 the demo, they were quite skeptical, so it was 12:10:13
14 an innovation that was almost unbelievable. 12:10:16
15 Q. Now, I want to go to Box No. 2. 12:10:19
16 It says at the bottom there, 12:10:21
17 "Delphi," now Aptiv, "has a 'Patent Pending' 12:10:23
18 for the Dual Role Hub innovation," and then it 12:10:26
19 lists a number. 12:10:28
20 What is that referring to? 12:10:29
21 A. Yeah, so that was a patent that we 12:10:30
22 submitted for the dual role hub innovation. 12:10:33
23 Q. Did you end up getting any patent? 12:10:36
24 A. Yes, we ended up getting five 12:10:38

1 patents. 12:10:41
2 Q. Are those the patents that we just 12:10:41
3 saw Mr. Voto go through? 12:10:43
4 A. That's correct. 12:10:44
5 MS. LI: All right. Thank you. 12:10:46
6 No further questions. 12:10:47
7 - - - 12:11:07
8 CROSS-EXAMINATION 12:11:07
9 - - - 12:11:10
10 BY MR. ADAMS: 12:11:10
11 Q. Good afternoon now, Mr. Dreon. How 12:11:10
12 are you today? 12:11:12
13 A. I'm doing well. Good afternoon. 12:11:12
14 Q. Good to see you again. Darryl Adams 12:11:14
15 representing Microchip. 12:11:17
16 Mr. Dreon, you just testified that 12:11:18
17 you worked for Aptiv Corporation, let me get 12:11:22
18 my pen with me, in one form or another, for 12:11:24
19 33 years; correct? 12:11:30
20 A. Yes. 12:11:31
21 Q. And when you started at the first -- 12:11:31
22 when you first started, Aptiv, what's now 12:11:34
23 Aptiv, was part of General Motors; correct? 12:11:37
24 A. That's correct. 12:11:39

1 Q. And then it subsequently got, I think 12:11:40
2 you used the term "spun out, divided off," 12:11:43
3 from General Motors into Delphi Corporation; 12:11:46
4 correct? 12:11:49
5 A. That's correct. 12:11:50
6 Q. Okay. 12:11:50
7 And Delphi Corporation, itself, 12:11:51
8 was a very large corporation; correct? 12:11:54
9 A. Yes. 12:11:58
10 Q. It was the biggest auto parts 12:12:00
11 manufacturer/supplier in the United States; 12:12:04
12 correct? 12:12:06
13 A. I don't know where it fits in the 12:12:08
14 size, but it was very large, yes. 12:12:10
15 Q. Fair enough. 12:12:13
16 And then Aptiv was subsequently 12:12:14
17 spun off out of Delphi; correct? 12:12:18
18 A. No, it was a little different than 12:12:22
19 that. Aptiv -- Aptiv was actually the part 12:12:23
20 that stayed with Delphi and Delphi spun off a 12:12:30
21 subsidiary and that company kept the Delphi 12:12:34
22 name. 12:12:37
23 So it is a little complex, but 12:12:37
24 the -- the company that spun off was called 12:12:40

1 Delphi, but the company that stayed was 12:12:44
2 renamed as Aptiv. 12:12:47
3 Q. Okay. Thank you. 12:12:49
4 A. A little complicated. 12:12:51
5 Q. A little complicated, I'll say. 12:12:53
6 So Delphi, or at least some 12:12:55
7 portion of it, became Aptiv; correct? 12:12:57
8 A. That's correct. 12:12:58
9 Q. And Aptiv, even after these spin-offs 12:12:59
10 of divisions, is still a large company, isn't 12:13:02
11 it? 12:13:07
12 A. Yes. 12:13:07
13 Q. And Aptiv currently has over 190,000 12:13:08
14 employees; is that correct? 12:13:13
15 A. I don't know how many exactly they 12:13:15
16 have, but they have a lot of employees. 12:13:18
17 Q. Okay. 12:13:20
18 If I represent to you that Aptiv's 12:13:20
19 website indicates it has 190,000 employees, 12:13:23
20 you wouldn't disagree with that, would you? 12:13:27
21 A. I would say that I would believe it, 12:13:29
22 yes. 12:13:31
23 Q. Okay. 12:13:31
24 Now, Mr. Dreon, you're not only an 12:13:31

1 employee of Aptiv, but you are the Aptiv 12:13:35
2 corporate representative in this litigation; 12:13:37
3 correct? 12:13:40
4 A. Yes. Yes, I'm here on behalf of 12:13:41
5 Aptiv. 12:13:44
6 Q. Until recently that got you a front 12:13:44
7 row seat to this, but you were here when Mr. 12:13:46
8 Obolsky testified that Microchip has 18 to 12:13:51
9 19,000 employees; correct? 12:13:58
10 A. Yes. 12:14:00
11 MR. ADAMS: Mr. Ferrer, could you 12:14:03
12 put up our demonstrative there? Do I need to 12:14:04
13 do something? No? The PowerPoint on 12:14:09
14 employees. 12:14:17
15 BY MR. ADAMS: 12:14:24
16 Q. So Microchip has about 19,000 12:14:24
17 employees, you heard Mr. Obolsky say that; 12:14:26
18 correct? 12:14:29
19 A. Yes. 12:14:29
20 Q. And Aptiv has about 190,000 12:14:30
21 employees; correct? 12:14:34
22 A. Yes. 12:14:35
23 Q. Okay. 12:14:35
24 And I wouldn't use this term, I 12:14:36

1 think it is offensive, but you were here when 12:14:40
2 your counsel referred to Microchip as a 12:14:42
3 900-pound gorilla; correct? 12:14:45
4 A. Yes. 12:14:46
5 Q. And if Microchip, at 19,000 12:14:48
6 employees, is a 900-pound gorilla, then Aptiv 12:14:52
7 is a much bigger, more imposing force than 12:14:59
8 that; correct? 12:15:02
9 A. I don't know how you would make a 12:15:06
10 comparison between companies and gorillas. 12:15:10
11 Q. Okay. All right. Fair enough. 12:15:14
12 Microchip has been a long-time 12:15:15
13 supplier to Aptiv; correct? 12:15:19
14 A. Yes. 12:15:21
15 Q. Over 25 years? 12:15:22
16 A. I don't know exactly, but that 12:15:25
17 wouldn't surprise me. 12:15:27
18 Q. Okay. 12:15:28
19 You have been there for 33 years; 12:15:29
20 correct? 12:15:31
21 A. Yes. 12:15:31
22 Q. And you have been aware of Microchip 12:15:32
23 for the majority of your career; correct? 12:15:34
24 A. Yes, probably. I mean, we used some 12:15:40

1 of their microcontrollers early in my career, 12:15:43
2 yes. 12:15:47
3 Q. And Microchip has stuck with Aptiv 12:15:49
4 through some hard times for Aptiv; correct? 12:15:51
5 A. Yes. 12:15:54
6 Q. And you mentioned earlier that Aptiv, 12:15:55
7 when it was Delphi, had filed for bankruptcy; 12:15:58
8 correct? 12:16:02
9 A. Yes. 12:16:02
10 Q. And they were in bankruptcy for about 12:16:03
11 four years, from 2005 to 2009? 12:16:07
12 A. That sounds about right. 12:16:11
13 Q. Okay. 12:16:13
14 And during that time, Microchip 12:16:13
15 continued to supply parts to Aptiv; correct? 12:16:17
16 A. To the best of my knowledge. I 12:16:21
17 wasn't involved in the supply chain at that 12:16:23
18 time, so I don't know what happened between 12:16:26
19 the two companies during that timeframe. 12:16:28
20 Q. Okay. 12:16:31
21 But you -- you wouldn't dis -- 12:16:31
22 I'll just move on. 12:16:36
23 And Aptiv actually helped -- 12:16:37
24 excuse me, Microchip helped Aptiv during that 12:16:39

1 timeframe design new products; correct? 12:16:43
2 A. I'm not personally aware of that, but 12:16:46
3 it's conceivable. 12:16:49
4 Q. Okay. 12:16:50
5 And in 2006, while Aptiv or Delphi 12:16:50
6 is still in bankruptcy, there was more 12:16:59
7 turmoil; correct? There was an SEC 12:17:03
8 investigation into fraud at Delphi; correct? 12:17:05
9 MS. LI: Objection. 12:17:08
10 THE COURT: Sustained. 12:17:09
11 BY MR. ADAMS: 12:17:12
12 Q. But through the bankruptcy and for 12:17:13
13 25 years, Microchip continued to supply parts 12:17:17
14 to Aptiv; correct? 12:17:22
15 A. I don't have personal knowledge of 12:17:26
16 the supply of Microchip products throughout 12:17:29
17 that timeframe. I'm certain that we had a 12:17:33
18 relationship. I don't know whether there were 12:17:36
19 disruptions or not, so I don't have personal 12:17:39
20 knowledge of the -- of the continuance of 12:17:41
21 supply during that time. 12:17:46
22 Q. And Microchip considered, at least at 12:17:47
23 the time -- 12:17:58
24 MR. ADAMS: Would you put up 12:17:58

1 Exhibit 9, please. 12:17:59
2 BY MR. ADAMS: 12:18:04
3 Q. Were you at -- were you working with 12:18:04
4 Delphi data connectivity when this letter was 12:18:09
5 received, Mr. Dreon? 12:18:14
6 A. I was not. 12:18:15
7 Q. Okay. 12:18:16
8 In this letter, Microchip 12:18:18
9 indicates that it views Aptiv as a valued 12:18:22
10 business partner; correct? 12:18:26
11 A. That's what it states, yes. 12:18:31
12 Q. Did Aptiv consider Microchip a valued 12:18:33
13 business partner; do you know, Mr. Dreon? 12:18:36
14 A. At that time, I wasn't involved with 12:18:39
15 anything related to electrical or electronic 12:18:43
16 components, so I don't know what the business 12:18:48
17 relationship was. 12:18:50
18 Q. Gotcha. 12:18:51
19 You're now involved with 12:18:53
20 electrical and electronic components; correct? 12:18:54
21 A. Yes. 12:18:56
22 Q. Okay. 12:18:57
23 Do you believe Aptiv considers 12:18:57
24 Microchip a valued business partner? 12:19:01

1 A. Yes. 12:19:04
2 Q. Now, Mr. Dreon, you had a discussion 12:19:06
3 in your direct about CarPlay -- Apple 12:19:12
4 certification and head unit changes and 12:19:17
5 whether manufacturers are using -- how they're 12:19:19
6 using the dual role hubs. 12:19:22
7 You're not an expert in this 12:19:25
8 matter; correct? 12:19:26
9 A. No, I'm not. 12:19:27
10 Q. So you're not offering an opinion 12:19:28
11 that the dual role hubs or the Boston chip 12:19:31
12 would only be within the scope of the '243 12:19:34
13 Patent if it was used in an Apple certified 12:19:40
14 car. That's not what you're saying; right? 12:19:42
15 A. Could you restate that? 12:19:44
16 Q. Yeah, that was a long question. Let 12:19:46
17 me restate it. 12:19:48
18 You're not offering an opinion 12:19:49
19 about whether the Boston chips infringe 12:19:51
20 whether -- depending on whether they are used 12:19:55
21 in an Apple certified car? 12:19:58
22 A. No, I am not offering that opinion. 12:19:59
23 Q. Okay. 12:20:01
24 And you are not offering an 12:20:01

1 opinion about whether the Boston chips only 12:20:03
2 infringe if the head unit operates in a 12:20:09
3 certain way? 12:20:12
4 A. No. 12:20:14
5 Q. Okay. 12:20:15
6 You're not offering any opinions 12:20:15
7 at all about when the Boston chip does or does 12:20:17
8 not infringe; correct? 12:20:22
9 A. No, I'm not. 12:20:25
10 Q. Okay. 12:20:26
11 And there was a discussion about 12:20:28
12 Dr. Becker reviewing a spreadsheet, and there 12:20:30
13 were certain items that weren't CarPlay 12:20:33
14 enabled compatible. 12:20:38
15 You're not suggesting that Dr. 12:20:40
16 Becker miscounted the number of Boston chips 12:20:43
17 relevant to this case, are you? 12:20:46
18 MS. LI: Objection, calls for a 12:20:50
19 legal conclusion. 12:20:52
20 THE COURT: Sustained. 12:20:53
21 BY MR. ADAMS: 12:20:56
22 Q. Are you offering any opinions about 12:20:56
23 the number -- the proper number of accused 12:20:59
24 devices in this case? 12:21:03

1 A. As far as an opinion, I mean, I know 12:21:11
2 what data I provided, and that data shows 12:21:13
3 where we know Apple CarPlay was not used. In 12:21:17
4 any other case, we don't know when Apple 12:21:22
5 CarPlay was implemented. 12:21:24
6 Q. And you're not offering an opinion 12:21:26
7 about whether it's necessary for Apple CarPlay 12:21:28
8 to be used to infringe the '243 Patent; 12:21:32
9 correct? 12:21:35
10 A. I -- no, I don't have an opinion on 12:21:38
11 that. 12:21:40
12 MR. ADAMS: Nothing more, Your 12:21:41
13 Honor. 12:21:43
14 THE COURT: Okay. 12:21:43
15 Any follow-up? 12:21:44
16 MS. LI: No, Your Honor. 12:21:45
17 THE COURT: Why don't we say that 12:21:47
18 this is a good moment to take a break for 12:21:50
19 lunch. I am going to try to keep it, again, 12:21:52
20 to -- why don't we plan to be back at 12:21:54
21 1 o'clock. That should give you enough time 12:21:58
22 and also to keep things moving along. Okay. 12:22:02
23 (Whereupon, the jury was excused 12:22:05
24 from the courtroom.) 12:22:07

1 C E R T I F I C A T E
2
3 I do hereby certify that I am a Notary Public in good standing, that the
4 aforesaid testimony was taken before me, pursuant to notice, at the time and place
5 indicated; that said witnesses were duly sworn to tell the truth, the whole truth, and
6 nothing but the truth; that the testimony of said witnesses was correctly recorded in
7 machine shorthand by me and thereafter transcribed under my supervision with
8 computer-aided transcription; that the transcript is a true and correct record of the
9 testimony given by the witnesses; and that I am neither of counsel nor kin to any party in
10 said action, nor interested in the outcome thereof.
11
WITNESS by hand a
12 this 11th day of April, 2022.
13
Notary Public
14
15
16
Job No. 5162170
17
18
19
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21
22
23
24