IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

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MICROCHIP TECHNOLOGY INCORPORATED,	: C.A. No. 17-1194
Plaintiff,	:
vs.	:
APTIV SERVICES US, LLC,	:
Defendant.	:

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TRANSCRIPT OF PROCEEDINGS

TESTIMONY/CHARGE CONFERENCE

VOLUME 4

- - -

Date: Monday, April 11, 2022

Time: 8:30 a.m.

Place: J. Caleb Boggs Federal Building
844 N. King Street
Courtroom 6B
Wilmington, Delaware 19801

Before: HONORABLE JOSHUA D. WOLSON, JUDGE

Reporter: Rose A. Tamburri, RPR, CM, CRR
Notary Public of Delaware

- - -

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E X H I B I T S, (Cont'd)

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368	236	236
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1 (Whereupon, the Court resumed
2 proceedings at 8:30 a.m.)
3 - - - 08:31:39
4 THE COURT CLERK: All rise. 08:31:39
5 Honorable Joshua D. Wolson 08:31:41
6 presiding. 08:31:41
7 THE COURT: Good morning, 08:31:42
8 everybody. Have a seat, please. 08:31:44
9 I know we have several emails with 08:31:52
10 issues that you wanted to tackle this morning. 08:32:04
11 Let me -- just a couple of things; let me lay 08:32:07
12 a predicate for that. 08:32:11
13 Number one, and this is not a 08:32:13
14 predicate for that, it's just a housekeeping 08:32:17
15 matter, but I will say something about, there 08:32:19
16 were a couple of cell phones that went off 08:32:24
17 Friday. I just want to caution everyone not 08:32:26
18 to have that happen anymore. We're going to 08:32:28
19 treat that -- I'm going to treat it with 08:32:31
20 Olympic grace, the false start gets charged to 08:32:35
21 everybody. 08:32:39
22 So going forward, if I hear a cell 08:32:39
23 phone, you are going to turn it in to Mr. 08:32:44
24 Koehler and be without it for the day. So 08:32:46

1 just make sure there's silence. 08:32:49
2 Second thing, just, Mr. Slayden, I 08:32:51
3 know I got a couple of emails over the weekend 08:32:57
4 that talk about the Aptiv testimony. I wasn't 08:32:59
5 clear at the end of Friday whether Microchip 08:33:02
6 is resting for Phase 1 or whether you've got a 08:33:05
7 couple things left to do before we turn to 08:33:08
8 Aptiv? 08:33:10
9 MR. SLAYDEN: We've got a video 08:33:10
10 deposition -- 08:33:12
11 THE COURT: Okay. 08:33:13
12 MR. SLAYDEN: -- to play this 08:33:13
13 morning, Your Honor. 08:33:14
14 THE COURT: Okay. All right. 08:33:15
15 Fine. Okay. 08:33:16
16 So then the other thing I just 08:33:16
17 want to sort of note, obviously we've got a 08:33:19
18 somewhat shortened day with the jury today, 08:33:22
19 given both the schedule for our one juror and 08:33:25
20 given -- so we're going to use that time for 08:33:29
21 the charge conference this afternoon. 08:33:33
22 I understand that -- I don't know 08:33:35
23 what the order of things to come up today is. 08:33:36
24 I want to maximize the time we have with the 08:33:40

1 jury while they're here. 08:33:42
2 And so I would just say that I'm 08:33:44
3 happy to take up all of the issues you've 08:33:45
4 given me from a pure triage standpoint. 08:33:48
5 Anything that we can do -- anything that we 08:33:51
6 need to do now, I am happy to do now. I just 08:33:53
7 thought we could defer -- 08:33:56
8 MS. DURIE: Understood. The thing 08:33:58
9 we need to do now is the proffer with respect 08:33:59
10 to Mr. Voto, because there is going to be a 08:34:03
11 little bit of deposition testimony and then he 08:34:05
12 will be the next witness. 08:34:06
13 THE COURT: That's fine. If you 08:34:07
14 want to start there, that's fine. And again, 08:34:08
15 we can do some of it -- I don't mind doing 08:34:10
16 stuff -- taking a very abbreviated lunch break 08:34:13
17 and doing some over lunch, if you need to do 08:34:15
18 it then, in the advance of the afternoon, and 08:34:18
19 then if there's other stuff we can do this 08:34:20
20 afternoon. 08:34:22
21 I looked quickly at the redlines 08:34:22
22 of the jury charge. I don't think it's two 08:34:26
23 hours' worth of discussion, and so we have 08:34:27
24 time to do some additional discussion today. 08:34:29

1 MR. SHAW: I just wanted the Court 08:34:33
2 ready to go with Mr. Voto, and knowing the 08:34:35
3 time, I just wanted to get the two objections 08:34:37
4 out so you were clear as you were listening as 08:34:39
5 to what's happening. 08:34:42
6 THE COURT: Okay. 08:34:43
7 MR. SHAW: So as I understand 08:34:44
8 things, Mr. Voto has desired to testify from 08:34:45
9 Aptiv on his patents and that those patents 08:34:49
10 cover the accused products. 08:34:53
11 So the two objections that we are 08:34:55
12 dealing with in this morning phase is, first, 08:34:56
13 he has not been disclosed, wasn't disclosed 08:34:58
14 about testifying concerning whether these 08:35:01
15 patents covered the Aptiv products. That's 08:35:05
16 for the initial disclosures. 08:35:07
17 The more substantive issue, which 08:35:09
18 I believe Your Honor had termed foundation at 08:35:12
19 the pretrial conference, is whether, under 08:35:13
20 Rule 701 of the Federal Rules of Evidence, he 08:35:15
21 is permitted to testify as a layperson about 08:35:19
22 the coverage of his patents on the Aptiv 08:35:20
23 products. 08:35:24
24 It's our position that that is not 08:35:24

1 permitted under Rule 701, and I think the best 08:35:27
2 lens through which to look at it is the 08:35:30
3 advisory committee notes from the year 2000. 08:35:32
4 When the rule was amended, they cited a number 08:35:34
5 of decisions, including several from the Third 08:35:36
6 Circuit that draw the distinction between, for 08:35:39
7 example, a layperson who is an amphetamine 08:35:41
8 user able to testify about something that's 08:35:44
9 amphetamine, but not able to testify about 08:35:46
10 methods of manufacture. 08:35:49
11 The same thing is true with police 08:35:50
12 officers might be able to testify to the lay 08:35:52
13 testimony that something is suspicious 08:35:54
14 activity, but not that the activity they have 08:35:56
15 seen is activity that's an indication of a 08:35:58
16 drug cartel or drug situation without being 08:36:02
17 qualified as an expert. 08:36:05
18 The issue we have here is Mr. Voto 08:36:06
19 has not been qualified as an expert to talk 08:36:09
20 about patent coverage. 08:36:11
21 THE COURT: Okay. All right. I 08:36:13
22 understand the issue. 08:36:14
23 Go ahead. 08:36:15
24 MR. WIENER: Your Honor, we call 08:36:16

1 Mr. Voto, Mr. Robert Voto, to lay the 08:36:17
2 foundation for 187 through 191. 08:36:20
3 THE COURT: All right. 08:36:25
4 MR. WIENER: Mr. Voto. 08:36:26
5 THE COURT: I'm sorry, did you say 08:36:40
6 it was 187 to 190? 08:36:41
7 MR. WIENER: It is Exhibit 187 08:36:44
8 through 191. 08:36:48
9 THE COURT: All right. 08:36:49
10 Go ahead, Mr. Koehler. Swear him 08:36:49
11 in. 08:36:51
12 THE COURT CLERK: Please state and 08:36:54
13 spell your name for the record. 08:36:58
14 MR. VOTO: Robert Martin Voto, 08:37:00
15 R-O-B-E-R-T, M-A-R-T-I-N, V-O-T-O. 08:37:02
16 - - - 08:37:07
17 ...ROBERT M. VOTO, after having 08:37:07
18 first been duly sworn and/or affirmed, was 08:37:11
19 examined and testified as follows... 08:37:14
20 - - - 08:37:18
21 DIRECT EXAMINATION 08:37:18
22 - - - 08:37:20
23 BY MR. WIENER: 08:37:20
24 Q. Good morning, Mr. Voto. 08:37:22

1 Can you please introduce yourself 08:37:23
2 to the Court? 08:37:24
3 A. Good morning. My name is Robert 08:37:25
4 Voto. 08:37:29
5 Q. And can you explain to the Court your 08:37:29
6 role in the development of the dual role hub 08:37:32
7 in the Boston 2 chip? 08:37:35
8 A. Yes. So my background is 08:37:37
9 engineering. I was the developer, along with 08:37:41
10 my team, of the Boston chip. 08:37:43
11 Q. And do you have an understanding of 08:37:45
12 how the product works from a technical 08:37:48
13 perspective, Mr. Voto? 08:37:49
14 A. Yes, I do. 08:37:50
15 Q. Did you apply for patent protection 08:37:52
16 in connection with your work developing the 08:37:56
17 dual role hub and Boston 2 chip? 08:37:58
18 A. Yes, we did. 08:38:01
19 Q. And what was the invention or 08:38:02
20 inventions you were seeking protection of? 08:38:04
21 A. The invention was our development of 08:38:06
22 a new type of USB hub. It had different 08:38:11
23 elements that previously were not part of 08:38:15
24 hubs, such as the bridge, the USB switches, 08:38:20

1 the hub, itself. 08:38:22
2 I felt that our combination of 08:38:24
3 those different technologies, in making them 08:38:26
4 work together for this new application, was 08:38:28
5 novel and unique. 08:38:31
6 Q. And did that work lead to the 08:38:32
7 development of the Boston ASIC and the dual 08:38:34
8 role hub module? 08:38:39
9 A. Yes. 08:38:39
10 Q. And did that work lead to a chip and 08:38:40
11 a module that provided a one-lane solution 08:38:43
12 that provided CarPlay on all downstream ports 08:38:47
13 which allowed the non-CarPlay downstream 08:38:50
14 ports -- 08:38:53
15 A. Yes. 08:38:53
16 Q. -- to obtain data? 08:38:53
17 A. That is correct. 08:38:55
18 Q. Okay. 08:38:55
19 Did you -- did the patent office 08:38:57
20 ultimately award you patents based on the 08:38:59
21 invention you had provided? 08:39:03
22 A. Yes. 08:39:04
23 Q. Okay. 08:39:06
24 You mentioned that you applied for 08:39:06

1 the patents. Did you work with lawyers in 08:39:08
2 seeking that patent protection? 08:39:13
3 A. Absolutely. We worked with lawyers; 08:39:14
4 I was describing the invention to the lawyers; 08:39:16
5 they helped with the construction and 08:39:19
6 correspondence with the patent office. 08:39:21
7 Q. And did you provide functional 08:39:23
8 diagrams and other information about your 08:39:25
9 invention to the lawyers to provide to the 08:39:27
10 patent office in connection with seeking the 08:39:29
11 patents? 08:39:31
12 A. Yes. 08:39:32
13 Q. Okay. 08:39:34
14 MR. WIENER: I'd like Mr. Glass to 08:39:35
15 put on the screen Exhibit 17. This is not yet 08:39:38
16 in evidence, Your Honor. We will be offering 08:39:41
17 it in evidence during Mr. Voto's testimony. 08:39:42
18 I'm happy to offer it in evidence now if -- 08:39:45
19 THE COURT: I mean, this is all 08:39:48
20 foundational, it's not necessary, actually. 08:39:49
21 MR. WIENER: Okay. And, Mr. 08:39:52
22 Glass, if you could turn to Slide 11. 08:39:54
23 BY MR. WIENER: 08:39:58
24 Q. Mr. Voto, is this a type of 08:39:59

1 functional diagram information you provided to 08:40:00
2 the lawyers to help describe to them what the 08:40:02
3 invention was that you were seeking protection 08:40:04
4 for? 08:40:07
5 A. That's correct. 08:40:08
6 Q. And what's shown on this slide? 08:40:08
7 A. So this slide gives some context for 08:40:11
8 how our dual role hub module works in the 08:40:15
9 larger automotive system. 08:40:20
10 Q. And in the slide right now, is the 08:40:21
11 system in CarPlay mode? 08:40:24
12 A. The system in this diagram is in 08:40:25
13 device mode. We know that because we can see 08:40:31
14 the head unit has a connection to the iPhone 08:40:33
15 through the hub, but not through the bridge. 08:40:37
16 MR. WIENER: And, Mr. Glass, if we 08:40:42
17 could turn to Slide 12 of the document, 08:40:44
18 please. 08:40:47
19 BY MR. WIENER: 08:40:47
20 Q. And how about page 12, what's shown 08:40:48
21 there? 08:40:49
22 A. So this is the other mode that our 08:40:49
23 hub can operate in. The chip is able to route 08:40:51
24 the iPhone data, either directly to the hub or 08:40:54

1 to the hub via the bridge, which is what's 08:40:58
2 shown here. So this is the CarPlay mode. 08:41:00
3 MR. WIENER: Mr. Glass, I'd like 08:41:03
4 to put up Figure 4, which is on page 6 of 08:41:05
5 Exhibit 188 that's one of the five patents at 08:41:08
6 issue. 08:41:11
7 BY MR. WIENER: 08:41:21
8 Q. And, Mr. Voto, what's shown on 08:41:21
9 Figure 4 from the -- from Patent 08:41:24
10 No. 9,619,420, Exhibit 188? 08:41:32
11 A. Another block diagram. It's similar 08:41:35
12 to what we just talked about. It's showing a 08:41:38
13 lot of the same components and content, 08:41:40
14 specifically the USB hub, the bridge, the 08:41:44
15 switches, upstream connection to a head unit, 08:41:47
16 downstream connection to USB devices. 08:41:51
17 Q. And did the claims that ultimately 08:41:53
18 issued in the five patents you received, were 08:41:56
19 they claims that were resulting from the work 08:41:58
20 that you had done in connection with 08:42:02
21 developing the solution to CarPlay? 08:42:05
22 A. That's absolutely correct. 08:42:07
23 Q. Okay. 08:42:09
24 I'd like to take a look at one of 08:42:10

1 the claims from the '188 patent particularly. 08:42:12
2 MR. WIENER: Claim 7, please, Mr. 08:42:16
3 Glass, if you could put it up side-by-side 08:42:17
4 with Exhibit 17. 08:42:20
5 BY MR. WIENER: 08:42:21
6 Q. So, Mr. Voto, the words in the claims 08:42:22
7 here, were these your words? 08:42:25
8 A. The claims were constructed with 08:42:28
9 myself, my technical team, together with the 08:42:31
10 lawyers. 08:42:34
11 Q. Okay. 08:42:34
12 I'd like to look at the elements 08:42:35
13 that are in claim 7. The first is an 08:42:38
14 integrated circuit. Is the Boston 2 chip an 08:42:40
15 integrated circuit? 08:42:46
16 A. It is. 08:42:47
17 Q. Okay. 08:42:48
18 The next element is a USB hub 08:42:48
19 configured to be interconnected to a first USB 08:42:51
20 port connected to a USB host and a second USB 08:42:54
21 port connected to a consumer device. 08:42:58
22 Does the Boston 2 chip have a USB 08:43:03
23 hub configured to be interconnected to a first 08:43:06
24 USB port connected to a USB host and a second 08:43:09

1 USB port connected to a consumer device? 08:43:12
2 A. Those both components are shown in 08:43:16
3 the drawing. 08:43:20
4 Q. And would it help, Mr. Voto, to have 08:43:21
5 a laser pointer to show? 08:43:23
6 A. Yes, it would. 08:43:26
7 MR. WIENER: May I approach the 08:43:28
8 witness, Your Honor? 08:43:29
9 THE COURT: Yes. 08:43:31
10 THE WITNESS: Thank you. 08:43:34
11 Okay. So if you go back, a first 08:43:36
12 USB port connected to a USB host, this is the 08:43:41
13 USB host for the system. It connects via this 08:43:46
14 first port to the USB hub. 08:43:50
15 BY MR. WIENER: 08:43:53
16 Q. And then the second USB port 08:43:53
17 connecting to a consumer device, can you show 08:43:55
18 where that is in the Boston 2 chip? 08:43:58
19 A. These are the consumer devices, these 08:44:00
20 two points here. Remember, this is the hub 08:44:03
21 module, itself, so the ports that you would 08:44:05
22 connect into that module would be here and 08:44:08
23 here. So this is port No. 2 in this example. 08:44:10
24 Q. The second element is a USB bridge 08:44:14

1 interconnected to the USB hub. 08:44:16
2 Does the Boston 2 chip contain a 08:44:19
3 USB bridge interconnected to the USB hub? 08:44:21
4 A. We see that, the hub, itself, and the 08:44:26
5 bridge here, and there is the connection. 08:44:30
6 Q. And then the next element in claim 7 08:44:32
7 is a USB routed switch interconnected to the 08:44:35
8 USB bridge, the USB hub, and the second USB 08:44:39
9 port. 08:44:43
10 Does the Boston 2 chip have a USB 08:44:44
11 routing switch interconnected to the USB 08:44:47
12 bridge, the USB hub and the second USB port? 08:44:50
13 A. This is the routing switch network, 08:44:56
14 and here we have the USB bridge and the USB 08:44:58
15 hub and they're all interconnected. 08:45:01
16 Q. And that limitation goes on to say, 08:45:03
17 "wherein the USB routing switch is configured 08:45:06
18 to connect the second USB port and the first 08:45:09
19 USB port through the USB bridge thereby 08:45:12
20 providing bi-directional initiation of 08:45:17
21 communication between the USB host and the 08:45:18
22 consumer device when the consumer device 08:45:21
23 connected to the second USB port is in a USB 08:45:25
24 host mode." 08:45:29

1 Does the Boston 2 chip have a USB 08:45:30
2 routing switch that's configured to connect 08:45:32
3 the second USB port to the first USB port 08:45:35
4 through the USB bridge, thereby providing 08:45:38
5 bi-directional initiation of communication 08:45:42
6 between the USB host and the consumer device 08:45:43
7 when the consumer device connected to the 08:45:46
8 second USB port is in a USB host mode? 08:45:48
9 A. Basically that's a really long 08:45:52
10 sentence in a way of saying that the consumer 08:45:54
11 device here is routed through the switches, 08:45:57
12 through the bridge, through the hub, back to 08:46:01
13 port 1, back to the head unit. 08:46:05
14 Q. And that's when it is in host mode? 08:46:06
15 A. Correct. 08:46:09
16 MR. WIENER: Mr. Glass, could you 08:46:09
17 switch it to Slide 11 and Figure 17, please. 08:46:11
18 BY MR. WIENER: 08:46:14
19 Q. And, Mr. Voto, Slide 11 is showing it 08:46:15
20 when it's not in host mode; correct? 08:46:17
21 A. Correct. 08:46:20
22 Q. For the Boston 2 chip? 08:46:20
23 A. That's correct. 08:46:22
24 Q. And then the last portion and the 08:46:22

1 last limitation of claim 7 of Exhibit 188 is, 08:46:25
2 "and wherein the USB routing switch is 08:46:28
3 configured to connect the second USB port 08:46:31
4 directly to the first USB port through the USB 08:46:33
5 hub; thereby only responding to communication 08:46:35
6 initiated by the USB host when the consumer 08:46:39
7 device is connected to the second USB port is 08:46:42
8 in a USB device mode." 08:46:45
9 Does the Boston 2 chip have a USB 08:46:48
10 routing switch that's configured to connect 08:46:52
11 the second USB port directly to the first USB 08:46:54
12 port through the USB hub; thereby only 08:46:57
13 responding to communication initiated by the 08:47:02
14 USB host when the consumer device connected to 08:47:03
15 the second USB port is in a USB device mode? 08:47:06
16 A. So now in this example, we have the 08:47:12
17 iPhone here in USB device mode. It connects 08:47:14
18 the port to port, 2 routes through the switch. 08:47:18
19 The switch is currently set in bottom 08:47:21
20 right-hand device mode so that we have a data 08:47:24
21 path back to the hub, and the hub has a 08:47:25
22 connection from port 1 back to the head unit, 08:47:29
23 so it would only respond for messages via the 08:47:32
24 host through the USB device. 08:47:35

1 Q. Thank you. 08:47:37
2 MR. WIENER: Your Honor, based on 08:47:37
3 Mr. Voto's testimony about the scope of the 08:47:39
4 work that was used to form the basis for the 08:47:41
5 patent applications, the fact that he received 08:47:44
6 patent applications for that work, the fact 08:47:46
7 that that work was the work that went into 08:47:50
8 developing the accused product and his 08:47:52
9 description of how each and every single one 08:47:55
10 of the claim limitations for one of the claims 08:47:57
11 in Exhibit 188, those limitations are, in 08:47:59
12 fact, present in the accused Boston 2 chip, we 08:48:02
13 move 188 into -- or we offer 188 into 08:48:06
14 evidence. 08:48:09
15 THE COURT: Okay. 08:48:11
16 Mr. Shaw? 08:48:13
17 MR. SHAW: Your Honor, moving it 08:48:14
18 into evidence, first of all, has to happen 08:48:15
19 when the jury is here, and second, we're here 08:48:17
20 to work on whether or not he's permitted to do 08:48:19
21 this. We've heard a lot about his technical 08:48:21
22 expertise, but the issue is does he, as an 08:48:23
23 individual, have the expertise to interpret 08:48:29
24 and discuss patent claims. 08:48:30

1 What I just saw was going through 08:48:32
2 a claim chart as you would have an expert do. 08:48:33
3 We have not had the opportunity to assess 08:48:36
4 methodology yet and whether he does this on a 08:48:38
5 day-to-day basis as a layperson. 08:48:40
6 MR. WIENER: Your Honor, let me 08:48:42
7 respond. 08:48:43
8 THE COURT: Hold on. Let me 08:48:43
9 just -- I mean -- okay. I've already said, I 08:48:47
10 think, that subject to -- I mean, I want to 08:48:54
11 see what his testimony is as he views patents, 08:48:55
12 but as far as the patents go, whether it's 188 08:48:59
13 or one of the other ones, you know, I think 08:49:01
14 they are a pass for you to admit them into 08:49:04
15 evidence during trial. Okay? 08:49:06
16 But I'm not going to do it now; I 08:49:09
17 agree. If there was an objection, I could 08:49:11
18 rule on it, but I'll overrule the objection 08:49:13
19 and admit it into evidence right now. 08:49:15
20 As far as testimony goes with 08:49:17
21 respect to the coverage and scope of the 08:49:25
22 patents, I agree that any testimony about the 08:49:27
23 coverage and scope of the patent is expert 08:49:33
24 testimony, it's not layman's testimony under 08:49:35

1 Rule 701. It may be a ploy as expert 08:49:38
2 testimony, but it's expert testimony. It 08:49:44
3 wasn't disclosed. 08:49:46
4 That said, I am in the same place 08:49:49
5 on this testimony that I was with respect to 08:49:52
6 the issues in limine, on the in limine motions 08:49:58
7 with respect to the other expert issues that 08:50:03
8 had come up at the hearing in November, which 08:50:07
9 is that I raised the issue in November. 08:50:09
10 We're now here in April and I 08:50:13
11 haven't seen anyone do anything to try to cure 08:50:15
12 it. The Third Circuit says the exclusion of 08:50:18
13 evidence is an extreme sanction that should 08:50:23
14 only be invoked when there is no ability to 08:50:26
15 cure, and I think there was an ability to cure 08:50:30
16 here over the last six months. 08:50:32
17 MR. SHAW: Your Honor, on this 08:50:35
18 particular issue, this was not raised in 08:50:36
19 November. This was an issue that first came 08:50:38
20 up on Monday, as I understand it, correct me 08:50:40
21 if I'm wrong, from the pretrial conference 08:50:43
22 last week, that their idea is to get these 08:50:46
23 patents into evidence and to have an expert 08:50:48
24 testify about them was a foundational issue 08:50:51

1 and they were going to raise it this week. 08:50:53
2 THE COURT: Let's break that 08:50:55
3 apart, first of all. I mean, there's no 08:50:57
4 question in my mind that Mr. Voto can testify 08:50:58
5 about the work he did to develop and get the 08:51:02
6 patent. That's all facts. That's fact 08:51:04
7 evidence. 08:51:08
8 MR. SHAW: We agree with that, 08:51:08
9 Your Honor. 08:51:09
10 THE COURT: Okay. So if we get 08:51:10
11 that far, then that's fine. 08:51:11
12 I thought the issues with respect 08:51:13
13 to Mr. Voto had come up before, but remind me, 08:51:19
14 Mr. Wiener, when was the first time you raised 08:51:23
15 them? 08:51:26
16 MR. WIENER: The issue of Mr. Voto 08:51:26
17 had not specifically come up before. However, 08:51:28
18 Aptiv put its patents on preliminary exhibit 08:51:31
19 lists that were exchanged back when -- 08:51:33
20 THE COURT: That's different. 08:51:35
21 Putting your patents on an exhibit list are a 08:51:36
22 little different than the question of telling 08:51:39
23 Microchip that someone is going to get up and 08:51:45
24 do an expert analysis of those patents to 08:51:48

1 explain the coverage of the patents and how 08:51:52
2 they apply to the dual role hub. 08:52:00
3 MR. WIENER: Your Honor, if I can 08:52:04
4 perhaps allay that concern, we are happy to 08:52:05
5 not have Mr. Voto provide coverage style 08:52:08
6 testimony and simply put in the fact that they 08:52:10
7 applied for and received patents based on the 08:52:13
8 work that they had done in connection with 08:52:15
9 developing the dual role hub. 08:52:17
10 THE COURT: Okay. That's fine. 08:52:18
11 Let's do it that way. Because I do think 08:52:20
12 otherwise you can start treading disclosures, 08:52:21
13 so yeah, I have no problem with him 08:52:25
14 testifying, I think it's fair game for him to 08:52:27
15 testify about the work he did in developing 08:52:29
16 and obtaining the patents. 08:52:32
17 MR. WIENER: And then that would 08:52:33
18 serve as a foundation for admitting the 08:52:35
19 patents into evidence, subject to what you 08:52:38
20 heard him testify during -- 08:52:40
21 THE COURT: I think so. Again, I 08:52:43
22 need to hear exactly what -- I mean, I don't 08:52:44
23 have a problem with him, again, putting the 08:52:46
24 patents in. I've already said the patents can 08:52:48

1 come in on various issues, subject to certain 08:52:51
2 arguments that you're going to make. You 08:52:54
3 know, there will be some limits as to what the 08:52:57
4 jury can do with them. They're certainly 08:53:00
5 going to be in the final instructions. 08:53:03
6 But yes, I think that the answer 08:53:04
7 is he can testify to the work that was done, 08:53:06
8 and the patents are a public document that can 08:53:11
9 come into evidence. 08:53:15
10 MR. WIENER: I think the jury will 08:53:15
11 appreciate not having to sit through that 08:53:17
12 portion anyway, so thank you. 08:53:19
13 MR. SHAW: What we don't have, 08:53:20
14 Your Honor, to make sure the record is 08:53:22
15 clear -- I understand your ruling. I don't 08:53:24
16 believe we have any evidence from a damages 08:53:26
17 expert or another person that says these 08:53:27
18 claims do something to the damages analysis 08:53:29
19 which is, I believe, what Your Honor had said 08:53:32
20 it might be relevant to, and we have a jury 08:53:34
21 instruction on infringement saying that 08:53:36
22 ownership of a patent is not a defense of 08:53:38
23 infringement. 08:53:42
24 So there may be the need, for 08:53:42

1 example, for a further limiting instruction. 08:53:44
2 I don't know what they are going to say when 08:53:46
3 they get their damages expert up here, but 08:53:47
4 it's certainly not in the scope of the report. 08:53:50
5 THE COURT: I don't know either, 08:53:51
6 so let's see where it goes and then it may 08:53:52
7 be -- it may require either a limiting 08:53:55
8 instruction or if you think that some further 08:53:57
9 modification of the instruction is necessary, 08:54:00
10 just let me know. Okay? All right. 08:54:02
11 It is 8:55. We can check and see 08:54:05
12 if the jury is here and just get started, or 08:54:09
13 if there's other issues... 08:54:11
14 MR. WIENER: There is one 08:54:13
15 outstanding issue with respect to a 08:54:14
16 demonstrative we would like to use with Mr. 08:54:17
17 Voto. 08:54:19
18 THE COURT: Okay. 08:54:19
19 MR. WIENER: There is an issue 08:54:20
20 with that. Mr. Voto, in developing this 08:54:21
21 host-to-host bridge within this chip, looked 08:54:25
22 at, existing at the time in 2013, USB 08:54:27
23 host-to-host bridges, and would like to show 08:54:31
24 what one of those looks like to the jury. 08:54:33

1 We don't plan to enter it into 08:54:35
2 evidence, we just want him to be able to show 08:54:36
3 what it looked like. He is going to say he 08:54:39
4 looked at it and considered it when he was 08:54:41
5 developing the product. Microchip has 08:54:43
6 objected to the demonstratives. 08:54:45
7 MR. RUSSELL: We are objecting to 08:54:48
8 it, Your Honor. You can see it here, we can 08:54:49
9 put a picture of it up on the screen if you'd 08:54:51
10 like. It is clearly intended to be a prior 08:54:53
11 art thing that they are talking about. It has 08:54:56
12 extremely limited relevance to infringement or 08:54:58
13 his development story. 08:55:01
14 There is no need for the jury to 08:55:02
15 see something that looks like a prior art 08:55:03
16 reference that's only really relevant to 08:55:05
17 whether the concepts in our patent were known. 08:55:07
18 He can explain -- you know, to the extent it's 08:55:11
19 not otherwise objectionable, he can explain 08:55:14
20 what he used it for and why he used it without 08:55:16
21 actually explaining to the jury without the 08:55:19
22 box that looks like prior art and sets out the 08:55:23
23 idea for the jury that this was known. 08:55:26
24 THE COURT: Let me make sure I 08:55:27

1 understand. Is your suggestion that it looks 08:55:28
2 old and therefore, the jury is going to infer 08:55:30
3 that it goes back further in time to somehow 08:55:33
4 be prior art as to your patent? 08:55:36
5 MR. RUSSELL: Well, I think that's 08:55:39
6 what they're trying to imply here, and they 08:55:40
7 are going to use this both with Mr. Voto and 08:55:43
8 with their invalidity expert, Mr. Garney. And 08:55:45
9 the only reason for them to put this physical 08:55:49
10 thing in an ancient-looking box in front of 08:55:51
11 the jury is to imply that this is a known 08:55:54
12 idea, and I think that's what they are really 08:55:56
13 getting at with this demonstrative. 08:55:57
14 Like I said, we are not objecting 08:55:59
15 to their story about how they came up with 08:56:00
16 their device; it's just that they don't need 08:56:03
17 this thing that looks like an old prior art 08:56:05
18 reference to tell that story. 08:56:07
19 THE COURT: So if they get rid of 08:56:09
20 the box, does that cure the problem? 08:56:11
21 MR. RUSSELL: I think it is the 08:56:13
22 box and the cable, because they shouldn't be 08:56:15
23 putting this at issue as a prior art reference 08:56:16
24 really. 08:56:19

1 THE COURT: If they're not and 08:56:19
2 they are just saying this is something I 08:56:20
3 looked at in 2012 and it's a cable, I mean, is 08:56:22
4 the jury really going to look -- can you hand 08:56:28
5 that cable up to me? I mean, you know, I 08:56:30
6 understand the box may be beat up. 08:56:33
7 MR. RUSSELL: Your Honor, I would 08:56:40
8 be happy to bring the box up as well. 08:56:41
9 THE COURT: But, so I'm 08:56:43
10 starting -- I mean, is there any reason, Mr. 08:56:45
11 Wiener, they need to see the box? Does the 08:56:48
12 box do anything to the testimony? 08:56:50
13 MR. WIENER: Not really, it's the 08:56:52
14 cable. 08:56:54
15 THE COURT: The cable. 08:56:54
16 MR. WIENER: And I just note Mr. 08:56:56
17 Garney is also our infringement expert, so 08:56:57
18 we're not offering this as prior art or with 08:57:00
19 the date claim. 08:57:01
20 MR. RUSSELL: But this device has 08:57:02
21 extremely limited relevance to anything. 08:57:03
22 THE COURT: Maybe. I mean, I 08:57:07
23 haven't heard what he is going to say about 08:57:08
24 it, but, I mean, I don't know. I'm looking at 08:57:09

1 this cable in my hand. It is -- it's got USB 08:57:13
2 plugs on either end. It's got some sort of 08:57:17
3 link in the middle. I am not a technical 08:57:21
4 expert so I don't know what happens in that 08:57:23
5 link, but I assume this isn't going to be more 08:57:25
6 than 10 seconds of looking at this; right? 08:57:30
7 MR. RUSSELL: Well, they put this 08:57:33
8 cable in and they also put two in with their 08:57:35
9 invalidity expert, and it seems to us that the 08:57:38
10 only relevance here is that they are trying to 08:57:41
11 say that this idea, connecting a host to a 08:57:44
12 host, was known before our patent came out and 08:57:46
13 they are trying to illustrate that. 08:57:48
14 THE COURT: They can't say -- 08:57:49
15 okay. This is not based on this and Mr. Voto 08:57:51
16 is not going to say anything about invalidity. 08:57:53
17 So I understand your concern that 08:57:58
18 they are going to infer that, you know, that 08:58:00
19 the jury might infer that, but I don't see 08:58:04
20 why -- I don't see why they necessarily would, 08:58:06
21 and I don't see anything about this -- you 08:58:09
22 know, look, I mean, I'll say it myself, but if 08:58:11
23 they were putting up, like, you know, some 08:58:15
24 device that everyone looks at and goes, I know 08:58:19

1 that this is ancient, right, or a TRS ancient 08:58:21
2 computer, then everybody is going to look at 08:58:26
3 it and go wow, that thing is old, it must have 08:58:28
4 existed for a long time. 08:58:31
5 To the extent anyone has seen -- 08:58:32
6 all they are going to see here, I think, is a 08:58:35
7 cable with a couple USB connections on the 08:58:37
8 end. I don't know that it's terribly 08:58:40
9 relevant, but it's a piece of -- it's just 08:58:42
10 there. 08:58:44
11 MR. RUSSELL: I agree, Your Honor, 08:58:44
12 it's really not relevant. 08:58:46
13 THE COURT: Hold on. Let me 08:58:47
14 finish. Just to demonstrate this is the kind 08:58:49
15 of thing I looked at, I don't have a problem 08:58:51
16 with this. I don't see this being a problem. 08:58:53
17 MR. RUSSELL: Okay. 08:58:57
18 THE COURT: So I'll overrule that 08:58:57
19 objection. 08:58:59
20 MR. RUSSELL: Your Honor, just to 08:59:00
21 clarify, the box can't be used, though; right? 08:59:01
22 THE COURT: I mean, it doesn't 08:59:04
23 sound like the box is necessary for anything. 08:59:05
24 Frankly, I'd rather save the time of having to 08:59:07

1 fumble with the box and getting the cable out 08:59:10
2 of it anyway, so we'll just hand up the cable. 08:59:12
3 MR. RUSSELL: There is another one 08:59:15
4 of these cables that may come up with Mr. 08:59:16
5 Garney, but we can deal with that later. 08:59:18
6 THE COURT: Okay. 08:59:20
7 MR. WIENER: Your Honor, can we 08:59:21
8 excuse Mr. Voto? 08:59:22
9 THE COURT: Sorry. You can step 08:59:24
10 down. Just so you understand, just for the 08:59:25
11 optical purposes, too, we'll swear Mr. Voto 08:59:30
12 back in in front of the jury. 08:59:32
13 MR. WIENER: All right. 08:59:35
14 THE COURT: Please go check if the 08:59:37
15 jury is here. If they are, bring them in. 08:59:39
16 MR. GRAY: Your Honor, could I 08:59:44
17 make one point of clarification? 09:00:52
18 THE COURT: You can, but the jury 09:00:53
19 may be coming in, so I don't want to be in the 09:00:54
20 middle of that when they come in. 09:00:56
21 MR. GRAY: I just want to make 09:00:58
22 sure, we are not closing right after this 09:01:00
23 video; there's a couple other small things. 09:01:01
24 THE COURT: Okay. That's fine. 09:01:10

1 (Whereupon, the jury entered the 09:01:14
2 courtroom.) 09:01:29
3 THE COURT: You can all be seated. 09:01:45
4 All right. Good morning, 09:01:51
5 everybody. I hope you had a good weekend. I 09:01:54
6 once again just want to commend you for your 09:01:56
7 promptness. We really appreciate it. 09:01:59
8 So we're going to resume this 09:02:01
9 morning with Microchip's presentation and, Mr. 09:02:03
10 Slayden -- I'm sorry. 09:02:10
11 MR. GRAY: Thank you, Your Honor. 09:02:12
12 At this point, Microchip calls Mr. 09:02:14
13 Craig Petku, who is an engineer -- we are 09:02:17
14 going to call him by deposition. 09:02:18
15 THE COURT: Okay. 09:02:19
16 MR. GRAY: He is an engineer for 09:02:20
17 Aptiv. And just for context, this is a video 09:02:22
18 that's about 10 minutes long. 09:02:24
19 THE COURT: Okay. 09:02:26
20 So, ladies and gentlemen, just so 09:02:27
21 you understand, and you may have heard 09:02:28
22 reference to this, a deposition is questioning 09:02:30
23 that takes place under oath during the course 09:02:32
24 of preparing the case. 09:02:35

1 So it happens in a conference room 09:02:37
2 somewhere typically. There is a court 09:02:40
3 reporter, the witness has been sworn in, and 09:02:42
4 the parties are allowed to, under certain 09:02:44
5 circumstances, play that testimony for you, 09:02:48
6 either by video or put the transcript in front 09:02:49
7 of you. That's what we are going to do here 09:02:53
8 now. 09:02:55
9 MS. DURIE: And, Your Honor, can I 09:02:55
10 just clarify, he is a former employee. 09:02:56
11 THE COURT: Former employee. 09:02:58
12 Okay. 09:03:00
13 MR. GRAY: Your Honor, may I 09:03:00
14 approach the Court? 09:03:01
15 THE COURT: Yes. 09:03:03
16 (Whereupon, portions of the 09:03:13
17 videotape deposition of Craig Petku were 09:03:20
18 played for the jury.) 09:03:22
19 THE COURT: All right. 09:14:10
20 MR. GRAY: Thank you, Your Honor. 09:14:11
21 At this time, we'd like to move 09:14:13
22 Exhibit 128 into evidence. 09:14:15
23 MR. WIENER: No objection, Your 09:14:17
24 Honor. 09:14:43

1 THE COURT: Okay. 128 will come 09:14:43
2 in. 09:14:46
3 MR. GRAY: Thank you, Your Honor. 09:14:50
4 THE COURT: All right. 09:14:51
5 Mr. Gray, what's next? 09:14:53
6 MR. GRAY: So at this time, I'd 09:14:55
7 like to read just a handful of what are known 09:14:57
8 as uncontested facts, and believe it or not, 09:14:59
9 there are a few of those here. The parties 09:15:02
10 have agreed to these specific facts being read 09:15:04
11 to you. 09:15:07
12 First, Microchip Technology 09:15:08
13 Incorporated owns all rights, title and 09:15:12
14 interest in and to the patents asserted 09:15:14
15 against Aptiv in this case. 09:15:16
16 The '243 Patent was originally 09:15:18
17 assigned to Standard Microsystems Corporation, 09:15:22
18 also known as SMSC, which assigned all rights, 09:15:25
19 title and interest to the '243 Patent to 09:15:28
20 Standard Microsystems, LLC in August 2016, who 09:15:31
21 in turn assigned all rights, title and 09:15:36
22 interest to the '243 Patent to Microchip in 09:15:38
23 August 2016. 09:15:42
24 Neither SMSC nor Microchip has 09:15:43

1 licensed the '243 Patent to any other company. 09:15:47
2 Aptiv has had knowledge of the 09:15:50
3 existence of the '243 Patent since at least 09:15:52
4 January 12, 2015. 09:15:56
5 Aptiv has tested and used the dual 09:15:58
6 role hub in the United States. 09:16:03
7 Aptiv offers for sale and sells 09:16:04
8 the dual role hub in the United States. 09:16:06
9 THE COURT: That's it? 09:16:12
10 MR. GRAY: That's all of those. 09:16:13
11 THE COURT: Great. 09:16:14
12 MR. GRAY: And the parties have 09:16:15
13 agreed that Microchip may hold open its case 09:16:16
14 in chief until after Mr. Voto's testimony to 09:16:19
15 avoid the need to call him up twice. 09:16:21
16 THE COURT: Okay. All right. 09:16:24
17 Great. 09:16:25
18 And that's correct, Mr. Wiener? 09:16:26
19 MR. WIENER: That is correct. 09:16:27
20 THE COURT: Okay. All right. 09:16:28
21 So what we are going to do, ladies 09:16:29
22 and gentlemen, now, is the last couple of 09:16:33
23 days, you have been hearing testimony 09:16:35
24 Microchip has been putting on to make its case 09:16:38

1 to you, and now we are going to turn to Aptiv 09:16:41
2 and give Aptiv an opportunity to present its 09:16:44
3 own evidence and its own witnesses who will -- 09:16:48
4 Aptiv will both defend itself against the 09:16:52
5 charge of infringement and also make its 09:16:54
6 argument that it thinks that the claims 23 09:16:58
7 through 25 of the patent are invalid. 09:17:03
8 MR. WIENER: Your Honor, Aptiv 09:17:06
9 calls Mr. Robert Voto. 09:17:08
10 THE COURT: Mr. Voto, you can step 09:17:09
11 up. 09:17:10
12 THE COURT CLERK: Please state and 09:17:31
13 spell your name for the record. 09:17:38
14 THE WITNESS: Robert Martin Voto, 09:17:41
15 R-O-B-E-R-T, M-A-R-T-I-N, V-O-T-O. 09:17:41
16 - - - 08:37:07
17 ...ROBERT M. VOTO, after having 08:37:07
18 first been duly sworn and/or affirmed, was 08:37:11
19 examined and testified as follows... 08:37:14
20 - - - 08:37:18
21 DIRECT EXAMINATION 08:37:18
22 - - - 09:18:19
23 BY MR. WIENER: 09:18:19
24 Q. Good morning, Mr. Voto. 09:18:20

1 Can you please introduce yourself 09:18:21
2 to the jury. 09:18:23
3 A. Good morning. My name is Robert 09:18:23
4 Voto. 09:18:26
5 Q. Mr. Voto, why are you here today to 09:18:26
6 testify? 09:18:28
7 A. Well, I am here today, I was -- 09:18:30
8 myself and my team developed this Boston chip 09:18:33
9 many years ago, and I really feel strongly 09:18:37
10 that the Boston chip does not infringe on 09:18:41
11 Microchip's patent, and I really wanted to 09:18:45
12 come here and explain to you the whole history 09:18:48
13 of how we developed it so you understand that 09:18:49
14 from my perspective. 09:18:51
15 Q. Mr. Voto, can you please tell the 09:18:52
16 jury about yourself? 09:18:54
17 A. Yes. So I'm born and raised in 09:18:55
18 Michigan, went to school for electrical 09:18:58
19 engineering degree at Purdue University, 09:19:01
20 graduated there, came back to Michigan, 09:19:04
21 started working in the automotive electronics 09:19:06
22 business. 09:19:09
23 So I was working for Delphi at the 09:19:10
24 time. We were developing different types of 09:19:13

1 electronic products for cars, got a master's 09:19:15
2 degree in electrical engineering while I was 09:19:19
3 doing that. 09:19:21
4 And then in 2009, I decided to 09:19:21
5 leave Delphi; I went to Unwired Technology. 09:19:26
6 Unwired Technology was another automotive 09:19:29
7 company, and I was the Vice President of 09:19:33
8 Engineering at Unwired Technology. 09:19:37
9 And I stayed with that until 2014 09:19:39
10 when Unwired Technology was actually purchased 09:19:42
11 by Delphi, the company actually got bought by 09:19:47
12 Delphi, so now I'm back to being a Delphi 09:19:50
13 employee in 2014. 09:19:53
14 After that, the company, Delphi, 09:19:55
15 changed its name, so it became Aptiv. And in 09:19:58
16 2020, I decided to leave Aptiv and move to 09:20:02
17 Indie Semiconductor. 09:20:09
18 Q. So, Mr. Voto, you are not currently 09:20:09
19 an Aptiv employee? 09:20:12
20 A. That's correct. 09:20:13
21 Q. Are you being compensated for your 09:20:14
22 work in connection with this trial by Aptiv? 09:20:16
23 A. I am. 09:20:19
24 Q. And how much? 09:20:20

1 A. I am being paid $230 an hour. 09:20:21
2 Q. And what's the nature of your 09:20:25
3 engagement with Aptiv on this matter? 09:20:27
4 A. So I am here as a consultant for the 09:20:30
5 case. 09:20:33
6 Q. And how did you come up with the rate 09:20:34
7 of $230 per hour? 09:20:37
8 A. So the rate -- the rates are like -- 09:20:39
9 I have a full-time job, right, so the rate is 09:20:42
10 kind of based on what I normally make anyway 09:20:44
11 in my day job. 09:20:46
12 Q. Now, do you have experience in USB, 09:20:48
13 Mr. Voto? 09:20:51
14 A. I do. 09:20:51
15 Q. How much? 09:20:52
16 A. I first started working with USB 09:20:55
17 products in about 2011. 09:20:58
18 Q. And are you the named inventor on any 09:21:00
19 patents relating to USB? 09:21:02
20 A. Yes, I believe five patents. 09:21:06
21 Q. Okay. 09:21:08
22 Now, earlier, Mr. Voto, you 09:21:09
23 mentioned that for your brief stint away from 09:21:11
24 Delphi, you worked at a company called Unwired 09:21:14

1 Technologies. 09:21:17
2 Can you tell the jury a little bit 09:21:18
3 more about that company, Unwired Technologies? 09:21:20
4 A. Yes. So it was 2009. I had been 09:21:22
5 working for Delphi for my whole career, so 09:21:26
6 quite a long time. I decided I wanted to make 09:21:28
7 a change. I moved to Unwired Technology, 09:21:32
8 which was very different. Unwired Technology 09:21:34
9 was a very small company compared, you know, 09:21:36
10 to big Delphi. 09:21:39
11 I was in charge of engineering. 09:21:41
12 Like I said, I was the vice president. A big 09:21:43
13 title, but actually it was a small company. 09:21:46
14 We only had, I don't know, maybe 20 or so 09:21:47
15 engineers in the whole company, so it was a 09:21:50
16 very different environment. 09:21:53
17 But at Unwired, I was, you know -- 09:21:55
18 on day one, I was responsible for product 09:21:58
19 design, technology development, and at the 09:22:01
20 time, there were these wireless headphones. 09:22:06
21 That was what the company did, it's called 09:22:08
22 Unwired, because it made these wireless 09:22:11
23 headphones for rear seat entertainment systems 09:22:14
24 and the back seat kind of entertainment 09:22:17

1 systems for the kids. 09:22:18
2 Q. So, Mr. Voto, at the time, who were 09:22:19
3 Unwired's customers? Were you selling those 09:22:22
4 headphones directly to the kids in the back 09:22:24
5 seat and their parents or -- 09:22:26
6 A. So -- so the headphones were part of 09:22:28
7 the package. If you bought that option in a 09:22:33
8 car, then when you got the car, it would come 09:22:35
9 with the headphone stream and all that stuff. 09:22:38
10 So our customers were, in large 09:22:41
11 part, you know, the carmakers. So General 09:22:44
12 Motors was big, you know, Chrysler was big, 09:22:48
13 Ford, you know. So all these OEMs, the 09:22:52
14 vernacular, you know, for the car companies, 09:22:59
15 car manufacturers, we call them OEMs, so those 09:23:01
16 were our customers. 09:23:05
17 Q. The jury has heard about OEMs over 09:23:06
18 the last week, so can you just tell them what 09:23:08
19 those letters stand for? 09:23:10
20 A. Sure. 09:23:11
21 OEM is just the acronym for 09:23:12
22 Original Equipment Manufacturers, is what we 09:23:15
23 call the carmakers. 09:23:16
24 Q. So did Unwired have any products 09:23:18

1 other than those wireless headphones that were 09:23:20
2 for the back seats of the car? 09:23:22
3 A. Initially, no. In 2009 when I 09:23:24
4 started, that was really what the company was 09:23:27
5 all about. Like I said, it was a small 09:23:30
6 company, not a big company. 09:23:33
7 But the company was doing well and 09:23:36
8 there was definitely an appetite to try to 09:23:39
9 expand the growth of the business. We had a 09:23:43
10 lot of relationships with a lot of these 09:23:46
11 customers and we thought well, maybe we can 09:23:48
12 get into some other products, too. Maybe 09:23:50
13 there's some other stuff that we can make for 09:23:52
14 cars, so there's plenty of opportunity. 09:23:54
15 Q. Did you get into any of those other 09:23:56
16 products, Mr. Voto? 09:23:58
17 A. We did. We were fortunate, you know, 09:23:59
18 that we got the opportunity at General Motors, 09:24:01
19 our biggest customer for headphones. General 09:24:05
20 Motors gave us the opportunity to bid on some 09:24:09
21 USB hub modules. 09:24:11
22 Q. So you bid on the USB hub modules. 09:24:13
23 Can you tell the jury a little bit about what 09:24:15
24 a USB hub module is? 09:24:17

1 A. Right. So all of the components that 09:24:19
2 go into cars are, in some way, you know, 09:24:25
3 uniquely created, you know. It's like you 09:24:28
4 don't go -- generally, you don't find the 09:24:31
5 parts that you need -- if you want to make a 09:24:34
6 brand new car, if you want to make a new 09:24:35
7 Corvette or something, your engineers at 09:24:38
8 General Motors are going to think about what 09:24:41
9 every single component of the car needs to do. 09:24:42
10 You are going to then find 09:24:45
11 suppliers that can design and manufacture that 09:24:46
12 for you. 09:24:48
13 So in the case of the hub module, 09:24:49
14 so GM was thinking about functionally, what do 09:24:51
15 they want the module to do, which you'll see 09:24:55
16 later, you know, it's basically a small box 09:24:59
17 and it's got some circuit boards inside of it. 09:25:02
18 It's got some plastic around it, and most 09:25:04
19 importantly, it's -- when you -- as the 09:25:06
20 consumer, when we get in our cars and we look 09:25:10
21 at these USB ports, that's what we're talking 09:25:13
22 about, is that particular piece of the car 09:25:15
23 that provides that USB function and those 09:25:17
24 connectors that you can plug into. 09:25:19

1 Q. All right. 09:25:22
2 So you bid on the USB hub module 09:25:23
3 contract with GM. How did that go? 09:25:25
4 A. So the very first time, you know, 09:25:28
5 there was multiple opportunities, but the very 09:25:32
6 first time, we were not selected as the 09:25:34
7 supplier. 09:25:37
8 It's a pretty fierce competition. 09:25:38
9 GM wants to make sure that they get the best 09:25:41
10 bang for their buck. They want the best 09:25:46
11 price, they want the best technology. So 09:25:48
12 everyone has to compete for that. And it took 09:25:50
13 us a couple tries, but we finally got GM to 09:25:52
14 award us the USB business. 09:25:56
15 Q. And around when was that? 09:25:58
16 A. 2011. 09:25:59
17 Q. Okay. 09:26:01
18 Did you have any other carmaker 09:26:01
19 customers for the USB hub business at Unwired? 09:26:04
20 A. So initially, yes, that comes next, 09:26:09
21 right? So first we have some great success 09:26:13
22 with General Motors. Then it was pretty big 09:26:16
23 business at GM, too, because it was going to 09:26:19
24 be for like all the trucks, and that's like a 09:26:22

1 lot of business, it's super important. 09:26:24
2 So little Unwired, we were pretty 09:26:26
3 excited about this, it was like our big break. 09:26:29
4 We wanted to see if we could offer similar 09:26:33
5 kinds of products to other OEMs as well. 09:26:35
6 So we knew it would be hard to get 09:26:40
7 into other OEMs that we didn't already have a 09:26:42
8 relationship with, so we went to Jaguar next 09:26:45
9 because we sold a lot of headphones with 09:26:48
10 Jaguar. We called up and said, what do you 09:26:50
11 think about us trying to be your USB module 09:26:53
12 supplier? 09:26:56
13 They gave us a chance to bid on 09:26:56
14 the business, similar process like what we did 09:26:58
15 with GM, and Jaguar ended up awarding Unwired 09:27:00
16 some USB module business. 09:27:04
17 Q. I know this was awhile ago, but do 09:27:07
18 you recall around when you were awarded the 09:27:10
19 Jaguar Land Rover contract? 09:27:11
20 A. I think we were -- we were starting 09:27:13
21 that process in, you know, 2012 and, you know, 09:27:15
22 about maybe the end of 2012, 2013, we were 09:27:18
23 awarded that business. 09:27:21
24 Q. All right. 09:27:22

1 And what was the product you were 09:27:22
2 supposed to provide to Jaguar Land Rover? 09:27:24
3 A. What Jaguar Land Rover was really 09:27:29
4 looking for was a hub module, but it was 09:27:33
5 different than the hub module from General 09:27:36
6 Motors. You know how every car has its own 09:27:41
7 unique styling? Well, all the engineers at 09:27:43
8 the car companies think they know best, too, 09:27:47
9 so they're all going to want something a 09:27:49
10 little bit different, right? 09:27:51
11 So with Jaguar, we had to develop 09:27:52
12 a whole new product. So just to make it 09:27:55
13 clear, when I say things like Jaguar awarded 09:28:00
14 us the business, what that really means is 09:28:03
15 Jaguar selected us to develop a custom 09:28:06
16 product, to get it ready for manufacture, to 09:28:10
17 do all the testing, to make sure it passes all 09:28:12
18 the requirements that would make it a good 09:28:15
19 product for the customer, right? So that's a 09:28:19
20 very long process, you know. 09:28:22
21 So you start with just 09:28:24
22 requirements from the customer on paper saying 09:28:26
23 hey, can you make something that does this for 09:28:28
24 me, right? So we go on this multi-year 09:28:30

1 process with the customer to do that. 09:28:33
2 Jaguar's product was a little 09:28:35
3 different from GM's because Jaguar wanted a 09:28:38
4 more upscale product, so they selected faster 09:28:41
5 USB communication, we call it super speed USB. 09:28:43
6 So that was a big difference. 09:28:47
7 Q. Did the hub that you were providing 09:28:49
8 at the time to General Motors, did that meet 09:28:52
9 the requirements that Jaguar Land Rover had 09:28:54
10 provided to you? 09:28:57
11 A. No, it didn't. You know, a big 09:28:58
12 reason why was because Jaguar wanted a higher 09:29:03
13 end, you know, class product. So not only did 09:29:06
14 we have to face the design of a new product, 09:29:10
15 but we needed to use different components, 09:29:13
16 different chips that made it a faster USB 09:29:15
17 setup. 09:29:21
18 And also, during the development 09:29:21
19 of that product, we ran across a requirement 09:29:22
20 that Jaguar had written, so remember, Jaguar 09:29:28
21 gives me the requirements, please make a 09:29:31
22 product that does X, Y and Z. Then we read 09:29:34
23 all the requirements and we understood them 09:29:37
24 all. We had some experience in doing this. 09:29:39

1 Except there was one requirement 09:29:42
2 that they asked for that absolutely made no 09:29:43
3 sense. They said the downstream port of the 09:29:46
4 hub module needed to support role reversing, 09:29:53
5 which means that you could hook up a USB host 09:29:59
6 or a USB device to the downstream ports of the 09:30:04
7 hub module. 09:30:07
8 Q. And did the hub that you had designed 09:30:10
9 the module for GM, did it support that role 09:30:14
10 reversing? 09:30:18
11 A. No, that's what I'm saying. As far 09:30:19
12 as I knew, nothing supported that requirement. 09:30:20
13 That requirement was bogus. It didn't even 09:30:23
14 make sense to me, and I told Jaguar that. I 09:30:26
15 said, I don't understand, is this a mistake? 09:30:29
16 No hubs work like this today and you're asking 09:30:33
17 me to make a hub that does something that hubs 09:30:36
18 don't do, so what gives? 09:30:38
19 So it took awhile to sort through 09:30:40
20 that because eventually Jaguar was saying 09:30:42
21 maybe that was a mistake, maybe we shouldn't 09:30:45
22 have put that in our requirements for you. 09:30:47
23 But eventually, there was a 09:30:49
24 specialist, and let's say an engineering 09:30:51

1 specialist within Jaguar that came forward and 09:30:53
2 explained, like, you know, that's not a 09:30:58
3 mistake. That was very much intentional. 09:31:01
4 And so he went on to explain the 09:31:05
5 reason that that requirement was in there was 09:31:09
6 because Jaguar was trying to work 09:31:12
7 cooperatively with Apple to implement this -- 09:31:15
8 this new iPhone application that they would 09:31:21
9 call CarPlay. 09:31:24
10 Q. Mr. Voto, can you turn to Tab 192 of 09:31:25
11 your binder, please, and look at Exhibit 192. 09:31:31
12 Can you describe what 192 is, 09:31:37
13 please? 09:31:39
14 A. Sure. 09:31:41
15 Exhibit 192 is a presentation that 09:31:44
16 I put together after finally understanding 09:31:48
17 this new requirement from Jaguar. 09:31:52
18 Remember, it's my job to design a 09:31:57
19 product that Jaguar wants so I didn't know how 09:32:00
20 to do it. I had to go out and research a 09:32:03
21 bunch of options, try to figure out how the 09:32:05
22 heck am I going to pull this off. And so this 09:32:08
23 presentation shows the results of that. 09:32:10
24 (Whereupon, Trial Exhibit 192 was 09:32:10

1 introduced.) 09:32:12
2 MR. WIENER: Your Honor, we offer 09:32:12
3 Exhibit 192 into evidence. 09:32:14
4 MR. SHAW: No objection, Your 09:32:16
5 Honor. 09:32:17
6 THE COURT: It's admitted. 09:32:17
7 MR. WIENER: Mr. Glass, can you 09:32:19
8 put 192 up on the screen. And if you could 09:32:21
9 please zoom in so that we can see the first 09:32:27
10 slide. 09:32:29
11 Actually, before you do that, Mr. 09:32:33
12 Glass, if you can zoom in on -- actually a 09:32:35
13 little -- yeah, the first slide will do just 09:32:39
14 fine. 09:32:41
15 BY MR. WIENER: 09:32:43
16 Q. Okay. 09:32:44
17 Now, first, Mr. Voto, in the 09:32:45
18 bottom right-hand corner, it says, "Jan 2013." 09:32:47
19 Does that mean that this document was created 09:32:50
20 in January of 2013? 09:32:53
21 A. Yeah, thereabouts. That's actually, 09:32:55
22 you know, kind of part of the slide template, 09:32:58
23 so I would say we probably started writing 09:33:01
24 this in January 13. It probably got updated a 09:33:06

1 couple times, but about right. 09:33:09
2 Q. All right. 09:33:10
3 Looking at the first slide of 09:33:11
4 Exhibit 192, can you explain to the jury 09:33:14
5 what's being shown on this slide? 09:33:16
6 A. Yeah, sure. 09:33:18
7 So, I mean, keep in mind, the 09:33:19
8 whole point of this presentation was me, as 09:33:21
9 the supplier to Jaguar engineering, going 09:33:23
10 okay, what's the problem, how can we fix it? 09:33:25
11 What are the options, you know. 09:33:29
12 So we started this saying what is 09:33:30
13 the current system? And you can see at the 09:33:32
14 top it says, "Vehicle System Diagram," the 09:33:34
15 baseline design, you know, that sort of thing. 09:33:38
16 This is just saying this is what we thought we 09:33:42
17 were going to make for you, right? 09:33:44
18 So what we did is the basic 09:33:46
19 description of the different bits and pieces 09:33:48
20 here is on the left, we have this Vehicle 09:33:50
21 System, okay. So this is like the main radio 09:33:52
22 of the head unit. 09:33:56
23 And then over on the right here, 09:33:58
24 this User Interface Panel, that was Jaguar's 09:34:00

1 name for the hub module. The hub module 09:34:04
2 obviously has all these ports on it. This 09:34:07
3 particular one, again, this is all Jaguar's, 09:34:10
4 you know, specifications saying I want an SD 09:34:13
5 card, I want a couple USB ports, I want this 09:34:15
6 place where you can plug in like a headphone 09:34:17
7 jack to get audio into your car. 09:34:22
8 And then Jaguar also had something 09:34:24
9 to say about the wiring that goes in between 09:34:27
10 the two. So if you think of this is like 09:34:29
11 somewhere in the car, this is somewhere else 09:34:31
12 in the car and this being a bunch of wires 09:34:32
13 going in between. That's the basic setup, 09:34:35
14 right? Okay, Jaguar, this is what you have 09:34:37
15 today. 09:34:40
16 Q. All right. 09:34:40
17 So you mentioned coming up with a 09:34:41
18 solution that would meet the requirement that 09:34:43
19 Jaguar was asking for in terms of role 09:34:44
20 reversal on the port. How did you go about 09:34:49
21 trying to meet that requirement? 09:34:51
22 A. Well, there were so many things 09:34:54
23 running through my head because, number one is 09:35:00
24 I didn't know where I could get the parts. I 09:35:03

1 mean, my job is to take parts, put them 09:35:05
2 together, you know, create stuff, make circuit 09:35:07
3 boards and great software and all this stuff 09:35:09
4 to do it, but you have to do that under like a 09:35:12
5 time crunch, you know. 09:35:14
6 Jaguar selected us and when they 09:35:16
7 do that, they said you now have one year to 09:35:17
8 complete the entire product element, 09:35:19
9 presentable, all right, about a year and then 09:35:24
10 after that, it's got to be done because then 09:35:26
11 we need to start building things and making 09:35:28
12 cars with it. You don't want to be the guy 09:35:30
13 that, you know, they can't make cars because 09:35:32
14 they don't have USB ports, right? 09:35:34
15 So we're under a time crunch. 09:35:36
16 That's number one. And so that means that I 09:35:38
17 need to go find parts that might be available 09:35:41
18 that I can use to, you know, somehow put them 09:35:44
19 together to make this new thing happen. 09:35:47
20 So the rest of this presentation 09:35:49
21 is to show Jaguar engineers hey, this might 09:35:52
22 not be perfect, but these are the ideas that I 09:35:55
23 came up with. 09:35:58
24 MR. WIENER: Mr. Glass, if we can 09:36:00

1 scroll down to the second slide that's on the 09:36:01
2 first page. Nope, that's the third slide. 09:36:04
3 Let's go up one more, please. 09:36:07
4 Okay. Thank you. 09:36:09
5 BY MR. WIENER: 09:36:10
6 Q. What's shown on the second slide of 09:36:11
7 this presentation, Option A? What is that? 09:36:12
8 A. Yeah. So we're saying Option A. All 09:36:15
9 right. So how many different ideas can we 09:36:17
10 come up with that we can then share back with 09:36:19
11 Jaguar engineer, our customer and say hey, 09:36:22
12 what do you think about this, right, or this 09:36:24
13 or this? 09:36:26
14 So Option A is the first one. 09:36:27
15 Option A, it looks like almost the same thing 09:36:30
16 as what you just saw in the baseline design, 09:36:33
17 but there is a big difference right here. 09:36:35
18 This is the hub chip, itself, inside of our 09:36:37
19 hub module. The hub chip, I replaced it with 09:36:41
20 a chip from SMSC that had this FlexConnect 09:36:47
21 feature. 09:36:51
22 So FlexConnect is going to allow 09:36:52
23 us to kind of swap the role of a downstream 09:36:54
24 port and the upstream port when you need to do 09:36:58

1 CarPlay. So it did start solving some of the 09:37:03
2 problems, but it also created problems, and 09:37:06
3 there was a couple big ones here. 09:37:08
4 The moment that you go into 09:37:11
5 CarPlay mode, the other ports that the head 09:37:12
6 unit should have access to will -- would be 09:37:18
7 lost. So like we said, hey, you could be 09:37:21
8 listening to music on one of those thumb 09:37:25
9 drives in one of those other ports and it's 09:37:28
10 just going to stop working. 09:37:30
11 So Jaguar is like, this is a no 09:37:31
12 go. I mean, there's no way that we can accept 09:37:33
13 these kinds of problems with Option A. 09:37:36
14 MR. WIENER: If we could please 09:37:39
15 scroll down to the next slide, Mr. Glass. 09:37:41
16 BY MR. WIENER: 09:37:43
17 Q. Option B comes after Option A. Can 09:37:44
18 you explain to the jury what Option B was? 09:37:46
19 A. Right. 09:37:48
20 So -- so Option B, okay, we've 09:37:49
21 already ruled out that we need -- we need to 09:37:53
22 make sure everything stays working at all 09:37:55
23 times, right? 09:37:57
24 So that's why Option B -- Option A 09:37:58

1 was bad, so we needed to come up with 09:38:02
2 something that keeps everything working the 09:38:03
3 whole time, so that's what we have here with 09:38:05
4 Option B. 09:38:07
5 Option B is all these ports can 09:38:07
6 work simultaneously with the head unit, great. 09:38:13
7 And we have a standard USB hub chip here 09:38:17
8 that's available to me. That's great. 09:38:21
9 So everything was fine except for 09:38:24
10 the fact that what we did to solve the problem 09:38:26
11 was we said hey, let's redesign the head unit, 09:38:28
12 let's add more wiring, let's add another 09:38:31
13 special USB channel to this one special port 09:38:35
14 that you can then plug in your iPhone to -- 09:38:38
15 that can do CarPlay. 09:38:42
16 Jaguar says yeah, you fixed all 09:38:44
17 the problems, but you just made me a massive 09:38:48
18 problem because I've already sourced all 09:38:51
19 these -- all these components you are talking 09:38:53
20 about changing here, it's way too late for 09:38:55
21 that. I've already got those things locked 09:38:57
22 down. So Jaguar rejected this option as well. 09:39:00
23 Q. Okay. 09:39:03
24 MR. WIENER: Mr. Glass, let's 09:39:05

1 please turn to the next slide. 09:39:05
2 BY MR. WIENER: 09:39:07
3 Q. So Option A and Option B have been 09:39:07
4 considered, that's using the sort of available 09:39:09
5 on-the-shelf technology, and what was your 09:39:11
6 summary here on the fourth slide? 09:39:13
7 A. So -- so not surprisingly, you know, 09:39:17
8 as we portrayed it here, I wasn't particularly 09:39:22
9 excited about Option A or Option B and neither 09:39:25
10 was Jaguar. We needed to -- I felt compelled, 09:39:27
11 I needed to find something better for Jaguar, 09:39:31
12 and that's what we worked on. We worked on 09:39:33
13 that and we came up with another option. 09:39:34
14 MR. WIENER: Okay. Let's go to 09:39:37
15 the next slide, please. 09:39:38
16 BY MR. WIENER: 09:39:41
17 Q. Option C, the Host 2 Host Hub. Can 09:39:42
18 you tell the jury about the Host 2 Host Hub, 09:39:46
19 please? 09:39:49
20 A. Sure. 09:39:49
21 So at this point, we were running 09:39:49
22 out of options, you know, of parts that we 09:39:51
23 knew that were available for the USB functions 09:39:54
24 that, you know, that would be easy to do. So 09:39:58

1 we had to start getting a little more 09:40:00
2 creative. I still needed to use chips that 09:40:03
3 are available, but maybe we could be more 09:40:05
4 creative in some of our, you know, fundamental 09:40:07
5 thinking about solving these problems. 09:40:10
6 And that's where this came up to 09:40:12
7 make sure that all of the downstream ports 09:40:16
8 work all the time, you know, these guys over 09:40:18
9 here, I need a regular hub here because that's 09:40:21
10 what hubs do. They make all the downstream 09:40:24
11 ports work all the time; I need that, right? 09:40:26
12 But I still have this problem 09:40:29
13 where one of these USB ports might suddenly 09:40:30
14 need to become a host instead of a device, so 09:40:33
15 how do I tackle that problem specifically 09:40:36
16 while still maintaining my hub? 09:40:38
17 And so in the process of 09:40:41
18 researching that, we came across these Host to 09:40:43
19 Host bridges that had been developed 09:40:50
20 previously by other people. And the reason 09:40:52
21 that they were out in the marketplace, you 09:40:56
22 know, you could even buy one from Amazon or 09:40:58
23 whatever, the reason that they were out there 09:41:01
24 has nothing to do with CarPlay, but it had 09:41:04

1 everything to do with, if you remember quite 09:41:07
2 awhile ago, before we had cloud memory storage 09:41:09
3 and huge thumb drives, when we got a new 09:41:14
4 computer, we needed to transfer all the data 09:41:16
5 from our old computer to the new computer. 09:41:20
6 That was a real problem; that was hard to do 09:41:22
7 many years ago, so we -- we saw people had 09:41:24
8 come up with some clever solution to that, 09:41:28
9 that they made a host to host bridge and a 09:41:31
10 cable that would allow you to hook two 09:41:34
11 computers which are both USB hosts together. 09:41:37
12 That was a novel thing that we 09:41:40
13 discovered. 09:41:42
14 Q. Mr. Voto, did you bring a 09:41:43
15 demonstrative to help show the jury what these 09:41:44
16 looked like? 09:41:48
17 A. We have an example of that cable. 09:41:48
18 MR. WIENER: May I approach, Your 09:41:51
19 Honor? 09:41:52
20 THE COURT: You may. 09:41:53
21 BY MR. WIENER: 09:42:01
22 Q. Mr. Voto, can you hold up what I have 09:42:02
23 just handed you and explain to the jury what 09:42:05
24 it is? 09:42:08

A. Sure. 09:42:08

So basically what we have here is 09:42:08

obviously a cable, and if you look closely on 09:42:10

the two ends, this is USB A connector, so this 09:42:13

would be the exact same connector that you 09:42:16

would find like on your home computer. It's a 09:42:18

little different than the normal cable you 09:42:22

have because normally, one end hooks to your 09:42:24

computer and the other one hooks to your phone 09:42:26

or something so it is a different connector. 09:42:29

This is the computer end of both sides, okay, 09:42:30

so that's strange. 09:42:33

But the reason why it all works is 09:42:34

what's in the middle here. Inside of this 09:42:37

little box, we have a host to host bridge. 09:42:39

The host to host bridge is basically two 09:42:45

different USB device controllers and so each 09:42:49

host that's, you know, here, gets to talk to 09:42:53

the USB device here. 09:43:00

This host on its own separate 09:43:01

network, it is being attached to the second 09:43:03

USB device also in the same module and then 09:43:08

these two USB device controllers are 09:43:10

physically connected so data can transfer from 09:43:12

1 one to the other. 09:43:15
2 So in essence, the cleverness of 09:43:16
3 this was I have now made two USB hosts talk 09:43:19
4 together, but not directly; that's not 09:43:23
5 allowed, you can't do it directly. But the 09:43:26
6 concept of a host to a device, a host to a 09:43:29
7 device, that's maintained. That's what you 09:43:32
8 need to not violate any USB rules and that's 09:43:35
9 what this does. 09:43:38
10 Q. And, Mr. Voto, is that whole cable 09:43:38
11 sometimes referred to as a bridge device? 09:43:42
12 A. Yes. I pause a little bit because 09:43:47
13 there's -- the word "device" is pretty 09:43:55
14 generic, okay? So when we think of a device, 09:44:00
15 a device is a device like several languages, 09:44:03
16 it's a thing, right? So this can be a device, 09:44:08
17 this can be a device, I mean, we can talk 09:44:10
18 about devices in a more general sense. 09:44:13
19 But I think for the purposes of 09:44:15
20 what we're here for now, we need to be talking 09:44:17
21 about devices a little bit more in a USB 09:44:20
22 sense, in USB lingo. We have host devices 09:44:24
23 and -- a host and we have devices, right? The 09:44:29
24 host talks to the device. 09:44:32

1 So just to be clear, we can call 09:44:34
2 this whole thing a device if we want, but 09:44:35
3 technically speaking, there's two different 09:44:38
4 device controllers inside of here to talk to 09:44:40
5 two different hosts. 09:44:43
6 Q. Turning back to the Exhibit 192 09:44:45
7 that's on the screen -- 09:44:48
8 MR. WIENER: You can go to Slide 09:44:53
9 5, please, Mr. Glass. One up, please. 09:44:54
10 Perfect. 09:45:00
11 BY MR. WIENER: 09:45:01
12 Q. Okay. 09:45:03
13 Mr. Voto, does Slide 5 of 09:45:03
14 Exhibit 192 describe the solution you had come 09:45:07
15 up with? 09:45:09
16 A. Yes, it does. 09:45:11
17 Q. Can you show to the jury sort of how 09:45:13
18 this works using the laser pointer to show how 09:45:16
19 the data flowed? 09:45:20
20 A. So this was the first picture the 09:45:22
21 first time we showed the Jaguar engineers, you 09:45:26
22 know, hey, I think we're onto something 09:45:28
23 interesting here. We said all right, first 09:45:30
24 off, we only have one lane of communication. 09:45:35

1 Jaguar is like yep, that's great. 09:45:38
2 Secondly, all my USB ports and all 09:45:40
3 these consumer ports will function at the same 09:45:44
4 time. Great. 09:45:49
5 Second or third is that the way 09:45:50
6 that I have solved the problem now is I have 09:45:53
7 the hub in here in this block diagram, but now 09:45:56
8 we've added this bridge. So that was the new 09:46:00
9 thing that then needed to be explained to 09:46:03
10 Jaguar next. 09:46:05
11 Q. How did Jaguar react to this idea? 09:46:07
12 A. They were pretty intrigued. They 09:46:10
13 were like wow, you guys found something where 09:46:13
14 I don't have to redesign all of my other car 09:46:16
15 parts and you can just fix this thing 09:46:18
16 magically in your one little module? That's 09:46:20
17 wonderful. 09:46:23
18 MR. WIENER: And, Mr. Glass, if we 09:46:26
19 could go down to Slide 8, please. 09:46:27
20 BY MR. WIENER: 09:46:32
21 Q. And what's shown on Slide 8, Mr. 09:46:34
22 Voto? 09:46:38
23 A. So naturally, yes, Jaguar was like 09:46:38
24 wow, this sounds pretty cool, but how does it 09:46:41

1 actually work? And naturally, they wanted to 09:46:45
2 know. And so this is the mystery piece. This 09:46:48
3 bridge, you know, we can tell them yeah, this 09:46:52
4 is where the inspiration came from, but this 09:46:55
5 is not an automotive product. This is 09:46:58
6 something that we found on the web. 09:47:00
7 So how do I get it into Jaguar's 09:47:03
8 product and make it meet all the requirements? 09:47:05
9 How do you design it? 09:47:08
10 So that's what this picture is 09:47:09
11 showing, is the very first bridge that we made 09:47:11
12 was actually comprised of a bunch of different 09:47:13
13 pieces. It had this FPGA chip, it had the USB 09:47:15
14 PHY chip, another USB PHY chip and a memory 09:47:21
15 chip over here, took all these different 09:47:24
16 pieces and put them together to make this. 09:47:26
17 Q. Mr. Voto, you see up in the middle of 09:47:29
18 the box, it says FPGA? 09:47:31
19 A. I do. 09:47:34
20 Q. Can you explain to the jury what FPGA 09:47:34
21 means? 09:47:37
22 A. Sure. 09:47:38
23 We use the word "chip" kind of 09:47:42
24 like for a lot of stuff, but there's many, 09:47:45

1 many different flavors of chips, right? And 09:47:47
2 one of the types of chips that's out there is 09:47:50
3 this Field Programmable Gate Array, which is 09:47:53
4 the type of chip where it's kind of like a 09:47:58
5 blank slate and it's got all these functional 09:48:02
6 pieces inside of it and you can make a lot of 09:48:05
7 different things with it. It's kind of like 09:48:09
8 Legos in a sense. 09:48:12
9 If you program it to do specific 09:48:13
10 functions, then you can use this off-the-shelf 09:48:18
11 piece of hardware with your own custom 09:48:21
12 programming that we would have to make to 09:48:23
13 implement an MCU and these, you know, USB 09:48:26
14 device controllers, you know, two of them, et 09:48:31
15 cetera. 09:48:34
16 So we basically used an available 09:48:35
17 chip with our own custom programming to make 09:48:37
18 the bridge. 09:48:40
19 Q. Did you get it to work? 09:48:42
20 A. We did. 09:48:43
21 Q. Do you remember about when you got it 09:48:45
22 to work? 09:48:47
23 A. I would say, you know, this wasn't a 09:48:49
24 one-week or one-month endeavor, but, you know, 09:48:53

1 during the year 2013, we had it working. 09:48:56
2 Q. And this was a solution that was -- 09:48:59
3 provided a single-lane solution to the head 09:49:02
4 unit; is that right? 09:49:04
5 A. That's correct. 09:49:05
6 Q. And it allowed for CarPlay on all of 09:49:06
7 the downstream ports? 09:49:09
8 A. Correct. 09:49:11
9 Q. And the data on the non-CarPlay ports 09:49:12
10 remained on those ports, even when the other 09:49:17
11 port was in CarPlay mode? 09:49:20
12 A. That's right. 09:49:22
13 Q. Okay. 09:49:23
14 Did this solution have a USB hub 09:49:23
15 chip? 09:49:26
16 A. Yes. 09:49:28
17 Q. Okay. 09:49:28
18 And who made the USB hub chip that 09:49:29
19 was used in the solution? 09:49:32
20 A. So in this design for Jaguar, 09:49:34
21 remember I said they wanted a higher end, they 09:49:37
22 wanted this super speed USB, so that means 09:49:41
23 that we had to use a hub chip that supports 09:49:43
24 super speed USB, of course, and the particular 09:49:48

1 part that we were using in this design came 09:49:50
2 from AyDeeKay. 09:49:52
3 Q. So it was not a Microchip that -- 09:49:55
4 plaintiff's chip; right? 09:49:59
5 A. Correct. 09:50:00
6 Q. Or SMSC? 09:50:01
7 A. No. 09:50:02
8 Q. Mr. Voto, if you could turn to -- if 09:50:06
9 you could turn to Tab 17 of your binder, 09:50:09
10 please. If you could give a high level 09:50:13
11 description of what that document is, please. 09:50:18
12 A. This document is a set of 09:50:22
13 requirements that my team wrote when I was at 09:50:28
14 Unwired Technology for how the -- how the 09:50:30
15 technical solution would work for this dual 09:50:34
16 role hub. 09:50:38
17 MR. WIENER: Your Honor, we offer 09:50:39
18 Exhibit 17 into evidence. 09:50:40
19 (Whereupon, Trial Exhibit 17 was 09:50:40
20 introduced.) 09:50:42
21 MR. SHAW: No objection, Your 09:50:42
22 Honor. 09:50:43
23 THE COURT: All right. Admitted. 09:50:43
24 MR. WIENER: Mr. Glass, if we 09:50:45

1 could put the first slide of Exhibit 17 up. 09:50:48
2 BY MR. WIENER: 09:50:51
3 Q. Was this a presentation that you 09:50:52
4 created, Mr. Voto? 09:50:53
5 A. That's correct. 09:50:55
6 Q. And who was the intended audience for 09:50:56
7 this presentation? 09:50:59
8 A. This presentation was meant for 09:51:01
9 customers, primarily, to help explain to them 09:51:05
10 what we were proposing. 09:51:10
11 Q. Sounds great. Let's use it to 09:51:11
12 explain to us how -- 09:51:14
13 A. All right. 09:51:15
14 Q. -- the solution worked. 09:51:15
15 MR. WIENER: If you could turn to 09:51:18
16 page 11 of Exhibit 17, please. 09:51:20
17 BY MR. WIENER: 09:51:20
18 Q. Mr. Voto, can you explain to the jury 09:51:24
19 what's being shown on page 11, please? 09:51:26
20 A. Sure. 09:51:30
21 So in this diagram, we -- let me 09:51:33
22 start from the outside here. This is on all 09:51:37
23 vehicle systems, so from our customer 09:51:41
24 perspective, we are talking to the car 09:51:44

1 manufacturers, right, so they want to see how 09:51:46
2 does it all fit together, how does it work. 09:51:48
3 The head unit, they know there is 09:51:50
4 a head unit, right, we have a single lane, 09:51:53
5 that's a plus, and we know we have, on the 09:51:55
6 other end of this diagram here, we have these 09:51:57
7 USB devices. These are the things that people 09:52:00
8 can plug into the hub module. 09:52:02
9 So we have some connection points 09:52:05
10 here. Here and here, these, as you can 09:52:08
11 imagine these things as being, that's where 09:52:12
12 you would actually have a USB connector you 09:52:13
13 can plug something into as a consumer. 09:52:16
14 On the left here, this is internal 09:52:19
15 wiring in the vehicle. That's how data goes 09:52:21
16 over a USB connection from the head unit to 09:52:24
17 the hub module. 09:52:27
18 And then inside of the hub module 09:52:29
19 is this whole middle section. And, you know, 09:52:31
20 fundamentally, to simplify it, there's three 09:52:35
21 pieces. There's the hub, the hub is like a 09:52:38
22 USB splitter, so to speak, so it splits data 09:52:41
23 paths. 09:52:46
24 The bridge is up here. The bridge 09:52:46

1 has these two USB devices with data flowing in 09:52:48
2 between. And then we have the switch matrix 09:52:52
3 here, which is important, because you'll see 09:52:54
4 that, you know, the iPhone can either go 09:52:57
5 through this path or it can go through other 09:52:59
6 paths. 09:53:02
7 Q. So on page 11 right now, is this 09:53:02
8 showing how the product works when the iPhone 09:53:06
9 is in host mode or in CarPlay mode? 09:53:09
10 A. Okay. So yeah, let me explain. 09:53:12
11 From -- think about it from the 09:53:16
12 perspective of you just get in the car, you 09:53:18
13 turn it on. What's going to happen next; 09:53:21
14 right? 09:53:23
15 So it's important to understand 09:53:23
16 the sequences. Because at the moment this 09:53:25
17 whole system turns on, the head unit is going 09:53:27
18 to detect this USB communication type stuff; 09:53:30
19 right? So the head unit is going to say okay, 09:53:35
20 something is out here, I see a hub chip, and 09:53:37
21 so the hub chip gets enumerated by the head 09:53:40
22 unit. 09:53:44
23 That means that the hub chip is 09:53:44
24 having to answer to the head unit, what are 09:53:48

1 you? You're a USB device, I know that, but 09:53:50
2 what are you and what do you do? That kind of 09:53:52
3 information has to flow back to the head unit 09:53:55
4 from the hub. The hub says I am a hub, this 09:53:58
5 is what I can do. Great. 09:54:01
6 So now the head unit says okay, I 09:54:02
7 recognize a hub here that I can talk to, 09:54:05
8 that's good. The hub then says oh, but I see 09:54:07
9 a USB device here that is connected to my hub. 09:54:10
10 And so the head unit then would get that 09:54:14
11 information, and it would say okay, let's play 09:54:18
12 the same game. Hey, USB device, what are you? 09:54:20
13 Please explain yourself to me. 09:54:23
14 This USB Device A says, I am a 09:54:24
15 vendor class bridge device. So the head unit 09:54:28
16 would then have to look up a driver for that, 09:54:33
17 locate that driver, you know, that sort of 09:54:36
18 thing. And then the head unit would basically 09:54:38
19 be up and running, all these devices are now 09:54:41
20 hooked up and ready for operation. 09:54:44
21 Then the iPhone or the devices 09:54:47
22 come into the picture. It doesn't have to be 09:54:52
23 an iPhone, it could be whatever you are 09:54:54
24 plugging into these USB devices, now that this 09:54:56

1 whole system is set up to run. One of these 09:54:58
2 things gets plugged in, it's going to have a 09:55:00
3 default routing. 09:55:03
4 Remember, these are controllable 09:55:06
5 by the whole system, but the default is that 09:55:08
6 you have this connection here. Whatever you 09:55:10
7 plug in is going to go to the hub. That's 09:55:12
8 going to go to the hub, that's going to go to 09:55:14
9 the hub. That's where you obviously start. 09:55:16
10 Q. So, Mr. Voto, you mentioned that -- 09:55:18
11 you mentioned the bridge device in this 09:55:21
12 context, and in the slide there in the second 09:55:23
13 bullet point, it talks about a custom driver 09:55:26
14 for the bridge device. 09:55:29
15 What does that mean in the context 09:55:30
16 of Slide 11? 09:55:32
17 A. Right. 09:55:34
18 So we talked about, in that 09:55:35
19 power-up sequence, so the moment when the hub 09:55:41
20 is all set up and this USB Device A is 09:55:44
21 discovered and it has to answer the question 09:55:48
22 to the head unit what are you, it gives it 09:55:51
23 that answer out of this, I'm a vendor class 09:55:53
24 device. 09:55:56

1 Vendor class device is just fancy 09:55:57
2 words for saying I'm a custom -- I'm a custom 09:56:00
3 device. I'm something, you know, unique. So 09:56:05
4 you need to go find a driver. So we have to 09:56:07
5 have a driver preloaded into the head unit 09:56:10
6 that, of course, knows how to communicate with 09:56:14
7 this custom device. That's what it's 09:56:17
8 referring to. 09:56:19
9 Q. And where on the diagram is the 09:56:19
10 bridge device? 09:56:21
11 A. So the bridge -- the bridge device is 09:56:24
12 what we refer to as USB Device A. 09:56:27
13 Q. Now, let's turn to Slide 12, please. 09:56:31
14 It's pretty similar to Slide 11, but not quite 09:56:37
15 the same. 09:56:40
16 MR. WIENER: Actually, Mr. Glass, 09:56:41
17 could you toggle back and forth really quickly 09:56:43
18 so we can see the difference between 11 and 09:56:45
19 12? 11, 12, okay. Let's stay on 12. 09:56:48
20 BY MR. WIENER: 09:56:51
21 Q. Mr. Voto, what's different in Slide 09:56:52
22 12? 09:56:54
23 A. So Slide 12 is the same diagram, and 09:56:55
24 I think you probably picked up on the fact 09:56:59

1 that the iPhone now is no longer directly 09:57:01
2 connected to the hub; it is now connected to 09:57:03
3 this USB Device B. 09:57:06
4 So at this point, this is what 09:57:10
5 happens when you would want to switch to 09:57:13
6 CarPlay mode. So if the iPhone needs to be a 09:57:16
7 host, a host can't connect to a downstream 09:57:19
8 port of a hub because that's not allowed. USB 09:57:24
9 technology doesn't allow that. 09:57:27
10 But USB technology does say a host 09:57:29
11 can connect to a device, so that's exactly 09:57:31
12 what we do here. 09:57:34
13 Q. So we've heard a lot over the last 09:57:36
14 week about how there are USB rules pertaining 09:57:38
15 to one host on a network. How is it possible 09:57:42
16 to have these two hosts communicating with 09:57:44
17 each other on a USB? 09:57:47
18 A. Right. 09:57:52
19 So the reason that you are seeing 09:57:53
20 two hosts and no USB violation is because it's 09:57:58
21 actually two USB networks, it's not one USB 09:58:01
22 network. You have a host here talking to this 09:58:04
23 device. There's nothing at all wrong with 09:58:09
24 that. 09:58:11

1 You have another host here talking 09:58:11
2 to this device. So they are really separate 09:58:13
3 networks, so there is no -- there's no 09:58:17
4 violation of having two hosts in one device. 09:58:19
5 Q. What about that green bridge, is that 09:58:22
6 USB connection right there between the two 09:58:24
7 devices? 09:58:27
8 A. In the middle here? 09:58:28
9 Q. Yeah. 09:58:29
10 A. No. So USB will -- let's say, for 09:58:30
11 example, from the iPhone, this will be USB 09:58:36
12 data, and at the end of the USB data pipe is 09:58:38
13 this USB device controller which then knows 09:58:42
14 how to interpret that data. And then once it 09:58:46
15 has received that data, then you can use it 09:58:49
16 for whatever you want. But it's no longer in 09:58:51
17 USB form; right? 09:58:53
18 So what we've done is we've just 09:58:56
19 said there's this broad data now shooting out 09:58:57
20 the end of this thing and we are just going to 09:59:00
21 pump it over here to this guy, and vice versa. 09:59:02
22 So that's what it's doing, is just taking two, 09:59:05
23 like, you can call them USB decoders or 09:59:08
24 receivers or whatever you want to call them. 09:59:12

1 Once the data gets received, you just send it 09:59:13
2 over to the other USB, and vice versa. 09:59:16
3 Q. And are those two working in concert? 09:59:18
4 A. Well, I mean, in a sense at a very 09:59:20
5 high level, you could say well, they are just 09:59:23
6 ping-ponging data back and forth. So maybe it 09:59:25
7 seems like they are just kind of working 09:59:28
8 together. But in reality, again, you have two 09:59:30
9 USB networks, so data can be going back and 09:59:32
10 forth here. 09:59:35
11 It doesn't mean that there's data 09:59:37
12 going back and forth here. It doesn't mean 09:59:38
13 that whatever is happening in this side is, 09:59:41
14 you know, symmetric with what's happening at 09:59:43
15 this side at any moment in time. 09:59:45
16 Of course, you know, when you send 09:59:47
17 data, it has to go all the way through, so 09:59:49
18 there is a continuation of data through the 09:59:51
19 whole system, but at any moment in time, it 09:59:53
20 doesn't mean that both sides are doing 09:59:58
21 identical things. 10:00:00
22 Q. Does this system allow for data to 10:00:02
23 continue flowing down to that other USB 10:00:07
24 device, that gray box? 10:00:09

1 A. Of course. I mean, that's a given, 10:00:11
2 that whenever we have the iPhone letters in 10:00:14
3 device mode, host mode, it doesn't matter. 10:00:19
4 All these other ports have to work in some 10:00:22
5 case and they do. 10:00:24
6 Q. Can the iPhone, when it is a host in 10:00:25
7 this diagram, can it control those other USB 10:00:27
8 devices? 10:00:29
9 A. It cannot. 10:00:29
10 Q. So the head unit and the iPhone, they 10:00:30
11 are not sharing the USB devices? 10:00:32
12 A. No. 10:00:34
13 Q. Let's -- 10:00:35
14 MR. WIENER: We can take this 10:00:40
15 slide down, Mr. Glass. 10:00:41
16 BY MR. WIENER: 10:00:42
17 Q. I'd like to sort of go back to where 10:00:43
18 you were at the end of your development of the 10:00:45
19 FPGA solution with Jaguar Land Rover. 10:00:47
20 Was it your plan to offer an FPGA 10:00:50
21 solution to other customers once you got that 10:00:53
22 thing to work for Jaguar? 10:00:55
23 A. Well, kind of. I mean, the FPGA 10:00:58
24 solution was pretty good, you know, it was 10:01:02

1 really exciting for us in the fact that we had 10:01:04
2 figured out a way to solve this problem. 10:01:07
3 However, you know, there was some 10:01:10
4 down sides to the design that we came up with, 10:01:12
5 and namely, I think I told you, it used a lot 10:01:15
6 of different parts. You know, each of these 10:01:19
7 parts are chips that you have to put on the 10:01:22
8 board and chips have to have other parts 10:01:23
9 around it so it's kind of clunky, it's kind of 10:01:25
10 big, right? So it wasn't really ideal. 10:01:28
11 Q. So does that mean that it wouldn't be 10:01:31
12 something you could -- well, let me ask it 10:01:35
13 this way. 10:01:37
14 So it wasn't ideal. What was the 10:01:38
15 next step? 10:01:40
16 A. Well, we knew what we wanted, you 10:01:41
17 know, functionally. We knew how to implement 10:01:46
18 it with these FPGAs and other things like 10:01:48
19 that; we just didn't like how big it was. It 10:01:52
20 was kind of expensive, too. 10:01:54
21 So we said well, how do we solve 10:01:56
22 those kinds of problems? We could maybe get a 10:01:58
23 custom chip made that would do exactly what we 10:02:03
24 want it to do. Instead of just buying a bunch 10:02:07

1 of off-the-shelf pieces, what if we made 10:02:09
2 something precisely to what we want? 10:02:12
3 And so we started looking at that 10:02:14
4 option and trying to find suppliers that could 10:02:16
5 do that sort of thing for us. 10:02:18
6 We had already had a supplier that 10:02:20
7 was making chips for our headphones, so we 10:02:22
8 went to talk to them. We said hey, what do 10:02:24
9 you guys think about, you know, trying to make 10:02:27
10 a USB module? And, you know, USB is pretty 10:02:29
11 well-known technology. It's been around for a 10:02:33
12 long time. This bridge thing, while, you 10:02:36
13 know, it needed development, that concept 10:02:39
14 worked. We showed proof of concept. 10:02:42
15 So long story short, we ended up 10:02:45
16 getting a proposal from our current chip 10:02:47
17 supplier to make a custom chip for us that did 10:02:49
18 the hub switching and the bridge function. 10:02:54
19 Q. And was that the AyDeeKay company 10:02:57
20 that we heard Mr. Petku testify about? 10:03:00
21 A. That's correct. 10:03:02
22 Q. Can you describe for the jury what 10:03:03
23 the relative roles were between you at Unwired 10:03:06
24 and AyDeeKay in terms of development of the 10:03:10

1 chip? 10:03:13
2 A. Okay. Sure. 10:03:14
3 So I think the best way to think 10:03:15
4 about it is like just from an analogy view, if 10:03:21
5 you want to build a house, you need an 10:03:27
6 architect. Somebody has to make the high 10:03:30
7 level decision, how many floors, how many 10:03:32
8 rooms, how many bathrooms, you know, just 10:03:34
9 there's so many decisions. You've got to kind 10:03:37
10 of have to set those parameters of what is it 10:03:40
11 that you're really looking for. 10:03:42
12 But we weren't in a position at 10:03:44
13 Unwired -- we knew all that stuff, right, so 10:03:48
14 we wrote it all down; we were the architects, 10:03:51
15 my team was the architect of what to do. But 10:03:53
16 what we didn't have was the capability of 10:03:57
17 designing chips, ourselves. That's a very 10:03:59
18 specialized knowledge. 10:04:02
19 And so that's where we worked with 10:04:03
20 AyDeeKay and said okay, AyDeeKay, I've got 10:04:06
21 some documents to show you, this is what I 10:04:10
22 want you to make for me. Could you please, 10:04:11
23 you know, translate this into an actual chip 10:04:14
24 design for us and get it fabricated and built 10:04:17

1 and provide that to us. 10:04:19
2 Q. Did you pay AyDeeKay to do that work? 10:04:20
3 A. We paid AyDeeKay a lot of money. It 10:04:23
4 was probably in the order of $5 million just 10:04:26
5 to pay them to develop a chip. 10:04:30
6 Q. Did it result in a working chip? 10:04:34
7 A. It did. It did. 10:04:37
8 Q. And is that the Boston 2 chip we've 10:04:38
9 heard about? 10:04:42
10 A. Yes, that's the Boston 2. 10:04:43
11 Q. Why is it called that? You said you 10:04:47
12 are a Michigan man; right? Why is this called 10:04:49
13 the Boston chip? 10:04:52
14 A. Well, every summer, one of the 10:04:53
15 vacations that I would look forward to is when 10:04:55
16 I was in the Boston area, go fishing with my 10:04:57
17 buddies, so I thought it would be fun to call 10:05:00
18 it Boston. 10:05:02
19 Q. When did you start selling the Boston 10:05:04
20 chip? 10:05:06
21 A. I would say -- I mean, okay. So 10:05:08
22 first, just to be clear, we didn't sell the 10:05:12
23 Boston chip to anyone. The Boston chip was 10:05:14
24 developed by my team at Unwired because we 10:05:16

1 wanted to use it in the hub modules that we 10:05:21
2 made, but that first hub module, probably like 10:05:25
3 in the 2015 timeframe. 10:05:30
4 Q. Okay. 10:05:31
5 Did you ever sell the chip by 10:05:32
6 itself? 10:05:35
7 A. No. It was never sold outside of -- 10:05:36
8 outside of Unwired/Aptiv. 10:05:40
9 MR. WIENER: Just give me one 10:05:49
10 second. I have some props. Let me start with 10:05:50
11 this. 10:05:57
12 BY MR. WIENER: 10:06:01
13 Q. You mentioned that you were a module 10:06:02
14 maker and that you developed a module that had 10:06:03
15 the Boston 2 chip in it; right? 10:06:08
16 A. That's correct. 10:06:11
17 Q. And what was the name of the module? 10:06:12
18 Did it have -- sorry, did you have a name that 10:06:16
19 you referred to the module in terms of 10:06:18
20 Unwired? 10:06:22
21 A. The dual role hub. 10:06:22
22 Q. The dual role hub. 10:06:24
23 MR. SHAW: Excuse me, Your Honor, 10:06:28
24 may I see it? 10:06:29

1 MR. WIENER: Sure. 10:06:31
2 THE COURT: Yes. 10:06:32
3 MR. WIENER: May I approach, Your 10:06:36
4 Honor? 10:06:38
5 THE COURT: Yes. 10:06:39
6 (Whereupon, Trial Exhibit 366 was 10:06:39
7 introduced.) 10:06:42
8 BY MR. WIENER: 10:06:42
9 Q. Mr. Voto, I've handed you what's been 10:06:43
10 marked Exhibit 366. Can you identify it, 10:06:46
11 please? 10:06:49
12 A. This is a hub module that uses one of 10:06:52
13 our Boston chips, and you can kind of see some 10:06:57
14 of the things I was trying to describe earlier 10:07:02
15 a few minutes ago. This is the front face 10:07:04
16 that you would see in the car, it's got the 10:07:07
17 USB ports, SD card, those type of things. 10:07:09
18 On the back of it is connectors 10:07:12
19 where it would -- you know, this would be the 10:07:13
20 hidden wiring in the vehicle that goes like to 10:07:16
21 the head unit, the entertainment system. 10:07:18
22 So yeah, they all look a little 10:07:22
23 bit different, because like I said, each 10:07:24
24 customer wants a little bit different contents 10:07:26

1 on it or different styling, but this is 10:07:29
2 generally what we are talking about when you 10:07:31
3 think of media modules. 10:07:33
4 MR. WIENER: Your Honor, I move 10:07:35
5 Exhibit 366 into evidence. 10:07:37
6 MR. SHAW: No objection. 10:07:38
7 THE COURT: All right. It's in. 10:07:39
8 MR. WIENER: That means at the 10:07:41
9 conclusion of the case, the jury will be able 10:07:43
10 to examine it. 10:07:45
11 BY MR. WIENER: 10:07:45
12 Q. How do you know that's a hub that has 10:07:46
13 the Boston chip in it? 10:07:48
14 A. Well, because of the fact that all 10:07:52
15 these different modules have kind of a unique 10:07:54
16 look to them, I can look at this and I know 10:07:58
17 exactly which hub module this is. This would 10:08:00
18 go in the General Motors vehicles and I helped 10:08:05
19 design the module, so I know what's inside of 10:08:07
20 it. 10:08:10
21 Q. You can't see the Boston 2 chip on 10:08:12
22 that one, just -- 10:08:14
23 A. No. 10:08:16
24 Q. Luckily, we have another one. I'm 10:08:16

1 handing you what's been marked Exhibit 365. 10:08:19
2 MR. SHAW: Thank you. 10:08:24
3 (Whereupon, Trial Exhibit 365 was 10:08:24
4 introduced.) 10:08:28
5 BY MR. WIENER: 10:08:28
6 Q. Mr. Voto, can you describe for the 10:08:28
7 jury what Exhibit 365 is? 10:08:30
8 A. So this, if you look at it, it's the 10:08:35
9 same thing, so this is the complete product. 10:08:40
10 This is how it would get shipped and actually 10:08:43
11 installed into the car, you know, attach the 10:08:46
12 cables and plug it into the car, good to go. 10:08:48
13 This is the same thing, but it's 10:08:51
14 kind of taken apart, which kind of gives you a 10:08:53
15 little bit of a deeper sense of what's 10:08:58
16 actually all the mystery that's going on 10:08:59
17 inside of this thing. 10:09:01
18 The first thing you see is we have 10:09:02
19 two plastic pieces; this is what forms the 10:09:04
20 housing of it. Inside of this, you have two 10:09:07
21 circuit boards that we are taking out now. 10:09:12
22 These two circuit boards work together. They 10:09:16
23 have an interconnect that go between them. 10:09:18
24 And now you can start to see where, on the 10:09:21

1 front of this, we have these different 10:09:24
2 connectors. 10:09:26
3 Now we can actually see these 10:09:26
4 connectors on the circuit board, right? These 10:09:28
5 are the USB connectors, the audio connector, 10:09:30
6 this is the connector that goes to the 10:09:34
7 vehicle, you know, that's behind the product 10:09:37
8 here in the back. 10:09:38
9 This is a USB connection that goes 10:09:40
10 back to the entertainment system. This is an 10:09:44
11 SD card connector and you can't see it from 10:09:47
12 there, but there is a ton of little tiny parts 10:09:50
13 all over this, like even right here there is, 10:09:53
14 I don't know, there's probably 50 or 60 parts 10:09:55
15 on the circuit board that are super tiny. 10:09:58
16 And one of the many components in 10:10:01
17 this design is this black square right here 10:10:03
18 which is the actual Boston hub chip. 10:10:08
19 Q. The reason we're all here today. 10:10:12
20 A. That's why. 10:10:15
21 MR. WIENER: Your Honor, I offer 10:10:15
22 Exhibit 365 into evidence. 10:10:18
23 MR. SHAW: No objection. 10:10:19
24 THE COURT: All right. It will 10:10:21

1 come in. 10:10:22
2 MR. WIENER: Your Honor, 10:10:22
3 permission to publish them to the jury so that 10:10:23
4 they can see them as well? 10:10:25
5 THE COURT: Any objection, Mr. 10:10:27
6 Shaw? 10:10:28
7 MR. SHAW: No, Your Honor. 10:10:29
8 THE COURT: Okay. Go ahead. 10:10:30
9 MR. WIENER: I'll do the hand-off. 10:10:33
10 (Whereupon, the exhibits were 10:10:44
11 published to the jury.) 10:10:46
12 BY MR. WIENER: 10:10:51
13 Q. All right. 10:10:52
14 Back to the documents, Mr. Voto. 10:10:53
15 If you could turn to Tab 14 of your binder, 10:10:55
16 please. 10:10:57
17 (Whereupon, Trial Exhibit 14 was 10:10:57
18 introduced.) 10:10:57
19 BY MR. WIENER: 10:10:57
20 Q. What's shown -- what is Exhibit 14? 10:11:04
21 Can you describe it at a high level for the 10:11:07
22 jury, please. 10:11:09
23 A. This is a document that my team wrote 10:11:10
24 at Unwired describing the Host to Host Bridge 10:11:12

1 technical specification. 10:11:15
2 MR. WIENER: Your Honor, I offer 10:11:16
3 Exhibit 14 into evidence. 10:11:17
4 MR. SHAW: No objection. 10:11:18
5 THE COURT: Okay. It can come in. 10:11:20
6 MR. WIENER: Mr. Glass, if you 10:11:21
7 could put the first page on there. 10:11:23
8 BY MR. WIENER: 10:11:24
9 Q. Can you explain what the purpose of 10:11:25
10 this document is to the jury? 10:11:27
11 A. Sure. 10:11:30
12 So as I was saying in some of the 10:11:30
13 previous slides, we were trying to develop our 10:11:35
14 own Host to Host Bridge, and, you know, the 10:11:37
15 specific -- the specifics of it were detailed 10:11:42
16 and we needed to write that down because we 10:11:47
17 needed to come up with that custom programming 10:11:49
18 that we could put into the FPGA to make it do 10:11:52
19 what we needed it to do, and there's actually 10:11:55
20 a lot of work to come up with that 10:11:58
21 programming, so the first step is to break 10:11:59
22 down the requirements. 10:12:01
23 MR. WIENER: Mr. Glass, could you 10:12:02
24 take us to page 4, please. 10:12:04

1 BY MR. WIENER: 10:12:05
2 Q. Mr. Voto, can you describe for the 10:12:06
3 jury what this chart or this diagram on page 4 10:12:08
4 is showing? 10:12:11
5 A. This diagram is similar to what we 10:12:13
6 were showing customers in those previous 10:12:16
7 drawings for the middle section here. It's 10:12:19
8 just got a little bit more detail to it, this 10:12:23
9 is more of an internal engineering 10:12:26
10 specification, but if you see this USB Device 10:12:28
11 A, Device B, those are both of the device 10:12:30
12 controllers inside of the bridge, and then 10:12:35
13 these are the switches down here at the bottom 10:12:37
14 that is allowing it to do different routing 10:12:40
15 between the USB ports and the hub and bridge. 10:12:42
16 Q. So if you could orient the jury and 10:12:46
17 show them where the head unit plugs in on 10:12:48
18 this, I think that would be helpful. 10:12:50
19 A. Okay. Sure. 10:12:52
20 So you're not seeing the whole 10:12:54
21 picture here because this picture is 10:12:55
22 specifically kind of about the bridge, itself, 10:12:57
23 right, just trying to track what's going on in 10:13:01
24 the bridge. 10:13:04

1 But if we back up and look at the 10:13:04
2 whole system, and let's say over here, we have 10:13:06
3 the head unit, the head unit has a data 10:13:08
4 connection, we have the hub right here. One 10:13:11
5 of the downstream ports of the plug would be 10:13:14
6 plugging in here as you would see Device A. 10:13:16
7 Q. Now, at the top it says, "FPGA." 10:13:19
8 Does that mean that this is just a diagram of 10:13:23
9 how the FPGA implementation works and there is 10:13:25
10 a different diagram somewhere for the chip 10:13:30
11 version? 10:13:32
12 A. No, it's the same diagram. Just 10:13:32
13 think about the sequence of events was we 10:13:35
14 first had to tackle Jaguar's problem and we 10:13:38
15 needed to do it quickly, we used FPGA, so the 10:13:41
16 first order of business was to get that done. 10:13:46
17 And then we made working 10:13:48
18 prototypes and then we said okay, how can we 10:13:51
19 make it smaller, cheaper, that sort of thing. 10:13:54
20 That's when we took the exact same concept, 10:13:57
21 because we already knew it worked, and tried 10:13:59
22 to put it into the chip. So at the end of the 10:14:00
23 day, it is the same thing in both the FPGA and 10:14:02
24 the chip. 10:14:05

1 Q. So this diagram on page 4 of 10:14:06
2 Exhibit 14 also describes how the bridge 10:14:10
3 functionality in the Boston chip works as 10:14:12
4 well? 10:14:15
5 A. Correct. 10:14:15
6 Q. Okay. 10:14:16
7 Mr. Voto, if you could turn to 10:14:17
8 Tab 16 in your binder, please. 10:14:19
9 (Whereupon, Trial Exhibit 16 was 10:14:19
10 introduced.) 10:14:19
11 BY MR. WIENER: 10:14:19
12 Q. When you get there, if you could 10:14:24
13 provide a high level description of what that 10:14:28
14 document is to the jury. 10:14:29
15 A. Yeah. This is what we call the 10:14:31
16 Boston data sheet. This is describing the 10:14:33
17 technical requirements or the features of the 10:14:36
18 Boston chip. 10:14:40
19 MR. WIENER: Your Honor, I offer 10:14:41
20 Exhibit 16 into evidence. 10:14:44
21 MR. SHAW: No objection. 10:14:45
22 THE COURT: All right. It will 10:14:46
23 come in. 10:14:47
24 MR. WIENER: Mr. Glass, if you 10:14:48

1 could put this up. And, Mr. Glass, if you 10:14:49
2 could turn to page 18 of Exhibit 16, please. 10:14:54
3 BY MR. WIENER: 10:14:57
4 Q. Now, Mr. Voto, here on page 18, we 10:14:58
5 have another diagram that looks a little 10:15:01
6 different from the block diagrams we have been 10:15:03
7 looking at so far. 10:15:05
8 Can you explain to the jury what 10:15:06
9 this diagram on page 18 is showing? 10:15:08
10 A. Sure. 10:15:11
11 So to put this into context, this 10:15:12
12 is page 18 out of 150. This is a huge 10:15:15
13 document that describes like every little 10:15:18
14 detail that we can think of about how the 10:15:20
15 Boston chip, itself, needs to be designed and 10:15:22
16 work. 10:15:25
17 So in the midst of all that 10:15:25
18 detail, it's nice to start with kind of a 10:15:28
19 let's go high level, like what does this thing 10:15:31
20 look like at the top level. What are we 10:15:33
21 dealing with here. 10:15:34
22 And so this diagram is, in 10:15:35
23 essence, it's like a cartoon of what the chip 10:15:40
24 is actually going to be. It represents the 10:15:42

1 chip, itself. So around the perimeter, you 10:15:45
2 can see this little tiny square, each of them 10:15:48
3 has words next to it. Those are the signals 10:15:51
4 that flow in and out of the chip. They all 10:15:53
5 have a name, they all have a purpose, they all 10:15:55
6 have a function. 10:15:57
7 And then inside the box, these -- 10:15:58
8 each of these little boxes represent some sort 10:16:02
9 of a function, some sort of a subsystem, if 10:16:04
10 you will, that does something. They all have 10:16:09
11 to work together, all that stuff works 10:16:11
12 together to make the overall chip function. 10:16:14
13 Q. And is there a portion of this 10:16:16
14 diagram that relates specifically to this 10:16:18
15 host-to-host bridging functionality we have 10:16:20
16 been talking about? 10:16:22
17 A. Yes. So specifically we see this box 10:16:24
18 down here that says, "H2H controller." That's 10:16:28
19 what we had to add, you know, largely on top 10:16:32
20 of everything else that the hub already did to 10:16:36
21 make the bridge function work. 10:16:38
22 MR. WIENER: Mr. Glass, if you can 10:16:41
23 zoom back out, please. 10:16:42
24 BY MR. WIENER: 10:16:44

1 Q. Now, this diagram, is this to scale 10:16:44
2 from, like, a physical perspective? 10:16:48
3 A. No, no. It's -- again, you can kind 10:16:49
4 of think of it as from -- from a top down 10:16:54
5 view, high level, like what are all the 10:16:58
6 different bits and pieces that go into this 10:17:01
7 chip. If you have to design the chip, you've 10:17:03
8 got to deal with every one of those things, 10:17:05
9 but I think it's also fair to say that the 10:17:07
10 boxes aren't all the same size because 10:17:10
11 somebody that created this diagram realized, 10:17:12
12 there's a heck of a lot of digital logic, 10:17:14
13 there is a whole lot of USB-to-hub logic and 10:17:17
14 many, many other little bits and pieces it 10:17:20
15 takes. 10:17:22
16 So kind of -- maybe by chance, it 10:17:23
17 sort of does somewhat compare in terms of the 10:17:26
18 complexity and how it's shown here. 10:17:29
19 Q. And are all of the components shown 10:17:31
20 on this page, are they all involved when -- or 10:17:34
21 necessary for using the hub in CarPlay mode? 10:17:38
22 A. No, they're not. 10:17:41
23 Q. Mr. Voto, from start to finish, how 10:17:50
24 long did it take Unwired to develop the Boston 10:17:53

1 2 chip? 10:17:56
2 A. Well, we had already been working 10:17:57
3 kind of with Jaguar for a while, but then when 10:18:02
4 we started trying to develop the chip, itself, 10:18:04
5 that was probably a couple years before we 10:18:08
6 had, like, something that worked well enough 10:18:10
7 and had been tested thoroughly enough to put 10:18:12
8 it in a product and sell it. 10:18:14
9 Q. And how many people from Unwired 10:18:16
10 worked on this project to develop the Boston 10:18:18
11 chip? 10:18:20
12 A. I mean, for the initial development, 10:18:22
13 probably, you know, rough guess, probably 10:18:24
14 around 10 guys, 10 people. 10:18:27
15 Q. And all told, how much did Unwired 10:18:29
16 invest to develop this chip? 10:18:31
17 A. We paid -- the contract with AyDeeKay 10:18:36
18 was for about $5 million and we worked on this 10:18:40
19 for those two years with 10 people, a lot of 10:18:44
20 outside testing. I don't have really a 10:18:47
21 precise number for you, but I am going to 10:18:49
22 ballpark it, like $10 million. 10:18:51
23 Q. How would you characterize an 10:18:52
24 investment of around $10 million for a company 10:18:55

1 like Unwired at the time that it made that 10:18:58
2 investment? 10:19:00
3 A. I mean, it was enormous, like we were 10:19:02
4 working at a little company. We made 10:19:06
5 headphones, you know. We made $10 products 10:19:08
6 that go in cars. We made a lot of them, but 10:19:12
7 this was unprecedented for us. We didn't have 10:19:16
8 $10 million to just throw around and hope it 10:19:21
9 worked, you know. So this was a huge -- this 10:19:24
10 was a big deal. 10:19:26
11 MR. WIENER: Mr. Glass, if we can 10:19:30
12 go back to the first page of this exhibit. 10:19:31
13 BY MR. WIENER: 10:19:36
14 Q. Mr. Voto, when Unwired invested the 10:19:37
15 money to develop the Boston 2 chip, were there 10:19:40
16 any risks associated with that investment? 10:19:44
17 A. Besides the fact that it might not 10:19:47
18 work? 10:19:49
19 Q. Yeah, besides the elephant in the 10:19:50
20 room, other risks? 10:19:52
21 A. Yeah. So, I mean, all joking aside, 10:19:54
22 it was -- it was -- it was super exciting and 10:19:57
23 super scary at the same time. We thought hey, 10:20:01
24 man, this is so cool. We figured out how to 10:20:04

1 solve this problem in a unique way. All we 10:20:07
2 have to do is crack this nut on figuring out 10:20:10
3 how to do it small enough so I can use it on 10:20:13
4 all these other customer programs. 10:20:15
5 It turned out to be a pretty hard 10:20:17
6 problem, you know. We were a module maker, so 10:20:20
7 working with some other company to make a chip 10:20:23
8 and make it meet all the requirements was 10:20:25
9 pretty tough. 10:20:28
10 And along the way, even though we 10:20:30
11 were getting positive feedback of, you know, 10:20:32
12 we built something, we tested, you know, it's 10:20:35
13 got some problems, but we're moving in the 10:20:37
14 right direction, there was always a risk that 10:20:39
15 some requirement could change. What if Apple 10:20:42
16 changed their mind about what they would 10:20:45
17 accept? 10:20:46
18 Q. Looking at Exhibit 16 towards the top 10:20:50
19 of the document, the first feature that's 10:20:54
20 listed underneath features, it says, "USB 2.0 10:20:59
21 - Compliant," and there is a footnote. 10:21:04
22 MR. WIENER: And, Mr. Glass, if we 10:21:06
23 could zoom back out and take a look at that 10:21:07
24 footnote at the bottom of the page. Just 10:21:10

1 above that. 10:21:12
2 There we go. Perfect. Nope, we 10:21:12
3 were close. If we could zoom in. Thanks. 10:21:16
4 BY MR. WIENER: 10:21:18
5 Q. So this is the footnote, "With the 10:21:18
6 exception of suspend current." 10:21:20
7 Does suspending current have 10:21:22
8 anything to do with CarPlay? 10:21:23
9 A. No. 10:21:25
10 MR. WIENER: Let's zoom back out 10:21:26
11 and go back to that top requirement, the main 10:21:28
12 features, Mr. Glass. Perfect. 10:21:30
13 BY MR. WIENER: 10:21:32
14 Q. "Main Features: USB 2.0 - Compliant 10:21:33
15 HUB operation." Can you explain to the jury 10:21:37
16 what that means? 10:21:37
17 A. Well, USB 2.0 is a version of USB we 10:21:40
18 had for a long time. We can call it USB high 10:21:50
19 speed, but it is a very complex specification. 10:21:55
20 I mean, you wouldn't even fit it in this 10:21:59
21 binder hardly. It is massively complex. 10:22:02
22 So we wanted to make sure that 10:22:05
23 AyDeeKay understood -- remember, we are the 10:22:08
24 architect, so we are like hey, when we get 10:22:11

1 this thing done, it better actually work with 10:22:14
2 all USB. It needs to follow all the USB 10:22:17
3 guidelines, all the USB regulations and, you 10:22:20
4 know, even get certified through the USB 10:22:24
5 standards. 10:22:30
6 Q. You mentioned get certified with the 10:22:30
7 USB standards. Can you tell the jury a little 10:22:32
8 bit about that process? 10:22:38
9 A. Think about all the different USB 10:22:39
10 products you've seen in your life. There's so 10:22:40
11 many companies making chips and modules and 10:22:43
12 products that all use USB technology. And we 10:22:45
13 all hope that they all work together right. 10:22:49
14 We expect it. 10:22:53
15 It doesn't mean that's always the 10:22:55
16 case, though. There is plenty of examples 10:22:56
17 where stuff doesn't seem to be compatible with 10:22:59
18 each other. 10:23:01
19 And the USB organization, 10:23:03
20 themselves, try to safeguard against that 10:23:06
21 happening and they set up a certification 10:23:10
22 program, so they said for anyone that's, you 10:23:11
23 know, serious about doing USB products, that 10:23:14
24 you want to know that your -- the quality of 10:23:17

1 your product is, you know, to the highest 10:23:20
2 level. Send your product through our 10:23:22
3 certification lab. 10:23:26
4 The USB certification lab, this is 10:23:27
5 an independent third-party kind of testing, 10:23:31
6 right, so only the USB is the one that's 10:23:33
7 prescribing how to test it and who is 10:23:35
8 qualified to test it. 10:23:38
9 So that's -- that's really the 10:23:39
10 gold standard when you want to say, you know, 10:23:41
11 something is or it is not compliant to the USB 10:23:44
12 standard. You can't really -- shouldn't 10:23:46
13 really make those claims yourself unless 10:23:49
14 you've taken your product and sent it to one 10:23:51
15 of these qualified labs and they independently 10:23:53
16 said yep, that looks good. 10:23:57
17 Q. Did you submit the Boston 2 for 10:23:58
18 certification to one of these labs? 10:24:00
19 A. We did. 10:24:01
20 Q. Did it pass? 10:24:02
21 A. It did. 10:24:03
22 Q. How about the dual role hub as a 10:24:03
23 whole, did you submit that to one of these 10:24:06
24 labs for USB certification? 10:24:07

1 A. Yeah. So expectation of our 10:24:09
2 customers and Apple was that all of our chips, 10:24:11
3 all of our modules were USB certified. So we 10:24:16
4 had to do that and we did. 10:24:19
5 Q. Now, you mentioned that it mattered 10:24:21
6 to Apple. Why did it matter to Apple? 10:24:23
7 A. So Apple -- Apple has its own 10:24:27
8 business interests and its own complex story, 10:24:34
9 but Apple basically was doing more and more 10:24:37
10 trying to integrate the iPhones in particular 10:24:41
11 into the cars. 10:24:44
12 They were doing this CarPlay thing 10:24:45
13 now. Even before CarPlay, you could stream 10:24:47
14 music over USB from your iPhone into the car 10:24:49
15 if your head unit supported it and all this 10:24:53
16 stuff. 10:24:55
17 So Apple is smart, you know. They 10:24:56
18 are always on the lookout to avoid anything 10:25:00
19 that makes Apple look bad, right? They don't 10:25:03
20 want to have accessories, Apple accessories, 10:25:06
21 that don't work well because the consumer gets 10:25:09
22 confused. They are like well, is this crappy 10:25:13
23 Apple product why my boom box doesn't work or 10:25:16
24 whatever? All right. We are just not even 10:25:19

1 going there, right. 10:25:21
2 So if you want to make an 10:25:22
3 accessory for an Apple product, you need 10:25:24
4 Apple's permission. And Apple is going to 10:25:26
5 say, and we are not going to make it easy on 10:25:29
6 you either. Particularly for USB products. 10:25:31
7 The first thing they ask, is everything in 10:25:34
8 your system, in this brand new system that, 10:25:36
9 let's say, Ford wants to launch or any OEM, is 10:25:39
10 every single component in it USB certified? 10:25:43
11 If they are not, go back and get that before 10:25:46
12 you start talking to me about whether or not 10:25:49
13 your system is approved by Apple. 10:25:50
14 Q. So could you submit the Boston 2 chip 10:25:52
15 by itself to Apple for certification or 10:25:55
16 approval? 10:25:57
17 A. No. So Apple wouldn't even have 10:25:57
18 looked at that, you know. Apple is not 10:26:00
19 interested in even really talking to component 10:26:02
20 suppliers that much. Their main interest, and 10:26:08
21 to keep things simple from their perspective, 10:26:11
22 is they want a relationship with car 10:26:14
23 manufacturers. 10:26:16
24 So Apple wants to talk to GM and 10:26:16

1 say hey, GM, what are you working on? What's 10:26:20
2 your new Cadillac that's going to come out in 10:26:23
3 a couple years? Can you give me a prototype, 10:26:27
4 give me a sneak peek on what you guys are 10:26:31
5 working on? Because here at Apple, we want to 10:26:33
6 make sure that it's all working smoothly and 10:26:35
7 to Apple's expectation. 10:26:37
8 So at the end of the day, it's 10:26:39
9 either their car manufacturers or their 10:26:41
10 representative that's submitting complete 10:26:43
11 systems to Apple, not bits and pieces like a 10:26:45
12 hub module. 10:26:47
13 Q. Did Apple ever approve Unwired's 10:26:48
14 host-to-host bridge solution for CarPlay in 10:26:52
15 any vehicle systems? 10:26:55
16 A. It got approved as part of a bigger 10:26:57
17 system. 10:26:59
18 Q. And when was the first time it got 10:26:59
19 that approval? 10:27:01
20 A. Around about 2015. 10:27:03
21 Q. Did you learn ahead of time from 10:27:06
22 Apple that they were going to approve the 10:27:08
23 system with your product in it? 10:27:10
24 A. No. 10:27:11

1 Q. Mr. Voto, there's been a suggestion 10:27:13
2 by Microchip that you received inside 10:27:16
3 information about Apple's -- about Apple's 10:27:18
4 specifications and what they would and would 10:27:23
5 not accept. 10:27:24
6 Did you get any information you 10:27:26
7 shouldn't have about Apple's requirements in 10:27:28
8 connection with developing this product? 10:27:31
9 A. No, no. So let me be clear. I don't 10:27:33
10 know where that's coming from, but the -- 10:27:38
11 here's how it works -- how it worked in this 10:27:42
12 case. And it's just all normal stuff. 10:27:44
13 Apple and Jaguar are talking to 10:27:50
14 each other and they're saying hey, you know, 10:27:53
15 we are going to have this new CarPlay thing. 10:27:55
16 Jaguar, here are some of the requirements, 10:27:58
17 right, this is what you have to do to make it 10:28:00
18 work. 10:28:01
19 And Jaguar is probably going 10:28:02
20 great, that sounds good. I would love to 10:28:03
21 support the latest consumer tech in a car. 10:28:05
22 Then Jaguar would turn around and 10:28:08
23 start thinking about, okay, which of these 10:28:11
24 different requirements of this do I need to 10:28:13

1 give to our supplier, you know, because our 10:28:16
2 suppliers have to make all the parts. The 10:28:20
3 suppliers have to make the hub module. And 10:28:22
4 the suppliers have to use chips and these 10:28:25
5 chips have to be able to do these things, too. 10:28:27
6 So that's how we found out, is 10:28:29
7 really because of the fact that we had earned 10:28:31
8 that business with Jaguar and we were in the 10:28:35
9 middle of developing it, at the same time that 10:28:37
10 Jaguar was talking to Apple, it just became, 10:28:40
11 you know, natural for Jaguar to start feeding 10:28:44
12 us some of these requirements. 10:28:48
13 Q. Did you ever meet with Apple to try 10:28:50
14 to learn if they would approve your solution 10:28:53
15 before it was approved as part of a vehicle 10:28:55
16 solution in 2015? 10:28:57
17 A. Yes, we did. 10:28:58
18 Q. Did they tell you at that meeting 10:29:00
19 whether they would be approving it? 10:29:02
20 A. No, they didn't. 10:29:04
21 Q. Mr. Voto, can you turn to Exhibit 12 10:29:05
22 of your binder, please. 10:29:07
23 (Whereupon, Trial Exhibit 12 was 10:29:07
24 introduced.) 10:29:07

1 BY MR. WIENER: 10:29:07
2 Q. Can you provide a high level 10:29:13
3 description of what that document is to the 10:29:15
4 jury? 10:29:16
5 A. This is a presentation that we put 10:29:18
6 together to show Apple what we were doing and 10:29:20
7 to try to solicit feedback from Apple. 10:29:26
8 MR. WIENER: Your Honor, I offer 10:29:28
9 Exhibit 12 into evidence. 10:29:31
10 MR. SHAW: No objection. 10:29:32
11 THE COURT: All right. It will 10:29:33
12 come in. 10:29:34
13 MR. WIENER: Mr. Glass, please put 10:29:35
14 it on the front. 10:29:37
15 BY MR. WIENER: 10:29:38
16 Q. So to set the stage in the time, this 10:29:41
17 is November 10th of 2014; is that right? 10:29:43
18 A. Yes. 10:29:46
19 Q. So by November of 2014, you had 10:29:46
20 developed -- did you have a chip that you had 10:29:50
21 tested and it worked? 10:29:52
22 A. Yes. 10:29:54
23 Q. Okay. 10:29:54
24 And you were meeting with Apple. 10:29:55

1 Had you been selected by any of the car 10:29:59
2 companies at this point? 10:30:01
3 A. Yes, we had. 10:30:03
4 Q. Okay. 10:30:04
5 And so you put this presentation 10:30:06
6 together, and what were you -- what was the 10:30:08
7 purpose of the presentation? 10:30:10
8 A. It was kind of twofold. The first 10:30:14
9 was we had been developing this technology now 10:30:20
10 since 2012, 2013, something like that, you 10:30:22
11 know, so a couple years, never having had 10:30:26
12 really direct anything from Apple. 10:30:31
13 It was understood that we needed 10:30:36
14 to meet the requirements on kind of what 10:30:38
15 Jaguar was telling us. It was understood that 10:30:40
16 we needed working systems. It was understood 10:30:43
17 that Jaguar was happy with what we had done 10:30:46
18 thus far. 10:30:49
19 But it would be so much more 10:30:50
20 satisfying for us, because again, this whole 10:30:52
21 thing represents a big risk for Unwired being 10:30:54
22 a small company. It would be so much more 10:30:57
23 satisfying if we can hear back from Apple that 10:30:59
24 hey, we are telling you exactly what we are 10:31:03

1 doing. We are laying it all out there for 10:31:05
2 you, Apple. Could you please tell me this is 10:31:07
3 okay. 10:31:09
4 Because we don't know, Apple can 10:31:10
5 change their mind about anything at any moment 10:31:12
6 in time. They could just swipe this whole 10:31:13
7 thing away and we would be totally gone. So 10:31:16
8 that's what we were doing and that's what the 10:31:21
9 presentation was for. 10:31:22
10 Q. So did you explain to Apple how your 10:31:23
11 dual role hub in the Boston 2 chip worked? 10:31:26
12 A. Yes. 10:31:29
13 MR. WIENER: Mr. Glass, if we 10:31:30
14 could go to Slide 4. This is the last one of 10:31:31
15 these you'll see from me today. 10:31:35
16 BY MR. WIENER: 10:31:37
17 Q. Can you explain to the jury what this 10:31:38
18 is? 10:31:40
19 A. Sure. 10:31:40
20 I hope at this point we can go 10:31:40
21 really fast, right? This is like the fourth 10:31:42
22 time I think we've looked at this. But it's a 10:31:44
23 safeguard, like if we wanted to have Apple 10:31:47
24 understand. Of course there is a head unit, 10:31:52

1 it has a single link connection to a two-wired 10:31:53
2 chip. Our chip has the hub, has the bridge, 10:31:56
3 it has the routing device, it has the consumer 10:31:59
4 device ports on the right. 10:32:01
5 MR. WIENER: And if we could go to 10:32:04
6 the last page of the exhibit, Mr. Glass. 10:32:05
7 BY MR. WIENER: 10:32:07
8 Q. What's shown on this slide? 10:32:08
9 A. So after walking through -- we 10:32:10
10 skipped over a bunch of pages, right, but 10:32:12
11 after walking through all this, you know, hey, 10:32:14
12 Apple engineers, I want you to understand, you 10:32:16
13 know, how it all works and kind of like the 10:32:18
14 bits and pieces, talk about the technical. 10:32:22
15 Before we walked away from this 10:32:25
16 meeting with Apple, we thought we should 10:32:27
17 really make sure that they understand, like, 10:32:30
18 who we are because they probably didn't even 10:32:33
19 know who Unwired was, at least their engineers 10:32:35
20 probably wouldn't have really known much about 10:32:38
21 us. 10:32:41
22 So we put this slide together just 10:32:41
23 as -- so by the way, we have a chip that we 10:32:44
24 just have been talking about. It's going -- 10:32:48

1 this bridge concept is going into this JLR 10:32:51
2 project, right? 10:32:56
3 Q. That's Jaguar? 10:32:57
4 A. Jaguar, yeah, JLR, Jaguar Land Rover. 10:32:58
5 The second is we have our own 10:33:04
6 custom chip in development. It's gone through 10:33:06
7 some revisions, it's going to have more, but 10:33:09
8 it's working. We are going to get it cleaned 10:33:11
9 up and ready for production and it is going to 10:33:13
10 go into awarded programs that we already have 10:33:16
11 from GM, Ford and Chrysler. So you can see 10:33:18
12 down here, five million vehicles. 10:33:21
13 We are basically telling Apple 10:33:23
14 hey, guys, if there's something wrong with 10:33:27
15 this, you need to like raise your hand now 10:33:29
16 because this is going to be in a lot of cars 10:33:32
17 where there is going to be a lot of heartache 10:33:34
18 about what's wrong with it. 10:33:36
19 Q. Did they give you the satisfaction of 10:33:38
20 letting you know they would approve this? 10:33:39
21 A. Man, I was really hoping they would 10:33:41
22 say this looks great, no problem, but we 10:33:43
23 didn't get that answer. The answer we got was 10:33:45
24 yeah, this looks fine, but please understand 10:33:48

1 that, you know, Apple's policy is we write 10:33:52
2 requirements. We publish those requirements 10:33:57
3 in places for you and your competitors to ask 10:33:59
4 us and you have to follow the same sort of 10:34:04
5 issues as anyone else. 10:34:07
6 I mean, the good news is they 10:34:09
7 didn't look at what we said -- look at what we 10:34:10
8 were proposing and say whoa. But at the same 10:34:13
9 time, they were making no guarantees that it 10:34:16
10 was going to be acceptable to Apple. We had 10:34:18
11 to follow the same certification process as 10:34:21
12 everyone else. 10:34:23
13 MR. WIENER: Your Honor, I am 10:34:25
14 probably at a good breaking point now, if it 10:34:26
15 would be a good time to take a morning break? 10:34:28
16 THE COURT: Okay. 10:34:31
17 Sounds good to me. So why don't 10:34:31
18 we take 5 to 10 minutes, plan to be back here 10:34:33
19 at quarter of, okay? 10:34:36
20 (Whereupon, the jury was excused 10:34:39
21 from the courtroom.) 10:34:41
22 THE COURT: Okay. 10 minutes be 10:35:04
23 back. Thanks, everyone. 10:35:06
24 (Whereupon, a 10-minute recess was 10:35:08

1 taken at 10:35 a.m.) 10:35:11
2 THE COURT CLERK: All rise. 10:45:32
3 THE COURT: All right. You may be 10:45:41
4 seated. 10:45:44
5 Please bring the jury back in. 10:45:45
6 (Whereupon, the jury entered the 10:45:47
7 courtroom.) 10:45:49
8 THE COURT: All right. You can 10:46:55
9 all be seated. 10:46:57
10 Mr. Wiener, proceed. 10:46:59
11 BY MR. WIENER: 10:47:01
12 Q. Mr. Voto, at the beginning of your 10:47:02
13 testimony this morning, you said you were here 10:47:03
14 to talk to the jury because Microchip was 10:47:04
15 accusing the Boston 2 chip you developed of 10:47:07
16 infringement; you wanted to tell the story how 10:47:11
17 you developed that product. You have done 10:47:14
18 that. 10:47:17
19 And now I want to focus on when 10:47:17
20 you learned from Microchip that they were 10:47:19
21 accusing you of patent infringement. 10:47:20
22 When did you first learn that 10:47:23
23 Microchip thought Aptiv infringed its patents? 10:47:24
24 A. In January of 2015, I received a 10:47:29

1 letter from Microchip. 10:47:32
2 MR. WIENER: Mr. Glass, can you 10:47:35
3 put up Exhibit 9 that's already in evidence. 10:47:37
4 BY MR. WIENER: 10:47:40
5 Q. Mr. Voto, is this the letter you 10:47:41
6 received? 10:47:42
7 MR. WIENER: If we can just zoom 10:47:46
8 out, Mr. Glass, it is just a one-pager. 10:47:48
9 Thanks. 10:47:50
10 THE WITNESS: Yes, this is the 10:47:51
11 letter I received. 10:47:52
12 MR. WIENER: Okay. 10:47:53
13 BY MR. WIENER: 10:47:53
14 Q. What do you remember about getting 10:47:56
15 the letter? 10:47:57
16 A. Being stunned, shocked even that 10:47:58
17 after everything we had gone through to 10:48:06
18 develop this new technology, that I was being 10:48:08
19 accused of stealing somebody else's ideas. 10:48:10
20 Q. What did you do when you got the 10:48:13
21 letter? 10:48:16
22 A. I mean, the first thing I did is 10:48:17
23 shared it with my boss and made sure that 10:48:20
24 management was aware of it. This was pretty 10:48:23

1 big news. 10:48:26
2 Secondly, I started looking at 10:48:27
3 these patents, because there was two patents 10:48:33
4 listed in this letter, which I can -- you 10:48:36
5 know, anyone can access freely. I started 10:48:39
6 studying those, together with my co-worker, 10:48:42
7 Craig Petku. 10:48:47
8 Both of us were trying to 10:48:48
9 understand how could we be infringing on these 10:48:49
10 patents; it's not explained in the letter. So 10:48:52
11 we were trying to understand where this was 10:48:55
12 coming from. 10:48:57
13 Q. And what did you do as part of that 10:48:59
14 investigation? 10:49:02
15 A. Well, you know, it kind of comes down 10:49:04
16 to reading the patents, the numbers that are 10:49:07
17 listed here, you read through those patents 10:49:12
18 very carefully, you read through all the 10:49:14
19 claims, try to understand what the meaning is 10:49:17
20 of all the claims and, you know, so whether or 10:49:19
21 not at the end of the day, are we doing 10:49:24
22 something inside of our hub chip, which Craig 10:49:27
23 and I obviously knew very well because we 10:49:30
24 developed it. 10:49:32

1 And we said okay, how -- how 10:49:35
2 could -- knowing what we know about how our 10:49:37
3 chip works, what is it that we might have done 10:49:40
4 that would have used some of what's in these 10:49:43
5 patents? And we looked hard for it. I mean, 10:49:46
6 just couldn't find it. 10:49:50
7 Q. And did you -- so you came to a 10:49:52
8 conclusion as to whether or not you were 10:49:55
9 using -- let me strike that. 10:49:59
10 You came to a conclusion as to 10:50:00
11 whether or not any of those claims in those 10:50:02
12 patents covered something you were doing? 10:50:04
13 A. Well, let's put it this way. We were 10:50:08
14 trying to see how anything could be construed 10:50:11
15 that we were violating these patents, and we 10:50:13
16 couldn't find it. 10:50:16
17 Q. Okay. 10:50:17
18 Why did you find -- or why did you 10:50:18
19 determine that that was the case? 10:50:21
20 A. Well, you know, at the danger of 10:50:23
21 oversimplifying it, these two patents that are 10:50:27
22 listed, what I remember about them is -- just 10:50:31
23 as you can see by the data here, but those two 10:50:37
24 patents, from my recollection, are largely 10:50:43

1 about multi-host systems with shared USB 10:50:47
2 devices or functions like printers, for 10:50:56
3 example. So that was something I remember 10:50:59
4 from the patents. 10:51:01
5 And if you think about a system 10:51:02
6 like that where maybe there is two computers 10:51:04
7 hooked to a printer, each has an active data 10:51:07
8 path to the printer, and the idea being, you 10:51:11
9 know, it would be kind of neat if you have 10:51:19
10 multiple computers hooked to one device like a 10:51:21
11 printer, and you could kind of very quickly 10:51:24
12 alternate access between being able to print 10:51:27
13 different documents; like if I wanted to print 10:51:30
14 a document and you wanted to print a document, 10:51:32
15 the printer can't print two things at one 10:51:35
16 time, but we both could have a connection to 10:51:37
17 the printer and the printer can then decide 10:51:39
18 with some controller logic how to kind of take 10:51:42
19 turns, you know, that sort of thing. That's 10:51:45
20 really what their invention was about. 10:51:47
21 We didn't do that, though. I 10:51:49
22 mean, I think that's the important 10:51:51
23 distinction, is when I look at the way both 10:51:53
24 the bridge and the hub and the switches and 10:51:59

1 all of that stuff inside of our chip work 10:52:01
2 together, we don't have two different hosts 10:52:04
3 trying to share some sort of a device. 10:52:06
4 Q. During your time at Aptiv, did you 10:52:09
5 believe, at any point, the dual role hub or 10:52:11
6 the Boston 2 chip infringed the Microchip '243 10:52:15
7 Patent? 10:52:19
8 A. No. 10:52:19
9 Q. Okay. 10:52:20
10 Did you ever ask Microchip to 10:52:21
11 explain why it thought Aptiv was infringing 10:52:23
12 its patent? 10:52:26
13 A. Sure. 10:52:28
14 Q. Can you tell us a little bit about 10:52:30
15 that? 10:52:32
16 A. So as I explained, we looked at these 10:52:33
17 patents over and over again very hard, 10:52:38
18 couldn't really connect the dots to what they 10:52:41
19 were claiming. That was in like January, 10:52:44
20 February of 2015. 10:52:48
21 Later in that same year, we had a 10:52:50
22 face-to-face meeting with Microchip. I think 10:52:52
23 it was, to my recollection, it was the first 10:52:57
24 actual meeting we had had since this letter 10:52:59

1 from many, many months ago. And part of that 10:53:02
2 discussion was okay, we knew that they think 10:53:07
3 we were violating the patents, but we really 10:53:11
4 didn't understand why, and asked, you know, 10:53:15
5 can we get a clear explanation? Where -- how 10:53:16
6 do you justify -- I'm sorry, what is it -- 10:53:20
7 what claim, what specific thing are we doing 10:53:23
8 inside of our chip that's violating the 10:53:26
9 patent? But we didn't get a clear answer. 10:53:29
10 Q. Was there a face-to-face meeting that 10:53:31
11 you had with them where this came out? 10:53:35
12 A. That's what I'm referring to, yeah. 10:53:37
13 Q. Okay. 10:53:38
14 And when did this meeting happen? 10:53:39
15 A. It was like October/November of 2015. 10:53:41
16 Q. Okay. 10:53:43
17 And who was at that meeting from 10:53:44
18 Microchip? 10:53:46
19 A. Gosh, Mitch Obolsky was there, I 10:53:47
20 think a couple other Microchip plaintiffs were 10:53:54
21 there. 10:53:56
22 Q. And how about from Aptiv's side, who 10:54:00
23 was there from Aptiv? 10:54:03
24 A. On the Aptiv side, it would have been 10:54:03

1 Craig Petku, myself, my bosses, Stephanie 10:54:06
2 Pennell and I believe Mike Dreon. 10:54:12
3 Q. Before we get into what happened at 10:54:16
4 the meeting, just earlier you were testifying 10:54:17
5 when you said you had looked at the patents 10:54:19
6 and you couldn't connect the dots. What do 10:54:22
7 you mean, you couldn't connect the dots? 10:54:24
8 A. I mean that I couldn't find any part 10:54:26
9 of our Boston chip that used any part of their 10:54:33
10 patented technology. 10:54:39
11 Q. Okay. 10:54:41
12 So we're in this meeting between 10:54:41
13 you and Mitch Obolsky and other people from 10:54:43
14 your group and their group. What was the 10:54:47
15 meeting set up to talk about? What was the 10:54:50
16 purpose of this meeting? 10:54:52
17 A. If I'm not mistaken, I think 10:54:54
18 Microchip wanted to come in and talk to us, 10:54:57
19 since we hadn't done a lot of talking for many 10:55:01
20 months, you know, past this letter that kind 10:55:04
21 of chilled the relationship pretty 10:55:06
22 significantly. 10:55:08
23 They came in, and I'm recalling 10:55:12
24 that the intention I think from their side was 10:55:15

1 maybe to be more -- less threatening and more 10:55:18
2 hey, I want you to know, Rob, that, you know, 10:55:23
3 we have been developing some new chips, too. 10:55:30
4 We think these new chips would be very 10:55:32
5 interesting to you. In fact, we think that it 10:55:34
6 would make a lot of sense for both sides if 10:55:37
7 you just stopped using your own hub chip and 10:55:39
8 started using these brand new Microchip hubs 10:55:42
9 instead. 10:55:47
10 Q. And what did you say to Mr. Obolsky 10:55:47
11 about that? Did you take him up on that? 10:55:49
12 A. Well, yeah. Long story short is I 10:55:51
13 said yes, conditionally, right? Because, 10:55:56
14 okay, why did we develop the chip in the first 10:56:01
15 place? It's not because Unwired is in the 10:56:03
16 chip business. In fact, it was really hard to 10:56:06
17 do and I really didn't think that that's 10:56:08
18 something that I needed to do. 10:56:10
19 My business, Unwired's business or 10:56:11
20 Aptiv's business, for that matter, is to make 10:56:14
21 modules for car companies, right? If you have 10:56:16
22 to make the underlying technology, too, that's 10:56:19
23 a lot of extra work. 10:56:22
24 But at the same time, our job is 10:56:23

1 to do what it takes, do whatever it takes, in 10:56:25
2 fact, to help our customers, the OEM 10:56:31
3 carmakers, make the best car that they can 10:56:34
4 make for all of our benefits. 10:56:36
5 So I told Mitch, that's what I do. 10:56:38
6 I don't have to make my own chip. I can use 10:56:41
7 your chip. In fact, if you price your chip 10:56:43
8 attractively to me, that means I can make 10:56:47
9 attractive products for our customer. If you 10:56:50
10 are correct in your claims about, you know, it 10:56:54
11 works just as well, doesn't have all these 10:56:56
12 downside issues that we have seen from 10:56:58
13 Microchip in the past, we're past all that and 10:57:00
14 everything is good, then I absolutely told him 10:57:02
15 I would use his chip. 10:57:05
16 Q. And what did he say? 10:57:06
17 A. Well, I don't think he was real 10:57:09
18 thrilled with the repercussions of what I was 10:57:12
19 saying because it would mean that he would 10:57:18
20 probably have to sell chips to us at a much 10:57:20
21 lower price than what they would prefer. So 10:57:23
22 it didn't -- the meeting really didn't end 10:57:28
23 well. 10:57:31
24 Q. How did the meeting end? 10:57:31

1 A. More or less ended with Microchip 10:57:33
2 being very upset and saying we would hear from 10:57:38
3 their lawyers. 10:57:42
4 Q. Okay. 10:57:42
5 I'd like to shift gears a little 10:57:43
6 bit. Earlier you mentioned that you received 10:57:46
7 five patents relating to USB. Can you tell me 10:57:48
8 about those patents? 10:57:50
9 A. Yeah. So along the way of developing 10:57:52
10 this new stuff, we thought, you know, it would 10:57:56
11 be smart of us to patent them, too. 10:57:59
12 So the very first patent 10:58:02
13 application that was submitted was around the 10:58:03
14 idea of combining the switches, the hub and 10:58:05
15 the bridge together. 10:58:08
16 Q. Now, why did you decide to seek 10:58:10
17 patent protection for the work you had done in 10:58:12
18 developing this Boston 2 chip? 10:58:15
19 A. Well, because we thought there was, 10:58:18
20 you know, significant value in it. We didn't 10:58:20
21 want to see other companies, you know, after 10:58:22
22 us having done all this hard work, just go and 10:58:25
23 copy our solution. 10:58:28
24 Q. And in connection with applying for 10:58:29

1 the patents, what information did you provide 10:58:32
2 to your lawyers to provide to the patent 10:58:35
3 office? 10:58:37
4 A. I provided, you know, a multi-page 10:58:38
5 document of description of a lot of the things 10:58:42
6 that we talked about today, diagrams showing 10:58:45
7 how things worked, you know, those sort of 10:58:47
8 things, so that from -- I worked with a patent 10:58:50
9 attorney. The patent attorney kind of knew 10:58:54
10 how to lay out a patent, how to format it, how 10:58:56
11 to submit it, how to communicate with the 10:58:58
12 patent office, but all the technical content 10:59:01
13 had either originated with me or had been 10:59:04
14 approved by me. 10:59:06
15 Q. And was the information you provided 10:59:08
16 to the attorney regarding what you had 10:59:10
17 invented the information about the work you 10:59:13
18 did to develop the Boston 2 chip? 10:59:15
19 A. That's correct. 10:59:18
20 Q. Okay. 10:59:19
21 Can you turn to Exhibit 187 of 10:59:20
22 your binder, please. 10:59:23
23 (Whereupon, Trial Exhibit 187 was 10:59:23
24 introduced.) 10:59:23

1 BY MR. WIENER: 10:59:23
2 Q. Can you describe what is -- what 10:59:32
3 Exhibit 187 is? 10:59:36
4 A. This is a U.S. Patent that was 10:59:37
5 granted to my team for the invention of the 10:59:41
6 Boston chip. 10:59:44
7 Q. Okay. 10:59:45
8 MR. WIENER: Your Honor, we offer 10:59:46
9 Exhibit 187 into evidence. 10:59:48
10 MR. SHAW: Your Honor, no 10:59:50
11 objection, subject to our discussion about 10:59:51
12 instructions later. 10:59:53
13 THE COURT: Okay. It will be 10:59:54
14 received. 10:59:56
15 MR. WIENER: Mr. Glass, can you 10:59:57
16 put 187 up on the screen, please. 10:59:58
17 BY MR. WIENER: 11:00:07
18 Q. Mr. Voto, what is the title of this 11:00:08
19 patent? 11:00:12
20 A. "Flexible mobile device connectivity 11:00:13
21 to automotive systems with USB hubs." 11:00:16
22 MR. WIENER: Mr. Glass, could you 11:00:19
23 zoom back out, please, for a second. 11:00:20
24 BY MR. WIENER: 11:00:22

1 Q. And up at the upper right, does it 11:00:23
2 show when the date -- when this patent issued? 11:00:25
3 A. Yeah, the patent issue date was 11:00:28
4 October 2016. 11:00:31
5 Q. And is that when you learned that you 11:00:35
6 were going to get patent claims? 11:00:36
7 A. We would have known maybe two or 11:00:38
8 three months in advance of that. The patent 11:00:42
9 office typically sends a notification of 11:00:44
10 allowance, I think they call it, and it lets 11:00:47
11 you know that your patent is going to be 11:00:50
12 granted soon. 11:00:52
13 Q. And then what do you see at the 11:00:52
14 bottom of the page on Exhibit 187? 11:00:54
15 A. The diagram. 11:00:58
16 Q. And we won't spend long going over 11:01:02
17 that, we've seen these enough at this point, 11:01:04
18 but is this one of the diagrams you provided 11:01:07
19 in connection with the information that you 11:01:09
20 gave to the attorney about the invention you 11:01:12
21 had come up with for applying for this patent? 11:01:15
22 A. Yeah. You can see how it's 11:01:17
23 significantly similar to a lot of the other 11:01:19
24 diagrams we looked at that I prepared for 11:01:20

1 customer presentations, and it's essentially 11:01:23
2 the same thing here in the patent application. 11:01:26
3 Q. Okay. 11:01:28
4 Can you turn to Tab 188 of your 11:01:28
5 binder, please. 11:01:31
6 (Whereupon, Trial Exhibit 188 was 11:01:31
7 introduced.) 11:01:31
8 BY MR. WIENER: 11:01:31
9 Q. And what is Tab 188? 11:01:35
10 A. Another U.S. Patent, this would be 11:01:38
11 the second patent that was granted under the 11:01:41
12 same family. 11:01:44
13 Q. And again, this was a patent that was 11:01:44
14 issued for your work in developing the Boston 11:01:47
15 2 chip and dual role hub? 11:01:49
16 A. Correct. 11:01:51
17 MR. WIENER: Your Honor, we offer 11:01:52
18 Exhibit 188 into evidence. 11:01:54
19 MR. SHAW: No objection, subject 11:01:55
20 to the same instruction. 11:01:56
21 THE COURT: It is received. 11:01:57
22 BY MR. WIENER: 11:01:58
23 Q. Can you turn to Tab 189 of your book, 11:01:59
24 please. 11:02:01

1 (Whereupon, Trial Exhibit 189 was 11:02:01
2 introduced.) 11:02:01
3 BY MR. WIENER: 11:02:01
4 Q. And what is tab -- Exhibit 189? 11:02:02
5 A. This would be the third patent that 11:02:07
6 was granted as part of the Boston chip 11:02:09
7 project. 11:02:12
8 MR. WIENER: Your Honor, we offer 11:02:12
9 Exhibit 189 into evidence. 11:02:14
10 MR. SHAW: No objection, subject 11:02:16
11 to the instruction. 11:02:18
12 (Whereupon, the Judge acknowledges 11:02:18
13 receipt.) 11:02:19
14 BY MR. WIENER: 11:02:19
15 Q. And then Exhibit 190? 11:02:19
16 (Whereupon, Trial Exhibit 190 was 11:02:19
17 introduced.) 11:02:19
18 THE WITNESS: Patent 4. 11:02:24
19 BY MR. WIENER: 11:02:25
20 Q. And when was that issued? 11:02:25
21 A. January 2020. 11:02:27
22 Q. And was this patent issued for the 11:02:28
23 work you did in connection with developing the 11:02:31
24 Boston 2 chip and the dual role hub? 11:02:33

1 A. It was. 11:02:36
2 MR. WIENER: We offer it into 11:02:36
3 evidence. 11:02:37
4 MR. SHAW: No objection, subject 11:02:37
5 to instruction. 11:02:39
6 (Whereupon, the Judge acknowledges 11:02:40
7 receipt.) 11:02:41
8 BY MR. WIENER: 11:02:41
9 Q. And last but not least, Exhibit 191. 11:02:41
10 (Whereupon, Trial Exhibit 191 was 11:02:41
11 introduced.) 11:02:41
12 THE WITNESS: Patent No. 5 related 11:02:47
13 to the Boston project. 11:02:49
14 MR. WIENER: We offer it into 11:02:51
15 evidence. 11:02:52
16 MR. SHAW: No objection, subject 11:02:53
17 to the instruction. 11:02:54
18 THE COURT: Okay. It will be 11:02:55
19 received. 11:02:56
20 BY MR. WIENER: 11:02:57
21 Q. If you could turn back to 11:02:57
22 Exhibit 188, please, Mr. Voto. And if you 11:03:00
23 could turn to the second page. 11:03:04
24 MR. WIENER: Mr. Glass, if you 11:03:08

1 could get the second page there. 11:03:09
2 BY MR. WIENER: 11:03:11
3 Q. And you'll see there is a portion of 11:03:12
4 the patent that says, "References Cited." 11:03:15
5 What is your understanding of the list of 11:03:19
6 documents that are shown there? 11:03:20
7 A. So in every patent, there is a 11:03:24
8 section for stating other works that are 11:03:28
9 similar or that look similar or could be 11:03:33
10 related to the invention. 11:03:36
11 So you're trying to submit a new 11:03:38
12 idea to the patent office that you think you 11:03:40
13 may have invented. There needs to be work to 11:03:43
14 see, is this really new or is it maybe already 11:03:46
15 covered by somebody else's invention, right? 11:03:49
16 So References Cited is where a 11:03:51
17 statement can be made to say hey, these things 11:03:56
18 ought to be considered when the patent 11:03:59
19 examiner thinks about this as being new or 11:04:03
20 novel. 11:04:05
21 Q. And is the '243 Patent that's 11:04:06
22 asserted in this case listed there? 11:04:08
23 A. Yes, it is. 11:04:10
24 Q. Okay. 11:04:12

1 Mr. Voto, I just have a couple 11:04:14
2 more questions for you. 11:04:16
3 I want to turn back to our 11:04:18
4 discussion about Microchip's allegations about 11:04:20
5 their patent. They sent you the notice letter 11:04:23
6 in 2015 and then you had a meeting in 11:04:27
7 October 2015. 11:04:30
8 What happened next? 11:04:31
9 A. So after the meeting, nothing 11:04:35
10 happened for a long time. We are talking from 11:04:39
11 the fall of 2015 until probably the next 11:04:44
12 significant thing, from my perspective, was in 11:04:51
13 the summer of 2016, we received a notification 11:04:53
14 from the patent office that our first patent 11:05:00
15 was going to be issued, our Aptiv patent was 11:05:03
16 going to get approved for the Boston chip by 11:05:07
17 the patent office. 11:05:10
18 Q. And what happened next? 11:05:12
19 A. At that point, more time went by, 11:05:17
20 another month or two later, and we received 11:05:21
21 notification from Microchip that they were 11:05:23
22 filing a lawsuit against Aptiv. 11:05:25
23 Q. Mr. Voto, ever since you first heard 11:05:29
24 from Microchip about the '243 Patent, has your 11:05:32

1 belief that the Boston chip does not infringe 11:05:36
2 that patent ever wavered? 11:05:38
3 A. Not at all. 11:05:41
4 MR. WIENER: Thank you. No 11:05:42
5 further questions. 11:05:43
6 THE COURT: Mr. Shaw. 11:05:46
7 - - - 11:05:47
8 CROSS-EXAMINATION 11:05:48
9 - - - 11:05:51
10 BY MR. SHAW: 11:05:51
11 Q. Good morning, Mr. Voto. 11:06:14
12 My name is John Shaw. I don't 11:06:15
13 think we've met before, but welcome. 11:06:17
14 A. Good morning. 11:06:19
15 Q. All right. 11:06:21
16 Just after the break, if my notes 11:06:22
17 are right, I believe you testified that you 11:06:27
18 didn't have any interest in getting into the 11:06:28
19 chip-making business? 11:06:30
20 A. Correct. 11:06:32
21 Q. And you just wanted to be a module 11:06:33
22 maker? 11:06:36
23 A. Right. 11:06:36
24 Q. And was that true back at Unwired, 11:06:37

1 also? 11:06:40
2 A. Yes. 11:06:41
3 Q. Okay. 11:06:43
4 Now, when you started this 11:06:43
5 morning, you testified a little bit about the 11:06:47
6 USB hub that Unwired had supplied to General 11:06:48
7 Motors. 11:06:52
8 Do you remember that? 11:06:52
9 A. I do. 11:06:53
10 Q. And that hub used an SMSC chip; is 11:06:53
11 that right? 11:07:00
12 A. That's correct. 11:07:00
13 Q. Okay. 11:07:01
14 Now, shortly after or around that 11:07:04
15 time, Unwired was thinking about getting into 11:07:07
16 developing a custom chip for that module. 11:07:11
17 Do you remember that? 11:07:13
18 A. I do. 11:07:14
19 Q. And do you remember that there were 11:07:15
20 questions about whether that would be a good 11:07:18
21 investment for Unwired? 11:07:20
22 A. Absolutely. 11:07:22
23 Q. And you worked on presentations about 11:07:23
24 that. 11:07:26

1 Do you remember that? 11:07:26
2 A. Yep. 11:07:26
3 Q. I think in your notebook towards the 11:07:27
4 back, there is an Exhibit 13. 11:07:31
5 (Whereupon, Trial Exhibit 13 was 11:07:31
6 introduced.) 11:07:31
7 BY MR. SHAW: 11:07:31
8 Q. Could you find that for us, please. 11:07:33
9 A. I see it. 11:07:39
10 Q. All right. 11:07:40
11 Now, that's the presentation -- 11:07:40
12 what is that, first of all? 11:07:43
13 A. Yeah, so this is a presentation that 11:07:45
14 was done -- it was created by me. It was done 11:07:47
15 for an internal management review within 11:07:52
16 Unwired to start thinking about this -- how do 11:07:56
17 we think about this position whether we would 11:08:00
18 make our own chip or not. 11:08:02
19 Q. And this is the chip you didn't want 11:08:03
20 to make, but you were talking about making 11:08:05
21 one? 11:08:07
22 A. Yeah. So to be clear about this 11:08:07
23 whole business of are we in the chip business 11:08:09
24 or do we want to make chips, what I'm saying 11:08:11

1 is Unwired or Aptiv or whoever at any Tier 1, 11:08:15
2 it was an auto supplier, you want to make the 11:08:22
3 best product you can. The easiest way to do 11:08:24
4 that is using components and chips that are 11:08:27
5 available to you. 11:08:29
6 But if that fails, if that lets 11:08:30
7 you down, if you can't satisfy or if there is 11:08:33
8 a better way that the supply base hasn't 11:08:35
9 offered yet, you can be bold enough to try to 11:08:38
10 make your own chip, and that's what we are 11:08:41
11 talking about here. 11:08:43
12 Q. Sure. 11:08:43
13 And at that point in time, you 11:08:44
14 hadn't gone out to suppliers in the market to 11:08:45
15 ask them to make a better chip for you; right? 11:08:47
16 A. At what point in time? 11:08:50
17 Q. When you did this presentation. 11:08:51
18 A. We had already considered that, yes. 11:08:53
19 Q. My question though, Mr. Voto, was had 11:08:56
20 you gone out to the marketplace to ask other 11:08:58
21 suppliers to make that better chip for you? 11:09:00
22 A. We had talked to suppliers to see 11:09:03
23 what they had available to us. 11:09:06
24 Q. Let me ask it again. 11:09:07

1 A. Okay. 11:09:09
2 Q. At the time of this presentation, had 11:09:09
3 you gone out to ask suppliers to make a better 11:09:10
4 chip for you? 11:09:13
5 A. Yeah. I mean, sure. I would say 11:09:18
6 yes. We had -- I have to nuance that answer 11:09:22
7 because there's a lot of different 11:09:27
8 discussions. It's not as straightforward as 11:09:30
9 maybe what you would like to think as we wrote 11:09:32
10 a bunch of requirements, then we sent it out 11:09:35
11 to supplier A, B, C, D, E, F, G and they all 11:09:37
12 got to have a look at that and then we got all 11:09:40
13 the responses back. It didn't really go like 11:09:43
14 that. 11:09:45
15 MR. SHAW: All right. At this 11:09:45
16 point, Your Honor, I would like to move into 11:09:47
17 evidence Exhibit 13. 11:09:48
18 MR. WIENER: No objection. 11:09:50
19 THE COURT: All right. It's 11:09:50
20 received. 11:09:52
21 MR. SHAW: Could you bring that 11:09:52
22 up, please, Mr. Ferrer. So blow up the first 11:09:53
23 blocks on the left. Thank you. 11:09:56
24 BY MR. SHAW: 11:09:59

1 Q. So that's the title page of the 11:10:00
2 presentation you are talking about here; 11:10:02
3 right? 11:10:03
4 A. Right. 11:10:03
5 MR. SHAW: Now, could you go to 11:10:05
6 the next box, please, Mr. Ferrer. 11:10:07
7 BY MR. SHAW: 11:10:10
8 Q. And this is your needs and decisions 11:10:11
9 discussion; correct? 11:10:13
10 A. Correct. 11:10:14
11 Q. Now, the first need you discussed 11:10:14
12 here was getting "Commercial advantage over 11:10:16
13 competitors using auto grade SMSC chips." 11:10:18
14 Do you see that? 11:10:22
15 A. Yes. 11:10:23
16 Q. And the second need or decision you 11:10:24
17 focused on was "Technical advantage over 11:10:27
18 competitors using SMSC chips." 11:10:29
19 Do you see that? 11:10:32
20 A. Right. 11:10:33
21 Q. And the third need was to find a dual 11:10:34
22 source for the Hub IC you were making; is that 11:10:39
23 right? 11:10:42
24 A. Yep. 11:10:42

1 Q. And the fourth need was a "Strategic 11:10:42
2 advantage in marketplace as we compete for new 11:10:46
3 business." 11:10:49
4 Do you see that? 11:10:50
5 A. Yes. 11:10:51
6 Q. And the last need you had was "Lower 11:10:51
7 BOM," BOM means bill of materials; correct? 11:10:54
8 A. That's -- that's -- yes, that's 11:10:57
9 saying that -- 11:10:59
10 Q. BOM means bill of materials; right? 11:11:01
11 A. Correct. 11:11:04
12 Q. And the last point says, "Lower 11:11:04
13 BOM/increase profit on the existing GM 11:11:06
14 business." 11:11:09
15 Do you see that? 11:11:09
16 A. Yes. 11:11:10
17 Q. And those were all things that 11:11:10
18 Unwired wanted to accomplish; correct? 11:11:11
19 A. Correct. 11:11:13
20 Q. Now, could you go to the next box, 11:11:15
21 please -- I'm sorry, go to the next page, the 11:11:17
22 top box. 11:11:20
23 Now, there were some decision 11:11:22
24 points to be made within Unwired about whether 11:11:23

1 it was a good investment. 11:11:25
2 Do you see that? 11:11:27
3 A. I do. 11:11:29
4 Q. And on this good investment chart, 11:11:29
5 none of them talks about costs and timeframe 11:11:32
6 going to third-party suppliers to make the 11:11:36
7 improved chip, does it? 11:11:38
8 A. It does. It's basically saying -- 11:11:48
9 when you talk about cost and timeframe, things 11:11:52
10 like high investment, things like the 11:11:55
11 engineering resources that are going to be 11:11:58
12 needed, those are significant. 11:12:00
13 Q. But those are significant, but 11:12:03
14 nowhere on here does it say we went to 11:12:05
15 third-party suppliers that couldn't meet our 11:12:08
16 needs; correct? 11:12:09
17 A. It wouldn't be appropriate to put 11:12:10
18 that here, so no, it's not there. 11:12:12
19 Q. Okay. 11:12:14
20 Now, in deciding whether it would 11:12:16
21 be a good investment to make your own chip, 11:12:17
22 the last bullet point you have there was "IP 11:12:20
23 risk?." 11:12:22
24 Do you see that? 11:12:23

1 A. That's right. 11:12:24
2 Q. And IP risk means things like having 11:12:24
3 a lawsuit brought against you for infringing 11:12:27
4 someone's patent; correct? 11:12:29
5 A. To me, IP risk meant how do we design 11:12:31
6 our product so we don't violate any IP. 11:12:34
7 Q. Like patents? 11:12:37
8 A. Patents, yeah, for sure. 11:12:38
9 Q. And one way you addressed this IP 11:12:40
10 risk question here is you looked at some 11:12:42
11 patents yourself. 11:12:45
12 Do you remember that? 11:12:47
13 A. That's one way, yes. 11:12:47
14 Q. And that's something that you did 11:12:49
15 personally; correct? 11:12:51
16 A. Yes. 11:12:52
17 Q. And this search occurred in 2012; 11:12:53
18 right? 11:12:56
19 A. Thereabouts. 11:12:56
20 Q. Okay. 11:12:57
21 Well, thereabouts. It didn't 11:12:58
22 happen in 2013; right? 11:12:59
23 A. I don't think so. 11:13:01
24 Q. Okay. 11:13:02

1 And for the search, you targeted 11:13:03
2 SMSC patents; correct? 11:13:05
3 A. Correct. 11:13:08
4 Q. And you knew that SMSC was an 11:13:09
5 innovator in the USB hub field; right? 11:13:11
6 A. I knew that they offered hub 11:13:15
7 products, yes. 11:13:18
8 Q. You knew they were an innovator, 11:13:19
9 that's why you looked at their patents; 11:13:21
10 correct? 11:13:22
11 A. I knew that they had patents and I 11:13:22
12 knew that they had products, yes. Sure, I'll 11:13:24
13 go with innovator, that's fine. 11:13:28
14 Q. And you looked at more than 20 11:13:30
15 patents? 11:13:32
16 A. Yeah. 11:13:33
17 Q. You're not sure how many, but you 11:13:33
18 know it was at least 20? 11:13:35
19 A. Right. 11:13:37
20 Q. And you don't remember looking at any 11:13:37
21 patents from anyone other than SMSC; correct? 11:13:39
22 A. I think what I said was I don't 11:13:42
23 remember one way or the other. I was not 11:13:45
24 specifically targeting SMSC, but it seemed 11:13:49

1 like, when you combine automotive grade and 11:13:53
2 hub chips, that that was where a lot of it 11:13:56
3 was, right, SMSC. 11:13:58
4 Q. Okay. 11:14:00
5 And you read the patents in 11:14:00
6 detail; correct? 11:14:02
7 A. That's correct. 11:14:03
8 Q. And you don't remember whether or not 11:14:04
9 you reviewed the '243 Patent that was owned 11:14:06
10 then by SMSC; right? 11:14:09
11 A. There was just too many. I can't 11:14:10
12 remember. 11:14:12
13 Q. Now, this was the only time that you 11:14:16
14 looked at the SMSC patents before you got the 11:14:18
15 January 12, 2015, letter from Microchip; is 11:14:23
16 that right? 11:14:26
17 A. Probably. 11:14:26
18 Q. Okay. 11:14:27
19 And I take it you were satisfied 11:14:28
20 with the results of this review of the SMSC 11:14:30
21 patent because Unwired signed an agreement 11:14:33
22 then to design and to have manufactured its 11:14:36
23 own custom chip? 11:14:38
24 A. That is correct. 11:14:39

1 Q. All right. 11:14:40
2 Now, the chip that you had 11:14:41
3 designed and manufactured wasn't the Boston 2 11:14:44
4 chip at that time; right? 11:14:46
5 A. Originally we started with what we 11:14:49
6 just referred to as the Boston chip. 11:14:51
7 Q. Right. 11:14:53
8 A. Which is different than Boston 2. 11:14:54
9 Q. And what you referred to at that 11:14:56
10 time, that didn't have the CarPlay 11:14:57
11 functionality involved; right? 11:14:59
12 A. Correct. 11:15:00
13 Q. Okay. 11:15:01
14 I am going to put up here, if I 11:15:03
15 can do this correctly, a little bit of a 11:15:05
16 timeline. Perfect. 11:15:08
17 So sometime in 2012, you looked at 11:15:14
18 the SMSC patents. Do I have that timeframe 11:15:21
19 right? 11:15:27
20 A. Correct. 11:15:27
21 Q. Okay. 11:15:28
22 Now, could you look in your binder 11:15:29
23 from this morning again at Exhibit 22. I 11:15:32
24 think it's also towards the back. 11:15:35

1 (Whereupon, Trial Exhibit 2 was 11:15:35
2 introduced.) 11:15:35
3 BY MR. SHAW: 11:15:35
4 Q. Do you have it? 11:15:43
5 A. I have it. 11:15:43
6 Q. Could you take a look at it, please, 11:15:44
7 and tell us what it is. 11:15:46
8 A. This document is titled ASIC 11:15:49
9 Development and Supply Agreement between 11:15:53
10 AyDeeKay and Unwired Technology for the 11:15:56
11 "Boston" ASIC. 11:15:57
12 Q. That's the manufacturing agreement we 11:15:58
13 just talked about? 11:16:00
14 A. It's more than that, but yes. 11:16:03
15 Q. But the product development 11:16:06
16 agreement? 11:16:07
17 A. Yeah. It is a development agreement. 11:16:08
18 Q. Okay. 11:16:10
19 MR. SHAW: I move into evidence 11:16:12
20 Exhibit 22, please. 11:16:13
21 MR. WIENER: No objection. 11:16:14
22 THE COURT: All right. It's in. 11:16:16
23 BY MR. SHAW: 11:16:17
24 Q. Now, in Exhibit 22 towards the back, 11:16:18

1 I'm sorry, I don't have a page, there is a 11:16:21
2 list of the charges for development of the 11:16:24
3 product. It's an exhibit to the agreement. 11:16:26
4 A. Appendix A? 11:16:34
5 Q. Did you find it? 11:16:36
6 A. No, I am asking you, are you 11:16:37
7 referring to Appendix A? 11:16:39
8 Q. Yeah. It's page 12 to 14. 11:16:41
9 A. Yes. 11:16:46
10 Q. And the cost to develop this product, 11:16:46
11 you can see the total payment of 646,000? 11:16:50
12 A. I see that. 11:16:53
13 Q. And that's the project you wanted to 11:16:54
14 make sure there was no IP risk for; correct? 11:16:55
15 A. Yes. 11:16:59
16 Q. All right. 11:17:01
17 Now, let's switch over to Jaguar a 11:17:02
18 little bit. I think you testified this 11:17:05
19 morning that you got introduced to Jaguar 11:17:06
20 because you had success in the GM hub 11:17:09
21 business; is that right? 11:17:11
22 A. Not exactly right. 11:17:12
23 So to clarify it, we already had a 11:17:15
24 relationship with Jaguar because we sold 11:17:18

1 headphones to them. 11:17:20
2 Q. Okay. 11:17:21
3 And then they had some hub 11:17:22
4 business for you? 11:17:24
5 A. We convinced them to give us a chance 11:17:25
6 to try to win the hub business, yeah. 11:17:27
7 Q. All right. 11:17:29
8 And it was through that chance 11:17:29
9 that you first learned about Aptiv's CarPlay 11:17:31
10 technology; correct? 11:17:34
11 A. That's correct. 11:17:35
12 Q. And at the time that you got 11:17:36
13 introduced to it, CarPlay was under a lot of 11:17:37
14 secrecy? 11:17:40
15 A. It was not publicly known. 11:17:42
16 Q. Right. 11:17:44
17 But it was also under a lot of 11:17:45
18 secrecy, wasn't it? 11:17:47
19 A. Apple is pretty secret about 11:17:49
20 everything they do. 11:17:51
21 Q. So that's a yes? 11:17:52
22 A. Yeah. 11:17:53
23 Q. Okay. 11:17:53
24 And this was in 2013 before it was 11:17:54

1 publicly announced; right? 11:17:57
2 A. Can you ask me the question again? 11:18:03
3 What was in 2013? 11:18:04
4 Q. So it's in 2013 that the CarPlay 11:18:06
5 project is under a lot of secrecy; correct? 11:18:08
6 A. At Apple? 11:18:11
7 Q. Well, also generally. 11:18:12
8 A. So let me be clear. I don't know 11:18:15
9 what Apple is doing in 2013. I am not talking 11:18:17
10 to Apple. 11:18:19
11 Q. All right. 11:18:20
12 MR. SHAW: May I approach, Your 11:18:21
13 Honor? 11:18:23
14 THE COURT: Yes. 11:18:23
15 BY MR. SHAW: 11:18:45
16 Q. Now, you were asked questions under 11:18:46
17 oath before in this litigation; right, Mr. 11:18:47
18 Voto? 11:18:50
19 A. That's correct. 11:18:50
20 Q. By my colleague, Mr. Adams? 11:18:51
21 A. Yep. 11:18:53
22 Q. And there is a point in your dep -- 11:18:54
23 and it is the same courtroom testimony; right? 11:18:56
24 A. Yes. 11:18:58

1 Q. Now, if you turn to page 88 of your 11:19:00
2 transcript, it is in the back of the binder I 11:19:02
3 just handed you. I'm sorry, in doing that, I 11:19:05
4 lost my note. 11:19:19
5 All right. Now, there is a long 11:19:20
6 series of explanations, over eight pages, but 11:19:27
7 I want you to look at line 7. And I'm going 11:19:30
8 to read your testimony and then let the jury 11:19:33
9 know if it's correct. 11:19:35
10 "Apple, you know, we're going back 11:19:37
11 to 2013. Apple didn't have CarPlay out in the 11:19:39
12 market. It was still under development and, 11:19:42
13 quite honestly, under a lot of secrecy, too." 11:19:46
14 Do you see that? 11:19:49
15 A. I do. 11:19:50
16 Q. And that was your testimony at the 11:19:50
17 deposition? 11:19:52
18 A. That is. 11:19:52
19 Q. Okay. 11:19:52
20 Now, the time when Apple announced 11:19:55
21 CarPlay to the public was in early 2014 at the 11:19:57
22 Virginia auto show? 11:20:03
23 A. I'm not sure. 11:20:03
24 Q. Could you go to the tab that says, 11:20:05

1 "BBC," right before your deposition. 11:20:08
2 A. Okay. 11:20:19
3 Q. And take a look at that and see if 11:20:19
4 that refreshes your memory as to when Apple 11:20:21
5 announced publicly the CarPlay iPhone system. 11:20:23
6 A. I can read what it says, but I don't 11:20:28
7 remember reading this particular article. 11:20:31
8 Q. All right. 11:20:32
9 But my question was different; it 11:20:33
10 was, does this refresh your memory as to when 11:20:34
11 Apple released to the public information about 11:20:36
12 the CarPlay system? 11:20:40
13 A. No, because I don't know this 11:20:43
14 particular article. But if your point is that 11:20:45
15 it was probably released publicly in or around 11:20:47
16 March '14, that's fine. 11:20:50
17 Q. March of 2014? 11:20:51
18 A. Yeah. 11:20:53
19 Q. Okay. 11:20:53
20 And that's how I marked up this 11:21:05
21 exhibit on the document screen; right? 11:21:06
22 A. Yep, yep. 11:21:10
23 Q. And then back in 2012, roughly when 11:21:11
24 that vertical line is, that's when the 11:21:14

1 AyDeeKay contract was for the Boston chip 1 11:21:16
2 was signed? 11:21:20
3 A. Which one? 11:21:21
4 Q. Roughly here. You can take a look at 11:21:22
5 Exhibit 22. It will have a date on it if you 11:21:27
6 want to check. I believe it was 11:21:29
7 September-ish. 11:21:32
8 MR. SHAW: Can you pull up the 11:21:40
9 first page, Mr. Ferrer, Exhibit 22? Oh, I'm 11:21:41
10 sorry. 11:21:50
11 BY MR. SHAW: 11:21:51
12 Q. Do you see the August 1st date? 11:21:52
13 A. Yeah. I see that. I'm also going by 11:21:54
14 the actual date it was executed, the 11:21:58
15 signatures. 11:22:01
16 Q. And what date was that? 11:22:01
17 A. Match the same date, August 1st, 11:22:03
18 2012. 11:22:06
19 Q. Okay. 11:22:06
20 And your patent search was done 11:22:06
21 before then; correct? 11:22:09
22 A. I believe so. I don't know the exact 11:22:10
23 date, but again, seems reasonable. 11:22:15
24 Q. Okay. 11:22:17

1 Now, let's go back to Jaguar. 11:22:18
2 When you learned about Apple's plans through 11:22:25
3 Jaguar, you thought they were radical; isn't 11:22:28
4 that right? 11:22:31
5 A. I thought this whole requirement of 11:22:32
6 making a downstream port of a hub be able to 11:22:35
7 hook a host to it was pretty radical. 11:22:39
8 Q. You thought it was radical. Okay. 11:22:41
9 And that was because in the 11:22:43
10 automotive infotainment market, no car 11:22:45
11 manufacturer had ever been allowed to 11:22:48
12 basically be the USB host? 11:22:51
13 A. That's right. 11:22:54
14 Q. Okay. 11:22:55
15 A. They didn't do that. The 11:22:55
16 infotainment systems were -- were USB hosts. 11:22:57
17 Q. So that's why Apple's plan about 11:23:03
18 CarPlay was radical? 11:23:07
19 A. Well, Apple's -- Apple's plan to 11:23:12
20 release this CarPlay feature where the phone, 11:23:19
21 itself, had to go into host mode, they 11:23:25
22 couldn't just do that by device mode, was 11:23:27
23 quite a surprising departure from what was 11:23:33
24 expected, so I called it radical. 11:23:35

1 Q. Okay. 11:23:37
2 Now, through the development 11:23:38
3 process, and I think you showed some slides 11:23:39
4 this morning, Unwired decided the best 11:23:41
5 approach was to add the host-to-host bridge in 11:23:44
6 the hub; correct? 11:23:47
7 A. Right. 11:23:48
8 Q. All right. 11:23:49
9 And at that point, you thought how 11:23:49
10 does Unwired take advantage of the fact that 11:23:53
11 we know this. And that's information that was 11:23:55
12 secret at that time; right? 11:23:59
13 A. Well, you have to remember that there 11:24:01
14 are a number of nondisclosure agreements in 11:24:05
15 place where companies can legally share 11:24:08
16 confidential information that is not public; 11:24:12
17 therefore, secret. 11:24:15
18 Q. Sure. And I am not trying to 11:24:16
19 insinuate you did anything wrong; I am just 11:24:18
20 trying to make clear that what you were 11:24:21
21 learning through Jaguar wasn't available to 11:24:23
22 the general public? 11:24:25
23 A. I believe that's true, yes. 11:24:26
24 Q. And then my question was, and I 11:24:27

1 probably made the error because I think I 11:24:29
2 asked two at once. 11:24:31
3 At this point in time when you 11:24:34
4 were going through the development process, 11:24:35
5 you thought how does Unwired take advantage of 11:24:37
6 the fact that they know this non-public 11:24:40
7 information; is that right? 11:24:42
8 A. What I was driving after was we 11:24:46
9 had -- because of the fact that we were 11:24:55
10 working with Jaguar and Jaguar was working 11:24:56
11 with Apple and we found out about this brand 11:24:59
12 new problem, we thought okay, if we can figure 11:25:01
13 out this problem, if this is going to be a 11:25:04
14 problem for the whole industry, this isn't 11:25:07
15 just a Jaguar problem because Apple is going 11:25:09
16 to try to roll this out everywhere. 11:25:11
17 So we figured if we could figure 11:25:15
18 out a novel solution ourself, this would be 11:25:16
19 huge for our business. So we want to know how 11:25:18
20 we can, you know, strengthen our business, 11:25:21
21 grow our business, you know, do something 11:25:23
22 great for not just Jaguar, but other car 11:25:25
23 companies, too. 11:25:28
24 Q. Right. 11:25:29

1 And you knew at that point, or 11:25:29
2 that was your thinking at that point, how does 11:25:31
3 Unwired take advantage of this knowledge that 11:25:33
4 they got from working with Jaguar; right? 11:25:35
5 A. Of course. 11:25:36
6 Q. And at that point, you realized you 11:25:37
7 were lucky being in that position; right? 11:25:40
8 A. Yeah, it was quite fortunate that we 11:25:41
9 were in a position where we needed to -- 11:25:45
10 perhaps I'm speculating a bit -- but I believe 11:25:49
11 when I made those statements under oath, as I 11:25:53
12 do today, that we were probably one of the 11:25:55
13 first ones to find out about this new thing 11:25:57
14 that car -- this CarPlay thing that Apple was 11:26:00
15 trying to do. 11:26:02
16 And, you know, we didn't get in a 11:26:03
17 position where we had learned about it by 11:26:06
18 chance. We didn't go to Vegas and roll the 11:26:07
19 dice. We worked hard to win Jaguar's 11:26:10
20 business. We worked hard to find a solution 11:26:12
21 to what was being presented to us as a major 11:26:16
22 problem. 11:26:19
23 No one had a chip that could fix 11:26:19
24 this problem, so it was really lucky that we 11:26:22

1 were in a position where we got to see this 11:26:24
2 problem, and through our own hard work and 11:26:27
3 determination, find a solution. I mean, we 11:26:29
4 kind of created our own luck, too. 11:26:32
5 Q. Absolutely. 11:26:35
6 And Unwired thought that the 11:26:35
7 opportunity was enormous; correct? 11:26:37
8 A. Absolutely. 11:26:38
9 Q. All right. 11:26:39
10 Now, it was about this time that 11:26:40
11 Unwired started thinking about making its own 11:26:44
12 custom chip for this hub also; correct? 11:26:46
13 A. Well, the way that I would say it is 11:26:49
14 we were already making a custom chip, right, 11:26:53
15 the Boston chip. 11:26:56
16 Q. Right. 11:26:57
17 You had started development on the 11:26:58
18 Boston chip? 11:26:59
19 A. That was already underway. 11:27:00
20 Q. Right. 11:27:01
21 And at this point in time, you 11:27:02
22 decided or started talking about developing 11:27:03
23 what you were calling the Boston 2 chip; 11:27:07
24 correct? 11:27:09

1 A. Correct. 11:27:09
2 Q. All right. 11:27:09
3 MR. SHAW: Could you call up, 11:27:12
4 please, Mr. Ferrer, Exhibit 192. And then 11:27:13
5 just blow up the first box there. 11:27:20
6 BY MR. SHAW: 11:27:24
7 Q. And then you talked a little bit 11:27:24
8 about -- do you need time to find it in your 11:27:26
9 book? It's in the book you had this morning. 11:27:28
10 It's on the bottom. 11:27:30
11 A. Okay, okay. Great. It's at the 11:27:31
12 beginning. Got it. 11:27:44
13 Q. And you talked a little bit about the 11:27:45
14 January 2013 date, and it may have been 11:27:48
15 finalized a little later than that. 11:27:50
16 Do you remember that? 11:27:52
17 A. Yes. 11:27:52
18 MR. SHAW: And then the second 11:27:52
19 page, Mr. Ferrer, I think the fifth slide, 11:27:54
20 Option C. Could you blow that up? 11:27:57
21 BY MR. SHAW: 11:28:00
22 Q. And then there is some pros and cons 11:28:00
23 listed on there. 11:28:03
24 Do you see them? 11:28:04

1 A. Yes. 11:28:06
2 Q. Okay. 11:28:07
3 MR. SHAW: And then under the 11:28:07
4 cons, could you blow those up, please, Mr. 11:28:12
5 Ferrer? Just the cons. The letters are a 11:28:14
6 little hard to see. 11:28:18
7 BY MR. SHAW: 11:28:19
8 Q. So con was a "Custom ASIC cost," and 11:28:20
9 that's the custom ASIC you were thinking about 11:28:23
10 making at that time; right? 11:28:26
11 A. This presentation, you have to 11:28:31
12 remember, was made for Jaguar. 11:28:31
13 Q. Um-hmm. 11:28:33
14 A. So for the Jaguar project, we 11:28:34
15 implemented it at FPGA and didn't do the 11:28:36
16 custom ASIC. 11:28:40
17 Q. Right. 11:28:40
18 But you were talking about the 11:28:41
19 need for a custom ASIC to do this solution? 11:28:42
20 A. We were certainly thinking about it, 11:28:44
21 right, right there. 11:28:46
22 Q. Yes. In January. Okay. 11:28:47
23 Now, from that point in time, by 11:28:48
24 September, I believe, you decided to go 11:28:56

1 forward with the custom ASIC project; right? 11:28:59
2 A. That sounds about right. 11:29:02
3 Q. Okay. 11:29:03
4 Could you look in your notebook 11:29:04
5 from this morning at Exhibit 23. 11:29:05
6 (Whereupon, Trial Exhibit 23 was 11:29:05
7 introduced.) 11:29:05
8 THE WITNESS: You are going all 11:29:20
9 the way from the beginning to the end. Sorry. 11:29:21
10 MR. SHAW: Yeah. 11:29:23
11 THE WITNESS: Exhibit 23. Got it. 11:29:26
12 BY MR. SHAW: 11:29:27
13 Q. And that's the amendment to the 11:29:27
14 manufacturing and developing agreement, I may 11:29:29
15 have the title wrong, but that's the amendment 11:29:31
16 to the AyDeeKay agreement that was Exhibit 22; 11:29:34
17 correct? 11:29:37
18 A. Yeah. This is the modifications that 11:29:37
19 we needed, because we already had the Boston 11:29:39
20 chip in development and then we said hey, we 11:29:41
21 don't want to start over and make another 11:29:44
22 chip. 11:29:46
23 Q. Excuse me, Mr. Voto. I just asked a 11:29:46
24 question about the date and the time. I 11:29:48

1 didn't -- all right. 11:29:50
2 MR. SHAW: So I'd like to move 11:29:53
3 this into evidence, first of all, Your Honor. 11:29:54
4 MR. WIENER: No objection. 11:29:56
5 THE COURT: Admitted. 11:29:58
6 MR. SHAW: Could you pull up 11:29:59
7 Exhibit 23, please, which is the exhibit I 11:30:01
8 moved into evidence without the number. 11:30:02
9 BY MR. SHAW: 11:30:05
10 Q. And you'll see the date at the top on 11:30:05
11 the second line says, "September 20th, 2013." 11:30:07
12 Do you see that? 11:30:09
13 A. I do. 11:30:10
14 Q. All right. 11:30:10
15 Now, between January and that 11:30:11
16 PowerPoint we just looked at, and the date you 11:30:13
17 signed this agreement, you were negotiating it 11:30:16
18 for a while, I take it. You probably didn't 11:30:18
19 negotiate it in just a day; is that right? 11:30:21
20 A. Yeah, I didn't sign the agreement 11:30:24
21 so... 11:30:27
22 Q. Okay. 11:30:27
23 But between when this agreement 11:30:28
24 was signed and the January timeframe, did 11:30:29

1 Unwired go out to the marketplace and ask any 11:30:31
2 manufacturer like SMSC if they could make the 11:30:35
3 custom chip you needed? 11:30:38
4 A. No. 11:30:40
5 Q. All right. 11:30:41
6 Okay. And, in fact, you didn't 11:30:42
7 publicize that you were making this custom 11:30:46
8 chip at the time, did you? 11:30:48
9 A. No. 11:30:49
10 Q. All right. 11:30:49
11 And the amended agreement was a 11:30:50
12 reset of the scope of the original agreement; 11:30:53
13 correct? 11:30:55
14 A. That's correct. 11:30:56
15 Q. And it's a reset because you changed 11:30:56
16 scope from making just this USB hub to making 11:30:59
17 the USB hub with the hub-to-hub bridge 11:31:02
18 technology in it? 11:31:06
19 A. That's correct. 11:31:07
20 MR. SHAW: Now, could you go to 11:31:09
21 page 5, please, Mr. Ferrer. And blow up the 11:31:11
22 chart in the middle. 11:31:19
23 BY MR. SHAW: 11:31:20
24 Q. And this is a summary of the 11:31:20

1 milestones and payments for the revised 11:31:22
2 project; correct? 11:31:24
3 A. Correct. 11:31:25
4 Q. And the first part of the project was 11:31:26
5 the 646,000 or so? 11:31:28
6 A. Correct. 11:31:31
7 Q. And that's what's labeled B1 there on 11:31:32
8 the left? 11:31:35
9 A. Yes. 11:31:35
10 Q. And then B2 is the Boston 2 expenses? 11:31:36
11 A. That's correct. 11:31:40
12 Q. And they total somewhere around $3 11:31:41
13 million? 11:31:47
14 A. I thought it was a little more than 11:31:47
15 that, but... 11:31:49
16 Q. Well, my math could be wrong as well, 11:31:51
17 but 3 million, $4 million, somewhere in that 11:31:53
18 range? 11:31:56
19 A. Yeah. 11:31:56
20 Q. This is all for just the B2 project, 11:31:56
21 it's just for adding the hub-to-hub 11:31:59
22 functionality that you worked on with Jaguar; 11:32:01
23 right? 11:32:03
24 A. Not just. 11:32:03

1 Q. Okay. 11:32:04
2 But to integrate that with the 11:32:05
3 rest of the chip? 11:32:07
4 A. Yeah. So we added some new function; 11:32:08
5 host-to-host was one of them. 11:32:11
6 Q. That was the primary one, though; 11:32:13
7 correct? 11:32:14
8 A. Yeah, it was one of the primary ones. 11:32:15
9 Q. Well, let's go back to the first page 11:32:16
10 then, and pull up the third recital, please. 11:32:19
11 It starts, "Whereas subsequent to the 11:32:29
12 passage." 11:32:33
13 And here it references changes in 11:32:33
14 features principally related to the USB 11:32:35
15 host-to-host bridge; correct? 11:32:38
16 A. Yes. 11:32:39
17 Q. All right. 11:32:40
18 Now -- 11:32:40
19 MR. SHAW: You can take that down, 11:32:42
20 please. 11:32:44
21 BY MR. SHAW: 11:32:45
22 Q. From the first patent search you did 11:32:46
23 until this agreement was signed, did you 11:32:48
24 conduct another search of USB patents to look 11:32:51

1 for whether there were any IP risks? 11:32:54
2 A. Not that I recall. 11:32:57
3 Q. And at the time you did the first 11:32:58
4 search, USB hub-to-hub wasn't even on the 11:33:00
5 horizon; correct? 11:33:05
6 A. No, it wasn't. 11:33:05
7 Q. All right. 11:33:06
8 Now, the -- the FG -- the chip 11:33:07
9 that you put together, the test war chips for 11:33:19
10 Jaguar, I think you mentioned that they were 11:33:22
11 too big or too costly to actually implement; 11:33:24
12 is that right? 11:33:27
13 A. I think what I said was -- the 11:33:29
14 question that was asked of me was so you 11:33:32
15 developed this, did you take it to other 11:33:34
16 customers, right, and my answer was yeah, we 11:33:36
17 were taking -- we were super excited about the 11:33:39
18 concept, but the fact that it was big and 11:33:41
19 expensive, it was a little bit difficult to 11:33:45
20 imagine that all the different car companies 11:33:47
21 would accept. 11:33:48
22 Q. Would that implementation that was 11:33:49
23 big and expensive have fit in the form factor 11:33:51
24 that was admitted in Exhibits 365 and 66? 11:33:54

1 A. Maybe, but it would have been tough. 11:33:58
2 Q. Okay. 11:34:00
3 The form factor means within the 11:34:01
4 plastic box? 11:34:03
5 A. Yes, I'm sorry. 11:34:04
6 Q. And on the chip, it has all the other 11:34:05
7 things besides the Boston 2 chip; correct? 11:34:08
8 A. That's right. 11:34:10
9 Q. All right. Let's skip forward 11:34:11
10 another year to the fall of 2014. 11:34:13
11 There was a slide you showed about 11:34:15
12 the meeting with Apple. I noticed that Delphi 11:34:18
13 was on it; correct? 11:34:22
14 A. Right. 11:34:23
15 Q. And at that point in time, it's just 11:34:24
16 a month or so after Delphi had bought Unwired; 11:34:26
17 correct? 11:34:29
18 A. About that, yeah. 11:34:29
19 Q. Now, when Delphi bought Unwired, you 11:34:30
20 were paid about $2 million for your shares; 11:34:33
21 correct? 11:34:35
22 A. Because of the sale of Unwired, 11:34:36
23 that's correct. 11:34:38
24 Q. So you made $2 million out of that 11:34:38

1 transaction. 11:34:40
2 And then we come to January 2015. 11:34:42
3 And that's Exhibit 9, the letter from 11:34:46
4 Microchip. 11:34:48
5 MR. SHAW: And could you call that 11:34:50
6 up, please, Mr. Ferrer. And could you blow up 11:34:52
7 the first paragraph, please. 11:35:01
8 BY MR. SHAW: 11:35:03
9 Q. Now, it's true at this time, wasn't 11:35:04
10 it, that Microchip and Delphi were valued 11:35:06
11 business partners, as it says in the first 11:35:10
12 phrase? 11:35:14
13 A. Sure. 11:35:15
14 Q. And they still are today, or at least 11:35:15
15 as of when you left Delphi? 11:35:21
16 A. Yeah, could you please clarify that 11:35:23
17 statement, because I don't work there. 11:35:24
18 Q. They were a valued business partner 11:35:26
19 still as of when you left Delphi? 11:35:28
20 A. Between -- between Microchip and 11:35:29
21 Aptiv? 11:35:32
22 Q. Yes. 11:35:34
23 A. As of the time that I was there? 11:35:35
24 Q. As of the time you left. 11:35:37

1 A. I think as a matter of perspective, 11:35:39
2 we obviously had our differences. Other parts 11:35:42
3 of Aptiv were using Microchip parts that I'm 11:35:45
4 aware of, but I had nothing to do with. 11:35:48
5 Q. Okay. 11:35:50
6 And it's correct that at that 11:35:50
7 time, as the letter states, that Unwired and 11:35:53
8 then Delphi had been "developing technology 11:35:57
9 related to USB device controllers designed for 11:36:00
10 multiple-host connectivity for use in 11:36:03
11 automotive infotainment systems"? 11:36:05
12 That's the second sentence; right? 11:36:09
13 MR. SHAW: Thank you, Mr. Glass. 11:36:11
14 BY MR. SHAW: 11:36:11
15 Q. That is true also; right? 11:36:13
16 A. Well, in a general sense, yeah. But, 11:36:15
17 I mean, as of 2015, okay, right, it's Aptiv's 11:36:19
18 system, it's not Unwired Technology anymore. 11:36:23
19 But it kind of overlooked that fact and just 11:36:25
20 said well, Unwired/Delphi, are we developing 11:36:27
21 USB things? Sure. That's a true statement. 11:36:31
22 Q. All right. 11:36:35
23 Now, as of the date of this 11:36:35
24 letter, the modules from Delphi that contained 11:36:39

1 the Boston 2 chip hadn't yet hit the 11:36:42
2 marketplace; in other words, they weren't in 11:36:46
3 cars that could be purchased in 2014? 11:36:48
4 A. I don't know. It was very close. 11:36:50
5 Q. All right. 11:36:51
6 Let's go back to Exhibit 23. And 11:36:52
7 see the chart with the cost, which I believe 11:36:58
8 was page 5. There we go. 11:37:11
9 MR. SHAW: And it shows that -- go 11:37:13
10 down to the second to last line and blow up 11:37:17
11 the first four boxes, one more to the right, 11:37:20
12 start one more to the right, perfect, and then 11:37:25
13 go back to the left. Highlight everything to 11:37:28
14 the left. 11:37:31
15 BY MR. SHAW: 11:37:36
16 Q. And this schedule shows mass 11:37:37
17 production beginning January 1st? 11:37:39
18 A. That's what it says. 11:37:41
19 Q. And then they have to be -- then the 11:37:42
20 modules have to be manufactured and placed 11:37:44
21 into cars; correct? 11:37:46
22 A. Yeah, but I think the schedule that 11:37:48
23 you're looking at was a schedule that was 11:37:52
24 written as of the date of this contract being 11:37:54

1 signed. 11:37:56
2 Q. Okay. 11:37:57
3 A. So that doesn't mean that it is 11:37:58
4 exactly how all of history unfolded. 11:38:00
5 Q. Sure. 11:38:03
6 But the car manufacturers are 11:38:04
7 given well -- months and months in advance of 11:38:05
8 schedules of when they will receive modules 11:38:07
9 that they can manufacture; correct? 11:38:09
10 A. Correct. 11:38:11
11 Q. And that planning takes place back in 11:38:11
12 2014 and even 2013, I would expect? 11:38:14
13 A. Your point is valid, they are 11:38:16
14 planning their launches far in advance. 11:38:19
15 Q. Right. 11:38:21
16 So now, when you got the letter, 11:38:21
17 did you offer up a module or a chip so that 11:38:26
18 Microchip could test it and see if it actually 11:38:30
19 infringed? 11:38:32
20 A. No. 11:38:33
21 Q. And when you got to -- 11:38:34
22 A. They also didn't ask for one. 11:38:37
23 Q. I understand. 11:38:38
24 But you said -- you testified that 11:38:39

1 you felt strongly that the chip didn't 11:38:40
2 infringe the patent; correct? 11:38:42
3 A. That's correct. 11:38:44
4 Q. And you didn't offer up one of these 11:38:45
5 chips to test; correct? 11:38:47
6 A. Nope. 11:38:49
7 Q. And it cost how much, the chip? 11:38:50
8 A. Oh, the chips, themselves, just the 11:38:54
9 individual chip? 11:38:56
10 Q. Yeah. 11:38:57
11 A. We would buy them for, you know, like 11:38:57
12 1 to $2. 11:39:00
13 Q. Okay. 11:39:01
14 And then in this October meeting 11:39:02
15 you had, you didn't offer up any chips to 11:39:05
16 test? 11:39:07
17 A. Well, they didn't ask for one; we 11:39:07
18 didn't offer it. 11:39:09
19 Q. And let me go back to this chart I 11:39:11
20 was working on here. 11:39:13
21 So this is -- do you see where I 11:39:21
22 put Delphi merger in 2014? Is that roughly 11:39:26
23 correct on the timeline? 11:39:29
24 A. Yes. 11:39:30

1 Q. And the AyDeeKay amendment, which 11:39:31
2 I'll call AyDeeKay 2, that was August 1, 2013. 11:39:37
3 Have I put that correctly on the 11:39:42
4 timeline? 11:39:44
5 A. Yes. 11:39:44
6 Q. And then the notice letter, which is 11:39:46
7 probably not accurate in terms of exact 11:39:51
8 distance, I've marked that roughly correctly? 11:39:55
9 A. Okay. 11:39:59
10 Q. And then between getting that letter 11:40:02
11 and the first AyDeeKay, what I'm marking now 11:40:07
12 in pink, through all that time, you didn't go 11:40:11
13 back and investigate anyone else's patents to 11:40:16
14 make sure there was no IP risk from your 11:40:19
15 Boston 2 development; is that correct? 11:40:23
16 A. That's correct. 11:40:24
17 MR. SHAW: Your Honor, I would 11:40:25
18 mark this demonstrative as Exhibit 11:40:26
19 Demonstrative 1000 because I don't know what 11:40:29
20 number we are, just for identification. 11:40:31
21 THE COURT: Okay. 11:40:32
22 (Whereupon, Demonstrative Exhibit 11:40:32
23 1000 was marked for identification.) 11:40:35
24 MR. SHAW: I pass the witness, 11:40:35

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 THE COURT: You can be seated. 12:22:31
2 Just real quickly before we break, 12:22:32
3 I don't know what we have to take up after 12:22:34
4 lunch. I don't know which witness is next and 12:22:41
5 therefore, what kind of things are necessary. 12:22:45
6 MR. SAULSBURY: Yes, Your Honor. 12:22:48
7 It was our intention to play 12:22:49
8 deposition testimony by video and there are 12:22:51
9 some objections that were outstanding based on 12:22:54
10 exhibits that were received as trial exhibits. 12:22:59
11 We submitted, from our 12:23:05
12 perspective, the correlation resolves the 12:23:08
13 questions about the objections and we -- we 12:23:11
14 submit that we should be permitted to play the 12:23:14
15 designations, but we're prepared to discuss. 12:23:16
16 THE COURT: Okay. 12:23:19
17 So let me make sure I understand. 12:23:20
18 I know I got your cross-reference sheet. As I 12:23:23
19 read what Microchip submitted to me, it seemed 12:23:26
20 like there was only one exhibit that was still 12:23:28
21 an issue; is that correct? 12:23:30
22 I don't know who is speaking on 12:23:34
23 behalf of Microchip. 12:23:35
24 MR. SAULSBURY: And I understand, 12:23:38

1 and you guys should let me know if this is 12:23:39
2 wrong, that it's Exhibit 6 of the deposition, 12:23:42
3 Trial Exhibit 329. 12:23:44
4 THE COURT: Yeah, that's the one 12:23:46
5 that I saw was still at issue. Is that right? 12:23:46
6 I don't know who is getting -- 12:23:49
7 MR. ADAMS: I can answer that one, 12:23:51
8 Your Honor. Yes, that's correct, Your Honor. 12:23:52
9 THE COURT: Okay. 12:23:53
10 And so the others are fine, the 12:23:54
11 objections are resolved? 12:23:56
12 MR. ADAMS: That's correct. I 12:23:57
13 think we resolved the other issues. 12:23:59
14 THE COURT: Okay. 12:24:01
15 So then the issue with respect to, 12:24:02
16 let me make sure I have it, Exhibit 329, and I 12:24:06
17 did re-review this testimony this morning, is 12:24:16
18 the issue with the document or the testimony 12:24:23
19 or both, Mr. Adams? 12:24:25
20 MR. ADAMS: Your Honor, the issue 12:24:28
21 is the documents are hearsay. They are 12:24:30
22 invoices from a third party with no business 12:24:34
23 record declaration or any supporting 12:24:39
24 information to indicate. 12:24:42

1 And to be clear, these are not 12:24:44
2 invoices from Mr. Rozycki's company; this is 12:24:46
3 from a third party. And there is just simply 12:24:49
4 no information about how it was kept, whether 12:24:53
5 it was kept in the ordinary course of 12:24:55
6 business, a custodian. So they are just pure 12:24:59
7 hearsay documents, Your Honor. 12:25:01
8 THE COURT: Understood. Okay. 12:25:03
9 MR. SAULSBURY: And, Your Honor, 12:25:04
10 they are from a third party, but they are a 12:25:07
11 third party with which Mr. Rozycki transacted, 12:25:09
12 a third party he bought the devices from. 12:25:13
13 He testified that he recognized 12:25:16
14 the invoices, said it was an invoice billed to 12:25:18
15 us. And the law is clear that for business 12:25:21
16 records exception to apply, you don't need 12:25:23
17 someone with personal knowledge of the 12:25:27
18 business's records, so long as there is enough 12:25:28
19 foundation for the stuff in the business 12:25:31
20 record. 12:25:35
21 It is an invoice that was billed 12:25:35
22 to him, a company he transacts with regularly, 12:25:37
23 and that's sufficient foundation from our 12:25:39
24 perspective. 12:25:41

1 We have the proposition that you 12:25:42
2 don't need personal knowledge of the business 12:25:45
3 practice. 12:25:49
4 THE COURT: Give me a second. Let 12:25:50
5 me look at some of his testimony. 12:25:51
6 (Brief pause.) 12:26:06
7 THE COURT: Just to be clear, is 12:26:27
8 this multiple invoices, this exhibit? 12:26:28
9 MR. ADAMS: Yes, Your Honor, I 12:26:31
10 believe there's three. 12:26:32
11 THE COURT: Okay. 12:26:33
12 Was there -- I don't know if you 12:26:58
13 had something else. I don't know, Mr. Adams, 12:27:00
14 I don't know if you were going to say 12:27:02
15 something else or not? I didn't mean to cut 12:27:03
16 you off. 12:27:06
17 MR. ADAMS: I'm sorry, Your Honor, 12:27:07
18 I didn't hear you. 12:27:09
19 THE COURT: I'm sorry. I said I 12:27:09
20 was looking down at the testimony. I wasn't 12:27:12
21 sure if you were about to say something else. 12:27:13
22 I didn't want to cut you off. 12:27:15
23 MR. ADAMS: Thank you, Your Honor. 12:27:17
24 And Mr. Rozycki doesn't ever say 12:27:19

1 he recognizes these invoices. They ask him, 12:27:21
2 do you recognize anything about it, and he 12:27:25
3 says yes, I recognize a part number on it. 12:27:26
4 They ask him a series of questions 12:27:29
5 about the invoices, but he never indicates he 12:27:31
6 represents the invoices or that they are 12:27:35
7 accurate. In fact, he says he doesn't recall 12:27:37
8 them. 12:27:39
9 And they asked him questions about 12:27:39
10 the invoices and they said, well, how do you 12:27:41
11 know that and he says, well, because you just 12:27:45
12 put it in front of me. 12:27:46
13 And, indeed, Your Honor, there's 12:27:48
14 one point in the deposition where the person 12:27:50
15 taking the deposition starts to ask the right 12:27:55
16 question, do these refresh your recollection 12:27:59
17 about these exhibits, and stops in mid 12:28:01
18 question because -- realizing he was going to 12:28:05
19 say no and then changed the question. 12:28:08
20 So Mr. Rozycki never says that's 12:28:11
21 my invoice. He just had a document put in 12:28:14
22 front of him and was asked to read information 12:28:17
23 off of it. 12:28:19
24 MR. SAULSBURY: And, Your Honor, 12:28:20

1 if I can just direct the Court to page 21, 12:28:21
2 line 15 through page 22, line 10, this is 12:28:25
3 where Mr. Rozycki is asked about the invoice 12:28:28
4 and he says, "Do you recognize anything about 12:28:31
5 Exhibit 6?" 12:28:34
6 And he says, "It's an invoice 12:28:34
7 billed to us." 12:28:36
8 "When you say it's billed to us, 12:28:37
9 I'm looking" -- 12:28:39
10 THE COURT REPORTER: I'm sorry, 12:28:39
11 keep your voice up. 12:28:39
12 MR. SAULSBURY: Oh, I'm sorry. 12:28:40
13 THE COURT: Why don't you move a 12:28:45
14 little closer to the microphone. 12:28:47
15 MR. SAULSBURY: Certainly, Your 12:28:48
16 Honor. Let me try that one more time. 12:28:49
17 So this is at line 23 of page 21. 12:28:57
18 "And what else do you recognize, if anything, 12:29:04
19 about the first page of Exhibit 6? 12:29:06
20 "ANSWER: It's an invoice billed 12:29:07
21 to us." 12:29:09
22 And then there is this question 12:29:10
23 about who "us" is, and it says... 12:29:11
24 "QUESTION: When you say it's 12:29:13

1 billed to us, I'm looking at the sold line and 12:29:14
2 I see here, it says, Tableau USA. 12:29:17
3 "ANSWER: Correct. 12:29:20
4 "QUESTION: Is that one of your 12:29:22
5 companies that you told us about? 12:29:23
6 "ANSWER: Yes. 12:29:25
7 "Who is it invoiced from? 12:29:26
8 "GWC Technology." 12:29:29
9 And then it goes through the 12:29:30
10 day-to-day invoice and so on. And so for the 12:29:31
11 -- so it's not accurate that he didn't 12:29:34
12 recognize the document. He recognized it as 12:29:36
13 an invoice to his company that he had 12:29:38
14 received. 12:29:40
15 MR. ADAMS: And, Your Honor, if I 12:29:43
16 might respond. I don't want to break your 12:29:45
17 train of thought. 12:29:47
18 THE COURT: Go ahead. 12:29:48
19 MR. ADAMS: He doesn't say -- they 12:29:49
20 asked him if he recognized anything about the 12:29:50
21 invoice, and he recognized that on the line 12:29:53
22 was his company name. It doesn't say he 12:29:58
23 recognized the invoice. 12:30:00
24 And they said, do you recognize 12:30:02

1 anything else? 12:30:03
2 And he says, well, there's a part 12:30:04
3 number on here. So he's really just reading 12:30:06
4 the invoices. 12:30:08
5 And then if you get down to 12:30:09
6 line 23:5, "Do you recall whether you 12:30:11
7 purchased an SS1280 for testing around that 12:30:15
8 time? 12:30:21
9 "I do not." 12:30:21
10 So he's looking at the invoice 12:30:22
11 that shows he purchased it, so a hearsay 12:30:23
12 invoice, and they asked him do you remember 12:30:26
13 this and he says no, I don't recall this. 12:30:28
14 It's just simply -- 12:30:32
15 THE COURT: I understand. It's 12:30:33
16 kind of the point of the document, right, is 12:30:35
17 he doesn't have an independent memory of it. 12:30:37
18 I do think it is a business 12:30:40
19 record. He does say he recognizes it. I 12:30:43
20 mean, he starts out -- I mean, he was being 12:30:46
21 questioned, right? 12:30:50
22 The question is, "It has an 12:30:53
23 invoice total; do you see that? 12:30:57
24 "Yes. 12:30:58

1 "Do you recognize anything else 12:30:59
2 about the first page?" 12:31:00
3 And he goes to another specific 12:31:01
4 item on it. 12:31:05
5 "And what else do you recognize?" 12:31:06
6 And his answer is, and so on. So 12:31:09
7 I think he recognizes that as an invoice, a 12:31:09
8 business record. So I'll overrule the 12:31:12
9 objection, I will admit it. 12:31:13
10 Okay. All right. So that's Mr. 12:31:15
11 Rozycki. I don't know if there is anything 12:31:17
12 else? I mean, his testimony is not terribly 12:31:21
13 long. 12:31:24
14 MS. LI: No. 12:31:24
15 THE COURT: I'm sorry, Mr. Dreon, 12:31:27
16 you can step down. 12:31:30
17 (Whereupon, the witness was 12:31:31
18 excused.) 12:31:31
19 THE COURT: All right. I don't 12:31:33
20 know, I mean, yeah, Mr. Rozycki is not going 12:31:34
21 to take real long. 12:31:37
22 MS. DURIE: Correct. 12:31:38
23 THE COURT: So I don't know what 12:31:38
24 else you had, if there are issues that we need 12:31:39

1 to act on before then. 12:31:41
2 MS. DURIE: I don't think so. We 12:31:42
3 are going to go to Mr. Garney after that. 12:31:43
4 We've got a bunch of depositions, we have some 12:31:46
5 deposition testimony. 12:31:50
6 THE COURT: Okay. 12:31:51
7 MS. DURIE: Other than the Rozycki 12:31:51
8 issue, it's all agreed to. We are going to 12:31:52
9 play that, then we are going to call Mr. 12:31:55
10 Garney. I don't think any of these issues 12:31:57
11 pertain to that. 12:31:59
12 There are maybe one or two things 12:32:00
13 we want to take up at the end of the day when 12:32:01
14 we do the charge conference. 12:32:03
15 THE COURT: And that's fine. And 12:32:04
16 I will take as much time as we need to go 12:32:05
17 through the revisions I got. 12:32:07
18 And I don't know if there are 12:32:09
19 issues for Mr. Garney that we need to tackle 12:32:10
20 that you just may not get to today. I mean, 12:32:13
21 my suspicion is you are not going to get 12:32:15
22 through all of his testimony today, but I 12:32:17
23 don't know. 12:32:19
24 MS. DURIE: That's probably true. 12:32:19

1 MR. RUSSELL: Your Honor, there 12:32:20
2 are issues that we want to raise with the 12:32:21
3 Court before Mr. Garney goes up. 12:32:23
4 THE COURT: Okay. 12:32:25
5 These are ones that you sent me 12:32:27
6 last night? 12:32:29
7 MR. RUSSELL: Yeah, it was No. 6 12:32:30
8 that we sent you on the list of six items last 12:32:31
9 night. And also a little bit later last 12:32:34
10 night, we sent some objections to his 12:32:36
11 demonstratives and exhibits. 12:32:40
12 THE COURT: All right. Hold on. 12:32:41
13 So you sent me a list of exhibits 12:32:42
14 of something, that was around 9 o'clock, about 12:32:44
15 Mr. Garney's testimony should be precluded as 12:32:50
16 outside the scope of his report, the proper 12:32:55
17 scope of his testimony about the product and 12:32:58
18 how he may refer to the product. Okay. 12:33:03
19 And then -- all right. So let's 12:33:05
20 tackle those three first. 12:33:11
21 MR. RUSSELL: So on the third one, 12:33:16
22 just so you know, we resolved the issue, the 12:33:18
23 very last one on that line about the naming, 12:33:20
24 it just refers to it now and Mr. Adams is 12:33:23

1 going to handle those. 12:33:25
2 THE COURT: Okay. 12:33:26
3 MR. ADAMS: Is it my issue? 12:33:30
4 MR. SAULSBURY: Go ahead. I 12:33:31
5 thought it had already been addressed. Go 12:33:32
6 ahead. 12:33:35
7 THE COURT: Go ahead. 12:33:35
8 MR. ADAMS: Your Honor, this is an 12:33:35
9 issue we've dealt with a few times and it's 12:33:37
10 really just a preview for the Court because we 12:33:40
11 think this issue will come up, that Mr. 12:33:44
12 Garney's testimony with regard to enablement 12:33:48
13 in this written description are very focused 12:33:51
14 on what he refers to as a host-to-host bridge. 12:33:54
15 He also talks about enabling the car phone. 12:33:56
16 He at no point in his testimony 12:33:58
17 refers to the claims, the multi-host device or 12:34:01
18 any of the elements of the claim. And as long 12:34:05
19 as Mr. Garney stays testifying about the 12:34:07
20 host-to-host bridge that he includes in his 12:34:11
21 opinions, we're fine with it. 12:34:13
22 If Mr. Garney ventures to testify 12:34:16
23 about the actual claim language, that's 12:34:19
24 outside the scope of his report, and we just 12:34:21

1 wanted to address that now before we have to 12:34:24
2 address it while the jury is here. 12:34:27
3 THE COURT: Okay. All right. 12:34:30
4 Go ahead. You can stay there if 12:34:33
5 we can hear you, you don't have to keep 12:34:35
6 shuffling back and forth, but I think you have 12:34:37
7 mics at your tables. 12:34:40
8 MR. SAULSBURY: Certainly. I 12:34:41
9 think I was too far away from it last time. 12:34:42
10 So with respect to enablement in 12:34:44
11 the description, I believe it's the same issue 12:34:46
12 raised in the motion in limine we talked about 12:34:47
13 at the pretrial conference that Microchip had 12:34:50
14 brought and was denied. 12:34:53
15 Mr. Garney isn't going to testify 12:34:55
16 outside the scope of his report. In his 12:34:57
17 report, he says full scope of the claim is not 12:35:00
18 enabled, so of course he can talk about the 12:35:03
19 claims. 12:35:05
20 With respect to what he is going 12:35:06
21 to say about why it is not enabled, we are 12:35:08
22 going to stick to what he disclosed 12:35:11
23 previously. I don't think it is an issue that 12:35:14
24 we need to address now. 12:35:15

1 THE COURT: Well, if you think 12:35:16
2 he's gone beyond, Mr. Adams, let me know and 12:35:17
3 you can approach. But I can't rule in a 12:35:21
4 vacuum. 12:35:23
5 MR. ADAMS: I understand. 12:35:24
6 MR. SAULSBURY: Your Honor, 12:35:26
7 apologies. Just one last objection. 12:35:26
8 THE COURT: Hold on. Before you 12:35:28
9 move to one last, this is still -- there were 12:35:29
10 three items in their paragraph 6. We tackled 12:35:32
11 two of them. Let me finish the third and then 12:35:34
12 go back to you. 12:35:36
13 The third is the scope about -- of 12:35:37
14 his testimony about the tested product, unless 12:35:39
15 you resolved that as well. You didn't say if 12:35:43
16 you resolved all of it. Have you resolved the 12:35:45
17 scope of his testimony about the tested 12:35:48
18 product or is that still at issue? 12:35:50
19 MR. RUSSELL: Your Honor, that was 12:35:52
20 just the same issue, except instead of 12:35:53
21 enablement, that was about whether he was 12:35:55
22 going to keep his testimony within the 12:35:58
23 opinions he offered within his report about 12:36:00
24 the relationship between the US-98 and the 12:36:04

1 products -- 12:36:05
2 THE COURT: All right, but you've 12:36:06
3 resolved that? 12:36:06
4 MR. RUSSELL: We resolved that. 12:36:08
5 THE COURT: Great. 12:36:10
6 I cut you off. Go ahead. 12:36:10
7 MR. SAULSBURY: No worries, Your 12:36:12
8 Honor. 12:36:13
9 The only exhibit that there is an 12:36:13
10 objection to that I think we need to address 12:36:15
11 now is there was an objection as to outside 12:36:17
12 the scope for Exhibit 5. I think we can 12:36:19
13 address this one of two ways. 12:36:24
14 I think this is a business plan 12:36:26
15 for Sandia that's already in evidence, we have 12:36:29
16 seen it a bunch of times. 12:36:31
17 Mr. Garney analyzed in his report 12:36:33
18 a corresponding document that essentially says 12:36:36
19 the same thing. We are going to talk about 12:36:37
20 Exhibit 25 because the jury is already 12:36:40
21 familiar with it, and so that would be our 12:36:41
22 preference. 12:36:44
23 But if you would like us to just 12:36:46
24 swap out the corresponding exhibit, we can 12:36:49

1 give it an exhibit number. 12:36:51
2 THE COURT: Which one did he talk 12:36:52
3 about? 12:36:53
4 MR. SAULSBURY: Just one second. 12:36:55
5 I think it is 236, but we're double-checking. 12:37:09
6 THE COURT: 236 is the product 12:37:12
7 used for the hub? 12:37:17
8 MR. SAULSBURY: Yes, that's right, 12:37:21
9 Your Honor. 12:37:22
10 THE COURT: Let me just 12:37:22
11 double-check. Isn't 236 in evidence? 12:37:30
12 MS. LI: It is in evidence, Your 12:37:31
13 Honor. 12:37:31
14 THE COURT: So we can talk 12:37:33
15 about -- if that's what is in his report and 12:37:36
16 it's already in evidence, so I don't think 12:37:38
17 there is any objection to talking 12:37:40
18 about Exhibit 25. 12:37:41
19 MR. SAULSBURY: We'll just use 12:37:42
20 236. No problem. 12:37:43
21 THE COURT: Fair enough. 12:37:45
22 Okay. Anything else we need to 12:37:45
23 tackle for Mr. Garney from your end, Mr. 12:37:46
24 Saulsbury? 12:37:49

1 MR. SAULSBURY: Not right now, 12:37:51
2 Your Honor. 12:37:53
3 THE COURT: And then I think, Mr. 12:37:53
4 Russell, you had something to add? 12:37:55
5 MR. RUSSELL: Yes. So I had 12:37:55
6 mentioned earlier today that there were 12:37:56
7 demonstrative objections, I believe we 12:37:58
8 resolved those in that they represented they 12:37:59
9 are not going to use the other cable they 12:38:01
10 disclosed and that they are going to use the 12:38:03
11 cable only for infringement. 12:38:05
12 So as long as that's correct, I 12:38:06
13 don't think there is anything we need to deal 12:38:08
14 with on the demonstratives. 12:38:09
15 THE COURT: Okay. Good. 12:38:10
16 MR. RUSSELL: And then on the 12:38:14
17 other exhibits that were already with the 12:38:15
18 Court, we had a number of product-related 12:38:20
19 exhibits and a number of data sheets that we 12:38:21
20 are maintaining our objections to that we 12:38:23
21 raised at the pretrial conference, and I 12:38:25
22 believe your order on those was that they need 12:38:27
23 to lay foundation first and we just don't want 12:38:29
24 to waive those. 12:38:31

1 So we'll just -- to the extent 12:38:32
2 they try to admit them without doing what Your 12:38:34
3 Honor required, then we'll object at the time. 12:38:37
4 THE COURT: And that's fine. I 12:38:38
5 mean, I don't know if that's something that 12:38:39
6 comes in with Mr. Garney or not. If it comes 12:38:41
7 up later, we can tackle it later, too, but 12:38:44
8 that's fine. And, you know, you'll lay your 12:38:46
9 foundation if there are objections. 12:38:50
10 MR. RUSSELL: And the final thing, 12:38:53
11 Your Honor, we do have objections to certain 12:38:55
12 of the Rozycki deposition designations, but I 12:38:56
13 understand that's not likely to be played 12:38:59
14 today. 12:39:01
15 THE COURT: I think it is going to 12:39:01
16 be played next. 12:39:03
17 MR. RUSSELL: Then Mr. Banner here 12:39:03
18 will argue those objections, if that's the 12:39:06
19 case. 12:39:08
20 THE COURT: I guess I 12:39:09
21 misunderstood. I guess I thought they were 12:39:10
22 all tied to the documents, but okay. 12:39:12
23 So give me a moment here. 12:39:16
24 Just so I'm in the right place, 12:39:51

1 following along with you, this would be 12:39:53
2 Exhibit 5 to your pretrial order; is that 12:39:55
3 correct? It might be Exhibit 6, I'm sorry. 12:39:57
4 It is the Aptiv designations. 12:40:09
5 MR. BANNER: That's right. And, 12:40:11
6 Your Honor, it sounds like that Your Honor 12:40:15
7 already ruled on one of the exhibit objections 12:40:18
8 that we had that would -- that was related to 12:40:20
9 Mr. Rozycki. 12:40:22
10 THE COURT: Right. 12:40:23
11 MR. BANNER: Exhibit 329. 12:40:24
12 THE COURT: Right. 12:40:26
13 MR. BANNER: And so I think that 12:40:26
14 essentially -- I mean, I think Your Honor's 12:40:30
15 ruling probably -- I think we'll withdraw our 12:40:33
16 objections on the rest of it, so I think there 12:40:37
17 is no further need to object. 12:40:39
18 THE COURT: Okay. 12:40:41
19 I understood all the objections to 12:40:42
20 be sort of tied to the exhibits, and I guess I 12:40:43
21 thought you had resolved the other exhibits, 12:40:47
22 the others probably were resolved anyway. 12:40:49
23 MR. BANNER: I think that's 12:40:52
24 correct, Your Honor. 12:40:54

1 THE COURT: All right. 12:40:54
2 And I think we have a game plan 12:40:55
3 for after lunch. So let's all eat, we'll do 12:40:56
4 that and then be back at 1 o'clock and we'll 12:41:01
5 resume. Okay? All right. 12:41:04
6 THE COURT CLERK: All rise. 12:41:07
7 (Whereupon, a 20-minute luncheon 12:41:09
8 recess was taken at 12:40 p.m.) 12:41:12
9 THE COURT CLERK: All rise. 13:01:19
10 THE COURT: All right. 13:07:17
11 Have a seat, everyone, so we can 13:07:19
12 get the jury. 13:07:22
13 (Whereupon, the jury entered the 13:07:24
14 courtroom.) 13:07:27
15 THE COURT: Mr. Saulsbury? 13:08:20
16 MR. SAULSBURY: The next witness 13:08:22
17 we'll be calling is Mr. Ghosh. He is a 13:08:23
18 Microchip engineer who is named as a 13:08:28
19 co-inventor with Mr. Bohm on the named patent. 13:08:32
20 We'll be calling him by deposition. 13:08:39
21 THE COURT: Okay. You may 13:08:41
22 proceed. 13:08:43
23 (Whereupon, portions of the 13:08:43
24 videotape deposition of Atish Ghosh were 09:03:20

1 played for the jury.) 09:03:22
2 MR. WIENER: Aptiv would now call 13:18:39
3 Mr. David Sroka by deposition. 13:18:41
4 Mr. Sroka was a product marketer 13:18:43
5 at Microchip in their USB group. 13:18:45
6 THE COURT: Okay. You can 13:18:48
7 proceed. 13:18:49
8 (Whereupon, portions of the 13:18:50
9 videotape deposition of David Sroka were 09:03:20
10 played for the jury.) 09:03:22
11 MR. WIENER: Aptiv now calls, as 13:20:36
12 its next witness, Mr. Donald Perkins, who also 13:20:38
13 was a partner at Microchip in their USB group. 13:20:41
14 THE COURT: Okay. 13:20:44
15 (Whereupon, portions of the 13:20:45
16 videotape deposition of Donald Perkins were 09:03:20
17 played for the jury.) 09:03:22
18 MR. WIENER: Aptiv now calls, by 13:23:08
19 video deposition, Mr. Craig Petku, who you 13:23:13
20 heard from this morning. He was an engineer 13:23:16
21 at Unwired who worked with Mr. Voto on the 13:23:18
22 solution. 13:23:20
23 THE COURT: Okay. 13:23:21
24 (Whereupon, portions of the 13:23:21

1 videotape deposition of Craig Petku were 09:03:20
2 played for the jury.) 09:03:22
3 MR. SAULSBURY: For its next 13:37:07
4 witness, Aptiv calls Mr. Rene Rozycki. He was 13:37:13
5 the proprietor of USB.com, a website that sold 13:37:16
6 USB products. 13:37:21
7 THE COURT: Okay. 13:37:23
8 (Whereupon, portions of the 13:37:23
9 videotape deposition of Rene Rozycki were 09:03:20
10 played for the jury.) 09:03:22
11 MR. SAULSBURY: In view of Mr. 13:46:46
12 Rozycki's testimony, we move Exhibits 229, 368 13:46:48
13 and 329. 13:46:52
14 THE COURT: 229, 368 and what was 13:46:56
15 the third one? 13:47:01
16 MR. SAULSBURY: The third one is 13:47:02
17 329. 13:47:04
18 THE COURT: 329. Okay. 13:47:04
19 Mr. Slayden? 13:47:06
20 MR. SLAYDEN: No objection. 13:47:07
21 THE COURT: All right. They are 13:47:08
22 received. 13:47:10
23 Okay. Mr. Saulsbury? 13:47:12
24 MR. SAULSBURY: For our next 13:47:17

1 witness, we call Mr. Garney. 13:47:18
2 THE COURT: All right. 13:47:20
3 THE COURT CLERK: Please state and 13:47:40
4 spell your name for the record. 13:47:43
5 THE WITNESS: My name is John 13:47:45
6 Garney. John Irving Garney, J-O-H-N, 13:47:46
7 I-R-V-I-N-G, G-A-R-N-E-Y. 13:47:52
8 - - - 13:47:52
9 ...JOHN IRVING GARNEY, after 13:47:52
10 having first been duly sworn and/or affirmed, 13:47:52
11 was examined and testified as follows... 13:47:52
12 - - - 13:48:14
13 DIRECT EXAMINATION 13:48:14
14 - - - 13:48:15
15 BY MR. SAULSBURY: 13:48:16
16 Q. Good afternoon, Mr. Garney. 13:48:16
17 A. Good afternoon. 13:48:17
18 Q. Could you please introduce yourself 13:48:18
19 to the jury. 13:48:20
20 A. Sure. My name is John Garney. I am 13:48:20
21 the sole member of my consulting company, 13:48:23
22 Garney Consulting, LLC. 13:48:25
23 Q. What brings you here today? 13:48:27
24 A. I am here to offer two opinions, one 13:48:28

1 on non-infringement and one on invalidity with 13:48:31
2 regard to the key patent. 13:48:36
3 Q. Are you here to tell the jury what to 13:48:37
4 do? 13:48:39
5 A. You guys have a rough job, you gotta 13:48:39
6 do it yourselves, sorry. 13:48:42
7 Q. What is the asserted patent about? 13:48:44
8 A. You've heard a lot about it, but it's 13:48:47
9 basically two USB hosts sharing a single USB 13:48:50
10 device, and there is some need for arbitration 13:48:53
11 to sort of kind of resolve making that work. 13:48:56
12 Q. You mentioned USB. Do you have 13:48:59
13 expertise relevant to USB? 13:49:01
14 A. Just a little bit. 13:49:03
15 Q. And could you tell us a little bit 13:49:05
16 about that expertise? 13:49:07
17 A. Sure. You want the five-minute 13:49:08
18 answer or the two-hour answer? 13:49:10
19 Q. Let's shoot between three and 13:49:12
20 five minutes. 13:49:15
21 A. I'll try. 13:49:16
22 So I was working at Intel 13:49:17
23 Corporation, which we can talk about later if 13:49:20
24 necessary, but around about 1994, I actually 13:49:22

1 came back from sabbatical and was invited to 13:49:27
2 join the team that was working on or became 13:49:29
3 USB 1.0 specification we've heard something 13:49:34
4 about. I was one of the key Intel technical 13:49:36
5 team members that was a part of that effort. 13:49:38
6 There was a number of 13:49:41
7 international companies, about seven different 13:49:42
8 companies that had technical experts to work 13:49:45
9 on the specification. Companies like 13:49:48
10 Microsoft, IBM, ABC, Digital Equipment, you 13:49:51
11 may have heard of some of those. 13:49:54
12 And we got together because we saw 13:49:56
13 a problem out in the industry and we wanted to 13:49:58
14 go solve that. 13:50:00
15 And so we worked on producing this 13:50:01
16 USB spec, and for USB 1, the specification 13:50:05
17 actually I personally proposed about over 13:50:11
18 50 percent of the material that was in the USB 13:50:15
19 1 spec, brought it to the technical group, we 13:50:18
20 debated and discussed, arm-wrestled over what 13:50:20
21 the details should be, and ultimately that was 13:50:23
22 included in the USB 1. And I personally wrote 13:50:26
23 about a third of the 1 USB spec and it got 13:50:29
24 released to the public. 13:50:33

1 And then I went off and did some 13:50:34
2 other projects at Intel, came back, was 13:50:35
3 invited back actually by Intel to work on the 13:50:37
4 USB 2 spec, I think you saw one of the pages 13:50:40
5 with my name on it. I was invited to be the 13:50:43
6 chair of the hub working group for USB 2 spec. 13:50:45
7 I did a similar kind of set of 13:50:49
8 work with that. I was responsible for leading 13:50:50
9 the technical team. It was a slightly 13:50:53
10 different set of companies involved with the 13:50:56
11 USB 2 work. USB 2 was trying to have a 13:50:58
12 performance improvement for USB. They had 40 13:51:01
13 times speed improvement so it could attach 13:51:05
14 faster devices and more devices. 13:51:08
15 And there were kind of two parts 13:51:10
16 to the USB 2 spec because we wanted to make 13:51:11
17 sure we reserved back to compatibility to USB 13:51:14
18 1. 13:51:17
19 So one of the areas were some 13:51:18
20 electrical changes. I had a co-worker that 13:51:19
21 was the head of the working group, the share 13:51:22
22 of the working group for the electrical 13:51:23
23 portions, and I and my group were responsible 13:51:25
24 for everything else. So if it was 13:51:28

1 intellectual, it was my problem. 13:51:31
2 One of the key features was the 13:51:32
3 definition of the enhanced USB 2 hub. There 13:51:34
4 was a key part of that called a transaction 13:51:36
5 translator, which I was the proposal person 13:51:39
6 for, and actually have some patents granted on 13:51:41
7 a number of USB technology. 13:51:44
8 And again, I wrote probably over 13:51:46
9 50 percent of the USB 2 spec and was 13:51:47
10 responsible for editing the whole document, 13:51:50
11 which I was also responsible for USB 1. 13:51:52
12 Again, we published that to the 13:51:55
13 world, and at that point, the story kind of 13:51:57
14 branches a couple ways. And if I back up just 13:52:03
15 a minute, after the completion of USB 1, we 13:52:06
16 already knew what USB 1 was and we wanted USB 13:52:09
17 1 to proliferate and solve all kinds of 13:52:12
18 problems. And so as device vendors, people 13:52:14
19 wanted to build devices to start reading the 13:52:17
20 spec and trying to understand it. 13:52:20
21 Intel actually formed a group 13:52:21
22 called the peripheral integration lab which is 13:52:23
23 just a test group, you've heard the compliance 13:52:25
24 talk about this, kind of pre-compliance, and 13:52:28

1 so we would invite or actually companies would 13:52:30
2 contact us that wanted to build USB devices 13:52:33
3 and they would come to this Intel lab. They 13:52:35
4 would have -- they would sit down with Intel 13:52:38
5 engineers that had been involved in the 13:52:40
6 creation of the spec, they would work with 13:52:42
7 those engineers to understand was the device 13:52:43
8 doing the right things electrically. 13:52:46
9 We'd take them through a whole 13:52:47
10 series of things to try to get their devices 13:52:49
11 starting to work because at the time, Intel 13:52:51
12 had the only host controller they could 13:52:53
13 connect up to and we wanted to make sure the 13:52:55
14 devices were going to work properly. 13:52:57
15 So I was involved in working with 13:52:58
16 them to make sure the electrical things were 13:53:00
17 working properly, that the software things 13:53:02
18 were working properly. 13:53:04
19 You've heard about the standard 13:53:05
20 request in USB. That was one of the chapters 13:53:07
21 I was independently involved in creating, the 13:53:09
22 standard replies, some of the pieces. And so 13:53:12
23 we worked through with these engineers to make 13:53:15
24 sure the device worked the way USB said it was 13:53:17

1 supposed to. 13:53:20
2 And then go off and fix things and 13:53:20
3 then come back and ultimately with a stellar 13:53:22
4 product, in short. 13:53:26
5 Same kind of thing for USB 2. 13:53:28
6 When that happened, I did some other projects, 13:53:30
7 and I don't know how far you want to go, but 13:53:35
8 there's other parts of the story, too, so 13:53:38
9 maybe that's the two-minute answer I can give. 13:53:40
10 Q. Thank you very much, Mr. Garney. 13:53:42
11 Roughly when were you doing this 13:53:44
12 work? 13:53:46
13 A. So I started in 1994, and actually I 13:53:46
14 continued with some USB work up until I think 13:53:50
15 like -- actually, USB 2 was published in the 13:53:54
16 year 2000, and I worked with a USB 3 efforts 13:53:59
17 that I was again invited back to -- by Intel 13:54:03
18 and the USB high-ups group to be the vice 13:54:06
19 chair of the hub working group for USB 3, and 13:54:09
20 I think that happened in, I'm not exactly 13:54:12
21 sure, 2008 or something like that. So it's 13:54:14
22 been a long period of time. At least 25 13:54:16
23 years, I think. 13:54:18
24 MR. SAULSBURY: Can we please have 13:54:20

1 Slide 3, Mr. Glass. 13:54:21
2 BY MR. SAULSBURY: 13:54:23
3 Q. Was there a particular problem you 13:54:24
4 were trying to address with the USB standard? 13:54:25
5 A. What a great picture, yeah, there was 13:54:28
6 a huge problem. I don't know if anybody 13:54:29
7 remembers computers at the time, but they had 13:54:31
8 all these really ugly and messy connectors for 13:54:32
9 different things that took up a lot of space 13:54:36
10 on the back of the PC. And on the one hand, 13:54:38
11 every different device had its own group of 13:54:41
12 connectors. 13:54:44
13 So there was a keyboard connector 13:54:44
14 at the top of the figure here, one of these -- 13:54:46
15 I forget which is which, but one of these is 13:54:49
16 the keyboard connector, one is the mouse 13:54:51
17 connector. Why they are color-coded 13:54:54
18 differently, one of these is the serial port, 13:54:56
19 we haven't really talked about yet, one of 13:54:59
20 these is a parallel port, which has a whole 13:55:01
21 lot of pins, like 25 pins, typically used for 13:55:03
22 printers. 13:55:07
23 This connector looks very much 13:55:07
24 like this other one, except this is for video, 13:55:08

1 and this created a lot of confusion for end 13:55:10
2 users. 13:55:13
3 Some of these were video 13:55:14
4 connectors, Ethernet connector, and then these 13:55:15
5 are some audio connectors. 13:55:18
6 And the problem was end users 13:55:19
7 would buy some device they wanted to use, like 13:55:21
8 a printer or something, and it needed a cable. 13:55:23
9 And so sometimes the product came with a 13:55:25
10 cable, sometimes they didn't come with a 13:55:29
11 cable. So they'd have to go back to the store 13:55:31
12 and get a cable. 13:55:33
13 And without being a technical guy, 13:55:34
14 people like me, you know, ask what cable do I 13:55:35
15 need? They buy a cable, they take it home and 13:55:37
16 it would be the wrong cable. Then they'd be 13:55:40
17 frustrated and they'd have to go back to the 13:55:42
18 store, return that cable, get another cable, 13:55:44
19 try to find the right one, and this was just a 13:55:46
20 mess. It was really slowing the use of PCs 13:55:48
21 down. 13:55:51
22 And Intel, since I was an Intel 13:55:51
23 employee, wanted PCs to be used for everything 13:55:53
24 they could think of. 13:55:55

1 So our idea, as part of USB, kind 13:55:57
2 of where the universal name comes from is we 13:55:59
3 wanted one connector, one technology that 13:56:01
4 could be used for any device you could think 13:56:04
5 of, and get rid of all this confusion. 13:56:06
6 On the back of a PC, just have one 13:56:09
7 or two little connectors, that were a lot 13:56:11
8 smaller, a lot cheaper to make and a lot 13:56:14
9 easier for the end user to understand. If you 13:56:15
10 buy one cable, no matter what device they 13:56:17
11 bought, and they could connect those devices 13:56:20
12 into the PC. 13:56:22
13 One of the big problems I was 13:56:22
14 directly involved in was talking a lot about 13:56:24
15 hubs. You only have two connectors on a PC 13:56:26
16 and you want to connect five devices, how do 13:56:28
17 you do it? I think some other experts or 13:56:31
18 people have talked about that. 13:56:33
19 There is a single hub which is 13:56:34
20 basically an expansion, like a three-way plug 13:56:36
21 on your electrical system for providing 13:56:38
22 electrical standard mixers or something. 13:56:40
23 So the hub would give you more 13:56:44
24 connection opportunities to any connection and 13:56:45

1 you could actually connect hubs to each other. 13:56:46
2 So with the USB, you could connect 127 13:56:49
3 devices, if anybody was so crazy they wanted 13:56:53
4 to do that, you could just have one connector 13:56:56
5 on your PC, which now, in today's world, with 13:56:58
6 phones or laptops having one connector that 13:57:01
7 can connect that many devices is really a 13:57:04
8 useful thing. 13:57:05
9 Q. Now, I can see up here on the slide 13:57:06
10 that we have a lot of different connectors 13:57:08
11 with a whole lot of different pin numbers. 13:57:10
12 The shape is different than I think you were 13:57:12
13 saying and the purpose is different. 13:57:14
14 How were you able to get to 13:57:15
15 replace those with a single cable and 13:57:17
16 connector type? 13:57:20
17 A. Yeah, it is a little tricky. So 13:57:20
18 since you have one connector and a consumer 13:57:24
19 can bring any device they could think of and 13:57:27
20 purchase and plug it into that one connector, 13:57:30
21 how would the host know what that device is? 13:57:32
22 In this world, if someone plugged 13:57:34
23 up to a keyboard connector, they would know it 13:57:36
24 was a keyboard. If they plug up to a video 13:57:39

1 connector, they would know it's a video 13:57:42
2 connector. 13:57:44
3 With USB, they knew it was going 13:57:44
4 to be universal; anything could be plugged in. 13:57:46
5 So one of the first things a host would have 13:57:48
6 to ask, and one of the key parts I was 13:57:50
7 involved in creating was this idea of having a 13:57:51
8 device be self-describing. It had to carry 13:57:53
9 enough information to be able to answer the 13:57:57
10 question from the host. 13:57:58
11 I'm sorry if I'm talking fast. 13:57:59
12 THE COURT REPORTER: You are. 13:57:59
13 MR. SAULSBURY: I think I heard 13:58:04
14 that, "You are." 13:58:05
15 THE WITNESS: Sorry. It's 13:58:06
16 exciting stuff. I have been doing this for a 13:58:07
17 long time now. 13:58:09
18 BY MR. SAULSBURY: 13:58:10
19 Q. If you would, please, do continue, 13:58:10
20 but perhaps we might be able to slow the tempo 13:58:12
21 a little bit. That would help. 13:58:15
22 A. See if I can take a breath in there. 13:58:17
23 So the host would have to ask a 13:58:19
24 newly attached device, what are you? What can 13:58:21

1 you do? Because it could be anything. So we 13:58:24
2 defined, as you've heard, some standard 13:58:28
3 requests for that. 13:58:30
4 So when the device is first 13:58:31
5 attached to the PC, the hub's responsibility 13:58:33
6 is to say hey, something got attached. And 13:58:35
7 there's some nasty little electrical things to 13:58:37
8 define how to do that. 13:58:40
9 And the hub would tell the host, 13:58:41
10 like USB message, hey, something has been 13:58:44
11 attached. I don't know what it is, it's your 13:58:46
12 problem. And the USB host would get that 13:58:48
13 message and say hmm, something has been 13:58:50
14 attached to this hub. Let's go reset the port 13:58:52
15 that it was attached to. 13:58:56
16 So the device on the other side 13:58:57
17 gets back into an unknown state, and then once 13:58:59
18 that's been completed, the host would say, 13:59:02
19 tell the device, a standard device, device 13:59:04
20 descriptor, and say hey, device, what are you? 13:59:07
21 And the device would respond with 13:59:10
22 a standard request. And in that standard 13:59:12
23 request, there would be some critical 13:59:14
24 information that would identify what the 13:59:16

1 manufacturer was, what the product was, what 13:59:18
2 kind of device it was. 13:59:21
3 And some of the lowest level sort 13:59:23
4 of device global things like how many 13:59:25
5 integrations does this device have and how big 13:59:29
6 is the buffer that the device has. So we can 13:59:31
7 talk to it without confusing it and the host 13:59:34
8 could get that information back. 13:59:40
9 And as you sort of heard, it's oh, 13:59:41
10 hmm, this device class, I think I know how to 13:59:44
11 do that, let's go continue. And it would tell 13:59:46
12 the device, okay, I am going to call you 13:59:48
13 George. It would actually say I might call 13:59:50
14 you Address No. 1, but it had to have some way 13:59:52
15 to uniquely identify that device. 13:59:55
16 So it would give a set address and 13:59:57
17 tell the device, here's your number. Any time 13:59:59
18 I say, hey, I want to talk to Device No. 2, 14:00:01
19 you need to respond. 14:00:03
20 Q. Did you face any other sorts of 14:00:05
21 challenges in creating USB? 14:00:07
22 A. Yeah, one of the other major ones, 14:00:09
23 which is kind of lurking in this, is low cost. 14:00:11
24 We wanted to have -- many of these connectors 14:00:14

1 and cables were expensive, there were a lot of 14:00:17
2 wires, the cables can be long so they can be 14:00:20
3 expensive, and the connectors, themselves, 14:00:23
4 could be somewhat expensive. 14:00:25
5 So one of the design goals we had 14:00:27
6 for creating the spec is we wanted something 14:00:28
7 that could be used for -- at a price a 14:00:31
8 consumer would pay for a mouse. At the time 14:00:35
9 you could buy a mouse for $5, so we had to 14:00:37
10 have a USB solution for the connector that 14:00:39
11 would allow, you know, something with that 14:00:43
12 kind of price. The bill of material cost for 14:00:45
13 a mouse is like 50 cents, so it's incredibly 14:00:50
14 price conscious. 14:00:53
15 At the time, Game Boy was a 14:00:54
16 typical kind of a thing and it had a really 14:00:56
17 unique connector that looked kind of robust, 14:00:58
18 and we kind of modeled the USB connector after 14:01:01
19 that kind of thing. Very successful. 14:01:04
20 Q. Why were you aiming to make the 14:01:06
21 connector low-cost? 14:01:08
22 A. Well, we wanted -- again, this 14:01:09
23 universal concept that's baked into the name. 14:01:12
24 We wanted anybody in the planet who would buy 14:01:14

1 a USB device, there were some other competing 14:01:17
2 technologies at the time that we looked at 14:01:20
3 that had licensing costs but were more 14:01:22
4 expensive, so we wanted to keep the price as 14:01:24
5 low as possible so people could see a USB 14:01:26
6 device, they could probably afford it and buy 14:01:31
7 as many as they wanted. 14:01:33
8 Q. What are some examples of devices 14:01:34
9 that use USB? 14:01:37
10 A. Some devices, keyboards. I mean, if 14:01:39
11 you have a phone in your pocket, it will 14:01:42
12 probably have the USB connected for it, 14:01:43
13 printers, scanners, web cams if you have a PC, 14:01:46
14 it probably has a web cam that's connected via 14:01:49
15 USB. Video devices, speakers, microphones. 14:01:52
16 The sky is the limit. 14:01:58
17 Cars, you know, it's hard to think 14:01:59
18 of a car as a USB device, but it's referred 14:02:01
19 to, kind of. 14:02:04
20 Q. You talked a little bit earlier about 14:02:06
21 a process called configuration. Is that 14:02:08
22 defined in the USB specification? 14:02:12
23 A. It is. There is a big section. 14:02:14
24 Q. And how long can configuration take? 14:02:16

1 A. Well, different device vendors can 14:02:20
2 build different things, but the USB definition 14:02:23
3 says it can take as long as five seconds, and 14:02:26
4 there are some devices that can be slower, it 14:02:28
5 can take close to that. 14:02:30
6 Q. How do vendors know how to implement 14:02:31
7 USB in their devices? 14:02:34
8 A. Well, they start by reading the spec, 14:02:34
9 and unfortunately it's not always the clearest 14:02:37
10 thing. We did our best, but it's very hard 14:02:40
11 the way the spec can be understood by 14:02:42
12 everybody in the world, so they have to study 14:02:44
13 the spec and try things. 14:02:46
14 Q. Mr. Garney, I've just handed you 14:03:04
15 what's marked as Exhibit 377. 14:03:06
16 (Whereupon, Trial Exhibit 377 was 09:03:13
17 introduced.) 09:03:13
18 BY MR. SAULSBURY: 09:03:13
19 Q. Do you recognize this? 14:03:09
20 A. Actually I do, yes. 14:03:10
21 Q. And what is it? 14:03:12
22 A. It actually appears to be a USB 1 14:03:13
23 specification, but not only that, it actually 14:03:17
24 appears to be a copy, my personal copy of the 14:03:20

1 USB 1 spec because it has the signature of all 14:03:22
2 of the people that were involved in creating 14:03:27
3 it. 14:03:29
4 Q. What was that moment like for you? 14:03:33
5 A. As you can see, it was pretty 14:03:35
6 overwhelming. So I have spent a year or so 14:03:37
7 creating the spec with all these people; it 14:03:39
8 was an incredible experience. Even today, I'm 14:03:42
9 talking to people that were involved in it who 14:03:45
10 are still amazed at this experience of the 14:03:47
11 success it's had. I heard like 10 years ago 14:03:49
12 from somebody that told me, like, there are 14:03:53
13 four billion USB devices that get created a 14:03:55
14 year, and now probably even more. 14:03:58
15 I mean, you heard earlier, 14:04:00
16 Microchip makes like eight billion devices I 14:04:01
17 think a year is what they said, and I've got 14:04:04
18 to believe a number of those go into USB 14:04:06
19 products. So every cell phone on the planet. 14:04:09
20 Every country in the world probably has USB. 14:04:11
21 That's pretty humble. 14:04:14
22 MR. SAULSBURY: We move to admit 14:04:17
23 Exhibit 377. 14:04:19
24 MR. SLAYDEN: Object, Your Honor, 14:04:20

1 for demonstrative purposes only. 14:04:21
2 THE COURT: Are you offering for 14:04:23
3 demonstrative purposes or are you offering it 14:04:25
4 substantively? 14:04:26
5 MR. SAULSBURY: We were offering 14:04:27
6 to admit it. It's a copy of the USB 14:04:28
7 specification. 14:04:32
8 THE COURT: All right. Let's go 14:04:32
9 to sidebar. 14:04:33
10 (Whereupon, a discussion was held 14:04:33
11 at sidebar as follows: 14:05:33
12 MR. SAULSBURY: I'm not too sure 14:05:33
13 what the nature of the objection is. 14:05:33
14 THE COURT: It's USB 1; right? 14:05:33
15 What does it have to do with this case? 14:05:33
16 MR. SAULSBURY: Because the 14:05:33
17 devices are compatible with USB 1 and USB 2. 14:05:33
18 MR. SLAYDEN: It doesn't make any 14:05:33
19 difference, Your Honor. 14:05:33
20 THE COURT: I don't think there is 14:05:33
21 anything -- 14:05:33
22 MR. SAULSBURY: That's fine. We 14:05:33
23 can use it as a demonstrative. 14:05:33
24 THE COURT: Okay. 14:05:33

1 (Whereupon, the discussion at 14:05:39
2 sidebar concluded.) 14:05:41
3 BY MR. SAULSBURY: 14:05:42
4 Q. Is anyone who worked on the USB 14:05:42
5 specification with you still involved in this? 14:05:45
6 A. Actually I was surprised, because 14:05:47
7 when we went to the IPR proceedings, a 14:05:49
8 gentleman named Harold Halpen, who was an 14:05:52
9 expert witness for the other side, and he and 14:05:55
10 I worked closely, we're still friends. 14:05:57
11 Actually a few pages in the USB spec itself he 14:05:59
12 wrote that describes some of the audio 14:06:03
13 relevant features of USB. He is a Phillips -- 14:06:05
14 at the time was a Phillips guy audio expert 14:06:08
15 and all kinds of things, so he had some deep 14:06:10
16 knowledge there and he is included in that 14:06:13
17 material for USB. 14:06:16
18 Q. How about the -- how about the 14:06:16
19 experts that we saw earlier; do you know Mr. 14:06:19
20 Zatkovich from the USB circle? 14:06:21
21 A. No, I never saw his name in the 14:06:23
22 technical. 14:06:26
23 Q. How about Dr. Levy? 14:06:26
24 A. Never saw him. 14:06:27

1 Q. Do they include experts of Microchip? 14:06:28
2 A. Sorry about that, I should wait. 14:06:31
3 No, I never saw him in any of the 14:06:34
4 technicals. 14:06:36
5 Q. Now, are there multiple versions of 14:06:39
6 the USB specification? 14:06:42
7 A. Kind of. As I mentioned, the three 14:06:43
8 major versions, USB 1, 2, 3. There's actually 14:06:44
9 a fourth version that I haven't been involved 14:06:47
10 in. 14:06:49
11 Q. And what versions matter in this 14:06:49
12 case? 14:06:52
13 A. USB 1 and USB 2 are, as I understand 14:06:52
14 it. 14:06:52
15 Q. What was the purpose of USB 2 14:06:58
16 relative to USB 1? 14:07:01
17 A. USB 2 was a speed improvement. I 14:07:02
18 mentioned USB 1 was -- had two speeds, 14:07:06
19 one-and-a-half megabytes a second and 12 14:07:10
20 megabytes a second was called low and full 14:07:11
21 speed. And oddly enough, when we did USB 2, 14:07:15
22 they introduced a 40 times speed, I believe 14:07:18
23 they call high speed, I almost forgot for a 14:07:21
24 minute. So 480 megabytes a second, quite a 14:07:25

1 bit faster. 14:07:28
2 Q. And has USB received any industry 14:07:29
3 recognition? 14:07:31
4 A. Yes, it has. Actually I think 14:07:31
5 shortly after we published the USB 1 spec, 14:07:33
6 there was a journal magazine at the time 14:07:36
7 called PC Magazine, I think it was, and they 14:07:39
8 awarded us an award for either best technology 14:07:42
9 or technology of the year, I forget what, but 14:07:46
10 it was a recognition of the impact that they 14:07:52
11 thought USB had. 14:07:54
12 When we'd go visit customers, 14:07:55
13 especially with this, the customers would say, 14:07:57
14 are you guys done yet? We need this now, we 14:08:00
15 have these problems. 14:08:03
16 My past experience, I think we 14:08:03
17 dealt with technology that was we usually had 14:08:06
18 to sort of help the customers to understand 14:08:08
19 what the new technology was, but everybody is 14:08:10
20 clamoring for us to finish this because it was 14:08:13
21 part of the reason for the award. 14:08:16
22 The second award happened just 14:08:18
23 recently, and I was actually contacted by a 14:08:19
24 member of IEEE and asked to provide some 14:08:22

1 evidence, a report to them of USB 2, because 14:08:26
2 IEEE was considering making an award 14:08:32
3 recognizing the contributions of USB -- of the 14:08:35
4 impact of USB throughout the world. 14:08:37
5 And their plans, as I understand 14:08:40
6 it, is to actually mount a plaque 14:08:41
7 acknowledging -- they did approve it, plan to 14:08:43
8 mount a plaque right outside the door at Intel 14:08:47
9 where I worked that was for innovation lab, so 14:08:50
10 that was pretty cool. 14:08:53
11 Q. For those of us like me who aren't 14:08:54
12 engineers, what's the IEEE? 14:08:56
13 A. I think it's called the Institute for 14:08:57
14 Electrical and Electronic Engineers. It is an 14:09:00
15 international organization. I think they do 14:09:02
16 other standards. 14:09:05
17 Q. Shifting gears a little bit, tell us 14:09:06
18 about your educational background. 14:09:08
19 A. Yes, I went to school at Purdue 14:09:10
20 University in Indiana and I got my bachelor's 14:09:13
21 science, in computer science, actually dual in 14:09:17
22 mathematics. I had a minor in digital 14:09:20
23 electronics, digital electrical engineering 14:09:22
24 and some analog or analytical engineering, and 14:09:25

1 then continued on and got a master's of 14:09:29
2 computer science at Purdue also. 14:09:32
3 Q. When did you start working at Intel? 14:09:35
4 A. Right out of college, so 1980. 14:09:37
5 Q. Why did you leave Intel? 14:09:40
6 A. After 27 years at Intel, I was a 14:09:42
7 little tired of the grind and the hours that 14:09:44
8 Intel expected you to make to be a senior 14:09:46
9 executor or contributor. I ended up as a 14:09:49
10 senior staff system architect, I think was the 14:09:52
11 title, in the corporate technology group and 14:09:54
12 also the headquarters in the technical sense, 14:09:57
13 and I loved the work there, but hated the 14:09:59
14 hours, so I took advantage of an opportunity 14:10:02
15 that Intel has for people that qualify to just 14:10:05
16 retire and I officially retired from Intel. 14:10:08
17 Unfortunately I sort of failed at 14:10:12
18 retiring because I started my own company. I 14:10:14
19 had heard -- I wanted to keep my hands in with 14:10:17
20 the technical things, but I didn't want to 14:10:19
21 work, you know, 40 or 60 hours a week anymore, 14:10:21
22 and so I started my consulting company and had 14:10:24
23 heard it might take a year to get connected to 14:10:29
24 finally work because people are particular 14:10:31

about hiring people, especially as a 14:10:35
consultant. 14:10:37
And within one month, I had 14:10:37
contacts from some of my USB friends and they 14:10:39
said, so how much beyond full time do you want 14:10:43
to work? 14:10:45
I said that's not really what I'm 14:10:45
looking for at this point, so some part-time 14:10:47
stuff. And when I started providing 14:10:50
electrical engineering services to a company 14:10:52
in New York doing system architect, that kind 14:10:53
of thing, taking big problems and breaking 14:10:57
them down to small problems and helping them 14:11:00
write up documents of interface, I provided 14:11:03
these kind of technical services to that 14:11:06
company. 14:11:08
There are also other companies 14:11:08
that would have problems with USB, their 14:11:10
devices wouldn't work according to spec and 14:11:13
they didn't know why, and so they contacted me 14:11:16
and asked if I could help them out. 14:11:18
So we'd look at the products, 14:11:19
analyze them, see what they have going that 14:11:21
was a problem. 14:11:24

1 And then somewhere, well, I don't 14:11:25
2 know. I can pause there and take a breath. 14:11:28
3 Q. Could you please turn in your binder 14:11:32
4 to Trial Exhibit 330. It should be tab -- 14:11:34
5 A. Sorry, what? 14:11:37
6 Q. Trial Exhibit 330. There should be a 14:11:38
7 tab for it. 14:11:41
8 (Whereupon, Trial Exhibit 330 was 09:03:13
9 introduced.) 09:03:13
10 THE WITNESS: There's a lot here. 14:11:45
11 Ah, okay. 14:11:50
12 BY MR. SAULSBURY: 14:11:52
13 Q. Do you recognize this as your resume, 14:11:52
14 Mr. Garney? 14:11:54
15 A. This is my resume, yes. 14:11:55
16 MR. SAULSBURY: We move 330. 14:11:57
17 MR. SLAYDEN: No objection. 14:11:59
18 THE COURT: All right. It's in. 14:12:00
19 MR. SAULSBURY: Mr. Glass, can we 14:12:02
20 please see it on the screen? Thank you. 14:12:04
21 BY MR. SAULSBURY: 14:12:06
22 Q. Why don't we start here. Let's just 14:12:07
23 jump right to experience and take a look at 14:12:09
24 section 2007 to the present. 14:12:11

1 Mr. Garney, does this portion of 14:12:15
2 your resume relate to some of the engineering 14:12:18
3 consulting that you were just talking about? 14:12:22
4 A. Yeah, it does. This basically covers 14:12:24
5 all of my work really at the time the resume 14:12:27
6 was. As you can see, that's my consulting 14:12:30
7 company. That actually covers some other USB 14:12:33
8 things I didn't talk about. 14:12:35
9 I also wrote a book on USB, one of 14:12:36
10 the first ones. I taught some multi-data 14:12:38
11 classes on USB, internationally. I was 14:12:43
12 invited to sponsor companies that teach 14:12:45
13 classes to their employees on USB 2. 14:12:48
14 I also didn't mention that at 14:12:52
15 Intel, I was a speaker at the International 14:12:55
16 USB Developers Conferences for companies so 14:12:57
17 they could come and hear about what USB was 14:13:01
18 and then explain the technical details so that 14:13:03
19 when they went home and studied the spec, they 14:13:06
20 might have a better understanding. 14:13:09
21 But yes, this describes a number 14:13:11
22 of things we've talked about. 14:13:12
23 Q. And if I could just stop you for a 14:13:14
24 moment. 14:13:16

1 A. Sure. 14:13:16
2 Q. It looks to me like all of the 14:13:17
3 experiences here that are under Garney 14:13:19
4 Consulting, you are talking about your 14:13:21
5 consulting firm, relates to USB; am I 14:13:22
6 understanding that correct? 14:13:25
7 A. That's correct. I mean, at Intel, I 14:13:25
8 had the luxury of doing a lot of different 14:13:27
9 things, but from a consulting business, it 14:13:29
10 just seemed natural to focus on what I knew 14:13:31
11 best. 14:13:34
12 Q. Now, the last bullet here references 14:13:35
13 expert witness service for cases involving 14:13:37
14 USB, it looks like in the U.S. and the UK. 14:13:43
15 How did you come to be involved in 14:13:45
16 assisting in litigation as an expert witness? 14:13:47
17 A. Yeah, I don't remember exactly. I 14:13:52
18 mean, after a period of time, this first 14:13:54
19 company that I worked for, I think they went 14:13:56
20 through some economic harder times and they 14:13:58
21 didn't want to use me anymore. And I was 14:14:00
22 looking for some other services, some other 14:14:02
23 opportunities, and I forget whether it was 14:14:04
24 before or after that, I was probably contacted 14:14:06

1 by somebody through my, you know, expertise 14:14:08
2 and they were looking -- they had questions 14:14:13
3 about patent-related things for USB and asked 14:14:15
4 if I would be willing to help them out. And 14:14:18
5 so I think that's one of the ways. 14:14:21
6 Somewhere along the line, I also 14:14:23
7 got connected with an expert witness services 14:14:25
8 company that would try to connect experts with 14:14:27
9 clients to help them do things like this, and 14:14:30
10 I thought, that's going to be fun. I am an 14:14:33
11 inventor of, like, I don't know, 68 patents or 14:14:36
12 something, so at least I was familiar from the 14:14:39
13 inventor side, and I thought I could at least 14:14:41
14 understand, you know, what it would take to 14:14:45
15 support a client that needed some help for USB 14:14:47
16 in patent cases, which I am sure are a lot 14:14:51
17 about USB. 14:14:54
18 Q. Do you advertise services as an 14:14:54
19 expert? 14:14:56
20 A. I don't want that work. I'm trying 14:14:56
21 to retire. I have been working this case for 14:14:58
22 five-and-a-half years and they are my last 14:15:00
23 client, and this is my only time at trial and 14:15:04
24 I'm trying to be done. 14:15:07

1 I want to actually succeed at 14:15:09
2 retiring this time. I tried once and I tease, 14:15:10
3 I kind of failed. I am ready to be done. 14:15:13
4 Q. Did I hear you say you haven't 14:15:15
5 testified at trial before? 14:15:17
6 A. This is the first time. I have been 14:15:17
7 a juror twice, so I understand the pain you 14:15:19
8 guys are all enduring, but this is the first 14:15:21
9 time I have sat here in a trial. It's not 14:15:24
10 much fun, a little different than you guys 14:15:26
11 but...it's interesting. 14:15:28
12 Q. Why don't we switch gears once more 14:15:30
13 and talk about the analysis you did in this 14:15:37
14 case. 14:15:39
15 Now, let's put up Trial Exhibit 1 14:15:40
16 in evidence. Do you recognize this as the 14:15:44
17 '243 Patent you analyzed? 14:15:49
18 A. Oh, yeah, I've seen this patent way 14:15:51
19 too many times. 14:15:54
20 Q. And you testified earlier that this 14:15:55
21 patent is generally about sharing a single use 14:15:57
22 USB device between two or more hosts? 14:16:00
23 A. Yeah, that's correct. 14:16:03
24 Q. Now, does the USB specification have 14:16:04

1 any rules about how many hosts can be in a USB 14:16:06
2 system? 14:16:10
3 A. Yeah. It's very explicit. It only 14:16:11
4 contemplates one host -- if you say it the 14:16:13
5 other way around, for any device, there is 14:16:16
6 only one host. And, in fact, at the lowest 14:16:18
7 level of the protocol of USB, when a host says 14:16:20
8 hey, I want to do something, I want to talk to 14:16:23
9 a device, there is no indicator in that 14:16:25
10 transaction on what the host is. It's just 14:16:27
11 assumed it is the one host. 14:16:29
12 And so all the host says is hey, 14:16:31
13 Device No. 2, do this, you know, do an in or 14:16:33
14 an out, the most basic thing, and then it 14:16:36
15 provides the data and expects to get a 14:16:38
16 response back from that device. And all the 14:16:40
17 other devices, you know, stay out of the way 14:16:43
18 until that transaction is done. 14:16:44
19 So the host is implicit. There is 14:16:46
20 no way you could possibly have more than one 14:16:48
21 host. And the USB spec is explicit, as I 14:16:50
22 think you've seen over the course. 14:16:53
23 Q. And does the USB specification say 14:16:54
24 anything anywhere about allowing two hosts to 14:16:56

1 share one device? 14:16:59
2 A. No. 14:17:00
3 Q. Okay. 14:17:01
4 Now, why don't we flip to page 5 14:17:01
5 of the patent, this is column 1, and I'd like 14:17:06
6 to take a look at lines 54 to 56, please. 14:17:09
7 MR. SAULSBURY: And while that's 14:17:17
8 coming up, I'd like to offer Mr. Garney as an 14:17:18
9 expert in USB technology. 14:17:21
10 MR. SLAYDEN: No objection, Your 14:17:23
11 Honor. 14:17:25
12 THE COURT: All right. He is 14:17:25
13 received. 14:17:26
14 MR. SAULSBURY: And, Mr. Glass, if 14:17:27
15 we could please highlight the text starting 14:17:30
16 with, "In general, the USB specification is 14:17:32
17 structured so that every device is configured 14:17:34
18 and accessed by a single host controller." 14:17:37
19 It's the third sentence. 14:17:46
20 THE WITNESS: Five lines down. 14:17:51
21 MR. SAULSBURY: If you go up a 14:17:52
22 little bit, "In general." There you go. 14:17:53
23 Great. 14:17:55
24 BY MR. SAULSBURY: 14:17:58

1 Q. Mr. Garney, how does this description 14:17:59
2 in the patent relate to what you were just 14:18:02
3 telling us about the host in the USB system? 14:18:03
4 A. It's basically saying the same thing, 14:18:05
5 just in legal words. 14:18:07
6 Q. Now, you said that patent was about 14:18:10
7 sharing multiple devices -- I'm sorry, sharing 14:18:12
8 USB devices with multiple hosts. What kind of 14:18:15
9 device does the patent talk about sharing? 14:18:18
10 A. There's actually a figure it talks 14:18:20
11 about. 14:18:22
12 Q. Is that Figure 2? 14:18:22
13 A. Yeah. 14:18:24
14 MR. SAULSBURY: Can we please take 14:18:26
15 a look at that, Mr. Glass. 14:18:28
16 BY MR. SAULSBURY: 14:18:30
17 Q. Is this the figure you had in mind? 14:18:31
18 A. Yeah, so it's figure -- I think it's 14:18:32
19 been mentioned a few other times, but it shows 14:18:34
20 a printer, a display, a keyboard, a mouse, I 14:18:36
21 think that's probably a phone and I think 14:18:40
22 later in the words, it actually talked about 14:18:41
23 shared Ethernet controller. Just an example 14:18:44
24 of the devices, I mean. 14:18:52

1 MR. SAULSBURY: And, Mr. Glass, if 14:18:56
2 we could please take a look at Exhibit 370 in 14:18:58
3 evidence at page 3280. And can we please blow 14:19:02
4 up the section that's the second paragraph, 14:19:12
5 yep. There we go. 14:19:14
6 BY MR. SAULSBURY: 14:19:18
7 Q. Mr. Garney, do you recognize this as 14:19:19
8 the text from the patent office's decision 14:19:22
9 that came up in the context of Mr. Zatkovich's 14:19:25
10 testimony? 14:19:27
11 A. I do. 14:19:27
12 Q. It says here that "Neither party 14:19:29
13 identifies, nor do we discern, any disclosure 14:19:31
14 in the USB specification describing a 14:19:33
15 capability to arbitrate among multiple host 14:19:35
16 requests - indeed adding such a feature is at 14:19:39
17 the heart of the purported invention of the 14:19:43
18 '243 Patent, i.e. the point of novelty." 14:19:45
19 Do you agree with that statement? 14:19:48
20 A. I do. 14:19:50
21 Q. Can you please elaborate? 14:19:51
22 A. Well, again, the USB specs only 14:19:52
23 contemplate one host to multiple devices, or 14:19:54
24 said the other way around, each device only 14:19:57

1 has one host. 14:19:59
2 So, you know, first of all, we 14:20:00
3 don't have multiple hosts that apply to USB, 14:20:02
4 and because there's only one host, there is no 14:20:05
5 need to arbitrate amongst anything. If the 14:20:07
6 host wants to do something, it just does it. 14:20:10
7 This patent, as I mentioned at the 14:20:15
8 beginning, if you have two hosts and one 14:20:17
9 device, somebody has got to figure out that 14:20:19
10 mess. 14:20:21
11 MR. SAULSBURY: And, Mr. Glass, 14:20:25
12 could we please put Figure 3 of Exhibit 1. 14:20:26
13 This might help illustrate that. 14:20:30
14 BY MR. SAULSBURY: 14:20:32
15 Q. Mr. Garney, with reference to 14:20:33
16 Figure 3, could you explain why there is a 14:20:35
17 need, in the context of the '243 Patent, to 14:20:36
18 arbitrate as between two hosts? 14:20:39
19 A. I don't know if the pointer is going 14:20:41
20 to work. I'll talk about it verbally. 14:20:43
21 So at the top of the figure, you 14:20:57
22 can see the thing that says, and you've heard 14:20:59
23 about this before, connection to the first 14:21:01
24 host and connection to a second host. 14:21:03

1 Ah, hard to see green for the 14:21:09
2 jurors, but there is a connection to the first 14:21:11
3 host. So the first host would be up here. 14:21:12
4 Connection with a second host, the second host 14:21:15
5 would be up here. 14:21:17
6 They are connected to the port. 14:21:18
7 We described this, but for each host, there is 14:21:21
8 the host, a connection to a port, the port is 14:21:23
9 connected to the endpoint and status buffer 14:21:26
10 and then it goes down to the MHDC. 14:21:30
11 Same thing for the second host; 14:21:33
12 there is a host, connection to the port, 14:21:35
13 connection to the endpoint buffer, connection 14:21:37
14 to the MHDC, and this is sort of where the 14:21:39
15 problem -- the device at the bottom, again, we 14:21:41
16 have one connection at the bottom. 14:21:44
17 And if you think about it, it's 14:21:48
18 like a row. You've heard about there is a 14:21:49
19 single lane between each host and the 14:21:51
20 invention. And then within the invention, 14:21:54
21 there is this, you know, mixing kind of thing 14:21:57
22 and then there is a single lane for the 14:21:59
23 device. 14:22:01
24 If you think about rows, if I have 14:22:02

1 two cars running down these two single lane 14:22:03
2 rows and they try to merge onto a one lane 14:22:06
3 road, there's going to be a collision 14:22:09
4 possibly. And so there's got to be a cop or a 14:22:11
5 stop sign or a stop light or something to sort 14:22:14
6 out who gets to go next. 14:22:16
7 And so that's at the heart of this 14:22:18
8 invention, just kind of mixing the two hosts, 14:22:20
9 this coupling. And there is a bunch of legal 14:22:22
10 words, and then how to get down to the single 14:22:24
11 shared device. 14:22:26
12 Q. And does the patent explain how to 14:22:28
13 accomplish arbitration? 14:22:32
14 A. It has two examples that it presents. 14:22:33
15 One of them talks about interleaving. You can 14:22:36
16 sort of think of that as a stop sign. If 14:22:38
17 you're familiar with stop signs, if you drive 14:22:40
18 properly, people arrive at a stop sign, and if 14:22:42
19 there's two cars there, one car goes and then 14:22:44
20 the other car gets a turn, and that sort of 14:22:46
21 keeps going as long as there are cars backed 14:22:49
22 up behind the stop sign. That's the 14:22:51
23 interleaving concept. 14:22:53
24 The second example that they use 14:22:54

1 in the patent, they use this technical thing 14:22:56
2 called a request grant. And you can kind of 14:22:59
3 think of that as a stop light. So instead of 14:23:01
4 stop signs, now I have stop lights. Not just 14:23:03
5 one car can go through, multiple cars can go 14:23:06
6 through. Then the stop light changes to grant 14:23:09
7 other lanes -- other cars can go through, and 14:23:13
8 they alternate. It is a bulkier process, more 14:23:16
9 cars can go through each time. 14:23:19
10 Q. Is that second example sometimes 14:23:21
11 called a hold-off mechanism? 14:23:23
12 A. Absolutely, yeah. 14:23:24
13 Q. And could you explain why you 14:23:26
14 sometimes hear that name? 14:23:27
15 A. Well, to put it in personal terms, 14:23:28
16 you think of a policeman sticking his hand out 14:23:29
17 and saying, hold on, let this guy go first, 14:23:32
18 and then hold on and let this guy go. 14:23:36
19 Q. Sorry, go ahead. 14:23:38
20 A. A different way of doing a stop 14:23:39
21 light, for example. 14:23:40
22 Q. Does the patent provide any examples 14:23:41
23 of how one can share a single device between 14:23:44
24 two hosts without arbitration? 14:23:48

A. No. 14:23:49
Q. I want to talk about an example where 14:23:56
the shared device down in block 312 is a 14:23:58
printer, by way of example. 14:24:03
A. Sure. 14:24:04
Q. What would happen if you didn't have 14:24:05
an arbitration mechanism? 14:24:06
A. Well, I could -- I mean, there is a 14:24:07
lot of possibilities. Obviously it depends on 14:24:10
how it's implemented because this is just 14:24:12
words from a patent, but if I imagine an 14:24:14
actual physical printer, it could be the print 14:24:16
just doesn't work. I mean, it's expecting 14:24:18
inputs and doesn't know what to do with them. 14:24:21
A second one is if the -- if you 14:24:23
think of printing a document, a big document, 14:24:26
multi-page document, from one side and doing 14:24:28
the same thing from the other side, you could 14:24:31
get the pages interweaved from each document, 14:24:32
so you'd get a mixture of document pages in 14:24:36
one printout. 14:24:38
Another problem could be that you 14:24:40
get, you know, the image of a page from each 14:24:42
individual document superimposed on each 14:24:46

1 other; they can print on top of each other. 14:24:49
2 Another possibility is you just 14:24:51
3 get garbage and the printer could get sort of 14:24:52
4 crazy and dump all kind of noise onto the 14:24:56
5 page. 14:25:00
6 Q. I'd like to now turn to claim 23. 14:25:01
7 MR. SAULSBURY: Mr. Glass, can we 14:25:04
8 please see that up on the screen. And if we 14:25:06
9 could put that side-by-side with Figure 3, 14:25:08
10 please. 14:25:09
11 BY MR. SAULSBURY: 14:25:13
12 Q. Mr. Garney, do you understand claim 14:25:14
13 23 to be the only independent claim that's 14:25:17
14 asserted here? 14:25:19
15 A. I do. 14:25:20
16 Q. And you understand that claims 24 and 14:25:21
17 25 are also asserted? 14:25:24
18 A. Yes, but they depend upon this claim. 14:25:26
19 Q. That's right. 14:25:29
20 Now, let's take a look at claim 23 14:25:29
21 in reference, if we could just -- for a point 14:25:32
22 in reference, if we could. 14:25:36
23 A. Okay. 14:25:37
24 Q. Now, do you see how up toward -- this 14:25:37

1 is the first requirement in claim 23. You see 14:25:41
2 how it requires that shared USB device block? 14:25:44
3 A. I do. 14:25:47
4 Q. Okay. 14:25:48
5 Now, USB device block is one of 14:25:49
6 the terms that the Court has construed, so 14:25:54
7 let's take a look actually at the Court's 14:25:57
8 construction on Tab 3. It's Tab 3 in the 14:25:59
9 jurors' notebooks. 14:26:04
10 MR. SAULSBURY: Mr. Glass, it 14:26:06
11 would be at 37. DX-37. There we go. 14:26:07
12 BY MR. SAULSBURY: 14:26:16
13 Q. And so this is the same document that 14:26:16
14 the jurors have in Tab 3 of their notebooks. 14:26:18
15 And, Mr. Garney, if you take a 14:26:22
16 look at the definition of a USB device block, 14:26:24
17 you see how it says here, "A USB device block 14:26:27
18 is a USB device or segment of a USB device 14:26:29
19 that performs a function to provide a 14:26:33
20 capability to a host over USB." 14:26:35
21 A. I see that. 14:26:37
22 Q. Okay. 14:26:38
23 Now, let's go back to claim 23. 14:26:38
24 First of all, did you apply this 14:26:42

1 construction in forming your opinions? 14:26:44
2 A. I did. I'm required to. 14:26:46
3 Q. Okay. 14:26:48
4 A. I don't have a choice. 14:26:48
5 Q. Now, what do you understand this 14:26:49
6 definition to mean in the context of claim 23 14:26:51
7 shared device block? 14:26:54
8 A. Well, it's saying, I mean, as you see 14:26:55
9 in the term, there is an "or" in there, so it 14:26:57
10 says, "a USB device or segment of a USB device 14:27:01
11 that performs," blah-blah-blah. 14:27:04
12 And so when the patent talks about 14:27:06
13 this, there can be a standard off-the-shelf 14:27:09
14 part as one of the possibilities that can be 14:27:13
15 the shared device block, and then this 14:27:15
16 language talks about some of the other 14:27:17
17 possibilities. 14:27:18
18 So the shared USB device block 14:27:19
19 here has to obey that definition. It has to 14:27:22
20 be a USB device, a standard off-the-shelf USB 14:27:24
21 device, or a segment of a USB device, and that 14:27:28
22 second word is really key because the patent 14:27:31
23 uses that same word, and words in patents 14:27:33
24 really matter. You have to be really 14:27:35

1 attentive. You can't just invent what you 14:27:37
2 think it means; you have to read what the 14:27:39
3 patent says. That's what makes the patent 14:27:41
4 world harder sometimes, especially for a 14:27:45
5 free-wheeler engineer like me. So I studied 14:27:48
6 this carefully, and so a segment of the USB 14:27:50
7 device. 14:27:52
8 And then further, it has to 14:27:53
9 perform a function to provide a capability to 14:27:54
10 a host over USB. So somehow that shared 14:27:56
11 device block is going to have to be connected 14:27:59
12 back up to a host, what they call over USB 14:28:01
13 sometimes. 14:28:04
14 Q. And how does this shared USB device 14:28:04
15 block in claim 23 relate to the purpose of the 14:28:06
16 invention? 14:28:09
17 A. Well, this is the thing that's being 14:28:10
18 shared. The two hosts are trying to do 14:28:11
19 something; a central idea of the patent is two 14:28:13
20 hosts sharing a single device. This is the 14:28:17
21 shared USB device block that they are talking 14:28:19
22 about. 14:28:21
23 Q. Now, claim 23 goes on to say, "Shared 14:28:21
24 USB device block operable to be simultaneously 14:28:25

1 configured by two or more hosts." 14:28:28
2 MR. SAULSBURY: And it might be 14:28:36
3 helpful to think about this in the context of 14:28:33
4 Figure 3. So, Mr. Glass, can you please have 14:28:35
5 that up on the right. 14:28:38
6 BY MR. SAULSBURY: 14:28:43
7 Q. Mr. Garney, does the device depicted 14:28:44
8 here in Figure 3 provide a way for the shared 14:28:48
9 USB device block to be simultaneously 14:28:51
10 configured by two or more hosts? 14:28:54
11 And let me ask you to first start 14:28:57
12 off with, what's the shared USB device block 14:28:59
13 here? 14:29:01
14 A. Well, in the figure, right, 312, this 14:29:02
15 bottom block, the device or function, that's 14:29:06
16 really what they mean by shared USB device 14:29:09
17 block. They have used device/function, but it 14:29:12
18 is still -- they do this partly I think in 14:29:15
19 some patents, they aren't really precise, but 14:29:17
20 they mean the USB shared device block. 14:29:21
21 Q. And how does the device on Figure 3 14:29:24
22 allow that device block to be simultaneously 14:29:26
23 configured? 14:29:29
24 A. So if you -- what we said before, 14:29:30

1 each host has its own path down into the 14:29:33
2 invention, the left-hand path here and the 14:29:38
3 right-hand path there. And the endpoint 14:29:40
4 buffers here, the endpoint blocks, endpoint 14:29:47
5 and status. 14:29:51
6 One of the things that we have 14:29:51
7 learned from this whole trial is the device 14:29:52
8 has an address, and so for each device -- 14:29:54
9 excuse me, for each host, each host in this 14:29:57
10 figure is essentially its own bus and the 14:30:00
11 addresses they use are determined by the host. 14:30:02
12 And the two hosts really don't 14:30:05
13 know anything about each other, so they can 14:30:07
14 assign any address they want. And in this 14:30:09
15 case for this invention, one host could use 14:30:11
16 one address and a different host could use a 14:30:14
17 different address for the same device. So 14:30:16
18 there would have to be someplace to keep that. 14:30:19
19 And the patent talks a little bit 14:30:21
20 about that, and we'll get to it later, but 14:30:23
21 basically the set address to others is one of 14:30:25
22 the things that you could expect to be stored, 14:30:28
23 you know, probably in the endpoint buffer in 14:30:29
24 this path and for each host, so each host has 14:30:32

1 a way of maintaining its address. 14:30:34
2 And that's part of the 14:30:36
3 configuration activity. As we talked about, 14:30:38
4 one of the first things the host has to do is 14:30:40
5 say okay, I am going to talk to you as Address 14:30:42
6 2, and the device has to have a way to -- this 14:30:45
7 invention has to have a way to store that for 14:30:48
8 the host, and that's how it can do that. 14:30:49
9 So each host has its own path for 14:30:52
10 that configuration information and there is 14:30:56
11 no -- there's no description of any way to 14:30:59
12 stop each host from doing it simultaneously; 14:31:02
13 it would be a normal kind of thing to have 14:31:05
14 happen. 14:31:07
15 Q. And, sorry, could you help me 14:31:07
16 understand how the two different paths, one 14:31:09
17 for each host down to the endpoint buffers, 14:31:10
18 allows for simultaneous configuration? What 14:31:13
19 about that allows for simultaneous 14:31:16
20 configuration? 14:31:18
21 A. Well, they're totally independent of 14:31:19
22 each other, the path from the host and the 14:31:22
23 invention through this path down to MHDC after 14:31:23
24 the host starts to say, each host is going to 14:31:28

1 say second address, and they are going to do 14:31:32
2 it independently, if they can happen 14:31:33
3 simultaneously without any problems. 14:31:35
4 There is no reason to arbitrate 14:31:37
5 for that because it only deals with setting 14:31:38
6 the address and that's something that's kept 14:31:40
7 specific for each host. 14:31:41
8 Q. Do you recall hearing Mr. Zatkovich 14:31:49
9 testify that claims 23 through 25 require 14:31:51
10 alternately accessing the USB device block? 14:31:54
11 A. I do. 14:31:57
12 Q. Do you agree with that? 14:31:58
13 A. Yes. 14:31:59
14 Q. Why? 14:32:00
15 A. Well, two things. The patent talks 14:32:02
16 about access requests from multiple hosts, so 14:32:06
17 that's part of it. And as we talked about, 14:32:10
18 there has to be some arbitration solution 14:32:13
19 because you can't have two single lane things 14:32:15
20 going into a mix to talk to one thing. 14:32:18
21 There's got to be some way to alternate. 14:32:20
22 And I talked about how the patent 14:32:22
23 describes two different ways that that 14:32:24
24 alternating could take place, arbitration 14:32:25

1 could take place. 14:32:28
2 Q. And do you see how, towards the 14:32:28
3 bottom of Figure 3 between the device/function 14:32:30
4 312 and the multi-host device controller 108, 14:32:33
5 there's just one -- 14:32:36
6 A. Right here. 14:32:37
7 Q. -- set of arrows? 14:32:38
8 A. One arrow here. That's the single 14:32:39
9 lane for the device, and up here, these are 14:32:41
10 the single lanes between the host and the 14:32:43
11 invention. 14:32:45
12 Q. Does that single lane down there 14:32:46
13 between the multi-host device controller and 14:32:47
14 the device function have anything to do with 14:32:50
15 why it's necessary to alternate? 14:32:53
16 A. Sure, because there's only one -- one 14:32:54
17 single connection. I mean, since it's a USB 14:32:58
18 device, that's one of the possibilities that 14:33:02
19 are talked about, it's only prepared to deal 14:33:06
20 with one host, as we talked about, why it 14:33:08
21 would be one host. 14:33:13
22 Q. Now, we've heard some debate over 14:33:13
23 whether there are two USB devices in Aptiv's 14:33:16
24 hub or just one USB device that's shared 14:33:20

1 between two hosts. 14:33:23
2 Does this matter to your 14:33:25
3 non-infringement opinion? 14:33:27
4 A. Yes. I mean, it's central. 14:33:29
5 Q. And why is that relevant to whether 14:33:33
6 the dual role hub of Aptiv infringes claim 23? 14:33:35
7 MR. SAULSBURY: And, Mr. Glass, 14:33:38
8 can we have claim 23 back up, please. Thank 14:33:40
9 you. 14:33:42
10 THE WITNESS: Well, the patent 14:33:42
11 only talks about one device that's shared by 14:33:44
12 multiple hosts. If it has -- if a practicing 14:33:47
13 product -- if a product has two devices where 14:33:51
14 each device is only used by its corresponding 14:33:54
15 host, that's not what the patent teaches. The 14:33:57
16 patent is explicit, and it's got to be a 14:34:00
17 single shared -- a shared USB device block, 14:34:02
18 right there in black and white. 14:34:04
19 So it's got to be the same thing 14:34:06
20 that both hosts access. There is some other 14:34:08
21 specific details, but that's the essence. 14:34:10
22 BY MR. SAULSBURY: 14:34:12
23 Q. Is the point that if you have two 14:34:13
24 devices, each of which talks only to its host, 14:34:15

1 you don't have a shared USB device? 14:34:18
2 A. Yeah, there's no arbitration required 14:34:19
3 because it's -- you can sort of imagine each 14:34:23
4 host with this device are in a separate room 14:34:25
5 in some other place on the planet that have 14:34:28
6 nothing to do with each other. They don't 14:34:31
7 know anything about each other; no reason to 14:34:33
8 arbitrate. There's no reason to do anything 14:34:35
9 with regard to each other. 14:34:37
10 That's kind of the model of a host 14:34:38
11 with its own device on both sides which, 14:34:40
12 there's no arbitration, no sharing. 14:34:42
13 MR. SAULSBURY: Mr. Glass, can we 14:34:46
14 please see Trial Exhibit 12 in evidence. 14:34:48
15 BY MR. SAULSBURY: 14:34:51
16 Q. Mr. Garney, do you recognize Trial 14:34:52
17 Exhibit 12 from Mr. Voto's testimony? 14:34:55
18 A. I do. 14:34:58
19 Q. Is this something you analyzed in 14:34:58
20 forming your opinion? 14:35:00
21 A. It is. 14:35:01
22 MR. SAULSBURY: Can we please put 14:35:03
23 page 4 of this document up. 14:35:06
24 THE WITNESS: What a surprise. 14:35:07

1 BY MR. SAULSBURY: 14:35:09
2 Q. What do we see here, Mr. Garney? 14:35:09
3 A. This is a picture the jurors have 14:35:10
4 seen many times. It is basically a 14:35:12
5 representation and it, as the title says, a 14:35:14
6 Simplified System Concept of the Dual Role Hub 14:35:17
7 of Aptiv, and it shows -- do you want me to -- 14:35:22
8 in the same order? 14:35:25
9 Q. Actually, that's a perfectly fine 14:35:26
10 stopping point because I have a question. 14:35:28
11 Does this diagram have a single 14:35:30
12 USB device that is shared by two or more 14:35:34
13 hosts? 14:35:38
14 A. No. As referred over and over again 14:35:38
15 from many experts, I mean people testifying, 14:35:40
16 not just experts, clearly identified here, 14:35:43
17 there is USB Device A that's connected to the 14:35:45
18 head unit through a hub, not the hub of the 14:35:48
19 invention. 14:35:52
20 There is an IOS device or an 14:35:52
21 iPhone connected through a similar routing 14:35:54
22 logic USB, and those two host and device 14:35:57
23 combinations do their own things. There has 14:36:00
24 to be some connection between the two devices, 14:36:02

1 but there's no arbitration; they just do their 14:36:04
2 own thing. 14:36:07
3 MR. SAULSBURY: Can we please turn 14:36:10
4 to Trial Exhibit 17 in evidence. 14:36:11
5 BY MR. SAULSBURY: 14:36:15
6 Q. Do you recognize this document, Mr. 14:36:16
7 Garney? 14:36:17
8 A. I do. 14:36:18
9 MR. SAULSBURY: And let's flip to 14:36:21
10 page 11, please. 14:36:23
11 BY MR. SAULSBURY: 14:36:25
12 Q. Is this diagram something you 14:36:26
13 analyzed in forming your opinion? 14:36:30
14 A. It is. 14:36:31
15 Q. Okay. 14:36:32
16 And at a high level, what do we 14:36:33
17 see here? 14:36:36
18 A. This is sort of a more detailed 14:36:36
19 zoom-in on a hub part compared to the more 14:36:39
20 simplified figure before, but again, it has 14:36:42
21 the same elements. It shows the head unit on 14:36:45
22 the left, has a host connected to a hub and 14:36:47
23 Device A, its device, and then in this case, 14:36:52
24 this is showing early -- an early point in 14:36:55

1 time was an iPhone attached through the 14:36:59
2 routing logic of that arrow, this arrow here 14:37:01
3 shows as a device of the head unit. And there 14:37:06
4 could be some other USB devices. 14:37:09
5 This is one host and multiple USB 14:37:13
6 devices, in summary. 14:37:16
7 Q. Did you say "currently"? 14:37:18
8 A. This is how this was configured. I 14:37:19
9 know this could operate another way. 14:37:21
10 Q. In fact, do you see, under 14:37:23
11 description, it says, "At power up, head unit 14:37:25
12 detects a USB hub and a custom device"? 14:37:27
13 A. I do. 14:37:30
14 Q. And then it sort of goes through a 14:37:31
15 sequence there? 14:37:33
16 A. Yep. 14:37:33
17 Q. Could you walk us through that 14:37:34
18 sequence? 14:37:36
19 A. Sure. I think there might be a slide 14:37:37
20 that -- 14:37:40
21 Q. I believe you did prepare some 14:37:40
22 slides. 14:37:42
23 MR. SAULSBURY: I think there are 14:37:42
24 some slides, too, Mr. Glass. 14:37:43

1 THE WITNESS: Your Honor, could I 14:37:51
2 step down and walk through as I'm speaking? 14:37:51
3 THE COURT: You can, but you need 14:37:56
4 to stand near a microphone. I don't know if 14:37:57
5 you want to just step in front of the witness 14:38:02
6 box. 14:38:04
7 THE WITNESS: Let's try to see if 14:38:04
8 it works. I'll try. It gives me a chance to 14:38:06
9 stretch my legs because I'm afraid I might be 14:38:08
10 there for a while. 14:38:10
11 Okay. So this is the same figure 14:38:11
12 we just saw and this is, let's call it before 14:38:13
13 power-ups when the car is still powered off 14:38:18
14 and it's got the head unit that's sitting over 14:38:21
15 here with its host port that's connected to 14:38:23
16 a -- well, the hub is there, but as you see, 14:38:26
17 there's not much going on. There's no lines 14:38:29
18 drawn, nothing is really connected because 14:38:32
19 it's powered off. Nothing can happen if it's 14:38:33
20 powered off. 14:38:36
21 Then you turn on the key in your 14:38:36
22 car and because of that, the head unit -- 14:38:38
23 excuse me, the head unit gets powered and now 14:38:43
24 it can do things. Its brain gets unscrambled 14:38:45

1 and can start doing things. And the hub gets 14:38:49
2 powered and the wire that physically connects 14:38:51
3 these two allows the host port on the head 14:38:53
4 unit to say ah, something is attached. 14:38:56
5 And one of the first things we've 14:38:59
6 said all along is the first thing the host has 14:39:00
7 to do is say, what are you because I don't 14:39:02
8 know what you are. You could be anything. 14:39:04
9 And so it asks the hub, what are 14:39:06
10 you? No button. I guess Mr. Glass can help. 14:39:09
11 MR. SAULSBURY: Mr. Glass, are you 14:39:24
12 able to advance the slide? 14:39:26
13 THE WITNESS: I think you are 14:39:26
14 going to have to advance them. 14:39:27
15 So actually we've blown past the 14:39:28
16 hub part. So the hub has to get enumerated 14:39:30
17 and configured and told okay, you're going to 14:39:33
18 be Device 1 because I recognize you as the 14:39:35
19 hub. I know what you can do and I am going to 14:39:38
20 support you, which makes those other ports 14:39:40
21 available. 14:39:42
22 And then, based on that, the 14:39:42
23 device is powered. And now that the hub is 14:39:44
24 configured, the hub can see that that Device A 14:39:47

1 is connected and it says, I'm here. And the 14:39:51
2 host says, hmm, I have a new device that's 14:39:53
3 connected to that port on the hub. I 14:39:56
4 wonder -- I wonder what you are. 14:40:00
5 So it does -- again it says, what 14:40:01
6 are you to Device A, and Device A returns -- 14:40:03
7 and the specific thing it does is get device 14:40:07
8 descriptors I was talking about and it returns 14:40:10
9 this, what we're focused on here is the stream 14:40:11
10 that's returned on the host-to-host bridge. 14:40:14
11 And it's also represented by the product 14:40:16
12 vendor ID, so details in the device 14:40:20
13 descriptor. 14:40:22
14 And the host, you know, stares at 14:40:23
15 itself and goes, gee, do I recognize this 14:40:24
16 vendor and product ID? Yeah, I do, I 14:40:27
17 recognize it. 14:40:29
18 And it's a little strange because 14:40:30
19 it is a vendor-specific device, but I have a 14:40:31
20 driver for that. And so we are going to go 14:40:33
21 tell that device -- Mr. Glass, next slide. 14:40:35
22 BY MR. SAULSBURY: 14:40:39
23 Q. Mr. Garney, actually, I heard you say 14:40:40
24 that I have a driver for that. What's that in 14:40:42

1 reference to? 14:40:45
2 A. I think we heard, in Mr. Petku's 14:40:45
3 testimony, that in order to support any USB 14:40:47
4 device, there has to be software in the host 14:40:50
5 that knows how to make that device work. And 14:40:52
6 each -- each type of device may need specific 14:40:55
7 software for that. 14:40:58
8 So if you can imagine I plugged in 14:40:58
9 a printer, I have to have the printer 14:41:01
10 software. If I plug in a camera, I have to 14:41:03
11 have the camera software. If I plugged in an 14:41:05
12 Ethernet cable, I have to have the Ethernet 14:41:08
13 software. 14:41:11
14 So in this case, if I plug in 14:41:12
15 Device A, you know, the Aptiv host-to-host 14:41:14
16 bridge, I have to have the host-to-host bridge 14:41:16
17 software; otherwise, that device won't do 14:41:18
18 anything. And as we've heard, that's specific 14:41:21
19 to Aptiv's host-to-host bridge dual hub 14:41:24
20 product. 14:41:28
21 So the host says yep, I know about 14:41:28
22 the device type, I have a driver for it. I 14:41:30
23 can make that device work. And so now I think 14:41:32
24 we go to the next slide. 14:41:36

1 BY MR. SAULSBURY: 14:41:37
2 Q. And while we're -- sorry, go ahead. 14:41:37
3 A. And it does a second -- 14:41:40
4 THE COURT: Mr. Garney, if you are 14:41:41
5 not using that pointer, I am going to say 14:41:43
6 please resume your seat. 14:41:46
7 THE WITNESS: Okay. Sure. Sorry. 14:41:47
8 THE COURT: Go ahead. 14:41:53
9 THE WITNESS: So one of the other 14:41:53
10 requirements of standard USB is just as we 14:41:55
11 said, the device has to be able to 14:41:57
12 self-describe what am I. The spec is explicit 14:42:03
13 to say until a device is configured, it can't 14:42:06
14 do anything. I mean, it can respond to a few 14:42:10
15 standard requests, but it can't provide its 14:42:13
16 function. It has to be configured before it 14:42:15
17 can be used is the language -- actually, I 14:42:18
18 wrote that language in the specs so I'm pretty 14:42:20
19 familiar with it. 14:42:23
20 And a specific thing is a 14:42:24
21 configuration coming on. And part of this is 14:42:26
22 a device -- well, it has a set configuration 14:42:30
23 to tell the device okay, now you can be a 14:42:32
24 total hub -- I mean, you can be Device A, 14:42:35

1 let's say in this case, sorry, you can be a 14:42:38
2 printer or you can be an Ethernet, and that's 14:42:40
3 what allows -- and if we advance in the 14:42:43
4 slide -- that allows now Device A to be -- 14:42:46
5 Device A to be the controller for this dual 14:42:48
6 role hub functionality, so role reversal. 14:42:53
7 BY MR. SAULSBURY: 14:42:54
8 Q. And at this point, how many hosts do 14:42:54
9 we have in the system? 14:42:56
10 A. There's only one host because, I 14:42:57
11 mean, there's nothing else that's discovered. 14:42:58
12 Q. And that host is the head unit? 14:43:01
13 A. That host is the head unit. 14:43:03
14 Okay. Next slide I think. 14:43:07
15 So now you're sitting in your car, 14:43:09
16 you plug in devices into the connectors that 14:43:11
17 you see in front of you in the car dashboard. 14:43:14
18 You can plug in a thumb drive that we've 14:43:16
19 heard, an iPod if anybody has those anymore or 14:43:19
20 your iPhone. 14:43:22
21 Once you plug in your iPhone, it 14:43:23
22 starts out looking like a device so it gets 14:43:25
23 connected to a hub port. The hub says hey, 14:43:28
24 there's something new here. The host says 14:43:30

1 hmm, I wonder, let's reset and make sure it's 14:43:33
2 in a good state and let's say who are you, 14:43:36
3 which I think is the next slide. 14:43:38
4 One of the key things here is in 14:43:41
5 the slide here again, this diagonal line, it 14:43:44
6 shows that the iPhone is connected to the 14:43:46
7 downstream port of the hub. Standard USB. 14:43:49
8 Q. And what does it mean for the iPhone 14:43:52
9 to be connected to a downstream port as 14:43:54
10 opposed to an upstream port? 14:43:56
11 A. It can only access one device. 14:43:57
12 Again, USB only comprehend one host. If it 14:44:01
13 tried to attach to a host, you would get 14:44:04
14 chaos, figures would break and it wouldn't be 14:44:07
15 compliant to USB. 14:44:09
16 Q. I think we are going to move on to 14:44:10
17 role reversal, but before we get there, before 14:44:11
18 the head unit initiates role reversal, how 14:44:16
19 many upstream ports are there in the dual role 14:44:20
20 hub? 14:44:22
21 A. There's only one, which is the one 14:44:22
22 the head unit is connected to. The others are 14:44:24
23 downstream ports. 14:44:26
24 Q. Does that affect the number of the 14:44:28

1 hosts that can connect to the dual role hub? 14:44:29
2 A. Yeah, the host is associated with an 14:44:31
3 upstream port. I mean, there can only be a 14:44:33
4 host if it's -- actually if it provides an 14:44:35
5 upstream port in some sense. 14:44:38
6 Q. Thank you. 14:44:41
7 A. Okay. So at this point, the head 14:44:42
8 unit has discovered this iPhone device, has 14:44:47
9 enumerated, has given it its address and told 14:44:51
10 it okay, you can be an iPhone. 14:44:54
11 And now the head unit, for 14:44:56
12 whatever reason, decides gee, let's allow 14:44:58
13 CarPlay to happen. And so now we have to do a 14:45:02
14 sequence of steps to make CarPlay happen. 14:45:06
15 So one of the first things is we 14:45:08
16 have to do something magic to make this iPhone 14:45:10
17 that's a device instead operate as a host. It 14:45:14
18 just doesn't happen by itself. 14:45:17
19 So the host, as you heard from Mr. 14:45:19
20 Petku, and I just remember from looking at 14:45:21
21 things also, the host issues a vendor-specific 14:45:23
22 role reverse command to the Device A and that 14:45:26
23 kind of starts the ball rolling, because then 14:45:29
24 Device A is going to go change this routing in 14:45:32

1 the routing logic which is sort of the first 14:45:34
2 step of allowing the iPhone to become a host. 14:45:37
3 Q. Is role reversal something discussed 14:45:40
4 in the '243 Patent? 14:45:42
5 A. No. It's not something that's 14:45:44
6 discussed in the USB 2 spec either. 14:45:47
7 Q. What happens next? 14:45:49
8 A. Okay. If we advance to the next 14:45:51
9 slide, so at this point, as part of the 14:45:53
10 contract, the rules of how CarPlay works that 14:45:57
11 Apple defined, Apple knows that based on this 14:45:59
12 interaction, the iPhone is now going to 14:46:01
13 attempt to become a host, so it's going to 14:46:04
14 change its -- change some of the electrical 14:46:06
15 details and, you know, see if it's connected 14:46:08
16 to a useful accessory that will allow it to do 14:46:12
17 CarPlay. 14:46:15
18 So it is going to act as a host. 14:46:16
19 And you see the routing -- picture here of how 14:46:18
20 the routing changed and we are now connecting 14:46:21
21 the host to USB Device B, which is the second 14:46:24
22 device in the dual role hub. And the iPhone, 14:46:27
23 since it is a host, now it has the 14:46:30
24 responsibility of doing the discovery. 14:46:33

1 So again, the Device B is going to 14:46:34
2 be noticed as a newly attached device to the 14:46:38
3 iPhone. The iPhone is going to say gee, 14:46:40
4 there's something new here. What are you? 14:46:43
5 I think that may be the next 14:46:45
6 slide. There we go. 14:46:47
7 And USB Device B is going to 14:46:50
8 respond with a device descriptor because, 14:46:52
9 again, this process is really get device 14:46:54
10 descriptor as who are you and the device 14:46:58
11 descriptor is what tells the host, in this 14:47:00
12 case, the iPhone. 14:47:02
13 I think the next slide shows -- 14:47:03
14 yeah, as you have heard earlier in the trial, 14:47:05
15 Device B responds with its device descriptor 14:47:08
16 that has, in this case, the string that says 14:47:11
17 iAP2 NCM accessory, and that's the key that 14:47:14
18 tells the iPhone, which is the start of the 14:47:18
19 key that tells the iPhone, this is possibly a 14:47:21
20 CarPlay thing and maybe we're going to do 14:47:23
21 CarPlay stuff. 14:47:26
22 And I think there may be one more 14:47:27
23 step which shows -- yeah, there is the second 14:47:29
24 configuration which now makes Device B present 14:47:33

1 and useful to be able to perform its function, 14:47:35
2 and again, it has to obey the rules; it can't 14:47:37
3 be a device that provides the specific 14:47:40
4 function until the host tells it set 14:47:43
5 configuration. 14:47:45
6 So again, there is like -- I think 14:47:46
7 there's one more slide here. Yeah. So again, 14:47:47
8 this is like two separate USB device -- USB 14:47:50
9 networks or trees is really the language that 14:47:54
10 USB talks about. USB buses and head unit as a 14:47:56
11 host is the one on the left and the iPhone now 14:48:01
12 is the host of the one on the right, and 14:48:05
13 iPhone only has one device and the head unit, 14:48:07
14 in fact, as represented here now has two 14:48:09
15 devices, but does not include the iPhone any 14:48:12
16 longer. And I think now we can advance to the 14:48:14
17 next slide. 14:48:18
18 So now the iPhone and the -- and 14:48:19
19 what it believes is the accessory has to go 14:48:23
20 through a more involved process that Apple 14:48:26
21 defines after having recognized this iAP2 and 14:48:28
22 NCM piece of information and it starts to -- 14:48:32
23 it goes through that authentication process to 14:48:35
24 confirm that this is an Apple-approved head 14:48:39

1 unit because that's what the iPhone is 14:48:41
2 expected to be attached to. 14:48:43
3 And now sort of like what Mr. 14:48:44
4 Zatkovich's idea of playing music, if the 14:48:47
5 iPhone starts playing music, it does USB 14:48:49
6 transactions to send, you know, little 14:48:52
7 snippets of the music to USB Device B in the 14:48:55
8 dual hub, which is what those green things 14:49:00
9 are; they are stored in the endpoints of USB 14:49:01
10 Device B. 14:49:04
11 And now if we advance to the next 14:49:05
12 slide, those data bits are copied by the 14:49:08
13 bridge logic that we heard about from the 14:49:12
14 endpoints of the USB Device B to the endpoints 14:49:14
15 of USB Device A to get them across the bridge 14:49:17
16 into the other device, just like the Ethernet 14:49:21
17 cable that we've seen. 14:49:24
18 And then if we go to the next 14:49:26
19 step, actually the data will sit in USB Device 14:49:28
20 A until the head unit host asks the device, do 14:49:33
21 you have any data? And the head unit is going 14:49:36
22 to be asking that device all the time because 14:49:38
23 it doesn't know when data may be coming. And 14:49:41
24 it doesn't do anything until data actually 14:49:45

1 comes. 14:49:47
2 So once data shows up in USB 14:49:47
3 Device A, the head unit can ask it, get it up 14:49:49
4 to the head unit and now play it. 14:49:53
5 Q. Now, this process you just talked 14:49:56
6 about for setting up the iPhone for CarPlay, 14:49:58
7 does that cause there to be a single USB 14:50:00
8 device -- 14:50:03
9 A. No. 14:50:04
10 Q. -- within the dual role hub? 14:50:04
11 A. No, it doesn't change anything. I 14:50:06
12 mean, it is using this as a nice transport 14:50:08
13 channel end-to-end, just like an Ethernet 14:50:11
14 connector between two hosts. 14:50:13
15 In effect, that's what NCM stands 14:50:15
16 for. NCM is a fancy technical term of a 14:50:17
17 particular USB device class for things like 14:50:21
18 Ethernet controllers. It's called a Network 14:50:24
19 Communication Model. It is exactly defined 14:50:26
20 for host-to-host communication. That's used 14:50:29
21 for all kinds of things in USB, not just a 14:50:32
22 dual role hub, but you can have Ethernet 14:50:35
23 cables and wireless could be used that way; 14:50:38
24 any number of things could be used that way. 14:50:40

1 Q. Now, I believe you showed us that 14:50:42
2 each USB device reported back different 14:50:44
3 descriptors. I think we saw, for USB Device 14:50:48
4 A, it reported back a vendor-specific 14:50:51
5 descriptor and then for USB Device B, we saw 14:50:55
6 iAP2 NCM. 14:51:00
7 Those different descriptors, was 14:51:02
8 that something that you considered in 14:51:05
9 concluding that there are two different 14:51:06
10 devices here, two different USB devices? 14:51:07
11 A. That was part of the evidence, 14:51:11
12 absolutely. 14:51:12
13 Q. Okay. 14:51:12
14 And what -- how did that -- how 14:51:13
15 did the fact of the different descriptors 14:51:17
16 factor into your description that there are 14:51:20
17 two devices here, not one shared device? 14:51:22
18 A. So are you asking how did I determine 14:51:23
19 that or what did I do once I had determined 14:51:25
20 that? 14:51:28
21 Q. Let's start with the second and then 14:51:28
22 we will -- I think it would be helpful to take 14:51:31
23 a look at the analysis you did to determine 14:51:33
24 the descriptors as well. 14:51:35

1 A. Well, if it is a shared device, I 14:51:37
2 mean, the best example to start with if it's 14:51:39
3 an off-the-shelf USB, it has a USB device, it 14:51:42
4 only connects one host. And, in fact, one of 14:51:46
5 the key pieces of information in that host is 14:51:49
6 how many configurations do you have. And it 14:51:51
7 returns the same information through any host 14:51:54
8 it asks. I mean, no matter where I plug that 14:51:57
9 USB device in, no matter what host, it is 14:51:59
10 going to return the same information. 14:52:02
11 Minor detail there, but we can 14:52:04
12 talk about that some other time. 14:52:14
13 So specifically with regard to the 14:52:17
14 device descriptors and the names, the type of 14:52:19
15 device it is, you know, for a given speed, 14:52:23
16 that's the quirk. But for a given speed at a 14:52:27
17 given host with the same capabilities, it will 14:52:31
18 report the same information. 14:52:33
19 So given that here we have two 14:52:35
20 different hosts that got different information 14:52:41
21 from this product and the information is 14:52:45
22 different, that was what -- one of the things 14:52:49
23 that told me these were two separate devices. 14:52:50
24 Q. And, Mr. Garney, let's take a look at 14:52:55

1 the analysis you did to determine what 14:52:57
2 descriptions were reported back by the USB 14:53:00
3 devices, and I'd like to start with the USB 14:53:02
4 Device B, the iPhone's USB device. 14:53:05
5 Could you please take a look at 14:53:10
6 Trial Exhibit 212 in your binder. 14:53:12
7 (Whereupon, Trial Exhibit 212 was 09:03:13
8 introduced.) 09:03:13
9 THE WITNESS: Okay. 14:53:14
10 BY MR. SAULSBURY: 14:53:21
11 Q. Do you recognize this? 14:53:21
12 A. I do. 14:53:22
13 Q. What is it? 14:53:23
14 A. This is a trace taken by a USB bus 14:53:23
15 analyzer of the connection between the iPhone 14:53:26
16 and a dual role hub, the Aptiv product. 14:53:32
17 MR. SAULSBURY: Move Trial 14:53:35
18 Exhibit 212 into evidence. 14:53:36
19 MR. SLAYDEN: No objection. 14:53:38
20 THE COURT: All right. It is in. 14:53:38
21 MR. SAULSBURY: Mr. Glass, can we 14:53:41
22 please see 212, and if we could please zoom in 14:53:42
23 on the table that's labeled "Device 14:53:45
24 Descriptor." 14:53:47

1 BY MR. SAULSBURY: 14:53:49
2 Q. So, Mr. Garney, could you remind us 14:53:51
3 which device this relates to in the 14:53:55
4 walk-through that you just gave? 14:54:00
5 A. Sure. This is Device B. This is the 14:54:01
6 iPhone's device. 14:54:03
7 Q. And what device description did you 14:54:04
8 find? 14:54:06
9 A. So this is all the gory details of 14:54:07
10 all of the pieces of USB device descriptor, 14:54:09
11 and down here you'll see this -- these are the 14:54:13
12 names of the fields, the names of the parts 14:54:15
13 and the sections of a USB device descriptor. 14:54:17
14 And one of the fields is called a product, and 14:54:20
15 a string, indirectly a string, that's what 14:54:24
16 these numbers are out here for, but the string 14:54:26
17 that identifies for an end user what is this 14:54:28
18 device, what's its purpose for. 14:54:30
19 When we defined USB, we didn't 14:54:33
20 want to have cryptic things that a poor 14:54:35
21 consumer would have no idea of what it was if 14:54:38
22 something went wrong, so we went the extra 14:54:40
23 mile to allow devices to carry their string 14:54:42
24 information that would be meaningful to a 14:54:46

1 human, as opposed to just the binder and data 14:54:47
2 that might be useful for a computer. 14:54:50
3 So this product says iAP2 NCM 14:54:53
4 accessory, which is the thing that says I am 14:54:57
5 CarPlay capable for the device to be, which is 14:54:59
6 the Apple CarPlay. 14:55:03
7 Q. And is iAP2 NCM a descriptor that's 14:55:04
8 specific to CarPlay? 14:55:10
9 A. Well, the elements, there's sort of 14:55:10
10 two parts to that request. Within the context 14:55:14
11 of this case, yes. 14:55:16
12 Q. And how do you know that? 14:55:17
13 A. The CarPlay spec identifies that this 14:55:19
14 is what's required to be recognized as CarPlay 14:55:23
15 capable accessory that's wired over USB. 14:55:28
16 CarPlay describes other ways to connect the 14:55:31
17 devices, but for this case, it's just wired 14:55:33
18 USB. 14:55:35
19 Q. Is that another way of saying that 14:55:35
20 the iPhone has to recognize this description 14:55:37
21 of this device in order for CarPlay to work? 14:55:39
22 A. Yeah. There's no -- yeah. I mean, 14:55:41
23 it has to have the software necessary to 14:55:44
24 support CarPlay. Again, you could plug 14:55:46

1 different things into an iPhone and it needs 14:55:48
2 to know what it is, and this is the key that 14:55:50
3 unlocks the ability to do CarPlay from 14:55:53
4 iPhone's perspective. 14:55:56
5 Q. Did you also do an analysis to 14:55:57
6 determine the device descriptor for USB Device 14:55:59
7 A and the end unit's device? 14:56:03
8 A. I did. 14:56:03
9 Q. What did you do? 14:56:05
10 A. What did I do. It's been awhile. 14:56:06
11 Q. And I might -- sorry, go ahead. 14:56:09
12 A. Well, I believe I looked at the 14:56:12
13 source code for the software that's 14:56:14
14 responsible for the dual role hub reporting 14:56:17
15 what its device descriptor is. 14:56:24
16 Q. Mr. Garney, I have just handed you 14:56:41
17 Trial Exhibit 365. 14:56:45
18 (Whereupon, Trial Exhibit 364 was 09:03:13
19 introduced.) 09:03:13
20 BY MR. SAULSBURY: 09:03:13
21 Q. Do you recognize this document? 14:56:46
22 A. This looks like the source code I 14:56:47
23 looked at, yes. 14:56:50
24 MR. SAULSBURY: Move to admit -- 14:56:51

1 BY MR. SAULSBURY: 14:56:53
2 Q. And, Mr. Garney, could you identify 14:56:53
3 what source code file that is? 14:56:55
4 A. The source code file is called H to H 14:56:56
5 upstream, which again, H to H is host that we 14:57:01
6 heard. Upstream is for the Device A part and 14:57:04
7 this is Aptiv source code that's in the 14:57:07
8 firmware of the dual hub that makes the Device 14:57:09
9 A/B Device A, a part of the source code. 14:57:13
10 MR. SAULSBURY: And we move to 14:57:19
11 admit the excerpt of source code that's been 14:57:20
12 marked as Trial Exhibit 264. 14:57:23
13 MR. SLAYDEN: No objection, Your 14:57:28
14 Honor. 14:57:30
15 THE COURT: I take it, just so 14:57:30
16 we're clear on the record, 364? 14:57:31
17 MR. SAULSBURY: That's right, Your 14:57:33
18 Honor. Thank you. 14:57:34
19 Mr. Glass, can we please see 14:57:36
20 DX-38. Why don't we go to page 6. 14:57:46
21 BY MR. SAULSBURY: 14:57:51
22 Q. Mr. Garney, do you recognize this as 14:57:52
23 a portion of what you analyzed? 14:57:54
24 A. I do. 14:57:56

1 MR. SAULSBURY: Mr. Glass, could 14:57:57
2 you please go down in your blowup, please go 14:57:58
3 down to line 327. 14:58:00
4 BY MR. SAULSBURY: 14:58:05
5 Q. And what did the source code tell you 14:58:07
6 about the device descriptor for USB A, the 14:58:10
7 head unit device? 14:58:15
8 A. Right. So this source code is 14:58:15
9 computer language called C, well-known 14:58:17
10 computer language I'm familiar with. And what 14:58:20
11 you have to do is sort of revert in this case. 14:58:23
12 There is some strangeness of the declaring 14:58:26
13 strings in C for certain uses, so this is sort 14:58:30
14 of one of them. 14:58:32
15 But if you look vertically here, 14:58:33
16 you'll see it says host space two space host 14:58:35
17 space bridge. So this is the string that's 14:58:40
18 exactly the string that's returned by Device A 14:58:43
19 to the head unit. 14:58:47
20 And if you look up at the top, 14:58:48
21 it's actually declaring this as a constant H 14:58:50
22 to H product string descriptor. And then it 14:58:53
23 has a comment down at the bottom, it also says 14:58:58
24 this is B string in a more human readable 14:59:00

1 form. Host-to-host bridge. It is all 14:59:04
2 consistent with this. 14:59:07
3 MR. SAULSBURY: And, Mr. Glass, if 14:59:12
4 we could please go back to Slide 11. I think 14:59:14
5 we're on 15. If we can go to 11, please. And 14:59:23
6 if you go back to 10 and forward to 11, I 14:59:28
7 think the PowerPoint -- there we go. Okay. 14:59:32
8 BY MR. SAULSBURY: 14:59:34
9 Q. So prior to the point of role 14:59:35
10 reversal, is it -- is it possible for the 14:59:41
11 iPhone to connect to the host? 14:59:43
12 A. No. It can only connect to the 14:59:45
13 device. 14:59:49
14 Q. And so just to get clear on the 14:59:50
15 sequence, prior to the car being powered on, 14:59:54
16 is it possible for there to be more than one 14:59:58
17 host attached to the dual role hub? 15:00:02
18 A. No. Prior to the power on, there 15:00:04
19 can't even be one host, zero host. I mean, 15:00:06
20 mechanically they may be connected, but 15:00:17
21 functionally, there's nothing doing -- nothing 15:00:19
22 happening. 15:00:22
23 Q. There is no device to be configured? 15:00:22
24 A. No. 15:00:24

1 Q. Now, I'd like to talk in more detail 15:00:28
2 about what happens between Device A and Device 15:00:31
3 B. Can we take a look at Trial Exhibit 14 in 15:00:33
4 evidence and go to page 4, please. 15:00:35
5 Do you recall seeing this document 15:00:37
6 in Mr. -- during Mr. Voto's testimony? 15:00:42
7 A. I do. 15:00:45
8 Q. What are we looking at? 15:00:45
9 A. This is what Unwired called their 15:00:48
10 host-to-host bridge design spec. 15:00:50
11 Q. Now, do you see how there is a big 15:00:53
12 blue box labeled USB Device A and another big 15:00:55
13 blue box labeled USB Device B? 15:00:58
14 A. I do. 15:01:00
15 Q. Do those correspond to the USB Device 15:01:00
16 A and USB Device B that we saw in your slides 15:01:02
17 from earlier? 15:01:05
18 A. Yeah, it corresponds to the 15:01:06
19 simplified figure we saw previously for the 15:01:08
20 bigger blue box labeled Device A is the same 15:01:10
21 as the previous figure Device A and the big 15:01:13
22 blue box on the right labeled Device B 15:01:17
23 corresponds to the Device B of the other 15:01:19
24 figure. 15:01:22

1 Q. And in your slides, it looked like 15:01:23
2 there was a green box labeled bridge in 15:01:28
3 between the two USB devices. Is that -- yes, 15:01:30
4 there it is right there. 15:01:33
5 Is that depicted in the figure 15:01:35
6 that we were just looking at in Trial 15:01:37
7 Exhibit 14? 15:01:42
8 A. It's actually little bitty boxes that 15:01:42
9 are labeled, I think they are labeled external 15:01:45
10 control, the connection between the two USB 15:01:48
11 devices. 15:01:52
12 Q. Are there also FIFO buffers depicted 15:01:53
13 here? 15:01:56
14 A. Yeah, they're not -- I mean, I don't 15:01:57
15 think in this figure they are called out as 15:01:59
16 FIFO, but based on the other design document 15:02:01
17 they showed, each of these things are labeled 15:02:04
18 bulk out or bulk in. These are the individual 15:02:07
19 FIFOs of Device A, and there is a 15:02:11
20 corresponding set of individual FIFOs for 15:02:14
21 Device B, usually actually the endpoint 15:02:17
22 buffers of the two devices. 15:02:20
23 Every USB device is required to 15:02:21
24 have endpoint buffers as part of the spec, and 15:02:23

1 this shows clearly the endpoint buffers for 15:02:26
2 Device A and endpoint buffers for Device B and 15:02:29
3 they are different and distinct. 15:02:32
4 Q. Now, I think we heard Mr. Zatkovich 15:02:35
5 refer to the FIFOs in the dual role hub as a 15:02:38
6 single device block. 15:02:41
7 A. Yeah. 15:02:42
8 Q. Is it accurate to think of them as 15:02:43
9 one device block? 15:02:45
10 A. No. You know, I mean, to a layperson 15:02:46
11 can see here, there is a part to each device 15:02:49
12 block. 15:02:52
13 Q. And could you help us follow that? I 15:02:53
14 just want to make sure that we are seeing the 15:02:54
15 same as you. 15:02:57
16 A. Sure. I mean, this is Device A, this 15:02:57
17 big blue thing, and this is -- this is the 15:03:00
18 actual sort of implementation picture. 15:03:03
19 Again, this is a zoomed-in picture 15:03:05
20 within the Unwired design, so the detail that 15:03:07
21 they actually baked into the chip. Some of 15:03:11
22 the other figures we've seen, you know, I'll 15:03:13
23 call them maybe almost marketing figures 15:03:17
24 almost, but higher level zoomed-out figures 15:03:19

1 hiding some of that detail. 15:03:21
2 This is a detailed design that 15:03:22
3 Aptiv would need to talk to AyDeeKay to help 15:03:27
4 them know how to build the real chip, and 15:03:30
5 you'll see here FIFOs are part of the zoom. 15:03:33
6 My further understanding is there 15:03:36
7 is some other technical detail we haven't 15:03:37
8 talked about here that helped confirm this for 15:03:39
9 me that talks about the FIFOs being part of 15:03:41
10 the IP block for each device controller. And 15:03:44
11 clearly, again, you know, here is Device B as 15:03:48
12 a whole device and individual FIFOs for each 15:03:51
13 endpoint up to each device is pretty clear. 15:03:54
14 Q. Now, Mr. Garney, do you recall this 15:04:03
15 Ethernet controller example that we talked 15:04:06
16 about earlier with Mr. Bohm, I believe? 15:04:08
17 A. I do. 15:04:10
18 Q. Okay. 15:04:11
19 Now, my questions are going to 15:04:11
20 sound a little similar to the ones I asked Mr. 15:04:14
21 Bohm. 15:04:17
22 MR. SLAYDEN: Sidebar, Your Honor. 15:04:17
23 (Whereupon, a discussion was held 15:04:19
24 at sidebar as follows: 15:08:27

1 THE COURT: All right. Go ahead. 15:08:27
2 MR. SLAYDEN: We're outside the 15:08:27
3 scope of his opinion. 15:08:27
4 MR. SAULSBURY: We are not, Your 15:08:27
5 Honor. This is the demonstrative to 15:08:27
6 illustrate that there are two different USB 15:08:27
7 devices which is precisely Mr. Garney's 15:08:27
8 opinion, his primary infringement opinion. We 15:08:27
9 are not going to use prior art. 15:08:27
10 MR. SLAYDEN: It's outside the 15:08:27
11 scope and it's not in agreement with the 15:08:27
12 issues in his report. It is beyond his 15:08:27
13 report. 15:08:27
14 THE COURT: When you say it's 15:08:27
15 beyond his report, I know in his report 15:08:27
16 that -- I mean, I don't have it memorized 15:08:27
17 probably nearly as well as you two. I know in 15:08:27
18 his report, he opines about non-infringement 15:08:27
19 generally and opines about the distinction 15:08:27
20 between a bridge and, you know, device. 15:08:27
21 MR. SLAYDEN: This is not USB. It 15:08:27
22 is an Ethernet controller. 15:08:27
23 MR. SAULSBURY: It's USB. It is 15:08:27
24 attached to a USB. 15:08:27

1 THE COURT: Well, I understand 15:08:27
2 what it is. I know what it is. It is a USB. 15:08:27
3 I understand there are USB connections and 15:08:27
4 then they are cross-wired with the Ethernet. 15:08:27
5 I understand that. 15:08:27
6 MR. SLAYDEN: And this type of 15:08:27
7 device or Ethernet in his report is way 15:08:27
8 beyond. If a fact witness talked about it, 15:08:27
9 that's different. We allowed that, we didn't 15:08:27
10 object to it. But their expert opinion is -- 15:08:28
11 it's an ambush. 15:08:28
12 THE COURT: Is he going to opine 15:08:28
13 that this is somehow connected to the scope of 15:08:28
14 the claim in 23? 15:08:28
15 MR. SAULSBURY: Yeah. He is going 15:08:28
16 to explain that if you have two different USB 15:08:28
17 devices that are talking to one another, that 15:08:28
18 doesn't make it shared just because, which is 15:08:28
19 within his non-infringement opinion, and this 15:08:28
20 is a demonstrative to illustrate that. 15:08:28
21 MR. SLAYDEN: It is a 15:08:28
22 demonstrative not disclosed in his opinion. 15:08:28
23 THE COURT: Well, but I don't 15:08:28
24 think he has to disclose every element of his 15:08:28

1 opinion. I don't think it's beyond the scope 15:08:28
2 of his opinion that he is giving, which is 15:08:28
3 that you can have a bridge that is connecting 15:08:28
4 the two separate USB devices. He is just 15:08:28
5 going to point out this is the wire equivalent 15:08:28
6 of what he thinks is, you know, computer 15:08:28
7 logic -- 15:08:28
8 MR. SLAYDEN: Operations? 15:08:28
9 THE COURT: As I understand his 15:08:28
10 position, tell me, Mr. Saulsbury, if I've got 15:08:28
11 it wrong, you are basically saying there is a 15:08:28
12 piece of software that is connected that is 15:08:28
13 allowing, not by a USB, two different USB 15:08:28
14 devices to talk to each other, right? And so 15:08:28
15 he is going to say this is the physical, 15:08:28
16 mechanical of that being connected. 15:08:28
17 MR. SAULSBURY: That's right. 15:08:28
18 THE COURT: I think that's fair 15:08:28
19 within the scope of his opinion. That's fine. 15:08:28
20 I've pushed the jurors pretty long 15:08:28
21 because we are going to stop early, but I 15:08:28
22 don't know how much longer you have. 15:08:28
23 MR. SAULSBURY: I have a couple 15:08:28
24 hours. He is our expert. 15:08:28

1 THE COURT: Okay. 15:08:28
2 MR. SAULSBURY: If Your Honor has 15:08:28
3 a time -- 15:08:28
4 THE COURT: I don't want to stop 15:08:28
5 too early. I also don't want to push them to 15:08:28
6 sit here for, you know, two hours and 15:08:28
7 45 minutes without a break if they need a 15:08:28
8 break. 15:08:28
9 So I'm just going to poll them 15:08:28
10 right now real quickly and tell them we plan 15:08:28
11 to stop between 3:30 and 3:45, but that we've 15:08:28
12 been going a long time so if they want five 15:08:28
13 minutes, we can. I'd rather they be fresh and 15:08:28
14 they have that opportunity if they want it. 15:08:28
15 MR. SAULSBURY: And 3:30 will 15:08:28
16 likely be a good stopping point for me. 15:08:28
17 THE COURT: He talks a lot, so see 15:08:28
18 how it goes. 15:08:28
19 (Whereupon, the discussion at 15:08:29
20 sidebar concluded.) 15:08:30
21 THE COURT: Just before we resume, 15:08:31
22 I just want to poll all of you. We have been 15:08:34
23 going for a while. We are stopping a little 15:08:37
24 early today, as you know, stopping somewhere 15:08:39

1 between 3:30 and 3:45. I know it can be 15:08:40
2 tiring sitting listening, so if you want to 15:08:44
3 take a five-minute break, we can. If you want 15:08:47
4 to press on until we're done at 3:45, I think 15:08:49
5 that's fine with everyone here, but you guys 15:08:53
6 are the key element. 15:08:56
7 So if anyone wants a break, just 15:08:57
8 raise your hand and let me know. 15:08:58
9 Nope? Okay. Good. 15:09:00
10 All right. Then proceed. Go 15:09:02
11 ahead, Mr. Saulsbury. 15:09:05
12 BY MR. SAULSBURY: 15:09:07
13 Q. Mr. Garney, do you remember this 15:09:08
14 demonstrative from Mr. Bohm's testimony? 15:09:11
15 A. I do. 15:09:12
16 Q. With the two Ethernet controllers and 15:09:12
17 this crossover cable in between? 15:09:14
18 A. I remember that, yes. 15:09:16
19 Q. Okay. 15:09:17
20 Now, in this demonstrative, what 15:09:17
21 are the devices? 15:09:20
22 A. The big black blocks on either side 15:09:23
23 of the Ethernet cable are the two independent 15:09:28
24 USB devices. 15:09:30

1 Q. Okay. 15:09:31
2 A. The plastic packaging for the USB 15:09:31
3 devices, anyway. 15:09:34
4 Q. Right. 15:09:34
5 Now, there's this crossover cable 15:09:35
6 connecting Device A and Device B; is that 15:09:38
7 right? 15:09:42
8 A. I mean, I don't know for a fact it's 15:09:42
9 a crossover, but I'm pretty sure it probably 15:09:44
10 is. It certainly connects the two. 15:09:46
11 Q. And if we were to -- if we were to 15:09:48
12 map this example, the Ethernet controls onto 15:09:51
13 the dual role hub, what would the Ethernet 15:09:56
14 cord represent? 15:09:57
15 A. The connection between the two 15:09:58
16 independent USB devices. 15:09:59
17 MR. SAULSBURY: And, Mr. Glass, if 15:10:03
18 we can actually take a look at Trial 15:10:04
19 Exhibit 14. 15:10:07
20 BY MR. SAULSBURY: 15:10:07
21 Q. Mr. Garney, do you mind pointing out 15:10:08
22 with your laser pointer what corresponds to 15:10:10
23 the Ethernet cord? 15:10:12
24 A. Sure. That's these connections here 15:10:13

1 between the two USB devices, that's the 15:10:15
2 Ethernet cable. 15:10:18
3 Q. Now, I am separating the Ethernet 15:10:19
4 cord. How many devices here, how many USB 15:10:22
5 devices? 15:10:24
6 A. Two. Two. 15:10:24
7 Q. Okay. 15:10:25
8 Connecting them together, how many 15:10:26
9 USB devices do we have? 15:10:28
10 A. Still two. 15:10:29
11 Q. And why is that? 15:10:30
12 A. Well, you have connected them, but 15:10:32
13 you haven't changed what they do and how they 15:10:34
14 act. They still can only be each connected to 15:10:36
15 one host and they still have to be controlled 15:10:40
16 by the respective hosts. 15:10:43
17 Q. Now, Mr. Garney, you might have just 15:10:53
18 seen me place the Ethernet controllers into a 15:10:57
19 housing, so they are both in the same housing. 15:10:59
20 Still two devices here? 15:11:04
21 A. Yeah, unchanged but for the 15:11:05
22 packaging. 15:11:07
23 Q. So the packaging of the devices 15:11:08
24 approximate to one another, does that factor 15:11:14

1 into whether you have one or two USB devices? 15:11:16
2 A. No, this is not a patent about 15:11:18
3 packaging; it is a patent about exactly how 15:11:21
4 the pieces work with regard to each other. 15:11:23
5 Q. So we don't have a shared USB device 15:11:25
6 block here? 15:11:28
7 A. No. 15:11:28
8 Q. I want to take a different diagram of 15:11:31
9 the dual role hub. I believe it is the one we 15:11:34
10 saw during Mr. Zatkovich's testimony. 15:11:36
11 MR. SAULSBURY: Can we take a look 15:11:37
12 at Trial Exhibit 7 in evidence, please. 15:11:39
13 BY MR. SAULSBURY: 15:11:48
14 Q. What do we see here in this diagram, 15:11:49
15 Mr. Garney, or actually what is this diagram? 15:11:51
16 A. This is an overall picture of all of 15:11:53
17 the parts of the dual role hub. I call it an 15:11:56
18 eye chart because you need magnifying glasses 15:11:59
19 to see what the different pieces are. It is a 15:12:02
20 lot of detail. But it is trying to talk about 15:12:04
21 all of the significant parts of the Aptiv dual 15:12:06
22 role hub. 15:12:09
23 Q. And I believe Mr. Zatkovich sort of 15:12:09
24 zoomed in to one part of this during his 15:12:13

1 testimony, so let's take a look at his -- at 15:12:15
2 the slide from his testimony. I believe it is 15:12:17
3 Slide 1 here. Yes. 15:12:20
4 So how would Device A be depicted 15:12:21
5 in this diagram? 15:12:27
6 A. So if you -- if you look here, Mr. 15:12:28
7 Zatkovich annotated the -- if you had a 15:12:32
8 magnifying glass, you could see this says, 15:12:35
9 "UDC_US," or USB device controller upstream. 15:12:37
10 That's the Device A. That's the thing that's 15:12:42
11 connected to the head unit. 15:12:45
12 And I think Mr. Zatkovich kindly, 15:12:47
13 you know, made that text bigger so you could 15:12:49
14 see it says UDC_US. That's the 15:12:52
15 vendor-specific thing that connects to the 15:12:56
16 head unit. There we go. 15:12:58
17 MR. SLAYDEN: Sidebar, Your Honor. 15:13:00
18 (Whereupon, a discussion was held 15:15:21
19 at sidebar as follows: 15:15:21
20 MR. SLAYDEN: Okay. So the last 15:15:21
21 module wasn't disclosed with this witness. 15:15:21
22 And this demonstrative is not our 15:15:21
23 demonstrative from Mr. Zatkovich. 15:15:21
24 THE COURT: I'm sorry, say that 15:15:21

1 again. I missed it. 15:15:21
2 MR. SLAYDEN: This demonstrative 15:15:21
3 is not from Mr. Zatkovich. This is not from 15:15:21
4 Mr. Zatkovich's report. They have annotated 15:15:21
5 over it, made it into a demonstrative that is 15:15:21
6 not identified in his report. This is not 15:15:21
7 from his report. You see device controller 15:15:21
8 block huge. 15:15:21
9 THE COURT: You are talking about 15:15:21
10 the purple blocks? 15:15:21
11 MR. SLAYDEN: Yes. They are 15:15:21
12 covering up the part that actually tells 15:15:21
13 you -- 15:15:21
14 MR. SAULSBURY: That's from Mr. 15:15:21
15 Zatkovich's report. However, I mean, if there 15:15:21
16 is a problem with letting Mr. Garney just walk 15:15:21
17 through the trial exhibit -- 15:15:21
18 MR. SLAYDEN: 7 is an unaltered 15:15:21
19 accurate exhibit? 15:15:21
20 MR. SAULSBURY: Yeah, by your 15:15:21
21 expert. 15:15:21
22 THE COURT: Wait, wait, wait. 15:15:21
23 First of all, I don't want cross-talk with you 15:15:21
24 two either. Okay? I don't have -- Mr. 15:15:21

1 Zatkovich's testimony. I mean, I have it, but 15:15:21
2 I don't have it right in front of me. 15:15:21
3 And I guess the purple boxes you 15:15:21
4 are saying are added, Mr. Slayden, because I 15:15:21
5 know they zoomed in momentarily? 15:15:21
6 MR. SLAYDEN: No, the big purple 15:15:21
7 boxes are added. That's not part of that -- 15:15:21
8 that's Trial Exhibit 7 that's been annotated 15:15:21
9 by him. The demonstrative, that is not what 15:15:22
10 Mr. Zatkovich identified. 15:15:22
11 MR. SAULSBURY: This wasn't added 15:15:22
12 by us, this is Mr. Zatkovich. But like I 15:15:22
13 said, I am happy to use Trial Exhibit 7 15:15:22
14 instead. 15:15:22
15 THE COURT: Just use Trial 15:15:22
16 Exhibit 7. Fine. 15:15:22
17 MR. SLAYDEN: Thank you, Your 15:15:22
18 Honor. 15:15:22
19 (Whereupon, the discussion at 15:15:22
20 sidebar concluded.) 15:15:27
21 MR. SAULSBURY: And, Mr. Glass, 15:15:27
22 can you please zoom in on the portion that has 15:15:30
23 the device controller UDC_US at the top, and 15:15:34
24 it goes down to where there's -- yeah, start 15:15:39

1 there. Keep on going down. That's perfect. 15:15:42
2 Great. 15:15:46
3 BY MR. SAULSBURY: 15:15:46
4 Q. And, Mr. Garney, with your laser 15:15:47
5 pointer, would you mind -- could you please 15:15:50
6 help us map where UDC -- excuse me, where USB 15:15:54
7 Device A from the last diagram we were just 15:15:58
8 looking at, Trial Exhibit 14, appears in this 15:16:00
9 eye chart? 15:16:04
10 A. Right. 15:16:05
11 So USB, as I was starting to say, 15:16:05
12 USB Device A is this part right here, device 15:16:08
13 controller UDC_US, here is the device 15:16:10
14 controller upstream. 15:16:14
15 Q. Now -- 15:16:15
16 A. I think, if you follow the line, it's 15:16:18
17 connected through the -- to the head unit 15:16:20
18 which is off the screen. 15:16:23
19 Q. And where is USB Device B? 15:16:26
20 A. Device B is the downstream part 15:16:28
21 UDC_DS, or again, USB device controller 15:16:32
22 downstream, and that's the iPhone's device. 15:16:35
23 Q. And does that name, UDC_DS, tell you 15:16:38
24 anything about whether that's connected to an 15:16:41

1 iPhone as opposed to the head unit? 15:16:43
2 A. Well, if we follow the line, the name 15:16:46
3 is suggestive, and it also correlates with 15:16:49
4 other information in the design documents for 15:16:51
5 Unwired that make that pretty explicit. 15:16:54
6 Q. And sorry, perhaps I should have 15:16:56
7 asked it this way: 15:16:58
8 How have they suggested that 15:16:59
9 that's the USB device for the iPhone? 15:17:01
10 A. It is the downstream port. It's away 15:17:04
11 from the head unit. It also streams close to 15:17:07
12 the head unit downstream, which is closer to 15:17:14
13 the iPhone. 15:17:18
14 Q. We talked about the FIFO buffers 15:17:18
15 earlier. Could you point us to where the FIFO 15:17:20
16 buffers are for USB Device A? 15:17:23
17 A. Well, the -- I mean, this figure has 15:17:25
18 this block in the middle, and again, from 15:17:27
19 other evidence, I know that the FIFOs are 15:17:30
20 actually within the USB device controller 15:17:33
21 upstream for Device A. 15:17:35
22 Q. And why is it depicted differently in 15:17:36
23 the context of this type of chart? 15:17:39
24 A. Well, I believe I had a conversation 15:17:41

1 with Mr. Petku that suggests that this was 15:17:42
2 sort of an early version of the doc, or a 15:17:45
3 thinking version of the doc, and it was really 15:17:48
4 more focused on the overall picture of 15:17:51
5 everything that was in the dual role hub. 15:17:53
6 This is just the architect that 15:17:57
7 does those things. It could have been helpful 15:17:59
8 to think about it this way when they did the 15:18:01
9 design, for all I know. 15:18:03
10 But I know that all the material I 15:18:06
11 looked at told me that the FIFOs were up here 15:18:08
12 for Device A and down here for Device B. 15:18:12
13 Q. Now, I wonder -- I want to make sure 15:18:14
14 I understand the respective functions of USB 15:18:19
15 Device A and USB Device B, the head unit's 15:18:22
16 device and the iPhone's device. 15:18:25
17 Would the dual role hub work if 15:18:27
18 those two devices were reversed? 15:18:28
19 A. No, the iPhone -- well, take an easy 15:18:31
20 case, I guess. The iPhone, if it was attached 15:18:36
21 to the vendor-specific Device A, it wouldn't 15:18:38
22 have the software that would know how to deal 15:18:40
23 with that device. As we said, you know, there 15:18:42
24 was -- each device type has its own software 15:18:45

1 that's specific to that device type, and 15:18:47
2 iPhone was never designed, nor was Aptiv's 15:18:49
3 dual role hub as a vendor-specific thing for 15:18:52
4 doing role reversal. I mean, iPhone, that 15:18:54
5 would blow its mind. It would have no idea 15:18:56
6 what that is. 15:18:58
7 Q. Changing gears a little bit, do you 15:18:59
8 recall, in opening statements, how Microchip's 15:19:02
9 counsel said that Mr. Bohm invented a way to 15:19:04
10 connect two computer hosts? 15:19:06
11 A. I do. 15:19:07
12 Q. Okay. 15:19:08
13 Do you need a USB -- strike that. 15:19:08
14 Do you need a multi-host device of 15:19:12
15 claim 23 of the '243 Patent to connect two 15:19:16
16 hosts via USB? 15:19:20
17 A. No. I mean, from my direct 15:19:21
18 experience and other things we've heard, 15:19:22
19 something like Ethernet can connect two hosts 15:19:24
20 just -- that's been for a long time, and there 15:19:27
21 are other ways of connecting hosts. 15:19:31
22 Q. And without reference to any 15:19:41
23 particular timeframe, are you familiar with 15:19:43
24 host-to-host bridges? 15:19:47

1 A. I am, just as I just mentioned with 15:19:49
2 regard to Ethernet, for example, and even 15:19:52
3 before that when I was traveling for Intel, 15:19:56
4 this is even before USB, we used a cable from 15:19:59
5 a company called Traveling Software that you 15:20:04
6 could use to connect two laptops together or 15:20:06
7 two computers together, actually serial 15:20:09
8 connectors, nothing related to USB, and you 15:20:13
9 could do file transfer over that with a host 15:20:16
10 and exchange files within them. 15:20:20
11 Q. And have you encountered any USB 15:20:22
12 host-to-host bridges? 15:20:26
13 A. I have. 15:20:28
14 Q. And I believe we saw one of those 15:20:29
15 with Mr. Voto. 15:20:30
16 Do you recognize this as a USB 15:20:33
17 host-to-host bridge? 15:20:35
18 A. I do. 15:20:36
19 Q. And let me pass it up to you, 15:20:37
20 actually. 15:20:39
21 How does a USB host-to-host bridge 15:20:50
22 like this work? 15:20:57
23 A. Well, the two connectors, these are 15:21:00
24 two standard A connectors which are the 15:21:04

1 connector that connects to each host. So you 15:21:06
2 connect this to two USB hosts, one for each 15:21:08
3 connector, and then this block in the middle 15:21:11
4 has some buffering unit and pretty similar to 15:21:15
5 what we have been talking about so that each 15:21:17
6 host sees its own USB device. 15:21:20
7 So there is two USB devices and 15:21:22
8 those two USB devices are connected and they 15:21:23
9 can copy information between the two and you 15:21:26
10 can use that basic mechanism to do things like 15:21:28
11 file transfer. 15:21:32
12 Q. Are there any USB devices in that 15:21:35
13 host-to-host bridge? 15:21:38
14 A. I mean, I haven't cracked this one 15:21:40
15 open, but I've seen these kind of things in 15:21:43
16 the data sheet that we talked about. But 15:21:45
17 yeah, this has two USB devices in it. 15:21:47
18 Q. So each host has its own device? 15:21:49
19 A. I'm sorry? 15:21:51
20 Q. Does that mean that each host sees 15:21:53
21 its own device? 15:21:55
22 A. Yeah. 15:21:55
23 Q. Is there a shared USB device? 15:21:56
24 A. No. No. 15:21:58

1 Q. What does each host see when the end 15:22:06
2 of the cable is plugged in? 15:22:09
3 A. You know, I don't know the specific 15:22:10
4 details of this one, but I would imagine that 15:22:12
5 each host is going to see a device, you know. 15:22:14
6 Let me see if -- there's a logo on this, so it 15:22:17
7 says it's USB compliant because USB is pretty 15:22:20
8 aggressive about making sure, so that means 15:22:22
9 when this connector gets plugged in -- in 15:22:25
10 fact, both connectors have a logo. 15:22:27
11 When the connector is plugged in, 15:22:29
12 the device is required to respond to the 15:22:30
13 standard requests, so it reports some device 15:22:34
14 descriptor that we talked about. It would say 15:22:37
15 hey, I am USB cable something, and then the 15:22:39
16 host would, if it had a driver for it, it 15:22:43
17 would set configuration and enable it to be a 15:22:47
18 USB link, and the other host would do the same 15:22:49
19 kind of a thing. 15:22:51
20 A device descriptor recognized a 15:22:53
21 driver for it, sets configuration, and then 15:22:57
22 those three pieces of software can accomplish 15:22:59
23 this file transfer. 15:23:02
24 Q. And that would all be compliant with 15:23:04

1 the USB spec? 15:23:06
2 A. Based on the logos I see here, 15:23:07
3 absolutely. 15:23:10
4 Q. How would it be compliant if you have 15:23:10
5 two hosts? 15:23:12
6 A. Well, again, if this USB only 15:23:13
7 comprehends a device being controlled by a 15:23:16
8 single host, it would have to pass the 15:23:19
9 standard request tests and have all of the 15:23:23
10 right information to be able to be controlled 15:23:26
11 by that host. And so there's two connectors 15:23:27
12 with two logos, each side has to be compliant, 15:23:31
13 which would have a USB device. 15:23:35
14 Q. Could you please turn to Trial 15:23:42
15 Exhibit 196 in your binder. 15:23:45
16 (Whereupon, Trial Exhibit 196 was 09:03:13
17 introduced.) 09:03:13
18 THE WITNESS: Okay. 15:23:52
19 BY MR. SAULSBURY: 15:23:53
20 Q. Do you recognize this as -- yeah, do 15:23:53
21 you recognize this as a data sheet for a 15:23:57
22 Prolific device? 15:24:02
23 A. I do. 15:24:02
24 MR. SAULSBURY: Move to admit 15:24:04

1 Trial Exhibit 196. 15:24:05
2 MR. SLAYDEN: Your Honor, subject 15:24:06
3 to laying a foundation. 15:24:07
4 THE COURT: Okay. Go ahead and 15:24:09
5 lay your foundation. 15:24:12
6 MR. SAULSBURY: Sure. 15:24:13
7 BY MR. SAULSBURY: 15:24:14
8 Q. Mr. Garney, do you recognize Trial 15:24:14
9 Exhibit 196 as a data sheet for a chip, 15:24:18
10 Prolific chip, for implementing a USB 15:24:20
11 host-to-host bridge? 15:24:23
12 A. That's what the title of the sheet 15:24:24
13 says. And looking at the figures, I see 15:24:26
14 evidence that that's what it, in fact, does. 15:24:29
15 And looking at the description of it, it seems 15:24:31
16 consistent with providing that behavior. 15:24:35
17 Q. And is the Prolific device a way to 15:24:37
18 share -- strike that. 15:24:42
19 Is the Prolific device a way to 15:24:43
20 implement host-to-host USB communication 15:24:45
21 without using the shared device of claim 23? 15:24:49
22 MR. SLAYDEN: Your Honor, sidebar. 15:24:54
23 THE COURT: Well, wait. Hold on, 15:24:56
24 Mr. Slayden. Let him lay a couple more 15:24:57

1 questions in foundation and then we can 15:25:01
2 approach. I think I know where it's going, 15:25:02
3 but let me hear it. 15:25:04
4 THE WITNESS: Sorry, ask your 15:25:05
5 question again. 15:25:06
6 MR. SAULSBURY: Yeah, no worries. 15:25:07
7 BY MR. SAULSBURY: 15:25:09
8 Q. Does the Prolific device depicted in 15:25:11
9 the data sheet provide a way to do 15:25:13
10 host-to-host USB communication without using a 15:25:17
11 shared USB device as is claimed in the '243 15:25:22
12 Patent? 15:25:27
13 A. Well, sure. I mean, if I look -- 15:25:27
14 MR. SLAYDEN: Sidebar. 15:25:29
15 THE COURT: Okay. It's not in 15:25:31
16 evidence, so let's come to sidebar. 15:25:33
17 (Whereupon, a discussion was held 15:29:11
18 at sidebar as follows: 15:29:11
19 MR. SLAYDEN: What he is about to 15:29:11
20 testify is purely hearsay. He has not laid a 15:29:11
21 foundation. It is a fact document, and he has 15:29:11
22 no personal knowledge of it. 15:29:11
23 THE COURT: I mean, I haven't 15:29:11
24 heard a foundation yet, Mr. Saulsbury, but, I 15:29:11

1 mean, he tells us what this document is, but 15:29:11
2 it's not -- 15:29:11
3 MR. SAULSBURY: The question I am 15:29:11
4 trying to lay -- I should ask him, I am trying 15:29:11
5 to lay a foundation for the proposition sort 15:29:11
6 of like relying on -- 15:29:11
7 THE COURT: I'm sorry? 15:29:11
8 MR. SAULSBURY: Sorry. I am 15:29:11
9 trying to use the document to show that this 15:29:11
10 is the type of device that an expert would 15:29:11
11 rely on to understand ways of implementing 15:29:11
12 host-to-host communication without a shared 15:29:11
13 USB device. 15:29:11
14 So I'm not relying on it for 15:29:11
15 hearsay purposes. Instead, I am relying on it 15:29:11
16 for what a person of skill in the art would 15:29:11
17 understand. 15:29:11
18 THE COURT: But did he rely on it? 15:29:11
19 MR. SAULSBURY: This is a document 15:29:11
20 he reviewed. 15:29:11
21 MR. SLAYDEN: It is also part of 15:29:11
22 the collateral estoppel order, Your Honor. 15:29:11
23 THE COURT: So it's not -- I am 15:29:11
24 trying to understand because it's not a data 15:29:11

1 sheet for one of the physical devices that's 15:29:11
2 at issue here in invalidity; right? 15:29:11
3 MR. SAULSBURY: That's correct. 15:29:11
4 THE COURT: So why does this data 15:29:11
5 sheet matter to anything? 15:29:11
6 MR. SAULSBURY: Because it 15:29:11
7 illustrates how a person of skill in the art 15:29:11
8 would understand you could implement 15:29:11
9 host-to-host communication without a shared 15:29:11
10 USB device, and it's responsive to the claim 15:29:11
11 in opening that to do host-to-host 15:29:11
12 communication, you need to use a shared USB 15:29:11
13 device in the '243 Patent. 15:29:11
14 THE COURT: The claims in opening 15:29:11
15 aren't evidence. 15:29:11
16 MR. SAULSBURY: Understood. 15:29:11
17 THE COURT: I'm not hearing -- I 15:29:11
18 mean, you know, if you have data sheets that, 15:29:11
19 for instance, go to physical devices, if you 15:29:11
20 want to use those, that seems like it's going 15:29:11
21 to be more on point. The only way it's 15:29:11
22 relevant, it's not the kind of thing that an 15:29:12
23 expert would receive under 703. That's not 15:29:12
24 what you're saying, I think; right? 15:29:12

1 MR. SAULSBURY: That's what I 15:29:12
2 intended to say. 15:29:12
3 THE COURT: So an expert can't 15:29:12
4 just use 703 to relay hearsay. 15:29:12
5 MR. SAULSBURY: Understood. 15:29:12
6 THE COURT: So he's not opining 15:29:12
7 about this particular device; right? 15:29:12
8 MR. SLAYDEN: Right. 15:29:12
9 MR. SAULSBURY: He is not opining 15:29:12
10 about this particular device. I mean, he is 15:29:12
11 opining that the Aptiv device doesn't infringe 15:29:12
12 because it can use this host-to-host bridge. 15:29:12
13 THE COURT: The Aptiv device 15:29:12
14 either does or doesn't use two -- the Aptiv 15:29:12
15 hub or really the Aptiv chip either does or 15:29:12
16 doesn't, right? The fact that some other 15:29:12
17 device does or doesn't I don't think matters. 15:29:12
18 So, you know, I am going to sustain the 15:29:12
19 objection. 15:29:12
20 (Whereupon, the discussion at 15:29:14
21 sidebar concluded.) 15:29:16
22 BY MR. SAULSBURY: 15:29:36
23 Q. Mr. Garney, could you please turn to 15:29:37
24 Trial Exhibit 236 in your binder, which is in 15:29:39

1 evidence, actually, so if we can please see it 15:29:42
2 up on the screen, Mr. Glass. 15:29:45
3 Do you recognize this as a Sandia 15:29:48
4 data sheet, Mr. Garney? 15:29:56
5 A. I do. 15:29:57
6 Q. Okay. 15:29:58
7 MR. SAULSBURY: Can we please turn 15:30:00
8 to page 6 and look at Section 2.1, General 15:30:01
9 Description. Great. 15:30:05
10 BY MR. SAULSBURY: 15:30:07
11 Q. And, Mr. Garney, if you could please 15:30:10
12 take a look at the second paragraph, do you 15:30:12
13 see how it says, "The device employs unique 15:30:14
14 USB functionality, whereby USB data can be 15:30:18
15 mirrored between two USB hosts, multi-host, in 15:30:21
16 order to perform a single USB transaction"? 15:30:26
17 A. I see that. 15:30:28
18 Q. Okay. 15:30:29
19 And do you understand this to be 15:30:29
20 describing the Sandia device of Microchip? 15:30:30
21 A. I have a problem with it, but yes, I 15:30:35
22 do. 15:30:38
23 Q. Okay. 15:30:38
24 What's the problem? 15:30:39

1 A. Well, it talks about two hosts 15:30:39
2 perform a single USB transaction. That's 15:30:42
3 nonsensical. 15:30:45
4 Q. Why? 15:30:46
5 A. Well, because a USB transaction is a 15:30:46
6 very specific defined term in the USB, almost 15:30:49
7 all the USB specs, and it's sort of what I 15:30:53
8 talked about first. It's a way for the host 15:30:55
9 to say, I want you to do a data transfer in or 15:30:57
10 out to Device 2 and point 3, and then there is 15:31:00
11 a data packet that's part of that either in or 15:31:06
12 out and there is a handshake involving the 15:31:09
13 device and that's a transaction, that's a USB 15:31:12
14 transaction. 15:31:14
15 It only makes sense with regard to 15:31:15
16 one host. Trying to do something that, you 15:31:17
17 know, I don't even know how you describe 15:31:20
18 having two hosts execute that single 15:31:22
19 transaction. It just doesn't make any sense. 15:31:24
20 You could have -- you could have 15:31:27
21 each of two hosts perform their respective USB 15:31:29
22 transactions, but this is nonsensical. 15:31:32
23 Q. And let's take a look at Figure 3 of 15:31:39
24 the patent, actually, because I think it might 15:31:41

1 help us think about this in the context of the 15:31:44
2 patent. 15:31:46
3 Does the device in Figure 3 allow 15:31:46
4 multiple hosts to execute a single USB 15:31:50
5 transaction? 15:31:53
6 A. No. I mean, a device only 15:31:53
7 comprehends its participation in a USB 15:31:56
8 transaction. It's the target, it's the thing 15:31:59
9 that's either accepting data or sourcing data. 15:32:03
10 It can't do that simultaneously or -- I mean, 15:32:05
11 it can do it alternately with different 15:32:08
12 transactions, but the one transaction involves 15:32:11
13 one host and one device. 15:32:14
14 Q. Now, one thing that we haven't talked 15:32:19
15 much about is whether the Aptiv dual role hub 15:32:22
16 can be used for purposes other than CarPlay. 15:32:24
17 Can it? 15:32:28
18 A. Yes. 15:32:29
19 Q. What are some examples? 15:32:30
20 A. Well, a simple one is it has a hub as 15:32:32
21 part of a standard normal USB hub with 15:32:36
22 multiple downstream ports, so you can just use 15:32:39
23 it as a hub. Maybe it's more expensive, I 15:32:42
24 don't really know, but it could just attach to 15:32:45

1 any old host and that would allow the hub to 15:32:47
2 connect to any other devices you want, any 15:32:56
3 standard USB devices. 15:32:58
4 Q. Is Android Auto another way in which 15:32:59
5 the hub can be used without using CarPlay? 15:33:03
6 A. Sure. Android Auto just allows 15:33:05
7 Android to formally connect to the device. 15:33:11
8 MR. SAULSBURY: Your Honor, I 15:33:20
9 think we are at a good stopping point. I was 15:33:21
10 going to transition to invalidity, but it 15:33:22
11 might make sense to take a pause here. 15:33:26
12 THE COURT: That's fine with me. 15:33:28
13 Get everyone out of here in a timely way. 15:33:30
14 So, ladies and gentlemen, we'll 15:33:33
15 wrap up for the day. We'll have a full day 15:33:34
16 tomorrow. 15:33:38
17 So my standard end-of-the-night 15:33:39
18 caution, right? If you hear some of this, do 15:33:43
19 not start talking about it amongst yourselves, 15:33:46
20 don't talk about it with family or friends or 15:33:49
21 anything. Don't tell them anything about the 15:33:51
22 case and do not start going and doing any kind 15:33:53
23 of independent research. 15:33:56
24 And when I say don't start doing 15:33:58

1 any independent research, there will be no 15:34:00
2 time to do independent research until this 15:34:02
3 case is over. After the case is over, if you 15:34:04
4 want to take do some independent research 15:34:06
5 yourselves, you are more than welcome to. But 15:34:07
6 from now until we're done, don't do any 15:34:10
7 intense research. 15:34:13
8 So with that, I'll let everyone 15:34:14
9 go. Have a good night and enjoy the weather. 15:34:16
10 (Whereupon, the jury was excused 15:34:19
11 from the courtroom.) 15:34:20
12 THE COURT: Mr. Garney, you can 15:34:40
13 step down, but may as well leave your stuff 15:34:41
14 there, the binders, because you're going to 15:34:43
15 need them in the morning. 15:34:45
16 THE WITNESS: Okay. 15:34:46
17 (Whereupon, the witness was 15:34:47
18 excused for the day.) 15:34:48
19 THE COURT: All right. 15:34:49
20 Why don't we -- I'd like to take 15:34:52
21 about 10 minutes before we pick up and, I 15:34:56
22 mean, I don't have a particular preference 15:34:59
23 between charge issues and the evidentiary 15:35:02
24 issues, which we handle first. Anyone's 15:35:06

1 preference. Let me know when I come back in. 15:35:08
2 But for now, let's take 10 15:35:10
3 minutes. We'll plan to be back at quarter of. 15:35:13
4 Okay. Thank you. 15:35:15
5 (Whereupon, a 10-minute recess was 15:35:17
6 taken at 3:35 p.m.) 15:35:20
7 THE COURT CLERK: All rise. 15:44:24
8 THE COURT: Boy, I really cleared 15:51:04
9 this place out. 15:51:05
10 MS. DURIE: I just wanted to give 15:51:07
11 the Court some timing because -- 15:51:08
12 THE COURT: Okay. 15:51:08
13 MS. DURIE: -- based on 15:51:08
14 discussions, we are not going to call Mr. 15:51:10
15 Chase. 15:51:13
16 THE COURT: Okay. 15:51:13
17 MS. DURIE: What that means is 15:51:14
18 that tomorrow, we will wrap up with Garney. 15:51:16
19 They are going to call, they said they may 15:51:20
20 call Mr. Holstein {ph} in rebuttal. 15:51:24
21 THE COURT: Okay. 15:51:26
22 MS. DURIE: And then I think we 15:51:27
23 are going to be done. So the evidence should 15:51:29
24 close tomorrow, which means that we should be 15:51:31

1 able to have closings on Wednesday morning. 15:51:33
2 THE COURT: We were just talking 15:51:35
3 about that and that's fine. Just -- and I 15:51:36
4 think that's probably plenty of time. As I 15:51:40
5 said to you guys last week, I will charge the 15:51:42
6 jury before your closings. 15:51:45
7 MS. DURIE: Yep. 15:51:47
8 THE COURT: It sounds like -- I 15:51:50
9 mean, as I talked at sidebar with Mr. 15:51:52
10 Saulsbury, it sounds like probably another 15:51:55
11 hour-and-a-half or so with this witness. 15:51:57
12 MS. DURIE: I am going to 15:52:00
13 encourage it to be an hour. 15:52:01
14 THE COURT: You can encourage Mr. 15:52:03
15 Saulsbury, but Mr. Garney talks a lot. 15:52:04
16 MS. DURIE: That's a fair point. 15:52:08
17 I will definitely work my part. 15:52:10
18 THE COURT: Okay. 15:52:13
19 And then, you know, I don't know 15:52:13
20 if you have any sense of how long Mr. 15:52:15
21 Slayden's cross of Mr. Garney will be. 15:52:20
22 MR. GRAY: I don't. 15:52:23
23 THE COURT: I would assume not 15:52:25
24 insignificant. 15:52:26

1 MR. GRAY: I would guess about an 15:52:26
2 hour. 15:52:28
3 THE COURT: And then how long is 15:52:29
4 Mr. Levy? 15:52:30
5 MR. GRAY: I don't expect very 15:52:31
6 long. I think about an hour as well. 15:52:34
7 THE COURT: So, I mean, that takes 15:52:37
8 us roughly until lunchtime tomorrow, and I 15:52:38
9 guess the question I have, and you can think 15:52:43
10 about it, you don't have to tell me right now, 15:52:45
11 and you guys can talk about it amongst 15:52:47
12 yourselves, is just in the interest of 15:52:49
13 efficiency, would you want me to charge the 15:52:52
14 jury tomorrow afternoon? 15:52:54
15 MS. DURIE: That would be great. 15:52:56
16 THE COURT: The downside to that 15:52:58
17 is they'll go home and they'll come back and 15:52:59
18 hear your closings, but if you're all okay 15:53:02
19 with that, I'd rather use the time with them. 15:53:04
20 MS. DURIE: I strongly agree and I 15:53:06
21 actually think that honestly -- 15:53:09
22 THE COURT REPORTER: A little
23 louder, please.
24 THE COURT: Louder.

1 THE COURT REPORTER: A little
2 louder.
3 MS. DURIE: Oh, I'm sorry. I
4 apologize. Nobody really wants to start their 15:53:14
5 closing right after that. So I think that's 15:53:20
6 great. 15:53:22
7 THE COURT: So assuming we're done 15:53:22
8 even by the mid-afternoon break tomorrow, I'll 15:53:24
9 plan to charge the jury tomorrow, and then we 15:53:27
10 will bring them back and you guys can just 15:53:32
11 close on Wednesday. 15:53:34
12 I did, just so you know, speak to 15:53:35
13 Juror No. 7. She is going to arrange for some 15:53:37
14 child care on Wednesday so they will not have 15:53:42
15 to break deliberations early on Wednesday. I 15:53:44
16 haven't yet told them that Friday is a court 15:53:46
17 holiday. I am going to at some point. 15:53:50
18 I did -- and while I will also 15:53:53
19 tell them that they are certainly free to come 15:53:56
20 back Monday, I think the practical reality is 15:53:58
21 they would be resistant to that. 15:54:01
22 So, now, we'll see how it goes. 15:54:03
23 But I think that's good because that means 15:54:06
24 they'll have at least a day-and-a-half of 15:54:08

1 deliberations. 15:54:10
2 MS. DURIE: Right. 15:54:10
3 THE COURT: Okay. Okay. All 15:54:11
4 right. 15:54:12
5 Well, that's great. I'm glad 15:54:13
6 we're sort of on a path to get them the case 15:54:14
7 on that schedule. 15:54:18
8 All right. Do you have -- do you 15:54:20
9 all have any preference as to tackling 15:54:21
10 evidence before or after charges? 15:54:24
11 MS. DURIE: Honestly, I would just 15:54:27
12 as soon tackle charges first, if that's okay, 15:54:30
13 because I might excuse myself before the 15:54:33
14 evidence portion of the proceedings. 15:54:35
15 THE COURT: That's fine. I don't 15:54:36
16 care, other than as long as nobody thinks that 15:54:38
17 the evidentiary rules are going to 15:54:40
18 dramatically affect what you do on the 15:54:42
19 charges. If they're not, that's fine. 15:54:44
20 So give me a second to just get 15:54:47
21 everything called up. 15:54:49
22 MR. RUSSELL: Your Honor, one 15:55:00
23 question. 15:55:01
24 THE COURT: Yes. 15:55:02

1 MR. RUSSELL: What is on the 15:55:02
2 Court's list as far as evidentiary issues, 15:55:04
3 because I think most of it is resolved at this 15:55:06
4 point. 15:55:08
5 MS. DURIE: Mr. Wiener was just 15:55:08
6 making the same point. He is on the ball. We 15:55:10
7 need to talk about the collateral estoppel 15:55:12
8 issues, which I think is going to take 15:55:15
9 30 seconds. Is that it? 15:55:18
10 MR. RUSSELL: Yeah, I think that 15:55:19
11 is it. 15:55:20
12 THE COURT: Okay. Well, then, I 15:55:20
13 can hang out for a minute while you guys talk 15:55:21
14 about it when we wrap up. I had to go back 15:55:23
15 and look at my list, but I didn't think there 15:55:26
16 was a lot else. Okay. 15:55:28
17 I'm just looking at emails 15:55:34
18 yesterday with the comments. And just so I 15:55:39
19 know where we stand, before you sent these to 15:55:46
20 me, did you all confer about your respective 15:55:53
21 changes, or is it really you each made 15:55:57
22 changes? And that's not a criticism, I am 15:56:02
23 just trying to understand what it is. 15:56:04
24 MR. GRAY: The latter, Your Honor. 15:56:07

1 THE COURT: Okay. 15:56:08
2 So then Microchip -- and then I 15:56:09
3 guess my other sort of gating question is, is 15:56:19
4 it the case for each of you that for 15:56:22
5 objections to which there are not proposed 15:56:28
6 edits, that there's no objections -- I'm 15:56:30
7 sorry, for instructions for which there is no 15:56:33
8 proposed edits, there is not an objection? 15:56:35
9 MS. DURIE: I would say no. 15:56:37
10 THE COURT: Okay. 15:56:38
11 MS. DURIE: In other words, we 15:56:39
12 intended to preserve our requests that the 15:56:40
13 Court charge the jury in accordance with our 15:56:44
14 original instructions. 15:56:45
15 THE COURT: Okay. 15:56:46
16 MS. DURIE: Having said that, we 15:56:46
17 are trying to be practical here. 15:56:49
18 THE COURT: I appreciate that. 15:56:50
19 Right. 15:56:51
20 So what I will say then for the 15:56:52
21 record, you filed your original instructions. 15:56:53
22 They are preserved. I will not deem anything 15:56:56
23 waived. But if there's anything -- I assume 15:56:59
24 that there's stuff that you still feel 15:57:02

1 strongly about here, and obviously now my 15:57:04
2 proposed instructions are of record. So if I 15:57:06
3 have changed them, you can assume that I have 15:57:09
4 considered and rejected whatever you proposed. 15:57:11
5 MS. DURIE: Right. 15:57:14
6 And if I may, Your Honor, there 15:57:15
7 was really only one thing which I wanted to be 15:57:16
8 heard on instructions. 15:57:18
9 THE COURT: Okay. 15:57:20
10 MS. DURIE: And it was the request 15:57:20
11 for some statement regarding the IPR 15:57:23
12 proceeding and the scope of evidence and 15:57:25
13 issues that can be considered. 15:57:28
14 And to be clear, I am happy to 15:57:31
15 handle it one of two ways. I am happy to just 15:57:32
16 get it from the expert as a factual matter as 15:57:35
17 to how it works, or I'm happy to have the 15:57:38
18 Court instruct. 15:57:41
19 What I don't want is a situation 15:57:41
20 where we get an objection that it is a legal 15:57:43
21 question that is sustained, and then there is 15:57:45
22 no jury instruction on it so the jury doesn't 15:57:47
23 understand that predicate just about the scope 15:57:50
24 of evidence. That's my only concern. 15:57:52

1 THE COURT: Okay. So just to be 15:57:55
2 clear, this is -- 15:57:57
3 MS. DURIE: It is the instruction 15:58:01
4 on invalidity. 15:58:03
5 THE COURT: Yes. 15:58:04
6 MS. DURIE: And it is invalidity 15:58:04
7 generally. And we had proposed, in addition 15:58:06
8 to that, that explained that the '243 Patent 15:58:09
9 and subject to -- during those proceedings, 15:58:14
10 they could only consider written prior art 15:58:18
11 such as patents and publication and could not 15:58:20
12 consider product or consistent prior art. 15:58:23
13 As I said, I am happy to elicit it 15:58:25
14 from the expert; I can do it either way. I 15:58:28
15 just want there to be one way or the other 15:58:29
16 that we can make sure the jury understands 15:58:31
17 that the new art that we are presenting was 15:58:34
18 not considered in that proceeding. 15:58:36
19 THE COURT: Understood. 15:58:37
20 MS. DURIE: Thank you. 15:58:38
21 THE COURT: It's helpful to see 15:58:39
22 the language as we talk, so let me just get 15:58:43
23 this up. 15:58:46
24 And so is the point that -- is the 15:58:52

1 point that you are making, Ms. Durie, is when 15:58:55
2 the last sentence says, "During the IPR 15:58:58
3 proceedings, the PTAB could only consider 15:59:02
4 written art and not product or" -- 15:59:05
5 MS. DURIE: Correct. And I would 15:59:07
6 say, I'm standing up just for Rose's benefit. 15:59:07
7 That's right, Your Honor, that's the 15:59:10
8 definition. 15:59:11
9 THE COURT: Okay. All right. 15:59:11
10 So, Mr. Gray, do you want to 15:59:15
11 comment on that and we'll sort of loop back, 15:59:16
12 but in front of me now -- well, let me tell 15:59:19
13 you my thinking as I look at these 15:59:25
14 instructions, and then I want to hear your 15:59:27
15 thoughts, Mr. Gray. 15:59:29
16 When I took this out from the 15:59:30
17 original draft to the jury, it was largely 15:59:33
18 sort of an outgrowth of the conversation we 15:59:35
19 had at sidebar and similar to the point you 15:59:40
20 are making, which is my thinking was this is 15:59:43
21 now a matter of fact, it is in the record. I 15:59:45
22 don't highlight, for the most part, facts in 15:59:49
23 the record because to elevate one piece of 15:59:52
24 evidence over the other suggests something to 15:59:54

1 the jury. 15:59:57
2 MS. DURIE: Yes. 15:59:58
3 THE COURT: I think that the first 15:59:59
4 couple sentences you proposed here are sort of 16:00:05
5 veering in that direction in the sense that it 16:00:10
6 says there were -- really that I would say the 16:00:12
7 second and third sentence. 16:00:17
8 MS. DURIE: Can I short-circuit 16:00:19
9 it? It was an error. We intended to take 16:00:20
10 those out. That was an error last night. 16:00:22
11 THE COURT: Okay. 16:00:25
12 MS. DURIE: So we are actually 16:00:25
13 proposing the first and last sentence. 16:00:27
14 THE COURT: And I think I'm okay 16:00:29
15 with that. That does seem like a statement of 16:00:30
16 law, not something that we should necessarily 16:00:34
17 be eliciting from an expert. 16:00:36
18 So, Mr. Gray, I don't know if you 16:00:39
19 have it in front of you. 16:00:41
20 MR. GRAY: I do. 16:00:42
21 THE COURT: But essentially what 16:00:43
22 we would be saying, and I would probably -- I 16:00:44
23 might -- '243 Patent was subject to 16:00:47
24 proceedings before the Patent and Trademark 16:00:50

1 Appeal Board. I might adjust, for context, 16:00:52
2 you've heard those referred to as IPR 16:00:54
3 proceedings. During those proceedings, the 16:00:57
4 Patent and Trademark Appeal Board could only 16:00:59
5 consider written prior art such as patents and 16:01:01
6 applications; it could not consider product or 16:01:05
7 system prior art. 16:01:09
8 What's your view on that? 16:01:10
9 MR. GRAY: I think there may be 16:01:11
10 sort of a middle ground with more English 16:01:14
11 language the jury could understand here, that 16:01:16
12 Dickens and US-98 and Belkin are the issues. 16:01:18
13 Could we say the Patent Trial and Appeal Board 16:01:22
14 considered Dickens, but did not consider the 16:01:25
15 US-98/Belkin? 16:01:26
16 THE COURT: I am not inclined to 16:01:29
17 go quite that specific. 16:01:30
18 MR. GRAY: I thought we had 16:01:33
19 agreement over here. 16:01:34
20 THE COURT: If you are in 16:01:36
21 agreement -- 16:01:37
22 MS. DURIE: No, I'm fine -- I'm 16:01:37
23 fine with the way the Court -- 16:01:37
24 THE COURT: Well, no, I mean, I 16:01:40

1 know I was going to suggest something 16:01:41
2 different. But if you are in agreement with 16:01:42
3 that, I'll do it that way. 16:01:43
4 MS. DURIE: No, I -- I -- 16:01:44
5 THE COURT: If you were going to 16:01:45
6 pop up and object, I won't. 16:01:46
7 MS. DURIE: I would like to hear 16:01:47
8 the Court's proposal. 16:01:48
9 THE COURT: All right. I think 16:01:51
10 what I would do then is -- I'm sorry, I just 16:01:54
11 need one second to get mine open. Do you have 16:02:01
12 it? You're good. Okay. That's even better. 16:02:07
13 So I think then why don't we just 16:02:11
14 do something like '243 Patent was subject to 16:02:14
15 proceedings before the Patent Trial and Appeal 16:02:22
16 Board. You've heard these referred to as IPR 16:02:26
17 proceedings. 16:02:29
18 During these proceedings, Patent 16:02:30
19 Trial and Appeal Board could only consider 16:02:32
20 prior art such as patents and publications and 16:02:34
21 could not consider prior product or system 16:02:39
22 prior art such as US-98 or Belkin. 16:02:44
23 MS. DURIE: That works for me. 16:02:51
24 MR. GRAY: We may have a slight 16:02:53

1 issue there because I think that suggests that 16:02:54
2 those two things are prior art and my 16:02:57
3 contributor is contesting their status as 16:03:00
4 prior art. 16:03:02
5 THE COURT: Okay. Could not 16:03:03
6 consider -- how about could not consider 16:03:07
7 just -- 16:03:13
8 MS. DURIE: Product of systems. 16:03:14
9 THE COURT: Yeah, well, product of 16:03:16
10 systems such as US-98 or Belkin. 16:03:17
11 MS. DURIE: Sure. 16:03:20
12 MR. GRAY: That works. 16:03:20
13 THE COURT: Okay. 16:03:21
14 Well, let me just -- so I just 16:03:24
15 want to be consistent about it because it does 16:03:26
16 say, "could only consider written prior art." 16:03:28
17 MS. DURIE: I think it's okay, 16:03:35
18 Your Honor, the Patent Trial and Appeal Board 16:03:36
19 could consider written prior art from the 16:03:40
20 patent application and could not consider 16:03:41
21 systems such as -- 16:03:43
22 THE COURT: Product or systems 16:03:44
23 such as; are you okay with that, Mr. Gray? 16:03:45
24 MR. GRAY: Written -- okay. Yes, 16:03:51

1 that's fine. So we remove "prior art" and 16:04:03
2 say, "such as US-98 and Belkin." 16:04:06
3 THE COURT: Yes. So "product or 16:04:09
4 systems such as US-98 or Belkin." 16:04:10
5 MR. GRAY: Now I see what you were 16:04:14
6 suggesting. So the word "prior art" in that 16:04:15
7 sentence, "written prior art," maybe say, 16:04:17
8 "written references." 16:04:19
9 MR. RUSSELL: Right. 16:04:21
10 MS. DURIE: That's fine. 16:04:22
11 THE COURT: That's fine. Okay. 16:04:22
12 So "written references such as 16:04:24
13 patents and publications and could not 16:04:25
14 consider products or systems such as US-98 or 16:04:27
15 Belkin." Okay. All right. 16:04:31
16 Okay. Let me just -- moving this 16:04:33
17 along, I am going to run through, I think, 16:04:52
18 Microchip's redlines and then move on. I just 16:04:57
19 want to run through them in order because 16:05:08
20 essentially I think that is what I am going to 16:05:10
21 try to do, and so I am going to try to go 16:05:12
22 through redlines as I go, and then if I miss 16:05:15
23 something, just let me know and we'll stop and 16:05:18
24 go through it. But I just want to try to move 16:05:22

1 through them in order rather than hopping 16:05:24
2 around, because hopping around, I might omit 16:05:28
3 something. 16:05:33
4 So, let's see. So the first one 16:05:33
5 that I have then is Microchip's proposed 16:05:36
6 revision, I believe, to the opinion testimony 16:05:44
7 instruction at 1F. Is that right? 16:05:53
8 MR. GRAY: Yes, on page 10. 16:06:02
9 THE COURT: Yes. And so if this 16:06:04
10 language including any bias that may arise 16:06:06
11 from evidence, the last clause of that 16:06:09
12 instruction, so, Miss Durie, where are you on 16:06:11
13 that? 16:06:14
14 Mr. Wiener, you can go. 16:06:15
15 MR. WIENER: Your Honor, I think 16:06:17
16 we would lean towards keeping that in. It 16:06:18
17 still matters and there can be a difference 16:06:22
18 among the experts, but we are okay. 16:06:24
19 THE COURT: Okay. 16:06:26
20 I'm inclined to leave it in. I do 16:06:27
21 think -- I take the point that Microchip is 16:06:29
22 making, they have also paid, but they have 16:06:31
23 been paid different amounts. There is no 16:06:33
24 question about it. It is something that the 16:06:35

1 jury can consider for anyone, so I'll leave it 16:06:37
2 in. 16:06:39
3 MR. WIENER: Your Honor, I just 16:06:40
4 note that while we are on that instruction, we 16:06:41
5 recommend removing the references to Mr. Chase 16:06:43
6 in the bottom paragraph and the top paragraph. 16:06:47
7 THE COURT: Yes. Okay. They will 16:06:50
8 be removed. Okay. 16:06:51
9 And then I think the next thing I 16:06:58
10 have is Microchip's proposed change on 16:07:00
11 infringement; right? 16:07:08
12 MR. GRAY: Yes. 16:07:10
13 THE COURT: You don't have 16:07:10
14 anything for invalidity; is that right, Mr. 16:07:11
15 Wiener or Ms. Durie? 16:07:13
16 MS. DURIE: That's right. 16:07:15
17 MR. RUSSELL: That's right. 16:07:15
18 THE COURT: All right. I don't 16:07:18
19 mind jumping forward in the redlines. Okay. 16:07:20
20 So is there anything with this -- 16:07:22
21 MS. DURIE: I would say, Your 16:07:41
22 Honor, originally we agreed to this language. 16:07:43
23 THE COURT: Okay. 16:07:45
24 MS. DURIE: And I think the thing 16:07:45

1 that we were saying that we have to work out, 16:07:46
2 which is we're not contending that the 16:07:50
3 patent -- the problem I have with this 16:07:52
4 language is that they are adding is that 16:07:56
5 depends on what you think additional features 16:07:59
6 means, but they may be relevant to whether the 16:08:01
7 product is infringing if they mean that you 16:08:04
8 don't leave that in. So I think that that is 16:08:07
9 misleading because it's not clear what is 16:08:09
10 meant in by features in that first sentence. 16:08:13
11 The second sentence I think is 16:08:21
12 fine, and I don't think it's necessary, but I 16:08:23
13 don't think -- but I think that can stay in. 16:08:30
14 MR. GRAY: Just for context, Your 16:08:40
15 Honor, we did discuss this language. It's 16:08:42
16 now -- you know, we are proposing to strike 16:08:44
17 this sentence, and I think the issue is you 16:08:46
18 punctuated today with the admission of Aptiv's 16:08:53
19 patents, and I actually have another sentence 16:08:55
20 that Microchip would like to propose here 16:08:57
21 where it's not just a matter of Aptiv doesn't 16:08:59
22 contend these things, it's that as a matter of 16:09:02
23 law, you know, the additional features and 16:09:04
24 improvements do not mean that the product is 16:09:07

1 infringing, using the cookie example from 16:09:09
2 openings, you know, if you have a chocolate 16:09:13
3 chip cookie with nuts, it still infringes. 16:09:15
4 THE COURT: Yeah, I am just going 16:09:18
5 to look. I thought that was -- concept was in 16:09:18
6 there, but maybe I'm wrong. Okay. 16:09:21
7 So -- 16:09:27
8 MR. GRAY: That instruction is 16:09:49
9 directly from the PureWick case from a few 16:09:50
10 days ago, the final jury instruction. 16:09:53
11 THE COURT: Okay. Give me a 16:09:57
12 second. 16:09:58
13 (Brief pause.) 16:10:00
14 THE COURT: So what I am thinking 16:10:37
15 about here is to say, I mean, the first 16:10:41
16 paragraph is fine, so whether Aptiv knew or 16:10:54
17 believed the accused chip infringes the '243 16:11:00
18 Patent is the relevant question of 16:11:05
19 infringement. Aptiv's knowledge or belief 16:11:09
20 regarding infringement is only relevant to the 16:11:25
21 separate question of infringement, which I 16:11:28
22 will explain shortly. 16:11:30
23 So if I were to then take out the 16:11:31
24 sentence that starts, "Additionally," and then 16:11:56

1 use the phrase "in other words," so if I 16:12:04
2 started with the word "whether" -- 16:12:05
3 MS. DURIE: Um-hmm. 16:12:07
4 THE COURT: -- I would go to the 16:12:08
5 end of the paragraph. 16:12:11
6 MS. DURIE: Yes. 16:12:13
7 THE COURT: And then at the end of 16:12:13
8 that paragraph, as long as Aptiv's accused 16:12:14
9 chip includes all the elements in the asserted 16:12:22
10 patent claim and that patent claim has 16:12:24
11 infringed, even if the accused chip also has 16:12:26
12 digital elements, features or improvements, 16:12:30
13 I'm just wondering if there is a way to insert 16:12:42
14 the concept here about Aptiv's patent. 16:12:44
15 Additional elements, features or improvements. 16:12:50
16 MS. DURIE: Can I make a 16:12:55
17 suggestion? 16:12:56
18 THE COURT: Yes. 16:12:56
19 MS. DURIE: I understand -- I 16:12:57
20 understand the concern that they are raising 16:13:01
21 about the sentence that they struck. I think 16:13:03
22 that concern can be mitigated by simply saying 16:13:06
23 whether Aptiv has patents does not have any 16:13:11
24 bearing on whether it infringes the patent at 16:13:15

1 issue in this case. 16:13:18
2 I mean, like if the concern is 16:13:19
3 that it's framed in terms of our contention as 16:13:21
4 opposed to the law, then I think that would be 16:13:26
5 fine. It also says, "ownership of a patent is 16:13:30
6 not an infringement of the patent," but... 16:13:33
7 THE COURT: So you're saying, so 16:13:44
8 what I could do then is if I -- going back up, 16:13:46
9 if I struck the first sentence of that second 16:13:50
10 paragraph in the edit and just left the 16:13:52
11 remainder of the paragraph starting with the 16:13:55
12 word "whether," and then going down to the 16:13:58
13 last paragraph on page 18, at least on page 18 16:14:02
14 on the redline with the way I'm showing the 16:14:08
15 redline -- 16:14:10
16 MS. DURIE: Um-hmm. 16:14:10
17 THE COURT: -- it would -- accept 16:14:11
18 the edits and then for the sentence just 16:14:18
19 instruct -- I could just say so -- for the 16:14:23
20 sentence that's there, "so ownership of a 16:14:29
21 patent is not a defense of patent 16:14:31
22 infringement, nor is ownership of other 16:14:35
23 patents evidence of infringement," I could add 16:14:37
24 a sentence that says, "As a result, the fact 16:14:44

1 that Aptiv -- the fact that you have heard -- 16:14:46
2 well, as a result, the fact that Aptiv has 16:14:49
3 patents has no bearing on whether it has 16:14:53
4 infringed Microchip's patent." 16:14:57
5 MS. DURIE: That's fine. 16:14:59
6 MR. GRAY: I think that's okay. 16:15:02
7 Could you read that back one more time? 16:15:03
8 THE COURT: Make sure I get it 16:15:10
9 exactly as I said it. 16:15:11
10 So it will say -- the language 16:15:12
11 that's there now says, "Ownership of a patent 16:15:15
12 is not a defense a patent infringes nor is 16:15:17
13 ownership of patents," and then it will say, 16:15:23
14 "As a result, the fact that Aptiv has patents 16:15:27
15 has no bearing on whether it has infringed 16:15:29
16 Microchip's patent." 16:15:31
17 MR. GRAY: I would propose one 16:15:33
18 edit to say has patents related to the accused 16:15:35
19 product, or is that too far? That is sort of 16:15:44
20 suggestive to the prior art. 16:15:48
21 THE COURT: I thought you were the 16:15:50
22 ones that pushed back on that. 16:15:51
23 MR. GRAY: We are. 16:15:53
24 MR. WIENER: Sorry we took your 16:15:57

1 deal. 16:15:59
2 THE COURT: I can just say, "As a 16:15:59
3 result, the fact that" -- yeah, I mean, I am 16:16:01
4 inclined to leave it that way. The jury has 16:16:11
5 heard about the patents, so I think they'll 16:16:14
6 know what I'm talking about. Obviously they 16:16:17
7 know that both companies, as they've heard, 16:16:20
8 have lots of patents, but it's the fair 16:16:23
9 inference to the ones that were actually 16:16:25
10 admitted into evidence. Okay. 16:16:26
11 All right. Moving right along -- 16:16:28
12 MR. GRAY: Your Honor, before we 16:16:30
13 move too far, on page 19 of the redline 16:16:36
14 document, we do want to raise an issue that 16:16:39
15 came up today about whether the Boston chip is 16:16:42
16 ultimately used in a car for CarPlay or a 16:16:46
17 vehicle for CarPlay. 16:16:49
18 Our position is that's irrelevant 16:16:53
19 to infringement. Our infringement case and 16:16:56
20 our damages case is based on Aptiv's sales of 16:16:58
21 the accused product of the dual role hub, so 16:17:02
22 the use of that product is not relevant to 16:17:05
23 infringement under our existing theory. 16:17:08
24 THE COURT: Just so I know, this 16:17:12

1 is the direct infringement instruction? 16:17:14
2 MR. GRAY: Correct. 16:17:17
3 THE COURT: And let me just see, 16:17:18
4 yeah, which language are you saying talks 16:17:21
5 about use? 16:17:24
6 MR. GRAY: Well, so, in the very 16:17:25
7 first paragraph, we would edit the acts of 16:17:26
8 infringement. So where it says, "Microchip 16:17:30
9 must prove by a preponderance of the evidence, 16:17:33
10 meaning that it is more likely than not that 16:17:36
11 Aptiv sold product covers." 16:17:38
12 MS. DURIE: No objection there. 16:17:40
13 THE COURT: Okay. Fine. 16:17:41
14 MR. GRAY: Offered for sale. I 16:17:48
15 don't want to short-circuit this too much. 16:17:50
16 THE COURT: Well, so, what are you 16:17:53
17 proposing, Mr. Gray? Sold, or is it sold or 16:17:58
18 offers to sell? 16:18:03
19 MR. GRAY: Give me just a second, 16:18:04
20 Your Honor. I'm sorry. 16:18:06
21 (Brief pause.) 16:18:07
22 MR. GRAY: So the sentence we 16:18:36
23 would like to add, and maybe we start there 16:18:38
24 and we can back out from there, is whether the 16:18:40

1 Boston chip is used -- is ultimately used for 16:18:43
2 CarPlay is not relevant to infringement. 16:18:46
3 MS. DURIE: Well, that would be 16:18:47
4 just wrong. 16:18:49
5 THE COURT: Wait, wait, wait. 16:18:50
6 Your case is a sale case; is that what you're 16:19:00
7 saying? 16:19:03
8 MR. GRAY: Primarily, yes. 16:19:03
9 THE COURT: Sale or offer to sell? 16:19:05
10 MR. GRAY: Primarily. 16:19:06
11 THE COURT: Those are the -- well, 16:19:07
12 it either is or isn't, because if it's 16:19:09
13 primarily, and then there's something else, 16:19:12
14 then I need to instruct the jury on the 16:19:14
15 something else. 16:19:15
16 MR. GRAY: Well, I would include 16:19:15
17 "made" as well. 16:19:18
18 MS. DURIE: That's fine. 16:19:20
19 THE COURT: Okay. 16:19:21
20 So then the last sentence of the 16:19:21
21 paragraph would be, "meaning that it is more 16:19:23
22 likely than not," probably don't need a comma 16:19:27
23 there, "that Aptiv made, sold or offered to 16:19:30
24 sell product covered by at least one asserted 16:19:36

1 claim"; right? 16:19:40
2 MR. GRAY: Correct. If we are 16:19:44
3 going to get a sentence on the irrelevance of 16:19:46
4 use. 16:19:51
5 THE COURT: Well, why do I need to 16:19:52
6 say the use is irrelevant if I haven't even 16:19:54
7 introduced use as something that was relevant 16:19:57
8 in the first place? In other words, by taking 16:20:01
9 it out of what can be infringement, then why 16:20:04
10 do I need to highlight it for the jury? 16:20:07
11 Right? 16:20:14
12 I mean, I am not going to say it 16:20:14
13 doesn't matter if they were imported, right, 16:20:16
14 which is another thing that's under the 16:20:21
15 statute that's not at issue, as I understand 16:20:22
16 it now. 16:20:25
17 MR. GRAY: Right, that's correct, 16:20:25
18 unimported. I'd like to understand why 16:20:27
19 counsel thinks that the use is relevant to 16:20:31
20 infringement? 16:20:36
21 THE COURT: I don't think they are 16:20:37
22 saying its use is relevant. I think -- well, 16:20:38
23 I mean, I guess I can hear from Ms. Durie, but 16:20:41
24 I'm not sure I understand why I need to 16:20:44

1 highlight one prong of the statute in a sort 16:20:46
2 of negative way when I'm not -- not doing it 16:20:52
3 for the other prongs. 16:20:57
4 MR. GRAY: I can respond to that, 16:21:00
5 Your Honor. 16:21:02
6 THE COURT: Okay. 16:21:02
7 MR. GRAY: That's -- I sensed a 16:21:03
8 shift today that that is an argument that's 16:21:05
9 confusing for the jury, that if the chip is 16:21:07
10 not ultimately used for CarPlay, Dr. Becker 16:21:10
11 should have somehow excluded that from his 16:21:13
12 calculations, and that's just not the case. 16:21:15
13 We have data that shows which 16:21:17
14 chips Aptiv told us were not CarPlay capable 16:21:19
15 and those were all removed from Dr. Becker's 16:21:24
16 calculations. 16:21:27
17 But through two witnesses today, 16:21:27
18 including Mr. Garney, it sounds like counsel 16:21:31
19 is suggesting that the ultimate use of the 16:21:35
20 chip in a vehicle, like what the customers 16:21:38
21 decide to do with the chip after it's sold by 16:21:41
22 Aptiv, determines infringement. 16:21:43
23 THE COURT: In other words, 16:21:47
24 meaning if a customer doesn't actually 16:21:48

1 activate CarPlay, then they never use the 16:21:50
2 accused features of the chip; right? 16:21:54
3 MR. GRAY: Correct. 16:21:57
4 THE COURT: And that's fine, and 16:21:58
5 that's kind of why -- isn't that why the sales 16:22:02
6 provisions are there in the statute? 16:22:06
7 MR. GRAY: It is, but it's sort of 16:22:07
8 a curative instruction, the way I see it, 16:22:11
9 because of the suggestion that this somehow 16:22:14
10 matters and casts doubt on Dr. Becker's 16:22:15
11 calculations. 16:22:19
12 THE COURT: What do you think, 16:22:23
13 Ms. Durie? 16:22:24
14 MS. DURIE: So Dr. Becker excluded 16:22:24
15 Tesla sales from his calculation and he did it 16:22:27
16 for a reason. This is a contested factual 16:22:31
17 issue. 16:22:33
18 If the Court needs to hear from me 16:22:35
19 in terms of a proffer, I can do that, but as a 16:22:38
20 practical matter, we disagree about the 16:22:40
21 significance of that evidence relative to 16:22:43
22 infringement. I'm not going to argue that the 16:22:44
23 test for direct infringement of the sale of a 16:22:48
24 product is a function of later use per se. 16:22:51

1 Obviously it is a function of the 16:22:55
2 characteristics of the product being sold. 16:22:58
3 In this case, the later use or 16:23:01
4 lack thereof is irrelevant to those 16:23:03
5 characteristics. 16:23:06
6 THE COURT: Explain that. I am 16:23:09
7 not sure I followed that. 16:23:10
8 MS. DURIE: Sure. This is a 16:23:11
9 direct infringement case. 16:23:13
10 THE COURT: Right. 16:23:14
11 MS. DURIE: They dropped their 16:23:14
12 indirect infringement allegation. 16:23:16
13 THE COURT: Right. 16:23:17
14 MS. DURIE: The testimony has 16:23:17
15 established that in order to have role 16:23:19
16 reversal and to have two hosts, you need 16:23:21
17 software. The software that does that is in 16:23:26
18 the car. Until the software does that, there 16:23:29
19 are not two hosts and not infringement. 16:23:31
20 THE COURT: Until the soft -- the 16:23:34
21 software is in the car, but the software is 16:23:37
22 activated in the car -- you are saying if the 16:23:39
23 software is not installed in the car -- 16:23:42
24 MS. DURIE: Until the software 16:23:45

1 acts -- so car manufacturers put software in 16:23:46
2 their head unit. 16:23:50
3 THE COURT: Right. 16:23:51
4 MS. DURIE: Until that software 16:23:52
5 acts on the dual role hub, it does not become 16:23:53
6 something, period. Once it is configured, 16:24:00
7 once the configuration happens in a CarPlay 16:24:04
8 enabled car, then and only then will there be 16:24:08
9 two hosts, and then and only then will it be 16:24:13
10 capable of meeting the claim. 16:24:16
11 THE COURT: Can I just be clear? 16:24:19
12 MS. DURIE: Sure. 16:24:19
13 THE COURT: When you say, 16:24:20
14 "configuration," are you talking about the 16:24:21
15 configuration of the head unit when the car is 16:24:23
16 turned on or the configuration of the iPhone 16:24:26
17 that is plugged in? 16:24:28
18 MS. DURIE: I am talking about the 16:24:29
19 configuration of the dual role hub by virtue 16:24:31
20 of the head unit interacting with it. 16:24:34
21 THE COURT: Right. 16:24:37
22 MS. DURIE: And then the phone 16:24:37
23 being plugged in. So to be clear, the head 16:24:38
24 unit configures the first code. The iPhone 16:24:43

1 connects as a device. Right now there is one 16:24:47
2 host port and only one. Role reversal then 16:24:50
3 happens. Software in the hub is required for 16:24:53
4 that role reversal. 16:24:58
5 Then and only then does the iPhone 16:25:00
6 disconnect and reconnect as a host, and then 16:25:02
7 and only then are there two hosts. The claim 16:25:07
8 requires two upstream ports. That is the 16:25:11
9 first time that there are two upstream ports 16:25:14
10 in the dual role hub. 16:25:16
11 THE COURT: So can I just be -- I 16:25:21
12 mean, are you suggesting then that every car 16:25:26
13 sold to a car owner who has an Android phone 16:25:31
14 needs to be excluded from the damages 16:25:36
15 calculation? 16:25:38
16 MS. DURIE: So I am suggesting 16:25:39
17 that there would need to be proof -- so first 16:25:42
18 of all, I think as a practical matter is the 16:25:46
19 only way they could have established this is 16:25:50
20 as an indirect infringement case, but if they 16:25:52
21 had an indirect infringement case, the 16:25:57
22 argument would be that things that happened in 16:25:59
23 the car, depending on the software in the 16:26:04
24 particular car, would result in an overall 16:26:06

1 system that would configure in an infringing 16:26:11
2 fashion. 16:26:16
3 But as we heard testimony today, I 16:26:18
4 mean, there is a reason that Dr. Becker 16:26:20
5 excluded Tesla from his calculation. I think 16:26:22
6 he actually understands this problem. 16:26:25
7 MR. GRAY: I can explain exactly 16:26:27
8 why it is not that. 16:26:29
9 THE COURT: Wait, wait, wait. 16:26:30
10 MS. DURIE: So Teslas were 16:26:31
11 excluded, and I think that was an effort to 16:26:32
12 exclude cars that did not have CarPlay. I 16:26:34
13 think Dr. Becker thought that all of the other 16:26:37
14 cars that were listed were, in fact, CarPlay 16:26:39
15 enabled. I don't think that solved the 16:26:42
16 problem that I am talking about, but I think 16:26:44
17 he thought that all of the other cars were 16:26:46
18 CarPlay enabled. 16:26:48
19 What we heard testimony about 16:26:49
20 today is that that's wrong and that we 16:26:50
21 actually don't know which cars were CarPlay 16:26:52
22 enabled. 16:26:55
23 Having said that, even if a car is 16:26:55
24 enabled with CarPlay, it requires software 16:26:57

1 that we do not provide in order for that 16:27:00
2 configuration to happen and in order for there 16:27:03
3 to be infringement. So, I mean, you are about 16:27:05
4 to hear a motion on this, but there is no 16:27:07
5 direct infringement case. 16:27:11
6 THE COURT: Go ahead, Mr. Gray. 16:27:13
7 MR. GRAY: Thank you. 16:27:14
8 So a couple things. Claims 23 16:27:15
9 through 25 do not require two hosts. It is an 16:27:18
10 apparatus claim. So it is a chip that is 16:27:20
11 capable of doing these things. And if you 16:27:22
12 need software later on to, you know, activate 16:27:25
13 the configuration within the chip as sold, 16:27:29
14 that's a different question. So we completely 16:27:32
15 disagree with that statement of the law. 16:27:35
16 And as for Dr. Becker, I have 16:27:37
17 personally worked with him in this case and I 16:27:39
18 know exactly why he excluded the units he did, 16:27:41
19 and it's because Aptiv's data, the first time 16:27:44
20 they produced it, it flagged specific model 16:27:47
21 numbers of parts, it had an entry, Aptiv tried 16:27:51
22 its best to exclude as many units as it could 16:27:56
23 and identified every model number as not 16:27:59
24 CarPlay capable. 16:28:02

1 So for every model number that 16:28:03
2 said in the original data it is not CarPlay 16:28:05
3 capable, those units were removed. And in the 16:28:08
4 updated data we got earlier this year, Aptiv 16:28:12
5 didn't provide that same data to us. 16:28:15
6 So Dr. Becker issued his report 16:28:18
7 and he said, I'm assuming that because this 16:28:20
8 data doesn't have the same data as before, 16:28:22
9 that all of these models are, in fact, CarPlay 16:28:24
10 enabled. And shortly before his testimony, I 16:28:27
11 conferred with counsel for Aptiv and got a 16:28:32
12 clarification that no, even though that column 16:28:34
13 was removed from the report, we should still 16:28:37
14 assume that the same models identified 16:28:39
15 previously as not CarPlay enabled are still 16:28:42
16 that way in the new dataset. So that's why 16:28:45
17 Dr. Becker's number dropped slightly. 16:28:48
18 There were three model numbers 16:28:51
19 that had sales in the updated data that the 16:28:53
20 earlier data said were not CarPlay enabled. 16:28:56
21 Every other -- every other unit sold that's in 16:29:00
22 Dr. Becker's calculation is, as far as we 16:29:02
23 know, CarPlay enabled based on what Aptiv told 16:29:05
24 us. 16:29:08

1 THE COURT: Okay. Hold on a 16:29:09
2 second. 16:29:10
3 (Brief pause.) 16:29:22
4 THE COURT: All right. Go ahead, 16:29:46
5 Ms. Durie. 16:29:49
6 MS. DURIE: Well, I think there 16:29:49
7 are two separate issues here. 16:29:50
8 THE COURT: Go ahead. 16:29:51
9 MS. DURIE: On the, what I'll call 16:29:52
10 the Dr. Becker issue, there is a dispute about 16:29:54
11 what the documentation produced by Aptiv 16:29:59
12 means. We heard testimony from the stand 16:30:03
13 today about what it means and what we do and 16:30:06
14 don't know about the extent to which carmakers 16:30:09
15 have actually enabled CarPlay. 16:30:11
16 We sell modules. There is a date 16:30:15
17 that is the first date that CarPlay could have 16:30:18
18 been enabled. That is not the same thing as 16:30:20
19 the first date that CarPlay was enabled, and 16:30:23
20 we had testimony today drawing that 16:30:25
21 distinction. I think that is one issue about 16:30:28
22 which perhaps there is simply a disputed fact. 16:30:30
23 The second issue is this question 16:30:34
24 of the extent to which CarPlay -- what happens 16:30:36

1 in the course of CarPlay is relevant to the 16:30:42
2 infringement case. 16:30:45
3 THE COURT: Okay. 16:30:47
4 MS. DURIE: And it is, from our 16:30:48
5 perspective, because the thing that we sell is 16:30:50
6 not configured to do the things that are 16:30:54
7 required by the claim, setting aside obviously 16:30:57
8 all of our other non-infringement arguments, 16:31:01
9 it is not configured to do the same. 16:31:04
10 That configuration requires, and 16:31:07
11 this is undisputed because Dr. Zatkovich 16:31:08
12 testified to this, that configuration requires 16:31:10
13 software that is separate, that is in the head 16:31:13
14 unit in order for that configuration to 16:31:16
15 happen. 16:31:18
16 So I think it would be factually 16:31:18
17 wrong -- I don't think it is a legal question 16:31:20
18 that would be appropriate for jury instruction 16:31:23
19 in the first place. I mean, it would be 16:31:26
20 factually wrong in resulting adversely to us 16:31:28
21 in a factual dispute to suggest that whether 16:31:31
22 CarPlay is or is not enabled is irrelevant to 16:31:33
23 the question of direct infringement. 16:31:37
24 THE COURT: I am looking at -- I 16:31:42

1 am sitting here looking at the language. 16:31:47
2 MS. DURIE: Sure. 16:31:49
3 THE COURT: And you know, there's 16:31:50
4 no doubt that the second in limine -- 16:31:54
5 MS. DURIE: Right. 16:31:56
6 THE COURT: -- is a controller 16:31:56
7 that is configured to establish the terms of 16:31:58
8 the respective dedicated USB connection. 16:32:02
9 MS. DURIE: Right. 16:32:04
10 THE COURT: Now, I think that's a 16:32:07
11 little, just to be clear about where -- 16:32:09
12 because of where we started here. 16:32:11
13 MS. DURIE: Right. It is actually 16:32:16
14 the second and third. The controller has to 16:32:17
15 be configured to establish a connection. 16:32:19
16 THE COURT: Right. And it's 16:32:21
17 operable. 16:32:22
18 MS. DURIE: And it has to be 16:32:22
19 operable to receive, and it is neither 16:32:23
20 configured nor operable to do those things as 16:32:25
21 it is sold. 16:32:28
22 THE COURT: Right. Understood. 16:32:28
23 So I understand the argument you 16:32:30
24 are making. Where we started here was just 16:32:31

1 the question about whether I should include 16:32:36
2 something saying use is irrelevant. 16:32:40
3 MS. DURIE: Right. And it's not, 16:32:50
4 because it is the use that causes the 16:32:52
5 configuration that would then render it 16:32:55
6 operable. So as sold, it has not been 16:32:57
7 configured, it is not operable, it does not 16:33:02
8 have two upstream ports. 16:33:04
9 If it is put into a car that is 16:33:07
10 CarPlay enabled, if someone turns on and uses 16:33:09
11 CarPlay, then configuration will happen and it 16:33:12
12 would become operable to perform those 16:33:17
13 functions. 16:33:19
14 As I said, I mean, they had an 16:33:21
15 indirect infringement case. They dropped it. 16:33:23
16 And I think there is a set of strategic 16:33:28
17 decisions that went into why they dropped it 16:33:30
18 that we don't need to get into, but that was 16:33:32
19 the decision they made. 16:33:35
20 So I don't see, on the direct 16:33:36
21 infringement case, how the Court could 16:33:37
22 instruct the jury that uses are relevant when 16:33:39
23 there is undisputed testimony, at this point, 16:33:42
24 that that use is required in order for the 16:33:44

1 configuration to happen. 16:33:47
2 THE COURT: Go ahead. 16:33:53
3 MR. GRAY: May I respond, Your 16:33:53
4 Honor? 16:33:54
5 THE COURT: Yes. 16:33:55
6 MR. GRAY: We are still not 16:33:55
7 talking about use or the actual configuration. 16:33:57
8 This is the -- it is a comprising claim, so 16:33:59
9 the controller is configured to do these 16:34:02
10 things. If software helps that controller to 16:34:04
11 do those things later when it's in operation, 16:34:07
12 that's one thing. But as it stands, the 16:34:09
13 controller is configured to perform these 16:34:11
14 operations. So number one. 16:34:13
15 And then number two, we are 16:34:15
16 still -- the use is not at issue. This is a 16:34:17
17 claim construction argument over the 16:34:20
18 controller. Is the controller, as sold, 16:34:22
19 configured to establish these things or is the 16:34:25
20 controller, alone, without any help from 16:34:29
21 anything else, configured to do these things. 16:34:31
22 It's separate from the use whether the use is 16:34:34
23 actually for CarPlay later after it's sold. 16:34:38
24 THE COURT: Well, let me -- okay. 16:34:41

1 MS. DURIE: That sounds like a 16:34:42
2 factual question for the jury. 16:34:43
3 THE COURT: Where I am on this is 16:34:46
4 that it is, in fact, I think, a factual 16:34:47
5 question, right? These are terms in the 16:34:52
6 patent that are not subject to construction by 16:34:55
7 the Court. 16:35:01
8 I am going to give the jury an 16:35:03
9 instruction on what they should do with those 16:35:05
10 terms and how they resolve what they mean. 16:35:07
11 You are certainly free, Mr. Gray, to argue, to 16:35:16
12 make the argument you just made to the jury, 16:35:22
13 right? 16:35:24
14 Well, these things work, that's 16:35:25
15 how they're built, and, you know, the notion 16:35:26
16 that there is some line of software codes to 16:35:29
17 make it actually configure, then that's what 16:35:32
18 they're built for. You are free to make that 16:35:35
19 argument to the jury, and Ms. Durie can make 16:35:37
20 the argument to the contrary, that it doesn't 16:35:41
21 work, and you heard testimony from Mr. Garney 16:35:44
22 that it doesn't work. 16:35:46
23 So that all is not, to me, a legal 16:35:47
24 basis to rule into this, which puts me kind 16:35:51

1 of, for my purposes, back where I started, 16:35:56
2 which is if this is a case about made, sold 16:35:58
3 and offered to sell, then those are the terms 16:36:05
4 from the statute that I am going to highlight 16:36:07
5 in construction, and I don't think I need to 16:36:10
6 provide sort of negative instructions to the 16:36:13
7 contrary about some statutory term that the 16:36:15
8 jury is not actually hearing created 16:36:17
9 infringement in the first place. 16:36:20
10 MR. GRAY: We are okay not 16:36:21
11 including the sentence, but we'd like to keep 16:36:23
12 the language as it stands. There is evidence 16:36:25
13 on those issues, including use, and based on 16:36:26
14 Ms. Durie's arguments just now, it sounds like 16:36:30
15 those should be in the instructions. 16:36:34
16 THE COURT: Look, I don't have a 16:36:35
17 problem putting in the full range of conduct 16:36:36
18 that can violate the statute because I think 16:36:40
19 it is an accurate statement of the law. So we 16:36:42
20 can leave it as is and just have it say more 16:36:44
21 likely than not. We'll take out the comma 16:36:48
22 after "not," it doesn't belong there, that 16:36:53
23 Aptiv made, used, sold, offered to sell or 16:36:56
24 employed its products covered by at least one 16:36:59

1 claim. 16:37:11
2 All right. Let me just -- 16:37:12
3 All right. Invalidity generally 16:37:13
4 tackles Aptiv's proposed changes. Microchip 16:37:19
5 has -- is your next change down... 16:37:24
6 MR. WIENER: Obviousness? 16:37:42
7 THE COURT: Yeah, it might be. 16:37:44
8 Okay. Let me see if there are any Aptiv 16:37:47
9 changes regarding that. 16:37:53
10 I think we are in the same 16:37:58
11 instruction now for both. Okay. So Aptiv has 16:38:08
12 instruction with some minor changes, I think, 16:38:20
13 prior to the list. 16:38:25
14 And then Microchip wants me to 16:38:49
15 again introduce clear and convincing evidence 16:39:00
16 concept. I mean, I've already said that Aptiv 16:39:04
17 has the burden, in the beginning instructions, 16:39:20
18 of proving clear and convincing evidence. I 16:39:23
19 don't think I need to say that again. 16:39:26
20 MR. GRAY: That's fair, Your 16:39:28
21 Honor. Thank you. 16:39:29
22 THE COURT: Okay. All right. All 16:39:29
23 right. Then we are good with obviousness. 16:39:32
24 So then my next change. My next 16:39:35

1 change from Aptiv -- is that it from Aptiv? 16:39:48
2 MR. RUSSELL: No, there's one line 16:39:51
3 we wanted to add on page 35, written 16:39:52
4 description. 16:39:55
5 THE COURT: Okay. 16:39:55
6 So written description, let me -- 16:39:56
7 all right. Well, hopefully we're all on 16:40:04
8 page 35 now, the redlines ended. All right. 16:40:07
9 So Microchip has proposed adding this 16:40:18
10 language, "nor must it describe every 16:40:23
11 conceivable possible embodiment." 16:40:27
12 I think that's an accurate 16:40:30
13 statement. I can't remember if -- 16:40:32
14 MR. GRAY: So the issue here is 16:40:38
15 that there is a statement that Your Honor 16:40:40
16 adopted in the invalidity generally section -- 16:40:41
17 THE COURT: Right. 16:40:44
18 MR. GRAY: -- along these lines, 16:40:45
19 but it doesn't appear in the specific 16:40:46
20 instruction, so our concern was that it would 16:40:47
21 get lost in the shuffle. 16:40:49
22 THE COURT: Okay. All right. 16:40:52
23 That's fine. They are -- I have no problem 16:40:53
24 with putting it back in here, too. 16:40:57

1 Mr. Wiener, what was your then 16:41:00
2 proposed position? 16:41:01
3 MR. WIENER: Our proposed position 16:41:04
4 would have gone in the location of the same 16:41:06
5 line to say that; however, a mere wish or plan 16:41:07
6 for obtaining the claimed invention is not 16:41:12
7 adequate written description. 16:41:13
8 THE COURT: Is that in your 16:41:22
9 redline? 16:41:24
10 MR. WIENER: It is. Top of 16:41:24
11 page 35. 16:41:27
12 THE COURT: Okay. 16:41:27
13 I don't have a problem with that. 16:41:53
14 I think we'll make it one sentence and so just 16:41:54
15 after the word "embodiment," put a comma and 16:42:01
16 say -- replace "however" with "but." 16:42:05
17 MR. WIENER: That's fine with us, 16:42:08
18 Your Honor. 16:42:10
19 MR. GRAY: Could we separate those 16:42:10
20 two? It sounds like that's -- the however 16:42:11
21 language is qualifying the statement of law 16:42:14
22 that we've put in here. 16:42:17
23 THE COURT: So you'd rather keep 16:42:19
24 it as two separate sentences? 16:42:21

1 MR. GRAY: I would. And we would 16:42:22
2 object to the inclusion of this sentence. It 16:42:24
3 seems like piling on an unhelpful -- I know 16:42:26
4 there's not a cite here. I'm guessing you 16:42:29
5 have a cite for where it came from, Mr. 16:42:32
6 Wiener? 16:42:34
7 MS. DURIE: I think from what we 16:42:38
8 had originally proposed. It's from -- 16:42:40
9 MR. WIENER: I believe the Federal 16:42:44
10 Circuit bar instruction, which is where our 16:42:46
11 original instruction that we gave to the Court 16:42:49
12 largely adopted Microchip's proposed 16:42:52
13 instruction. So we said one we thought was an 16:42:54
14 important context from that to put into this 16:42:56
15 instruction, which is the "however" language. 16:42:59
16 THE COURT: Okay. 16:43:02
17 Well, I don't have a problem to 16:43:04
18 use two sentences, so we'll do that. I do 16:43:06
19 think that it's adding, so we will do that. 16:43:09
20 So we'll just put the "however" language after 16:43:16
21 the word "embodiment" as a second sentence. 16:43:18
22 Okay. 16:43:22
23 All right. So then I have -- then 16:43:22
24 I have the enablement requirement sentence 16:43:56

1 from Microchip, "the specification does not 16:43:59
2 have to describe or enable the accused 16:44:02
3 product." I think I've already said something 16:44:11
4 like that at the beginning; right? 16:44:14
5 MR. GRAY: Correct, same issue. 16:44:17
6 THE COURT: Yes, the same 16:44:19
7 language? 16:44:21
8 MR. GRAY: It is. It's shortened 16:44:21
9 more than the written description language is, 16:44:23
10 but it's just the relevant portion of 16:44:25
11 enablement. 16:44:27
12 THE COURT: Okay. That's fine. 16:44:28
13 We can add that in. 16:44:29
14 And then let me see what else we 16:44:31
15 have. You wanted the instruction about the 16:44:44
16 two-supplier market? 16:44:47
17 MR. GRAY: Yes, Your Honor. 16:44:48
18 THE COURT: Before I get there, 16:44:50
19 Ms. Durie, anything else? That's it for you, 16:44:52
20 right, Mr. Wiener? 16:44:55
21 MR. WIENER: Yes. And I do have 16:44:56
22 thoughts on the two-supplier market. 16:44:58
23 THE COURT: I am not just going to 16:45:00
24 adopt that one just because -- okay. All 16:45:01

1 right. 16:45:18
2 So, Mr. Wiener, I know your 16:45:19
3 thoughts. I mean, I didn't want you to -- two 16:45:21
4 questions here; one is the question of to what 16:45:24
5 extent I should instruct the jury, the other 16:45:26
6 question is whether you think this has the law 16:45:28
7 wrong. 16:45:31
8 So answer that one first if you 16:45:31
9 would, since it pertains to the law, and then 16:45:33
10 come back to me on the question of what you 16:45:35
11 think I should do in terms of the instruction. 16:45:38
12 MR. WIENER: Sure, Your Honor. 16:45:40
13 So to be clear, we would agree and 16:45:42
14 we, in fact, cited cases in our opposition to 16:45:44
15 their motion in limine that in the event that 16:45:47
16 they establish that there is a two-supplier 16:45:51
17 market, that they are entitled to an inference 16:45:53
18 of no non-infringement terms. 16:45:55
19 However, in this case, it's a 16:46:01
20 little bit complicated because there are not 16:46:02
21 suppliers that are in the exact same market, 16:46:04
22 and all of the cases in this context are 16:46:06
23 discussing parties that are directly competing 16:46:08
24 in the exact same market, and here we have a 16:46:11

1 market for hubs and a market for chips. 16:46:13
2 And so we would suggest that it is 16:46:15
3 not on all fours with the case law that 16:46:19
4 suggests that that sort of presumption down on 16:46:21
5 non-infringing alternative applies in this 16:46:26
6 context. 16:46:28
7 THE COURT: As a matter of sort of 16:46:29
8 economics, you are competing in the chip 16:46:30
9 market. It's just through internal sales; 16:46:38
10 right? There's not an arm's length 16:46:41
11 negotiation over the value, but, you know, I 16:46:44
12 think the whole point here is you would 16:46:49
13 presumptively have to -- I mean, maybe you use 16:46:53
14 some other chip, but that would always be true 16:47:00
15 in any market whether they would choose a 16:47:07
16 supplier where you could say well, you could 16:47:11
17 go buy a lesser product. 16:47:13
18 So why the different -- I mean, I 16:47:15
19 understand the distinction you are drawing, 16:47:16
20 but why does the distinction make a 16:47:18
21 difference? 16:47:20
22 MR. WIENER: Your Honor, it is not 16:47:20
23 a distinction we would stand on. I think what 16:47:21
24 we would recommend in terms of implementing it 16:47:24

1 in the jury instructions is that rather than 16:47:26
2 have a stand-alone large two-supplier market 16:47:28
3 instruction, that after the jury is instructed 16:47:30
4 in lost profits on the four Panduit factors, 16:47:33
5 that there is a single instruction that says, 16:47:36
6 "If Microchip proves that it is a two-supplier 16:47:40
7 market, they are entitled to an inference that 16:47:43
8 there are no non-infringing alternatives," 16:47:45
9 which is the net effect of this inference that 16:47:48
10 there is a demand, that the first two Panduit 16:47:51
11 factors steps are met. 16:47:54
12 The other thing I would say, and 16:47:56
13 this is a sort of a point of compromise that I 16:47:58
14 think maybe two parties are in agreement on, 16:48:00
15 is that the language that they have proposed 16:48:02
16 at the bottom of their lost profits 16:48:04
17 two-supplier market is something that we would 16:48:06
18 also adopt, and I think we would want to put 16:48:09
19 into this instruction, which is point out that 16:48:11
20 the Panduit factors doesn't -- if the four 16:48:13
21 Panduit factors are met, it doesn't mean that 16:48:16
22 the plaintiff necessarily gets that damages 16:48:19
23 amount. It means that there is a presumption 16:48:20
24 of damages, and the burden shifts to the 16:48:22

1 defendant to show that that presumption is 16:48:24
2 unreasonable for some or all of the sales. 16:48:28
3 And that's the law as stated in 16:48:30
4 the Rite-Hite Corp. versus Kelley case. It is 16:48:34
5 reflected in the jury instruction that 16:48:35
6 Microchip, itself, has proposed at the bottom 16:48:37
7 of the two-supplier market. 16:48:39
8 So our proposal would be to go to 16:48:41
9 the current instruction on lost profits with 16:48:44
10 an instruction after the Panduit factors 16:48:46
11 explaining the two -- you know, the 16:48:49
12 two-supplier test, that if they prove that 16:48:51
13 there is a two-supplier market, that they are 16:48:53
14 entitled to an inference on the first and 16:48:55
15 second Panduit factors, and then also an 16:48:58
16 instruction explaining that if the four 16:49:00
17 Panduit factors are met, then the burden 16:49:02
18 shifts to Aptiv to show that that presumption 16:49:05
19 of damages is unreasonable for some or all of 16:49:08
20 the sales. 16:49:11
21 THE COURT: And just to be clear, 16:49:12
22 when you say, "an instruction," that's 16:49:13
23 language inserted in the instruction where I 16:49:17
24 listed four Panduit factors, or are you saying 16:49:20

1 break it out as a separate instruction after I 16:49:23
2 do the sort of subheading on these Panduit 16:49:25
3 factors? 16:49:28
4 MR. WIENER: Your Honor, we would 16:49:28
5 propose, just after the fourth Panduit factor, 16:49:29
6 to have a paragraph that explains that 16:49:32
7 Microchip contends it is a two-supplier market 16:49:34
8 and if they are able to prove by a 16:49:37
9 preponderance of the evidence that it is a 16:49:41
10 two-supplier market, they are entitled to an 16:49:43
11 inference that the first two factors of the 16:49:45
12 Panduit factor test are met. 16:49:47
13 And then an additional paragraph 16:49:50
14 that says, "If you find that the Panduit 16:49:52
15 factor test is met, then Microchip is entitled 16:49:55
16 to an inference of damages," after, you know, 16:49:57
17 the language that's in their proposed 16:50:01
18 instruction, which is that the burden shifts 16:50:02
19 to us to show that that inference is 16:50:04
20 unreasonable for some or all of the sales. 16:50:06
21 THE COURT: What do you think of 16:50:10
22 that, Mr. Gray? 16:50:10
23 MR. GRAY: We would disagree, 16:50:12
24 first with the placement. The two-supplier 16:50:14

1 market instruction typically comes directly 16:50:16
2 after the sort of introduction to lost 16:50:18
3 profits, before you dive into all four 16:50:20
4 factors. 16:50:23
5 THE COURT: I think that's what he 16:50:23
6 is proposing. I think what they are proposing 16:50:25
7 is rather than have a separate heading that 16:50:27
8 essentially what I do is you go up to 16:50:29
9 preceding instruction on page -- which ends on 16:50:32
10 page 42 of my redline volume, the lost profit 16:50:34
11 sort of introductory instruction, after No. 4 16:50:39
12 Panduit factors, before I say, "I will now 16:50:42
13 explain each of these factors," I would add 16:50:44
14 language that says, "Microchip contends that 16:50:47
15 if there were only two suppliers in the market 16:50:54
16 and if Microchip proved, by a preponderance of 16:50:58
17 the evidence, that there were only two 16:51:02
18 suppliers in the market, then you should 16:51:03
19 infer, assume, something like that, you know, 16:51:07
20 "that Microchip has satisfied the first two of 16:51:10
21 these elements here"; right? 16:51:13
22 And then I would have, I guess, a 16:51:15
23 new paragraph that says, "If Microchip 16:51:18
24 satisfies all four of these elements, you 16:51:25

1 know, then Aptiv has an opportunity to" -- 16:51:31
2 MR. WIENER: The language they 16:51:40
3 proposed actually would be fine there. If 16:51:41
4 they meet the four factors, then starting with 16:51:43
5 "you may presume that Microchip satisfies the 16:51:45
6 but-for test and is entitled to lost profits." 16:51:47
7 And then the next sentence, "However" -- 16:51:51
8 THE COURT: Yes, and just move 16:51:54
9 that up and not have a separate page. 16:51:56
10 MR. GRAY: Okay. I understood the 16:51:58
11 proposal differently. I'm sorry. 16:52:00
12 THE COURT: Yes. 16:52:02
13 MR. GRAY: I think that's okay, 16:52:03
14 listing or saying if Microchip satisfies the 16:52:07
15 four factors is a little bit confusing since 16:52:09
16 we're saying the first two factors sort of 16:52:11
17 collapse. 16:52:14
18 THE COURT: Well, I'm saying maybe 16:52:14
19 they collapse. I think maybe I can add a 16:52:16
20 phrase that says -- I guess I can say -- I 16:52:19
21 don't want it to get too wordy. 16:52:34
22 MR. GRAY: I have an idea. 16:52:37
23 THE COURT: Go ahead. 16:52:38
24 MR. GRAY: We could sort of repeat 16:52:39

1 the second sentence and say basically using 16:52:41
2 the general but-for language, you know, if -- 16:52:44
3 I think that the case from the -- I think it's 16:52:49
4 cited in Mr. Chase's report. It says, "If 16:52:53
5 Microchip shows a reasonable probability that 16:52:55
6 it would have made additional sales but for 16:52:57
7 the infringement, the burden shifts to the 16:52:59
8 infringer to show that basically that it's 16:53:02
9 that -- it's unreasonable for some or all of 16:53:07
10 those sales." 16:53:11
11 Is that what you're referring to? 16:53:14
12 MR. WIENER: Yeah, but I thought 16:53:15
13 that we already sort of figured out that last 16:53:16
14 paragraph. I thought we were moving on the 16:53:19
15 paragraph between the four factors and sort of 16:53:23
16 the explanation of the two-supplier situation. 16:53:27
17 THE COURT: So, yes. And it may 16:53:30
18 be that there are other ways to do this, you 16:53:34
19 know. Maybe it could be different language. 16:53:36
20 But I think what I am inclined to 16:53:44
21 do to tackle the problem is to say, after 16:53:46
22 No. 4, after the fourth Panduit factor, we can 16:53:51
23 say, "Microchip contends that if there were 16:53:55
24 only two suppliers in the relevant market, 16:54:08

1 Microchip and Aptiv" -- I assume you want me 16:54:11
2 to say Aptiv because you agree, Mr. Wiener? 16:54:21
3 MR. WIENER: Yes, because it is a 16:54:26
4 market issue. 16:54:28
5 THE COURT: Yes. Aptiv disagrees. 16:54:28
6 And then say, "If Microchip proves, by a 16:54:32
7 preponderance of the evidence, that there were 16:54:38
8 only two suppliers in the relevant market, 16:54:44
9 then you should presume..." 16:54:49
10 MR. WIENER: Your Honor, I think 16:55:04
11 we are going to have another presumption 16:55:05
12 concept coming, so I think it would be fine 16:55:07
13 with ending after, "satisfied the first two." 16:55:09
14 THE COURT: "Had satisfied the 16:55:13
15 first two elements and only provide proof of 16:55:15
16 elements three and four." 16:55:23
17 And then I can say -- and then in 16:55:30
18 a new paragraph it would say, "If Microchip 16:55:32
19 satisfies the four elements." 16:55:40
20 MR. WIENER: "Microchip satisfies 16:55:50
21 the language in their proposed instruction," 16:55:53
22 starting on the third line of that paragraph. 16:55:58
23 THE COURT: I am okay with that, 16:56:01
24 Mr. Gray, if you are. It doesn't -- it leaves 16:56:11

1 a little bit of lack of clarity in the sense 16:56:17
2 that I will have just introduced the concept 16:56:21
3 of collapsing, but the presumption of but-for, 16:56:26
4 I mean, they could get there without 16:56:33
5 showing -- 16:56:38
6 MR. WIENER: Right. 16:56:41
7 THE COURT: And so there's some 16:56:41
8 small risk of confusion, I think, in the 16:56:43
9 possibility -- in the introduction of the 16:56:46
10 instruction about two-supplier market and then 16:56:53
11 immediately -- so why don't I say, "Aptiv -- 16:56:56
12 if Microchip proves, by a preponderance of the 16:57:10
13 evidence, these four factors, whether by 16:57:13
14 proving the two-supplier market or otherwise, 16:57:25
15 you may presume that Microchip satisfied the 16:57:31
16 but-for test," and then just pick up the rest 16:57:35
17 of the paragraph that Microchip proposes. 16:57:37
18 Does that work for you, Mr. 16:57:42
19 Wiener? 16:57:43
20 MR. WIENER: It does with one 16:57:43
21 additional edit, which is that the original 16:57:44
22 lost profits instruction before introducing 16:57:47
23 the four factors has language that's 16:57:48
24 inconsistent with that, and I think the law, 16:57:50

1 because it says, "Microchip" -- it says, 16:57:53
2 "Microchip has proven entitlement to and the 16:57:55
3 amount of lost profits," and if the point is 16:57:58
4 that they are entitled to prove a presumption 16:58:02
5 and then there is a ability to rebut that, 16:58:04
6 then just satisfying the four factors doesn't 16:58:07
7 proven entitlement to an amount. 16:58:10
8 So we would recommend striking the 16:58:13
9 "in the amount of" in that first sentence, 16:58:16
10 figures that would cause confusion with the 16:58:20
11 presumption language later. 16:58:22
12 MR. GRAY: I'm not sure I am 16:58:25
13 following, because factor four is the amount 16:58:27
14 of profits that Microchip would have made. I 16:58:28
15 thought that was part of satisfying the four 16:58:32
16 factors. 16:58:34
17 MR. WIENER: Well, I think that 16:58:35
18 the amount of proof that they have proven a 16:58:37
19 presumption to a certain amount and then it 16:58:41
20 goes to us to figure -- you know, to rebut the 16:58:44
21 presumption to determine what the final amount 16:58:46
22 of damages will be. 16:58:48
23 The first sentence of this 16:58:50
24 paragraph says, "Microchip has proven its 16:58:51

1 entitlement to, and the amount of, lost 16:58:53
2 profits. If you find that," dot dot dot. 16:58:56
3 There's no accommodation for that presumption 16:58:58
4 later on. 16:59:01
5 Now, the presumption can rebut 16:59:02
6 some or all of the sales -- 16:59:05
7 MR. GRAY: Right. 16:59:07
8 MR. WIENER: -- so that's why the 16:59:07
9 amount I think sort of would be consistent 16:59:08
10 with the other approach. 16:59:11
11 THE COURT: Yeah, I understand the 16:59:19
12 point. Are you okay, Mr. Gray, if I take out 16:59:20
13 that phrase "and the amount of" in that 16:59:23
14 sentence -- in the sort of introduction to the 16:59:25
15 Panduit factors? 16:59:29
16 MR. GRAY: Not right now, but I 16:59:43
17 may be misunderstanding. 16:59:45
18 THE COURT: Well, so here's -- I 16:59:47
19 mean, I understand the problem. I mean, I 16:59:48
20 think I am getting a little frank and I worry 16:59:54
21 about that sometimes because I said this I 16:59:56
22 think the other day, but I just want to make 16:59:58
23 sure that I did tell you all because I think I 16:59:59
24 may have said it back in voir dire, that I am 17:00:02

1 going to send a written copy of the 17:00:04
2 instructions back to the jury, too, publish a 17:00:08
3 copy, so I just want to make sure it's 17:00:10
4 readable to them as well. 17:00:12
5 (Brief pause.) 17:01:00
6 THE COURT: I think one way to 17:01:02
7 deal with a lot of this might be to let the 17:01:12
8 addition a little bit. So what if -- what if 17:01:37
9 I do something like this. 17:01:47
10 I can leave it as is through the 17:01:52
11 end of the Panduit factors. At the end of the 17:01:54
12 Panduit factors, I could say, "If Microchip 17:01:59
13 proved, by a preponderance of the evidence -- 17:02:22
14 if Microchip proved these four factors by a 17:02:26
15 preponderance of the evidence, then Aptiv may 17:02:29
16 rebut this showing -- Aptiv may rebut 17:02:36
17 Microchip's showing, but proving that -- then 17:02:41
18 the burden shifts to Aptiv to show that 17:02:50
19 Microchip reasonably would not have made some 17:02:52
20 or all of the diverted sales but for the 17:02:55
21 infringement." I can introduce that there. 17:02:58
22 I can then add the language that 17:03:04
23 "Microchip intends that there were only two 17:03:08
24 suppliers in the relevant market, Microchip 17:03:11

1 and Aptiv. Aptiv disagrees. And if you 17:03:14
2 find -- if Microchip has proven, by a 17:03:20
3 preponderance of the evidence, that there were 17:03:22
4 only two suppliers in the market, then 17:03:24
5 Microchip has proven the first two factors." 17:03:28
6 And then what I would do is after 17:03:31
7 No. 5, which is the lost profit amount of 17:03:44
8 profits, the last Panduit factor, I would -- 17:03:48
9 well, 35 in the redline, it is really in 4 if 17:03:54
10 we added No. 2, but I would add one more 17:03:58
11 instruction, I'll title it, "lost profits - 17:04:01
12 rebuttal," and then I can add -- essentially I 17:04:18
13 can repeat, "if Microchip has proven the four 17:04:26
14 elements by a preponderance of the evidence, 17:04:31
15 Aptiv may rebut this" -- I'm sorry, let me -- 17:04:33
16 "If Microchip has satisfied the 17:04:48
17 four elements necessary for -- to claim its 17:04:49
18 lost profits, Aptiv may rebut Microchip's 17:04:54
19 showing -- may rebut Microchip's evidence" -- 17:04:58
20 I'm sorry, I said earlier "the burden will 17:05:02
21 shift to Aptiv to show that Microchip 17:05:04
22 reasonably would not have made some or all of 17:05:06
23 these sales but for infringement; for example, 17:05:10
24 Aptiv may rebut the presumption by determining 17:05:12

1 this whole other available non-infringement 17:05:15
2 substitute to the market. The burden of 17:05:18
3 persuasion ultimately remains with Microchip." 17:05:20
4 So it breaks it up a little bit, 17:05:24
5 but I think it probably makes it a little more 17:05:26
6 readable and to me, Microchip's rebuttal 17:05:28
7 coming right after the four Panduit factors 17:05:31
8 makes a little more sense logically than 17:05:34
9 introducing the presumption about the first 17:05:36
10 two factors before I even get to rebuttal. 17:05:38
11 MR. WIENER: I think that's fine, 17:05:42
12 Your Honor. The only addition I would say is 17:05:43
13 that in the "for example, Aptiv may rebut the 17:05:45
14 presumption by showing that it sold," it 17:05:48
15 should be "ordered or sold," just to add the 17:05:52
16 point. But other than that, we're fine with 17:05:55
17 it. 17:05:57
18 MR. GRAY: We would object to 17:05:57
19 that, Your Honor. There's no evidence that's 17:05:59
20 been admitted in this trial about a grant 17:06:00
21 processing type original alternative. And Mr. 17:06:03
22 Chase isn't going to testifier and Mr. Voto 17:06:07
23 testified today that Aptiv at Unwired created 17:06:10
24 a solution for JLR that is not accused of 17:06:14

1 infringement that was accepted by one of the 17:06:17
2 carmakers. To get to this point, it's 17:06:19
3 certainly enough to go to the jury. 17:06:22
4 THE COURT: This is the solution 17:06:24
5 that was sort of -- I'll call it third 17:06:26
6 generation solution -- 17:06:29
7 MR. WIENER: Yeah. 17:06:30
8 THE COURT: -- that he sold to 17:06:30
9 Jaguar Land Rover? 17:06:32
10 MR. WIENER: Right. There might 17:06:34
11 be factual dispute about whether that's an 17:06:35
12 acceptable alternative, but that is a fact of 17:06:37
13 record. 17:06:40
14 MR. GRAY: Are you saying that 17:06:41
15 they -- Aptiv would have used the TI chip that 17:06:43
16 Mr. Voto testified to or that Aptiv would have 17:06:46
17 redesigned the Boston to be a super speed 17:06:50
18 chip? 17:06:52
19 MR. WIENER: That the solution was 17:06:53
20 the TI chip. 17:06:54
21 THE COURT: The chip the jury 17:06:57
22 heard about. 17:06:59
23 MR. GRAY: Right. So it's not a 17:06:59
24 development. Grant processing is typically 17:07:01

1 you have the skills or know-how to develop 17:07:04
2 your own alternative. You are just saying 17:07:06
3 that Aptiv's contention is that it could have 17:07:08
4 sold a TI chip that was on the market if it 17:07:12
5 was a product that it had the ability to sell. 17:07:14
6 It sold, instead, the infringing product and 17:07:17
7 this is a product that it could have sold on 17:07:20
8 the market more widely. 17:07:22
9 MR. GRAY: So what was the 17:07:24
10 proposed language again? I misunderstood 17:07:25
11 that. 17:07:28
12 MR. WIENER: It was just a product 17:07:28
13 that it sold or could have sold to rebut the 17:07:29
14 infringement, to rebut the presumption; right? 17:07:34
15 THE COURT: So it would be Aptiv 17:07:37
16 may -- or actually the language should be, "If 17:07:38
17 Microchip satisfies the four elements, the 17:07:44
18 burden shifts to Aptiv to show that Microchip 17:07:49
19 reasonably would not have made some or all of 17:07:58
20 the diverted sales but for the infringement. 17:08:01
21 For example, Aptiv may rebut the presumption 17:08:03
22 by showing that it sold or could have sold 17:08:06
23 another available non-infringing substitute in 17:08:09
24 the relevant market." 17:08:12

1 That's what you're suggesting, Mr. 17:08:12
2 Wiener? 17:08:14
3 MR. WIENER: Yes. That would be 17:08:14
4 fine, either way. 17:08:17
5 THE COURT: Okay. 17:08:17
6 MR. GRAY: And that's okay with 17:08:18
7 us, except for it would be "available and 17:08:20
8 acceptable of non-infringing." 17:08:22
9 MR. WIENER: Your Honor, we are 17:08:25
10 fine with the language. 17:08:26
11 THE COURT: "Available and 17:08:27
12 acceptable to non-infringing substitute in the 17:08:28
13 relevant market." And then we will say, "The 17:08:30
14 ultimate burden of persuasion remains with 17:08:32
15 Microchip." Okay? 17:08:36
16 MR. WIENER: Sorry, Your Honor, I 17:08:37
17 was saying we are fine with the language in 17:08:38
18 the instruction without it. 17:08:39
19 THE COURT: Without adding -- 17:08:41
20 MR. WIENER: It is getting too 17:08:42
21 funky at this point, and let's just say a 17:08:44
22 product that Aptiv sold. 17:08:46
23 THE COURT: Okay. Fine with just 17:08:47
24 saying sold? 17:08:49

1 MR. WIENER: Yeah. 17:08:50
2 THE COURT: Okay. All right. 17:08:50
3 So the language that Microchip 17:08:51
4 proposed, "For example, Aptiv may rebut the 17:08:53
5 presumption by showing that it sold in other 17:08:55
6 available non-infringing substituted developed 17:08:58
7 markets." 17:09:02
8 MR. GRAY: That's fine. 17:09:03
9 Available, acceptable. Acceptable is part of 17:09:05
10 the main sentence; that's the key word for us. 17:09:12
11 MR. WIENER: I think -- we don't 17:09:17
12 feel strongly about it. 17:09:19
13 THE COURT: Okay. Acceptable is 17:09:20
14 fine. Let me make sure we've got it. 17:09:21
15 (Brief pause.) 17:09:25
16 THE COURT: Okay. All right. So 17:10:14
17 we resolved that. All right. 17:10:17
18 So now I am in Panduit factor 2, 17:10:29
19 which is the acceptable non-infringing 17:10:36
20 substitute. 17:10:39
21 MR. GRAY: What context would you 17:10:47
22 like something, Your Honor? 17:10:53
23 THE COURT: Let me read it again. 17:10:54
24 I know I read it this morning, but -- or maybe 17:10:55

1 yesterday. 17:10:58
2 (Brief pause.) 17:11:15
3 THE COURT: All right. Go ahead, 17:11:15
4 Mr. Gray. 17:11:16
5 MR. GRAY: So what caught our 17:11:17
6 attention here is that the first sentence of 17:11:19
7 the second paragraph suggested that an 17:11:21
8 acceptable substitute just needs one or more 17:11:23
9 of the advantages of the patent infringement. 17:11:26
10 THE COURT: No, I am fine taking 17:11:29
11 out one or more of. I think that's fair when 17:11:31
12 we are going to talk about patent 17:11:35
13 infringement, I think that's fair to take that 17:11:37
14 out. 17:11:38
15 MR. GRAY: Okay. And then the 17:11:38
16 second sentence is from the ABA model jury 17:11:40
17 instruction just to help better explain what 17:11:43
18 an acceptable non-infringing substitute means. 17:11:46
19 THE COURT: All right. Mr. 17:11:49
20 Wiener? 17:11:57
21 MR. WIENER: Your Honor, I think 17:11:57
22 this is sort of getting at the concept of the 17:11:58
23 two-supplier market which has already been 17:12:00
24 handled already, and I am not sure what -- let 17:12:02

1 me just read the sentence to understand what 17:12:06
2 we are really getting at. 17:12:09
3 THE COURT: Well, I will have 17:12:10
4 already instructed the jury at this point that 17:12:11
5 if it is a two-supplier market, this factor is 17:12:14
6 presumed; right? So really, what we are 17:12:17
7 talking about here is the world in which there 17:12:19
8 is not two suppliers, so I guess I don't know 17:12:24
9 what else in the way of -- and so... so the 17:12:29
10 part where I am getting a little hung up, Mr. 17:12:51
11 Gray, and, you know, maybe the ABA had 17:12:54
12 something in mind that I am not picking up on 17:13:01
13 here and maybe I'm just tired, but the 17:13:03
14 phrasing where it says, "because of the 17:13:06
15 features available only from that product and 17:13:07
16 a patentholder's patented product," seems 17:13:11
17 strange to me. 17:13:15
18 I almost feel like it should be -- 17:13:17
19 what we're getting at here is in the first 17:13:19
20 asserted of and alleged infringed product, we 17:13:24
21 are motivated by the infringing product 17:13:26
22 because of the features available only from 17:13:29
23 the patentholder's patent, I think it should 17:13:32
24 be patented invention then some other 17:13:36

1 alternative product is not an acceptable 17:13:41
2 substitute. 17:13:45
3 MR. GRAY: We would be okay if it 17:13:45
4 says "because of the features available only 17:13:47
5 from that product, but not necessarily the 17:13:49
6 patented invention." Our contention is that 17:13:51
7 the features are available because of the 17:13:54
8 patented invention, but the product is the 17:13:56
9 context in which the substitutes are 17:13:59
10 considered. 17:14:01
11 THE COURT: All right. 17:14:02
12 That conjunctive phrase is the 17:14:03
13 place where I am getting hung up, because it 17:14:05
14 doesn't make a lot of sense to me, frankly. 17:14:07
15 So if I said the first -- if 17:14:10
16 purchasers of an alleged infringer's product 17:14:10
17 were motivated to buy the infringing product. 17:14:15
18 See, the problem is that the predicate for 17:14:18
19 that is the alleged infringer's product, 17:14:22
20 right? And we all know that the alleged 17:14:25
21 infringer's product may have features that are 17:14:30
22 beyond what's patented, right? 17:14:34
23 And so, I mean, I guess it might 17:14:38
24 be motivated by something in the price, but 17:14:42

1 feature -- but the features of the alleged 17:14:44
2 infringer's product is not the appropriate 17:14:47
3 limitation here, I don't think. It sort of 17:14:50
4 wipes away the concept of -- I understand this 17:14:53
5 is the damages portion we are talking about, 17:14:57
6 it is that issue. 17:14:59
7 So I think if they are motivated 17:15:01
8 by the infringing product because of the -- I 17:15:17
9 mean, what if I just said "because of features 17:15:31
10 arising from the patented invention"? 17:15:34
11 MR. GRAY: Yes, we're okay with 17:15:39
12 that. 17:15:41
13 THE COURT: Mr. Wiener? 17:15:41
14 MR. WIENER: That's fine. 17:15:42
15 THE COURT: Okay. 17:15:42
16 So if purchasers of an alleged 17:15:43
17 infringer's product were motivated to buy the 17:15:45
18 infringing product because of features from 17:15:48
19 the patented invention. However, then some 17:15:54
20 other alternative product is not an acceptable 17:15:58
21 substitute." Okay. All right. 17:16:04
22 Let me see what else. All right, 17:16:05
23 guys, we have Sandia -- no, why is it not 17:16:13
24 Sandia chip? 17:16:24

1 MR. GRAY: So Dr. Becker's opinion 17:16:25
2 is based on time periods, so July '17 through 17:16:27
3 present day data. 17:16:32
4 THE COURT: Right. 17:16:33
5 MR. GRAY: He's claiming lost 17:16:33
6 profits for those sales, those units. 17:16:35
7 THE COURT: Right. 17:16:37
8 MR. GRAY: And the way the 17:16:38
9 evidence came in and the way the reports were 17:16:39
10 disclosed here is that Mr. Chase came in and 17:16:42
11 said the model years, you know, when the OEMs 17:16:45
12 made their purchasing decision and awarded the 17:16:51
13 programs occurs long before the actual sales 17:16:53
14 do. And he said that Sandia wouldn't have 17:16:56
15 been ready to prove that it worked by the 17:17:01
16 deadlines for a couple of the major OEMs for 17:17:05
17 model year 2016. 17:17:10
18 Basically he was saying that 17:17:12
19 Sandia couldn't have been ready early enough 17:17:13
20 to make the sales beginning in July 2017 for 17:17:16
21 all of The Big 3. 17:17:19
22 And so what Dr. Becker said in 17:17:21
23 response, and he testified about in this trial 17:17:23
24 is that look, even if Sandia couldn't have 17:17:25

1 been -- if the schedule couldn't have been 17:17:29
2 pulled in, the alternative that the OEMs would 17:17:31
3 have purchased is the Athens chip and they 17:17:34
4 would have purchased the Athens chip 17:17:36
5 temporarily until Sandia was complete. 17:17:38
6 So the key is that the lost 17:17:41
7 profits theory is based on a time period that 17:17:43
8 yes, the time period is book-ended by the 17:17:45
9 actual history of Sandia sales, but it's not 17:17:49
10 tied specifically to the sale of the Sandia 17:17:52
11 chip. 17:17:54
12 MR. WIENER: Your Honor, may I be 17:17:55
13 heard? 17:17:56
14 THE COURT: Yes. 17:17:57
15 MR. WIENER: Dr. Becker said 17:17:58
16 unequivocally on the stand that his lost 17:17:59
17 profits calculation was based only on the sale 17:18:02
18 of the Sandia chip. To the extent he had some 17:18:04
19 alternative opinion in response to an expert 17:18:09
20 that's coming to trial, that doesn't change 17:18:11
21 that testimony. And so they absolutely should 17:18:13
22 be limited to lost profits based on that 17:18:16
23 theory as proffered by their expert and 17:18:18
24 confirmed on cross. 17:18:20

1 MR. GRAY: Can we look at that 17:18:21
2 testimony, because I think I know what you are 17:18:23
3 talking about and he clearly responded with 17:18:25
4 time periods in those answers. 17:18:26
5 MR. WIENER: No, he did not. I am 17:18:28
6 happy to assist the Court, but he made it 17:18:29
7 clear that he was not offering lost profit 17:18:32
8 opinions based on lost sales that would have 17:18:34
9 been made of any other chip besides Sandia, 17:18:36
10 including Athens. 17:18:40
11 THE COURT: All right. 17:18:41
12 Why don't we -- I mean, I am not 17:18:45
13 going to go scrolling through the transcript 17:18:48
14 now. 17:18:49
15 MR. WIENER: Sure. We will 17:18:50
16 provide it. 17:18:52
17 THE COURT: Yeah, give it to me in 17:18:52
18 the morning because it's obviously two words. 17:18:54
19 MR. WIENER: Okay. 17:18:57
20 THE COURT: All right. 17:18:58
21 MR. GRAY: The last one is now 17:19:02
22 moot, the last edit. 17:19:04
23 THE COURT: The last edit 17:19:05
24 meaning the negotiation information? 17:19:07

1 MR. GRAY: Correct. 17:19:09
2 THE COURT: That was with regard 17:19:10
3 to Chase? 17:19:11
4 MR. GRAY: Correct. 17:19:13
5 THE COURT: Okay. Good. 17:19:13
6 Then we are done with the 17:19:15
7 instructions, subject to you letting me know 17:19:16
8 on the testimony. You guys can talk to each 17:19:20
9 other and see where you are, and then -- all 17:19:23
10 right. 17:19:25
11 Ms. Durie, if you want to 17:19:26
12 skedaddle. 17:19:29
13 MS. DURIE: There was actually one 17:19:29
14 other quick issue, which was this collateral 17:19:30
15 estoppel issue. 17:19:33
16 THE COURT: Yes. 17:19:34
17 MS. DURIE: Our understanding of 17:19:34
18 the law as we briefed in connection with the 17:19:35
19 motion in limine is that Microchip is 17:19:38
20 precluded, under collateral estoppel, from 17:19:40
21 attempting to relitigate any of these issues 17:19:42
22 that were solved. 17:19:45
23 I don't -- I have not heard an 17:19:48
24 argument that that is not a correct statement 17:19:50

1 of the law. I am not sure whether that is 17:19:52
2 subject to dispute. 17:19:55
3 Microchip had asked us with 17:19:57
4 respect to our position on estoppel. 17:19:59
5 Obviously we are stuck with the IPR estoppel 17:20:01
6 results from the PTAB proceeding, which is 17:20:05
7 actually broader than collateral estoppel 17:20:07
8 because it includes any references that could 17:20:10
9 have been submitted. 17:20:13
10 THE COURT: Yeah. 17:20:14
11 MS. DURIE: We understand that; we 17:20:14
12 are not going to try to relitigate those 17:20:15
13 issues. I think that should be pretty clear 17:20:18
14 and straightforward. But it's not clear to us 17:20:20
15 whether we have an agreement on that. 17:20:22
16 THE COURT: I am not clear whether 17:20:24
17 you are still within still some dispute 17:20:25
18 either, so... 17:20:28
19 MR. RUSSELL: Your Honor, I don't 17:20:32
20 think there is a dispute. I think it makes 17:20:33
21 sense, and if we need to clarify it any more, 17:20:35
22 we can run it by Your Honor again tomorrow, 17:20:37
23 but I think that we are in agreement. 17:20:39
24 MS. DURIE: Good. 17:20:41

1 THE COURT: Okay. Great. 17:20:41
2 MR. WIENER: Your Honor, I can 17:20:43
3 actually provide you the transcript cite from 17:20:43
4 Dr. Becker's testimony. It was on pages 364 17:20:46
5 and 365 of Friday's trial transcript. 17:20:49
6 THE COURT: Let me look at it. 17:20:53
7 Give me one second. 17:20:55
8 MR. WIENER: Sure. 17:20:57
9 THE COURT: So this would be on -- 17:21:01
10 MR. WIENER: Friday, the 8th. 17:21:02
11 THE COURT: Right. Okay. 17:21:04
12 MR. GRAY: Your Honor, we don't 17:21:12
13 have the transcript with us right now, but 17:21:14
14 would request a chance to respond. 17:21:15
15 MR. WIENER: Here you go. 17:21:18
16 THE COURT: Well, all right, look. 17:21:30
17 MR. WIENER: So the testimony is 17:21:32
18 on page 364 starting at line 17. I asked him, 17:21:33
19 "Your lost profits opinion is based solely on 17:21:37
20 how much additional profits Microchip would 17:21:39
21 have made on the Sandia multi-host chip; 17:21:41
22 correct? 17:21:44
23 "ANSWER: Yes. 17:21:44
24 "QUESTION: Okay. You don't have 17:21:45

1 -- your $84 million total damages number did 17:21:46
2 not include -- let me strike that. 17:21:49
3 "Your lost profits calculation did 17:21:52
4 not include a calculation of lost profits 17:21:53
5 based on the Athens chip; correct? 17:21:55
6 "ANSWER: Correct." 17:21:57
7 So I'm not sure what the dispute 17:21:58
8 is. 17:22:01
9 MR. GRAY: He testified that the 17:22:02
10 lost profits would have gone up because of 17:22:03
11 Athens. 17:22:06
12 MR. WIENER: I believe he 17:22:06
13 testified about Athens in the context of a 17:22:08
14 reasonable -- explaining that the profits on 17:22:10
15 Athens would have motivated them to have a 17:22:12
16 hypothetical negotiation to care about lost 17:22:15
17 sales that might have been displaced in 17:22:17
18 Athens. It was not part of his lost profits 17:22:19
19 calculation. 17:22:21
20 THE COURT: I see the testimony, 17:22:22
21 and it goes on and says, "And it's your 17:22:23
22 opinion, in fact, that there are no lost 17:22:25
23 profits damages for the sale of the Athens 17:22:27
24 chip; correct?" And he says, "Well, I looked 17:22:29

1 at the question of whether there was evidence 17:22:32
2 of lost sales in that earlier time period and 17:22:33
3 the conclusion that I reached, there was quite 17:22:39
4 a bit of evidence there were Athens sales that 17:22:40
5 were lost because of being displaced, but the 17:22:43
6 sort of -- in that world, the solution that 17:22:45
7 would have been provided in lieu of the Boston 17:22:48
8 chip was not an interchangeable substitute 17:22:52
9 because it didn't have the same features, and 17:22:54
10 so there's not a bunch of clarity about the -- 17:22:56
11 meeting the exact demands that the OEMs had. 17:22:58
12 "And so even though there was 17:23:00
13 quite a bit of evidence that there was impact 17:23:01
14 on Microchip sales, I concluded, to be 17:23:03
15 conservative, that I would not sort of go all 17:23:10
16 the way to the step of quantifying lost 17:23:14
17 profits in that time period." 17:23:16
18 MS. DURIE: Correct. 17:23:17
19 THE COURT: "QUESTION: Okay. So 17:23:19
20 your lost profits number is not based on lost 17:23:20
21 profits of Athens? 17:23:23
22 "ANSWER: It is not based on that, 17:23:24
23 but it is not an affirmative statement that 17:23:26
24 there was no impact on Microchip's business in 17:23:30

1 that prior time period. There clearly was. 17:23:32
2 But I think it's more appropriate to 17:23:35
3 compensate that earlier time period with a 17:23:37
4 reasonable royalty." 17:23:39
5 So I see the testimony. You know, 17:23:39
6 if that's the testimony as it is, I'll leave 17:23:43
7 the word "Sandia" in, but I also recognize, 17:23:46
8 Mr. Gray, you don't have it here and you want 17:23:49
9 to look at it, and so take a look at it 17:23:51
10 overnight. And if there's something else that 17:23:53
11 you think bears on it, flag it for me in the 17:23:55
12 morning and I'll look at it. 17:23:58
13 MR. GRAY: Thank you, Your Honor. 17:24:00
14 THE COURT: Okay. All right. 17:24:02
15 Are there -- so I'm not sure then, 17:24:04
16 having dealt with the collateral estoppel, I'm 17:24:07
17 not sure if there are other issues. Are there 17:24:15
18 other evidentiary issues that we need to 17:24:18
19 tackle in advance of tomorrow? 17:24:21
20 MR. RUSSELL: No for us, Your 17:24:23
21 Honor. I know there are a couple of pending 17:24:24
22 things that may come up, but we are still 17:24:26
23 talking about them. 17:24:28
24 THE COURT: And from your 17:24:29

1 perspective, Mr. Wiener, Ms. Durie? 17:24:30
2 MR. WIENER: Not that I am aware 17:24:33
3 of. 17:24:34
4 THE COURT: Okay. Great. 17:24:34
5 Then we'll let everyone go. We'll 17:24:36
6 get these final revisions done, the 17:24:39
7 instructions, so you can all follow along as I 17:24:42
8 go through this tomorrow and then I will see 17:24:46
9 you all back here at 9. 17:24:50
10 MS. DURIE: Thank you. 17:24:51
11 THE COURT: All right. Have a 17:24:52
12 good night. 17:24:53
13 (Whereupon, the Court adjourned 17:24:56
14 proceedings at 5:25 p.m.) 17:24:58
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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 and official seal
12 this 11th day of April, 2022.

13 _____
Notary Public
14

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Job No. 5162170
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