



Transcript of Mark Mahon, Ph.D.

Date: February 26, 2026

Case: XiFi Networks R&D, Inc. -v- Samsung Electronics Co., Ltd. et al.

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Conducted on February 26, 2026

1 (1 to 4)

1	IN THE UNITED STATES DISTRICT COURT	1	A P P E A R A N C E S
2	EASTERN DISTRICT OF TEXAS	2	ON BEHALF OF THE PLAINTIFF:
3	MARSHALL DIVISION	3	MS. REBECCA BACT
4	- - - - - x	4	ROBINS KAPLAN LLP
5	XIFI NETWORKS R&D, INC., :	5	800 Boylston Street, Suite 2500
6	Plaintiff, : Civil Action No.	6	Boston, Massachusetts 02199
7	v. : 2:24-cv-01057-JRG	7	617.267.2300
8	SAMSUNG ELECTRONICS CO., :	8	rbact@robinskaplan.com
9	LTD., and SAMSUNG :	9	
10	ELECTRONICS AMERICA, INC., :	10	ON BEHALF OF THE DEFENDANTS:
11	Defendants. :	11	MR. PATRICK T. SCHMIDT
12	- - - - - x	12	QUINN EMANUEL URQUHART & SULLIVAN, LLP
13		13	865 South Figueroa Street, 10th Floor
14	REMOTE VIDEOTAPED DEPOSITION of MARK MAHON, Ph.D.	14	Los Angeles, California 90017
15	Thursday, February 26, 2026	15	213.443.3000
16	9:01 a.m. CST	16	patrickschmidt@quinnemanuel.com
17		17	
18		18	ALSO PRESENT:
19		19	Mr. Jeff Salmon, XiFi In-House Counsel
20	Job No.: 621103	20	Mr. Viktor Bezmen, Videographer
21	Pages: 1 - 221	21	
22	Stenographically Reported By:	22	
23	Michelle M. Yohler, CSR, RMR, CRR	23	
24		24	
25		25	
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2	held remotely pursuant to notice before	2	WITNESS PAGE
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4	Reporter, Registered Professional Reporter,	4	By Ms. Bact..... 7
5	Registered Merit Reporter, Certified Realtime	5	
6	Reporter, CSR No. 84-4531, in and for the State of	6	
7	Illinois.	7	
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5 1 E X H I B I T S 2 No. 13 Declaration of Dr. Robert Akl, 3 D.S.C., in Support of Patent Owner 4 Preliminary Response..... 196 5 No. 14 '105 Patent..... 135 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	7 1 Now, the court reporter, would you please 2 swear in the witness. 3 (WHEREUPON, the witness was duly sworn.) 4 MARK MAHON, Ph.D., 5 called as a witness herein, having been first duly 6 sworn, was examined and testified as follows: 7 EXAMINATION 8 BY MS. BACT: 9 Q Welcome, Dr. Mahon. We really appreciate 10 your time today. Again, for the record, I'm 11 Rebecca Bact. I represent XiFi, and I'll be 12 asking you some questions here today at your 13 deposition. 14 I know from your CV that you've been 15 deposed before, but just to say it again, I'll ask 16 you questions. I ask that you allow me to finish 17 my question before you answer. 18 Understood? 19 A Understood. Thank you. 20 Q Great. 21 And I'll do my very best to let you finish 22 your answer before I answer [sic] another 23 question. 24 Good with you? 25 A Yes.
6 1 P R O C E E D I N G S 2 THE VIDEOGRAPHER: Here begins Media 3 Number 1 of the videorecorded deposition of 4 Dr. Mark Mahon, in the matter of XiFi Networks 5 R&D, Inc., versus Samsung Electronics Company, 6 Ltd., et al., filed in the United States District 7 Court, Eastern District of Texas, Marshall 8 Division, Case Number is 2:24-cv-01057-JRG. 9 Today's date is February 26, 2026. The 10 time on the video monitor is 9:01 a.m., Central 11 Time. 12 This remote deposition, everyone is 13 appearing via remote deposition. 14 All parties -- now, counsel, would you 15 please voice-identify yourself, beginning with the 16 noticing attorney. 17 MS. BACT: Good morning. My name is 18 Rebecca Bact. I'm from Robins Kaplan, and I 19 represent Plaintiff, XiFi Networks R&D, Inc. 20 MR. SCHMIDT: Good morning. This is 21 Patrick Schmidt from Quinn Emanuel on behalf of 22 the Samsung defendants. 23 THE VIDEOGRAPHER: The remote videographer 24 today is Viktor Bezmen representing Planet Depos, 25 and the court reporter is Michelle Yohler.	8 1 Q Great. And thank you very much for making 2 verbal responses rather than nodding or saying 3 "uh-huh," so appreciate that. 4 If you do not answer a question -- excuse 5 me. If you do not understand a question that I 6 ask, please let me know so I can rephrase, but if 7 you answer, I will assume that you do understand. 8 Understood? 9 A Yes. 10 Q Great. 11 And is there anything impairing you from 12 offering full and correct testimony today? 13 A No, there is not. 14 Q Great. 15 Okay. So before we jump into this case's 16 material, I would just like to briefly discuss 17 your experience. You've served as an expert in 18 quite a few patent cases over the course of your 19 career, correct? 20 A I've been hired as an expert witness in 21 several cases, yes. 22 Q Okay. Do you have, like, a ballpark 23 number that you could estimate? 24 A I know it's certainly probably more than 25 20 or around that number.

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3 (9 to 12)

9 1 Q Thank you. 2 And on how many of those would you 3 estimate you opined on claim construction? 4 A I would think somewhere around 10 to 12 or 5 so would be my guess. 6 Q Okay. Thank you. 7 And how many times would you estimate 8 you've been deposed? 9 A About 20 times or so. 10 Q Okay. And have you testified at trial? 11 A Yes, I have. 12 Q Around how many times? 13 A I believe six times. 14 Q Okay. With respect to your work as an 15 expert witness, have you ever had your opinion 16 excluded? 17 A No. 18 Q Okay. So turning to this case, when were 19 you retained in connection with this case? 20 A My memory is it was last April, I believe. 21 Yes, last April, roughly. So maybe -- 22 Q April -- 23 A -- in there, but yes. 24 Q Excuse me for interrupting. 25 April of 2025?	11 1 Q Great. 2 And you signed that on February 4, 2026, 3 in Marshall, Texas? 4 A That's correct. 5 Q Great. 6 Okay. So I'm just going to take that down 7 for a minute. 8 So in this case you have been retained to 9 provide opinions regarding the understanding of a 10 person of ordinary skill in the art of, or a 11 POSITA, in connection with certain terms in the 11 12 asserted patents that you list in Paragraph 2 of 13 your declaration; is that correct? 14 I can put it back up if that's helpful. 15 A Not required. 16 Q Okay. 17 A That's correct. 18 Q Okay. And is your retention beyond 19 offering opinions as to the meaning of those 20 terms, or are you retained purely for the purposes 21 of opining on these terms? 22 MR. SCHMIDT: Objection to form. 23 I'll caution the witness not to disclose 24 any communications with counsel about potential 25 future work that he might be engaged for.
10 1 A Correct. 2 Q And who were you retained by? 3 A Counsel for Samsung. 4 Q And when you say, "Samsung," you mean both 5 Samsung Electronics Co., Ltd., and Samsung 6 Electronics America, Inc., the two defendants in 7 this case? 8 A That's my understanding, yes. 9 Q Okay. Great. 10 And you provided a declaration in this 11 case; is that correct? 12 A Yes, I did. 13 Q Okay. So I'm going to pull up what I will 14 ask the court reporter, at a time convenient to 15 her, mark as Exhibit 1, and ask you if this is 16 your declaration. 17 (WHEREUPON, Mahon Exhibit No. 1 was 18 presented to the witness.) 19 BY MS. BACT: 20 Q So can you see your declaration on the 21 screen, Dr. Mahon? 22 A Yes, I can. 23 Q Okay. And if I scroll to the last page, 24 is that your signature, Dr. Mahon? 25 A Yes, it is.	12 1 BY THE WITNESS: 2 A I was engaged to perform and provide my 3 opinions with respect to the claim construction 4 at -- for any terms at issue in this case. 5 I do not have any expectations as far as 6 how else I'm going to be used in this case. 7 BY MS. BACT: 8 Q Have you signed the protective order in 9 this case? 10 A I don't recall. I'd have to go back and 11 look in my directory to see if I did or not. 12 Q Okay. And since you were retained in 13 April 2025, have you worked continuously on this 14 matter? 15 MR. SCHMIDT: Objection to form. 16 BY THE WITNESS: 17 A I was engaged in April, and I have met 18 with counsel, and since that point in time I -- 19 for various reasons to -- obviously to discuss the 20 claim construction issues, but I wouldn't 21 characterize it as continuously. 22 BY MS. BACT: 23 Q Okay. And can you ballpark about how many 24 hours you've billed to this matter? 25 A Yeah, ballpark would be somewhere in the

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4 (13 to 16)

13 1 25-hour, 30-hour range, somewhere in there, would 2 be my guess. 3 Q And your hourly rate for this work is \$550 4 an hour? 5 A That's correct. 6 Q Okay. Now, other than counsel, did anyone 7 help you prepare your declaration? 8 A No. 9 Q Okay. And in preparing your declaration, 10 you reviewed a number of materials, correct? 11 A That is correct. 12 Q Okay. And I'm just going to refer to 13 Paragraph 4 of your declaration. 14 And you considered the asserted patents, 15 their file histories, the parties' claim 16 construction disclosures, filing in -- filings in 17 the parallel PTAB proceedings, and any other 18 documents referenced, discussed, or listed in your 19 declaration, correct? 20 A Yes. 21 Q And you also have relied upon your own 22 knowledge and experience in the relevant fields, 23 correct? 24 A Certainly, yes. 25 Q And, finally, you reviewed the productions	15 1 Q Okay. And do you recall if you also 2 reviewed any of the declarations from Samsung's 3 exhibit [sic], Dr. Almeroth? 4 A Yes. 5 Q You did review those? 6 A The documents that showed his analysis and 7 opinions, yes. 8 Q Great. Thank you. 9 Have you reviewed any documents in the 10 district court case related to infringement? 11 A Not that I recall, no. 12 Q Okay. Have you reviewed any internal 13 Samsung documents? 14 A Not that I recall, no. 15 Q And, excuse me, that was a little unclear. 16 Any, you know, documents produced by Samsung 17 regarding Samsung's products? 18 A No, not to my recollection. 19 Q Okay. And did you speak with anyone at 20 Samsung in the course of your representation -- or 21 your retention? 22 A Not that I can recall for this case. 23 Q Okay. Have you spoken to Dr. Almeroth? 24 A I have not. 25 Q Okay. So when you prepared your
14 1 associated with the claim construction disclosures 2 in this case, correct? 3 A Yes. 4 Q And to your knowledge, is that a complete 5 list of the materials that you reviewed in the 6 course of preparing your declaration? 7 A I believe it does represent everything. 8 Nothing's coming to mind that wouldn't be 9 contained within that. Obviously -- yeah, 10 patents, file -- yeah, I believe that's a complete 11 list. 12 Q Okay. Great. 13 And when you say that you reviewed the 14 filings in the parallel PTAB proceedings, did you 15 review all of them or a subset of them? 16 A I reviewed specific documents I believe I 17 reference here within my declaration, and we can 18 talk about those. 19 I don't know if that's a comprehensive 20 list of all the documents or not; I couldn't 21 characterize that. 22 Q So one of those documents that you 23 reference is a declaration by XiFi's expert, 24 Dr. Akl; is that correct? 25 A Yes.	16 1 declaration, you reviewed the 11 asserted patents? 2 A Yes. 3 Q And you didn't have any trouble 4 understanding them, correct? 5 A I reviewed them from the perspective of a 6 POSITA, and I do not recall having any issues 7 while I was doing that in terms of the process of 8 my review. 9 Q And you were able, in the context of the 10 patents, their specification, claims, file 11 histories to understand claim terms such as 12 "virtual MAC interface"? 13 A Within the disclosures of the documents 14 themselves, and, again, from the perspective of a 15 POSITA using plain and ordinary meaning, yes. 16 Q And "virtual PHY interface," you were able 17 to understand that term? 18 A As I discussed, yes. 19 Q Okay. And, for example, the term 20 "transparent" or "transparently," you are able to 21 understand that term? 22 A Again, as disclosed, based on my analysis 23 from the perspective of a POSITA, I was able to 24 understand and then provide my opinions on what 25 was being disclosed.

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5 (17 to 20)

17	1 Q Understood. Thank you. 2 And, finally, you were able to understand, 3 as they were used in the asserted patents, 4 "association," and "disassociation"? 5 A The term shows up in the claim. I 6 don't -- didn't see support anywhere in the 7 specification for that. 8 I understand that Dr. Akl has taken a 9 clarifying position on that term and how it's used 10 within the claim. 11 But certainly, you know, based on that 12 analysis, as I've discussed in my declaration, I 13 would characterize that as my ability to 14 understand how that's being used within the claim 15 term. 16 Q Fair enough. Thank you. 17 So did you review the transcript of 18 Dr. Akl's deposition that took place two days ago? 19 A I did not. 20 Q Okay. So I won't dive into that because 21 I'm gathering you probably heard about it from 22 counsel. 23 A That's correct. 24 Q Okay. So at the time of your declaration 25 on the date that it was signed, the parties also	19	1 Q Okay. And I'm going to scroll through and 2 let you see it. This is the same document that I 3 emailed to you -- or that I emailed to your 4 counsel who emailed it to you. 5 Is this document, now that I have scrolled 6 to the bottom, your CV? 7 A Yes. 8 Q Okay. 9 MS. BACT: And I'll ask that this be 10 marked as Exhibit 2. 11 BY MS. BACT: 12 Q And when I received this document from 13 your counsel, Dr. Mahon, it had a file name that 14 said: "Mark Mahon CV Mar 2025," which I 15 interpreted as March 2025. 16 Does that sound right to you? 17 A That sounds correct, yes. 18 Q Okay. Is there anything that has happened 19 since March of 2025 that ought to be updated on 20 your CV for purposes of this case? 21 A I'm not sure the extent of that question. 22 Technic-- as far as my technical background 23 or -- I have not changed jobs; I'm still teach -- 24 a professor at the University teaching those 25 courses and performing research in those areas.
18	1 exchanged and filed with the Court some agreed 2 constructions. 3 Have you reviewed the parties' joint claim 4 construction statement expressing these agreed 5 constructions? 6 I can show it to you if that helps. 7 A It might help. Thank you. 8 Q Sure thing. 9 So, again, this would not have been 10 available at the time of your declaration because 11 it was coextensive. So I'm going to share my 12 screen and -- I did not mark your CV, so let me 13 just back up for a second. I just want to -- I 14 want to keep my numbering. 15 So I'm just going to show you your CV and 16 actually ask you a couple of questions about it. 17 A Okay. 18 Q And then we can jump back into the joint 19 claim construction statement. 20 (WHEREUPON, Mahon Exhibit No. 2 was 21 presented to the witness.) 22 BY MS. BACT: 23 Q Can you see your CV on the screen, 24 Dr. Mahon? 25 A Yes.	20	1 So not that I can think of. 2 Q Okay. That's fine. 3 So now I'm going to open up the joint 4 claim construction and ask that this be marked by 5 the court reporter as Exhibit 3. 6 (WHEREUPON, Mahon Exhibit No. 3 was 7 presented to the witness.) 8 BY MS. BACT: 9 Q So I'm showing you a document that has a 10 case header at the top with the case number that 11 we just heard our video-- -- videographer read 12 earlier, Document 52, filed February 4, 2026, and 13 it has the case caption on the front. 14 Do you agree with that, Dr. Mahon? 15 A Yes. 16 Q Okay. And it's called the "Joint Claim 17 Construction Statement." 18 And I'm scrolling now to Page 2, and we 19 can see Roman Numeral II: "Construction of the 20 Claims and Terms to Which the Parties Agree." 21 Do you see that, Dr. Mahon? 22 A Yes, I do. 23 Q Okay. And have you seen this document 24 before? 25 Would you like me to scroll further?

21 1 A Yes, please, just to -- 2 Q Okay. Let me show you the rest of it. So 3 I've shown you Page 2, which is the first 4 substantive page, and now I'm scrolling through 5 Pages 3, which contains additional agreed 6 constructions; Page 4, which begins the disputed 7 constructions; Page 5, which continues the 8 disputed constructions and has another Roman 9 numeral claim construction hearing with some 10 information that the parties have transmitted to 11 the judge about that hearing. 12 A signature page -- or pages followed by 13 evidentiary support that the parties have provided 14 for the disputed constructions in an Exhibit A 15 that begins at PDF Page 8 and continues until the 16 end of the document at PDF Page 22. 17 Do you know if you've seen this document 18 before, Dr. Mahon? 19 A I'm not recalling specifically seeing this 20 document, particularly in that time frame, so I 21 wouldn't be able to say yes definitively. 22 Q Okay. No problem. 23 So with the understanding that this may be 24 the first time you're seeing this document, do you 25 understand that the parties have agreed to certain	23 1 you about anything you discussed with counsel, but 2 if you feel comfortable sharing whether you agree 3 that this is a permissible construction for 4 virtual MAC interface, please answer. 5 MR. SCHMIDT: Objection to form. Calls 6 for a legal conclusion. Outside the scope. 7 BY THE WITNESS: 8 A I did not, to my recollection, make -- 9 form an opinion for these -- all these terms, 10 certainly within my declaration, and I would 11 confine my answers with respect to what's 12 contained in my declaration on any of the 13 questions associated with this document, which, 14 again, I would need time to be able to review to 15 form an opinion. 16 And it's my understanding that we are here 17 to discuss my opinions as articulated within my 18 declaration in response to XiFi's opinions on the 19 terms at issue within my declaration. 20 BY MS. BACT: 21 Q Understood. Thank you for clarifying. 22 So just to back out of that a little bit, 23 you do understand that Samsung has agreed to the 24 construction of "virtual MAC interface" I just 25 read?
22 1 constructions of certain terms? 2 A That's my understanding, yes. 3 Q Okay. And were you aware of what those 4 constructions were that the parties agreed to 5 prior to right now? 6 A In terms of what was -- had been agreed 7 to, I certainly communicated with counsel about 8 that, so I would say, based on that understanding, 9 yes. 10 Q Okay. And do you have any issue with the 11 construction for virtual MAC interface being a 12 software or logical-based interface that is 13 separately addressable from the recited actual MAC 14 interfaces and that obscures the recited actual 15 MAC interfaces from higher protocol stack layers? 16 MR. SCHMIDT: Objection to form. This is 17 beyond the scope of the deposition and the 18 witness's opinions. 19 And I'm going to caution the witness not 20 to disclose any communications with counsel that 21 you have that didn't form the basis of the 22 opinions that you actually set forth in your 23 declaration. 24 BY MS. BACT: 25 Q So I definitely don't want to hear from	24 1 A Well, what my -- I was saying previously 2 was that I've obviously, since I filed my 3 declaration, have had conversations with counsel 4 regarding claim terms and claim analysis, I -- and 5 my opinions on those. 6 I can't say with specificity that I have a 7 specific understanding of all these terms, so I 8 would have to fall back on what we're here to talk 9 about today, which is my declaration. 10 Q Okay. Understood. 11 And I assume your answer would be the same 12 if I went through any of the other terms that were 13 agreed to by Samsung and XiFi on that document I 14 just showed you, that we need not go through that 15 exercise. 16 Would you agree that your answer would be 17 similar, Dr. Mahon? 18 A It would be the same answer, yes. 19 Q Okay. No problem. 20 Okay. So coming back to your declaration. 21 And now I'm referring to Paragraph 45 of your 22 declaration. 23 A One second, please. 24 Q Sure. Take your time. Let me know when 25 you're there.

25 1 A Okay. I'm there. 2 Q Okay. Great. 3 And you say in your declaration: "A 4 POSITA at the time of the invention would have 5 been aware of the OSI model." 6 Did I read that correctly? 7 A Yes. 8 Q And when we're talking about the OSI 9 model, we're talking about the Open Systems 10 Interconnection model, correct? 11 A That's correct. 12 Q Okay. And in the paragraph above, 44, you 13 refer to a document, the ISO/ED 7498-1 Information 14 Technology - Open Systems Interconnection - Basic 15 Reference Model: The Basic Model; is that 16 correct? 17 A Yes. 18 Q Okay. And just backing up a little bit. 19 A POSITA would be familiar with the OSI 20 model, but they would also be familiar with other 21 similar models that would express wireless 22 networking in the terms of a layer stack; isn't 23 that correct? 24 MR. SCHMIDT: Objection to form. 25	27 1 look at the actual documents that POSITAs use for 2 either understanding or implementing within those 3 protocols. 4 Layers, the concept of layers as disclosed 5 in this document, certainly was known at the time 6 of the invention. 7 BY MS. BACT: 8 Q Okay. So there were at least some other 9 models known at the time of the invention that 10 were expressed in layers, correct? 11 A Well, again, these layers -- the concept 12 of what a POSITA would know with respect to a 13 particular wireless protocol, the language often 14 includes things such as layers, so within that 15 context, a POSITA would be aware. 16 Q Okay. Thank you. 17 So if you're -- are you able to see the 18 substance of your image clearly, or would you like 19 me to pull up the actual document that you're 20 quoting from so I can make it a bit bigger for us? 21 How would that work -- work best for you? 22 A So the doc- -- the image right above 23 Paragraph 45? 24 Q Correct. 25 A I can see that. I can read that.
26 1 BY THE WITNESS: 2 A Could you repeat the question, please? 3 BY MS. BACT: 4 Q Let me rephrase. 5 Is the OSI model the only model that a 6 POSITA at the time of the invention would have 7 been familiar with? 8 A There are several models that a POSITA 9 would be familiar with at the time of the 10 invention. 11 Q Okay. And I'll -- I'm looking at your, 12 sort of, screenshot of an image out of the basic 13 reference model that is in between Paragraphs 44 14 and Paragraph 45 of your declaration. 15 And that expresses the layers of the OSI 16 model, correct? 17 A This section is discussing the layers as 18 disclosed within that document. 19 Q And the other models that you mentioned 20 that a POSITA would be familiar with are also 21 expressed in layers, correct? 22 MR. SCHMIDT: Objection to form. 23 BY THE WITNESS: 24 A It depends upon the specific protocol. We 25 could go to each one of those protocols and take a	28 1 Q Okay. So as we were just discussing, the 2 OSI model is made up of layers in a layer stack, 3 correct? 4 A A POSITA would understand the display 5 of-- within this Section 6.1.3, for example of 6 how that's portrayed as a stack, yes. 7 Q Okay. And at the bottom of the stack is 8 the physical layer? 9 A Yes, the physical layer would be at the 10 bottom of that. 11 Q And the layer above or layer 2 is the data 12 link layer, correct? 13 A As portrayed, the next layer would be the 14 data link layer as pictured here. 15 Q Right. So there are two sections that I'm 16 looking at in the image that you reproduced. One 17 of them is 6.1.2, and that lists the layers with a 18 parenthetical that has a layer number next to it; 19 is that correct? 20 A Yes. 21 Q And then 6.1.3 has an illustration of the 22 layers with, you know, a sort of stack imagery; 23 would you agree that that's fair? 24 A Yes. 25 Q Okay. And so when I'm talking about

29 1 layer 2 as the data link layer, that's something I 2 can take from Section 6.1.2, correct? 3 A I'm not sure if your question -- if you're 4 saying does -- is the data link layer associated 5 with layer 2 in this document, the answer is yes. 6 Q Right. Thank you for phrasing it more 7 clearly than I did. 8 What I'm trying to say is that this 9 document expresses that the data link layer can 10 also be known as layer 2, given that parenthetical 11 that follows the listing of data link layer; would 12 you agree with that characterization? 13 A Yes. 14 Q Okay. And then 6.1.2 lists the network 15 layer as layer 3, correct? 16 A Yes. 17 Q And it also displays it in 6.1.3 on top of 18 the data link layer, correct? 19 A It shows that network layer in the 20 position above the data link layer. 21 Q Great. Thank you. 22 And then the application layer is titled 23 layer 7 in 6.1.2, correct? 24 A Yes. 25 Q And it's shown at the very top of the	31 1 layer? 2 A This is a concept of abstractions for a 3 POSITA to know how they could possibly implement a 4 service or application within the OSI model. 5 So there's no stipulations that I'm aware 6 of that would prevent a particular layer from 7 communicating with the -- another layer. And a 8 POSITA would understand there's certainly -- at 9 the time of the invention, there were things -- 10 concepts, implementation, specific ones known as 11 cross-layer communications. 12 Q Okay. I'm going to show you what I'll ask 13 that the court reporter mark as Exhibit 4. 14 (WHEREUPON, Mahon Exhibit No. 4 was 15 presented to the witness.) 16 BY MS. BACT: 17 Q This is going to be the basic reference 18 model that you were quoting and discussing in your 19 declaration. It has the ISO/IEC 7498-1 20 nomenclature at the top, the same title I read 21 before, and it is Bates XIFI_0028977, which I 22 believe should be the same Bates that begins your 23 citation. 24 Do you agree that this is the document you 25 were quoting from in your declaration?
30 1 stack in 6.1.3? 2 A In that document, yes. 3 Q Okay. So then looking at your 4 declaration, I'm looking at the very top of this 5 page, which is part of Paragraph 44. You say: 6 "Each layer in the hierarchical structure performs 7 designated functions while providing services to 8 the layer immediately above and receiving services 9 from the layer immediately below." 10 Did I read that correctly? 11 A Yes. 12 Q Okay. And when you say, "the layer 13 above," you mean, for example, the network layer 14 sitting on top of the data link layer, correct? 15 Or, rephrasing, the network layer is 16 immediately above the data link layer, correct? 17 A As the illustrated flow is concerned, yes. 18 Q Okay. And the physical layer is 19 immediately below the data link layer, correct? 20 A Again, as illustrated, yes. 21 Q Okay. And when you say that the layer 22 provides services to the layer immediately above 23 and receives services from the layer immediately 24 below, would you also agree that a layer cannot 25 provide or receive services from a non-adjacent	32 1 And I'm happy to scroll through it if 2 that's helpful to you. 3 A One second, please. 4 Yes, it's the same document. 5 Q Okay. Excellent. Thank you so much. 6 I am going to go to a different section of 7 that document than you quoted from. I'm turning 8 to Page 50 of the PDF, and I'd like you to focus 9 on Section 7.5.4.2.2. I've zoomed in a little 10 bit. 11 Can you see that section on your screen? 12 A I do have that open, yes. 13 Q Okay. Great. 14 And I'm just going to read that section 15 into the record and ask you if I've read that 16 correctly: "The control of interconnections of 17 data circuits, which are in the physical layer, 18 from the network layer require" -- "requires 19 interaction between a network entity and a 20 physical entity in the same open system. Since 21 the reference model permits direct interaction 22 only between adjacent layers, the network entity 23 cannot interact directly with the physical entity. 24 This interaction is thus described through the 25 data link layer which intervenes transparently to

33 1 convey the interaction between the network layer 2 and the physical layer." 3 Did I read that section correctly? 4 A Yes. 5 Q Okay. And part of what this section that 6 I just read says: "The reference model permits 7 direct interaction only between adjacent layers." 8 Do you agree that that's expressed in this 9 document? 10 A Yes. 11 Q Okay. So pursuant to the OSI model, any 12 interactions between non-adjacent layers has to 13 have an intervening interaction with an adjacent 14 layer, correct? 15 A I'm sorry. Could you restate that 16 question? 17 Q Sure. 18 So using the example in this section, 19 we're talking about an interaction that's going -- 20 an interconnection that's going to go from 21 originating in the physical layer to arriving in 22 the network layer. 23 Do you agree? 24 A Yes. 25 Q Okay. And this section says: "The	35 1 this model to talk to each other and to facilitate 2 communication is what it's disclosing. 3 BY MS. BACT: 4 Q And that's because, and I quote: "The 5 reference model permits direct interaction only 6 between adjacent layers," correct? 7 A Well, those are -- that's the -- the words 8 that are used within that paragraph; that's 9 certainly the case. 10 Q And do you disagree with this document? 11 A I'm not sure I understand the context of 12 that question. 13 Q Do you disagree that the OSI reference 14 model permits direct interaction only between 15 adjacent layers? 16 A Again, the words that are used here, I 17 certainly say that the model permits direct 18 interaction only between adjacent layers. I'm not 19 saying that it doesn't say that. 20 Q And in your understanding of what a POSITA 21 would understand at the time of the invention, 22 would that be contrary to a POSITA's 23 understanding? 24 A No, a POSITA would be familiar with this 25 and understand what's being conveyed with respect
34 1 network entity cannot interact directly with the 2 physical entity"; is that accurate? 3 A Yes. 4 Q And then it further says: "This 5 interaction is thus described through the data 6 link layer which intervenes transparently to 7 convey the interaction between the network layer 8 and the physical layer"; is that accurate? 9 A Yes. 10 Q So do you agree that, for an interaction 11 or an interconnection to take place between the 12 physical layer and the network layer, the data 13 link layer must intervene? 14 MR. SCHMIDT: Objection to form. 15 BY THE WITNESS: 16 A So what's being disclosed in this is -- in 17 this section of this document is the -- the 18 conveyance of how this model is supposed to be 19 understood by a POSITA. 20 It is, for example, saying that the data 21 link layer is described, for example, as 22 intervening. So it's communicating to a POSITA, 23 based on the plain and ordinary meaning of these 24 terms, that the data link layer's purpose is to 25 provide the ability for those two layers within	36 1 to informing them of how the model was intended to 2 provide a structure and framework within the 3 abstractions of the layering concepts that are 4 within the document. 5 So, no, it would actually be consistent 6 with what I'm saying. 7 Q Okay. And are you aware of any other 8 layer stack model -- for example, the other ones 9 we were discussing earlier -- that would permit -- 10 that would have a different rule, or would they be 11 consistent with this rule? 12 A Well, we could look at each one in terms 13 of the controlling document associated with the 14 protocol itself, but usually the protocol -- or 15 the documents that outline the protocols have 16 statements like this in them, and a POSITA would 17 understand what's being conveyed and what -- how 18 that informs them for implementing the protocol. 19 So certainly I would expect to see this 20 type of nomenclature in other models for other 21 protocols. 22 Q Thank you. 23 And would you agree that it's fair to say 24 that it would be unconventional in wireless 25 networking, in 2013, to have a layer model that

37 1 would allow direct interaction between 2 non-adjacent layers? 3 A No, I wouldn't say -- I wouldn't 4 characterize it that way. There's certainly 5 enough -- there are many different models, and 6 we'd have to go through each one. 7 I can't say that every single one would 8 have the same language, the strict language that's 9 in here. 10 Now, the understanding from a POSITA, 11 we -- again, we'd have to go ahead and compare 12 each one of those to what is actually understood 13 by a POSITA from the documents that provide the 14 reference model. 15 Q Okay. But, sitting here today, you can't 16 think of a model that would have a contrary 17 statement in it about communication between 18 non-adjacent layers? 19 A What I would say is that a POSITA 20 understood that these documents -- these reference 21 documents provide them, again, an outline for how 22 the model's being disclosed and trying to convey 23 how that should be understood. 24 They would also understand that, for 25 example, the OSI model has seven layers, and for	39 1 between non-adjacent layers. 2 Can you think of one right now, Dr. Mahon? 3 A Well, my answer is that, again, permitting 4 communications between different layers of the 5 protocol, whatever protocol we were discussing, 6 the model may include, again, similar language 7 that says -- uses words such as "only" or "direct 8 interaction," for example. 9 And as far as calling out one that does 10 not include that, I would have to, again, go -- go 11 review every single protocol to say whether my 12 reference to it would be correct or not to look at 13 these -- this specific language in the model 14 itself. 15 Q Okay. Thank you. I appreciate that. 16 So I'm going to take down the basic 17 reference model and take you back to your 18 declaration. 19 And then if you could please scroll down 20 to Paragraph 47 regarding the preamble. Let me 21 know when you're there. 22 A I am there. 23 Q Okay. And it's your opinion that the 24 preamble of the various independent claims of the 25 asserted patents should be construed as limiting;
38 1 decades that has basically been ignored. Most 2 applications use a four or five-layered protocol 3 stack for implementing the same thing that's 4 disclosed here. 5 And that's an example of how the model is 6 under -- these models are understood by a POSITA 7 with helping them to design protocols that can 8 interact with other equipment and systems that are 9 being developed within this space. 10 Q Okay. So my question was: Sitting here 11 today, you can't name a model that would have a 12 contrary statement about communication being 13 permitted between non-adjacent layers, and I take 14 it that your answer is no? 15 A Well, I'm trying to provide you my answer, 16 which is that the question from the perspective of 17 a POSITA, first of all, I'd have to go look at 18 every single one of those protocols to see if that 19 specific language is in there. 20 But that's also a separate question of how 21 that's understood by a POSITA in terms of 22 implementing the particular protocol. 23 Q Okay. But I didn't ask you about that. I 24 asked you if you could name a protocol that would 25 have a rule that permits direct interaction	40 1 is that correct? 2 A That is correct. 3 Q Okay. And looking to Paragraphs 49 and 50 4 of your declaration, the basis for your opinion 5 that the preamble should be construed as limiting 6 is that they provide antecedent basis for the 7 terms recited in the body of the claims; is that 8 fair to say? 9 A Yes. 10 Q Okay. And I believe that you list out the 11 actual preamble in Paragraph 47 of your 12 declaration. 13 Do you agree? 14 A Yes. 15 Q Okay. And I'll just read them for 16 clarity. 17 You say: "The preamble in 18 independent 1" -- "independent claim 1 of the 19 '591, '976, '756, and '564 patents reads: 'A 20 wireless networking device comprising"; is that 21 correct? 22 A That's correct. 23 Q And the next sentence in your declaration 24 reads: "The preamble and independent claim 1 of 25 the '337, '414, '105, and '143 patents reads: 'A

41 1 method of improving the performance of a wireless 2 networking device comprising the steps of"; is 3 that correct? 4 A That's correct. 5 Q Okay. And then the next sentence reads: 6 "The preamble in independent claim 1 of the '933 7 and '177 patents reads: 'A method of improving 8 the performance of circuitry comprising the steps 9 of"; is that correct? 10 A That's correct. 11 Q And, finally, the preamble in independent 12 claim 1 of the '198 patent reads: "A method for 13 improving the operation of circuitry that is 14 adapted to be used in a wireless networking 15 device, the method comprising the steps of." 16 Is that correct? 17 A That's correct. 18 Q Okay. And then in Paragraph 48, you refer 19 to various of the patents' independent claim 20 preambles, and you say that: "A POSITA reading 21 the independent claims of the '591, '976, '756, 22 '564, '337, '414, '105, '143, and '198 patents 23 would understand that the 'wireless networking 24 device' term in the body of these claims refers to 25 the same 'wireless networking device' introduced	43 1 basis. 2 Q Okay. And in your declaration from 3 Paragraphs 47 to 50, which is the entirety of the 4 section regarding the preamble, that -- those two 5 terms provide antecedent basis is the sole basis 6 of your opinion that the preambles are limiting, 7 correct? 8 A As I say that -- in that Paragraph 50, 9 that's my understanding from counsel based on how 10 that antecedent basis can be formed, and, yes, 11 that is specifically what I am limiting to -- my 12 opinion to within that -- those sections. 13 Q Okay. Thank you. 14 MS. BACT: So I'm about to continue to 15 scroll through your declaration and shift gears to 16 wireless networking device. 17 We've been going for a little under an 18 hour. Just please do let me know if you want a 19 break. This will, you know, probably take us over 20 an hour, But if that's okay with you, we can 21 continue. 22 If anybody else, including our wonderful 23 reporter or videographer, needs a break, shout it 24 out. 25
42 1 in the preamble." 2 Is that correct? 3 A Yes. 4 Q And then you finish the paragraph by 5 saying: "A POSITA would recognize that the 6 'circuitry' term in the body of the claims of the 7 '933, '177, and '198 patents refers to the same 8 circuitry introduced in the preamble." 9 Is that correct? 10 A Yes. 11 Q Okay. And when we just read out those 12 preambles, they included additional language 13 beyond the terms "wireless networking device," and 14 "circuitry," correct? 15 A Yes. 16 Q Okay. And it's your opinion that the only 17 terms that provide antecedent basis to the body of 18 the claim are "wireless networking device" and 19 "circuitry," correct? 20 A Those are the terms I'm pointing to, yes. 21 Q Okay. And none of the rest of the 22 language is part of what provides antecedent 23 basis, correct? 24 A I'm pointing to just those specific terms 25 within the preambles as providing antecedent	44 1 (WHEREUPON, discussion was had off the 2 stenographic record.) 3 MS. BACT: So for the next section, I'm 4 just going to pull up and ask to be marked two of 5 the asserted patents. 6 I'm first going to be asking that we mark 7 the -- hold on. I'll just pull it up. 8 (WHEREUPON, Mahon Exhibit No. 5 was 9 presented to the witness.) 10 BY MS. BACT: 11 Q So, Dr. Mahon, let me know when you see a 12 document on your screen. 13 A The '591 patent; is that correct? 14 Q Yes, U.S. Patent Number 11,818,591 to 15 Manapragada. 16 Do you agree that this is the '591 patent 17 asserted in this case? 18 A Yes. 19 Q Okay. Great. 20 MS. BACT: I'll ask that this be marked as 21 Exhibit 5. 22 And I'm going to take that down and just 23 quickly put up another patent so we can use those 24 together. 25

45 1 (WHEREUPON, Mahon Exhibit No. 6 was 2 presented to the witness.) 3 BY MS. BACT: 4 Q Dr. Mahon, let me know when you can see 5 the document on your screen. 6 A I see it. 7 Q Okay. Great. 8 And this is U.S. Patent Number 11,856,414 9 to Manapragada. 10 Do you agree? 11 A Yes. 12 Q And this is the '414 patent asserted in 13 this case, correct? 14 A Yes. 15 Q Great. 16 MS. BACT: So I'll ask that this be marked 17 as Exhibit 6. 18 BY MS. BACT: 19 Q Okay. So I'm going to take that down and 20 just take us back to your declaration. 21 A Oops. One second, please. 22 Q And-- I closed it. Let me reopen your 23 declaration. My apologies. 24 All right. Well, I'm not going to put it 25 up on the screen because I understand we're both	47 1 network. 2 Q Okay. And looking at Paragraph 53, it's 3 your opinion that each of the 11 patents are -- 4 excuse me, the independent claims of each of the 5 11 patents include a distinction between a, quote, 6 wireless networking device and a, quote, 7 recipient? 8 A Yes. 9 Q Okay. What types of devices would a 10 POSITA understand to be a wireless networking 11 device? 12 A Well, I disclose in and discuss within my 13 declaration that the wireless networking device -- 14 and I have it here somewhere -- provides the 15 capability for, as an example, other devices to 16 access networks and networking capability. 17 Q And we'll get to that that you -- that is 18 one of your opinions, but I believe you opine that 19 a wireless networking device is an access point, 20 correct -- or could be an access point? 21 A Certainly an access point is a wireless 22 networking device from the perspective of a 23 POSITA. 24 Q And a relay would also be a wireless 25 networking device?
46 1 looking at it, but I wanted to make sure I could 2 look at it with you. 3 And then I'll go to the "Wireless 4 Networking Device" section of your declaration, 5 which begins on Page 15 at Paragraph 51. 6 Are you there with me? 7 A Yes. 8 Q Okay. Great. 9 So scrolling down to Paragraph 52, you 10 opine that you disagree with XiFi's proposed 11 construction because it does not meaningfully 12 distinguish between the types of devices that a 13 POSITA would recognize comprise a wireless 14 network; is that correct? 15 A Yes. 16 Q Okay. And so it's your opinion that a 17 proper construction of the term "wireless 18 networking device," should distinguish 19 meaningfully between the different types of 20 different devices that a POSITA would recognize 21 comprise a wireless network, correct? 22 A A proper construction would certainly 23 clarify to a POSITA and fall within the POSITA's 24 understanding within the plain and ordinary 25 meaning that there are distinct devices within a	48 1 A Yes. 2 Q Could an access point ever be a recipient? 3 A Within the context of the disclosures in 4 the patent, you would have to look at the claim 5 language with the functionality and the 6 implementation that is occurring at that 7 particular time if it's a narrow case. 8 But within the disclosures of the patent, 9 it's certainly discussing only -- discussing the 10 use of an access point in a relay, for example, as 11 a wireless networking device and not illustrating 12 it as a specific recipient, or limiting it to a 13 recipient, I should say. 14 Q What type of device is a recipient? 15 A Well, to be consistent from the 16 perspective of a POSITA within the disclosures of 17 the patent, a recipient within the claims is a 18 device that would -- a POSITA would consider, for 19 example, an end-point device, would be something 20 that would be able to be considered a recipient. 21 Q And let me see if I can find where you use 22 that term. 23 Okay. So what types of devices would 24 constitute a network end-point? 25 A An end-point to a POSITA is a device

49 1 that's at the end of a wireless network. So it 2 would be, for example, a user could be an 3 end-point device and that could be -- that user 4 could be a laptop, it could be a phone, it could 5 be an electronic -- any basically electronic 6 device that would be involved or requested access, 7 for example, to a network and utilizing a network. 8 Q Okay. And could one of those end-point 9 devices, like a phone or a laptop, ever be a 10 wireless networking device? 11 A Well, if it was being used to provide 12 other devices access to a network, within that 13 context, it could be considered a wireless 14 networking device. 15 Q Okay. So there are cases where you agree 16 that those devices would be wireless networking 17 devices, correct? 18 A As I stated, if it's providing networking 19 capabilities to other devices connecting to it, 20 then it would be a wireless networking device. 21 Q Okay. And we'll come back to that. I 22 promise. 23 I'm going to share my screen to the -- 24 show you some of the claims of the '414 patent, 25 which is Exhibit 6.	51 1 Q Okay. So the patent actually contemplates 2 that those devices that we just discussed are, in 3 fact, wireless networking devices at least some of 4 the time, correct? 5 A It's contemplating that, yes. 6 Q Okay. And, in fact, it would have to be 7 the case for independent claim 1 to include those 8 devices as wireless -- wireless networking devices 9 because there are dependent claims that explicitly 10 recite those devices, correct? 11 A That's correct. 12 Q Okay. So coming back to your declaration 13 you say in Paragraph 53 that: "The preamble of 14 claim 1 of the '591 patent, which is 15 representative of other claims for this analysis, 16 recites a wireless networking device comprising 17 the further limitations of the claim. 18 Specifically, the wireless networking device 19 comprises, a, quote, processing interface and, 20 quote, transceivers that are associated with, 21 quote, actual MAC and, quote, actual PHY 22 interfaces." 23 Do you agree that that's what your 24 declaration reads? 25 A Yes.
50 1 And so we've got -- let me know when you 2 can see that on your screen. 3 A Okay. 4 Q It's a little small. I can make it bigger 5 for you. 6 A That's fine. 7 Q Okay. Great. 8 So you see the number of the '414 patent 9 at the top of the screen and that I'm showing you 10 columns 15 and 16 of the patent; do you agree? 11 A Yes. 12 Q So I'll direct your attention to claim 14, 13 which reads: "The method of claim 1, wherein the 14 wireless networking device comprises a handheld 15 computing device"; is that correct? 16 A Yes, that's correct. 17 Q Okay. And claim 15, which recites: "The 18 method of claim 14 wherein the handheld computing 19 device comprises a tablet." 20 Is that correct? 21 A That's correct. 22 Q Okay. And then we've also got claim 22: 23 "Where the method of claim 1, wherein the wireless 24 networking device comprises a telephone," correct? 25 A That's correct.	52 1 Q Okay. So now I'm going to pull up the 2 '591 patent. We can look at it together. 3 Let me know when you see the '591 patent. 4 A Okay. I have it. 5 Q Okay. I'm going to make it bigger so it's 6 readable. Does that feel readable to you? 7 A Yes, I can read it. 8 Q Okay. I am going to go down to column 3. 9 I've got some figures to go through. There we go. 10 Column 3. So this section is referring to 11 Figure 1, if you read along with me at about 12 line 12. It says: "Further referring to 13 Figure 1." 14 So this section will be describing 15 Figure 1; do you agree? 16 A Yes. 17 Q And we could refer to this as the Figure 1 18 embodiment; is that fair to say? 19 A It is addressed to Figure 1, so it would 20 be certainly understood to be a particular 21 discussion of a -- the embodiment of Figure 1. 22 Q Okay. So I can give you some time to look 23 this over, but at about Line 13, it says: "The 24 process layer includes a decision block 106..." 25 and it continues down.

53 1 Would you agree that this paragraph 2 describes the process layer? 3 A It is discussing the process layer as -- 4 as stated here, "the process layer includes..." 5 and it goes through the various components. 6 So it's certainly talking about -- and 7 referencing that figure specifically detailing the 8 blocks that are indicated that are within that 9 process layer, so yes. 10 Q And earlier we just discussed that the 11 wireless networking device has to include a 12 processing interface. Would a POSITA understand 13 the process layer described here to be a 14 processing interface? 15 A Well, the -- a POSITA reading this with 16 respect to what's disclosed is that you have 17 something that's being referred to as a -- a 18 processed layer. 19 And specifically it says, -- which is 20 consistent with the understanding of a POSITA -- 21 is that these elements interface with each other, 22 and, therefore, they provide interfaces. 23 So within that context, it's discussing 24 both of those aspects of terms that are familiar 25 to a POSITA, so I guess that would be my best	55 1 to line 41 continues to discuss various components 2 of the process layer that were originally 3 referenced above, correct? 4 A Yes, it's still continuing the discussion 5 associated with that Figure 1. 6 Q Okay. So we've got a process layer that's 7 described here. 8 Then we go to the next paragraph beginning 9 at line 42 through line 51. And this includes a 10 description of an actual MAC layer and an actual 11 PHY layer, correct? 12 A Yes. 13 Q And the actual MAC layer and actual PHY 14 layer are associated with transceiver resources, 15 correct? 16 A Yes, that's what's stated in that section. 17 Q Okay. So going back to the elements of a 18 wireless networking device that you listed in 19 Paragraph 53 of your declaration, would a POSITA 20 recognize a process layer, actual MAC, actual PHY 21 layers, and transceivers in this description? 22 A You said Paragraph 53? 23 Q Mm-hm -- yes. Excuse me. I should 24 verbalize as well. 25 A And could you reask the question, please?
54 1 answer to that question. 2 Q Okay. Would a POSITA generally understand 3 "layer" and "interface" to be interchangeable 4 terms? 5 A I would say in general not, but you -- it 6 depends on context. Certainly, functional blocks, 7 and, as discussed here, layers, they have to 8 interface with each other. It's possible that you 9 could use the nomenclature as -- within that 10 context of being interchangeable, but that's in 11 general. 12 You think of an interface as something 13 that is what it says, which is it's a -- an 14 element of something that is communicating or 15 interfacing with something else. 16 So that's generally how it would be 17 understood by a POSITA. 18 Q Okay. So we can agree that the paragraph 19 we just looked at describes the process layer of 20 the Figure 1 embodiment, or it partially describes 21 the process layer of the Figure 1 embodiment, 22 correct? 23 A It is discussing the process layer, yes. 24 Q Okay. And I'm going to scroll down. And 25 the next paragraph beginning at line 33 and going	56 1 Q Sure. Looking at the description in the 2 specification between column 3, line 12 and 3 column 3, line 51, would a POSITA recognize the 4 structures you listed in Paragraph 53: The 5 processing interface, transceivers, and actual MAC 6 and actual PHY interfaces? 7 A Well, if I understand your question, 8 certainly I'm referencing those terms in 9 Paragraph 53 with respect to my analysis of the 10 distinctions between a wireless networking device 11 and a recipient, and those elements are discussed 12 with respect to the disclosures in the 13 specification associated with Figure 1. 14 If I understand that's your question, then 15 certainly those terms are encompassed there. 16 Q Yes, that was my question, are the four 17 terms that you noted make up a wireless networking 18 device disclosed in that description we just 19 looked at together. And you agree that they are, 20 correct? 21 A Yes, those terms are discussed in that 22 section of the spec. 23 Q Okay. Thank you so much. 24 Okay. I'm going to scroll down to the 25 paragraph after we've just been looking at. We

57 1 ended looking at line 51, and we'll skip just a 2 little bit down to line 63. 3 And I will read you this section: 4 "Additionally, the wireless networking system may 5 be employed and/or embedded into a variety of 6 electronic devices, including wireless access 7 points, base stations, handhelds, tablets, 8 computers, telephones, televisions, DVD players, 9 BluRay players, media players, storage devices, or 10 any such devices that use wireless networks to 11 send and receive data including standalone add-on 12 devices such as dongles that serve as wireless 13 interfaces between devices." 14 Did I read that correctly? 15 A Yes, you read that correctly. 16 Q Okay. And this says that the wireless 17 networking system -- I'm scrolling back down to 18 column 3, line 63 -- may be employed and/or 19 embedded into any of those devices that I just 20 listed, correct? 21 MR. SCHMIDT: Objection to form. 22 BY THE WITNESS: 23 A So what I -- it certainly uses those -- 24 that language. And, specifically, I think I have 25 a discussion of this in my declaration regarding	59 1 again, would -- is distinct from a recipient as 2 disclosed within the spec, or a user, and my claim 3 term analysis is consistent with that. 4 BY MS. BACT: 5 Q Okay. So I'm looking for a, sort of, more 6 straightforward answer to my question, which is 7 that: Would a POSITA in possession of this 8 description of the Figure 1 embodiment understand 9 that the wireless networking system of Figure 1 10 may be employed and/or embedded into any such 11 devices that use wireless networks to send and 12 receive data, including standalone add-on devices, 13 et cetera; yes-or-no, please, Dr. Mahon? 14 MR. SCHMIDT: Objection to form. 15 BY THE WITNESS: 16 A Well, again, I -- I'm answering that 17 question specifically saying that what's being 18 disclosed is that that capability can be embedded 19 and it's consistent, and even specifically says 20 that those devices have the capability of -- to 21 serve as wireless interfaces between devices. 22 So it's disclosing to a POSITA, that if 23 you want to be consistent with what the -- is 24 being disclosed within this Figure 1 and 25 processing interface, that if you are -- want the
58 1 this term -- or at least associated with this 2 disclosure. 3 I know Dr. Akl has it in his declaration, 4 and the -- what's being disclosed here certainly 5 is consistent with my analysis and my declaration 6 of the distinction between the devices and 7 actually supports my understanding from the 8 perspective of a POSITA that there is a 9 distinction between a wireless networking device 10 and a recipient, or a user, for example. 11 BY MS. BACT: 12 Q Okay. But you agree that the 13 specification states that the Figure 1 embodiment 14 can be embedded into, quote, any such device that 15 use wireless networks to send and receive data? 16 A What's being disclosed here is -- 17 MR. SCHMIDT: Objection -- hold on. 18 Objection to form. 19 THE WITNESS: Sorry. 20 BY THE WITNESS: 21 A What's being disclosed here is, again, 22 based on my analysis. And from the perspective of 23 a POSITA, the plain and ordinary meaning is that a 24 networking capability can be embedded in a device 25 to make it a wireless networking device, which,	60 1 device and/or the device serves as a wireless 2 interface between devices, then you would include 3 this into the device. 4 BY MS. BACT: 5 Q Can you direct me to where in the 6 '591 patent it says: "Serves as an interface"? 7 A It's line -- you had just read it 8 previously. The sentence three -- one, two, 9 three -- 10 Q I see. 11 A -- on column 4. 12 Q "Such as dongles that serve as wireless 13 interfaces between devices." 14 So would you agree with me, Dr. Mahon, 15 that "such as" is an example? 16 A Well, specifically, this -- end of this 17 paragraph going from column 3 to 4, is -- is the 18 way this is being disclosed is a list of devices 19 and it includes a dongle. And that it's saying 20 that those devices that were just listed serve as 21 wireless interfaces between devices, which is 22 consistent with the claim term "wireless 23 networking devices" and how a POSITA would 24 understand it. 25 Q So it's your opinion that the phrase "that

61 1 serve as wireless interface between devices" 2 applies to the entire list and not just to 3 dongles? 4 A Well, it's certainly not just restricting 5 it to dongles, and that is consistent with both 6 the way that I read that as well as the 7 understanding of a POSITA with respect to what's 8 being disclosed here in columns 3 and 4. 9 Q So you disagree that the Figure 1 10 embodiment would be able to be embedded into any 11 such device that you -- devices that use wireless 12 networks to send and receive data? 13 MR. SCHMIDT: Objection to form. 14 BY THE WITNESS: 15 A No, I didn't say that. I'm saying that -- 16 BY MS. BACT: 17 Q Would you answer -- 18 A I'm saying that it's consistent with 19 the -- my answer is consistent with the device 20 including the capability of serving as an 21 interface between devices. 22 And certainly the device if you're 23 embedding it into is one of the devices such as a 24 tablet or a phone that is receiving data, it's not 25 inconsistent with that, and it's -- it's a	63 1 BY MS. BACT: 2 Q Where is it being disclosed that it needs 3 to provide network access to another device? 4 A It's being disclosed, both from the 5 perspective of a -- the plain and ordinary meaning 6 of the terms what wireless networking device is, 7 as well as what's specifically presented here as 8 read by a POSITA, that it serves as a wireless 9 interface between devices. 10 It's all consistent. 11 Q So it is your opinion that all of those 12 devices, in order to be a wireless networking 13 device, must serve as a wireless interface between 14 devices? 15 A It provides wireless network access to 16 other devices, yes. 17 Q Because it -- this portion of the 18 specification includes the phrase "including 19 standalone add-on devices such as dongles that 20 serve as wireless interfaces between devices"? 21 A No, my opinion's formed on the entire 22 disclosure, and that's consistent with my analysis 23 of the entire disclosure. There's nothing 24 inconsistent with that last -- well, with the last 25 sentence in that paragraph that ends on top of
62 1 coherent read of what's being disclosed in 3 and 4 2 from the perspective of a POSITA. 3 Q So I'm asking a little bit of a different 4 question. Because I don't disagree -- you know, 5 and my opinion doesn't matter, but I certainly 6 understand that it could include something that 7 serves as a wireless interface between devices, 8 but I'm asking you a different question. 9 I'm going to ask it, and I'm going to try 10 to be as clear as possible. 11 Do you agree that a person of skill in the 12 art, reading columns 3 and 4 of the '591 patent, 13 would understand that the wireless networking 14 system of Figure 1 may be employed and/or embedded 15 into any such devices that use wireless networks 16 to send and receive data? 17 MR. SCHMIDT: Objection to form. 18 BY THE WITNESS: 19 A Again, consistent with what I've said, 20 that what's being disclosed there, is you can take 21 this system, you can embed it in a device in order 22 to allow that device to provide wireless network 23 access to other devices. And so it's -- that's 24 what's being disclosed there. 25	64 1 column 4. 2 Q So other than the phrase at the top of 3 column 4: "Including standalone add-on devices 4 such as 'dongles' that serve as wireless 5 interfaces between devices," what disclosure do 6 you rely on for your opinion that a wireless 7 networking device must provide network access to 8 another device? 9 A It's my perspective and analysis from a 10 POSITA in what's being disclosed as the wireless 11 networking system and how it's disclosed in this 12 part of the specification, and I'm saying that, 13 based on that analysis, this section we've been 14 talking about from column 3 to 4, provides 15 additional support to my analysis. 16 Q Thank you, Dr. Mahon. 17 And I'm asking you where in column 3 and 4 18 you find that support. You can take your time. 19 A I'm saying every -- everything from -- all 20 the lines we've been looking at, from 13 through 21 the end of 4-3. 22 Q Can you give me an example of a few lines 23 that include support for your position that a 24 wireless networking device must provide network 25 access to another device?

65 1 A What's -- the entirety would be what's 2 being disclosed is that process. It's to provide 3 wireless networking capability. That term has 4 meaning to a POSITA, and what's being disclosed in 5 columns 3 and 4 is consistent with that. 6 Q So other than the line "including 7 standalone add-on devices such as 'dongles' that 8 serve as wireless interfaces between devices," 9 you're unable to point to specific lines within 10 columns 3 and 4 that support your position that a 11 wireless networking device must provide network 12 access to another device? 13 MR. SCHMIDT: Objection to form. That's a 14 mischaracterization. And it's argumentative. 15 MS. BACT: He can -- 16 BY THE WITNESS: 17 A I agree -- 18 MS. BACT: -- answer. 19 BY THE WITNESS: 20 A I agree it's a mischaracterization of what 21 I've said several times, is -- which is I'm 22 reading this from the perspective of a POSITA in 23 the plain and ordinary meaning of what a wireless 24 networking device is, and what I've said is 25 everything there is consistent and that particular	67 1 and even in column 2 if you want to go back to 2 that. 3 A Well, I don't know how else to explain it 4 other than what's being disclosed here, and as 5 we've gone through several times is -- with 6 respect to Figure 1 and the embodiment, and then 7 what's disclosed throughout these columns is 8 consistent with the devices that are including 9 this wireless networking system, which the system 10 is being embedded in any one of these devices, is 11 providing networking capability to other devices. 12 It's providing an interface so that those 13 other devices can access networking services. 14 Q So I'm -- you earlier said I 15 mischaracterized you when I said, I believe, 16 something like: Other than the phrase at the top 17 of column 4 "including standalone add-on devices 18 such as 'dongles' that serve as wireless 19 interfaces between devices," you cannot point me 20 to a specific selection within columns 3 and 4 21 that supports the idea, in your opinion, that a 22 wireless networking device does -- must provide 23 network access to another device. 24 And I am offering you the opportunity now 25 to explain how I've mischaracterized you and to
66 1 phrase is included within that consistent 2 understanding. 3 BY MS. BACT: 4 Q So, Dr. Mahon, let's assume -- and it's 5 actually the case -- I am not a POSITA. I would 6 like you to point me to any phrase, any phrase 7 that you want to, in columns 3 and 4 and explain 8 to me why that phrase supports or helps support 9 your opinion that a wireless networking device 10 must provide network access to another device? 11 A Well, as I discuss in my declaration 12 which, again, is consistent with how a POSITA is 13 reading the disclosures and the invention in 14 the -- in the patent's claims of, number one, you 15 need to be consistent with providing distinctions 16 between types of networking -- types of devices, 17 what is being disclosed as the inventive 18 networking capability within this patent or within 19 the patents. 20 So it's all consistent within there. 21 Q So I'd definitely like to dig into why you 22 believe that there has to be a distinction between 23 the types of devices, but I'm still not 24 understanding where that is coming from in the 25 Figure 1 embodiment as expressed in columns 3, 4,	68 1 point me to a selection of text anywhere in the 2 Figure 1 embodiment, including back to column 2 if 3 you'd like, that supports your opinion that a 4 wireless networking device must provide network 5 access to another device other than the phrase at 6 the top of column 4: "Including standalone add-on 7 devices such as 'dongles' that serve as wireless 8 interfaces between devices." 9 A That was -- 10 MR. SCHMIDT: Objection to form. 11 BY THE WITNESS: 12 A I'm saying that the phrase that you're 13 trying to exclude -- which is fine -- if I exclude 14 that, it's -- my opinion is still consistent from 15 the perspective of a POSITA of what's being 16 disclosed here. 17 That particular phrase that -- if you 18 exclude that, it's -- it's still consistent, 19 meaning what's being disclosed here is a 20 networking capability, that word means something; 21 and that -- that -- end of that paragraph that's 22 at the top of para- -- column 4 just emphasizes 23 that. 24 If it wasn't there, my analysis would be 25 the same; it just provides additional support.

69 1 BY MS. BACT: 2 Q Okay. And I think this may be where we've 3 misunderstood each other. I'm not trying to say 4 that we're going to exclude that phrase. I 5 understand that phrase is part of the disclosure 6 and that you're relying on that phrase. 7 I'm asking you if there are any other 8 particular phrases that you can point to within 9 the description of the Figure 1 embodiment that 10 explains why you have the opinion that a wireless 11 networking device must provide network access to 12 another device. 13 And if that is the only phrase within the 14 Figure 1 embodiment that you would point to 15 specifically, that's fine; please just specify 16 that. 17 MR. SCHMIDT: Objection to form. 18 BY THE WITNESS: 19 A Yeah, I'm not narrowing my opinion to just 20 that phrase and/or -- I'm just pointing to that 21 as, you know, that's consistent with my 22 understanding of what's being disclosed here. 23 That's the only thing I would -- the reason I 24 brought that up. Not to say that that's what I'm 25 relying on.	71 1 wireless networking device, it's comprehensive 2 within that -- my opinions that are there, this is 3 consistent with those opinions. 4 Q Okay. And, just summarizing, Dr. Mahon -- 5 and thank you for bearing with me -- after this 6 entire discussion that we've had, you have not 7 pointed me to any specific phrases in the 8 description of the Figure 1 embodiment other than 9 the phrase "including standalone add-on devices 10 such as 'dongles' that serve as wireless 11 interfaces between devices," that supports your 12 opinion that wireless networking devices must 13 provide network access to other devices. 14 Is that a fair statement, Dr. Mahon? 15 MR. SCHMIDT: Objection to form. 16 BY THE WITNESS: 17 A Again, I think that is rearranging and 18 trying to recharacterize what I'm saying. I'm 19 saying that the entire disclosure there is 20 consistent from the perspective of a POSITA in the 21 plain and ordinary meaning of the term "wireless 22 networking device" and how Figure 1 is an 23 embodiment of the wireless networking system in 24 a -- in a device to provide that -- 25
70 1 BY MS. BACT: 2 Q So you're not relying on that phrase? 3 MR. SCHMIDT: Objection to form. That's a 4 mischaracterization. 5 BY MS. BACT: 6 Q Are you relying on that phrase -- 7 A Well, it's -- 8 Q -- "including standalone add-on devices 9 such as 'dongles' that serve as wireless 10 interfaces between devices"? 11 A My opinion, again, from the perspective of 12 a POSITA in the plain and ordinary meaning of 13 what's being disclosed, is that -- that phrase, 14 that end of -- that paragraph is consistent with 15 that understanding. 16 Q Okay. So you -- that phrase is consistent 17 with the understanding you put forward in your 18 opinion. 19 Are there other phrases that you will 20 point me to in the description of Figure 1 that 21 particularly support your opinion that wireless 22 networking devices must provide network access to 23 another device? 24 A Well, again, if we go back to my 25 declaration contained within my analysis of	72 1 BY MS. BACT: 2 Q Okay. 3 A -- that capability. 4 Q Excuse me for interrupting you there at 5 the end. 6 And I'm asking you something just a little 7 bit different, Dr. Mahon. I'm asking you: Have 8 you, in this discussion that we've been having 9 about the Figure 1 embodiment, pointed me to a 10 specific disclosure within the description of 11 Figure 1 embodiment in the common specification, 12 other than the phrase "including standalone add-on 13 devices such as 'dongles' that serve as wireless 14 interfaces between devices," for your opinion, 15 that a wireless networking device must provide 16 network access to another device? 17 MR. SCHMIDT: Objection to form. Asked 18 and answered. 19 BY THE WITNESS: 20 A Yeah, I'm going back -- I don't know how 21 else to explain it other than it's consistent with 22 my analysis from the perspective of a POSITA, 23 reading the embodiment of Figure 1 that's 24 disclosed, and so I'm pointing to the entire 25 embodiment from the perspective of a POSITA.

73 1 I have a discussion of my analysis of what 2 the "wireless networking device" term means, And 3 that's all consistent from my perspective. 4 BY MS. BACT: 5 Q I understand that you're continuing to 6 give me the same answer to my question, Dr. Mahon, 7 but you have not answered it. 8 My question is: Have you provided me any 9 specific citation within the description of 10 Figure 1 embodiment, other than the entirety of 11 the description beyond the sentence "including 12 standalone add-on devices such as 'dongles' that 13 serve as wireless interfaces between devices" that 14 supports your opinion that wireless networking 15 devices must provide network access to another 16 device? 17 MR. SCHMIDT: Objection to form. Asked 18 and answered. 19 BY THE WITNESS: 20 A And my answer is consistent, which is: 21 The entire disclosure there is what I'm pointing 22 to during our discussion, and my opinions, as 23 disclosed in my declaration, are consistent with 24 that answer. 25	75 1 that section on wireless networking device is -- 2 is inconsistent with, we can discuss that. I 3 don't see it from the perspective of a POSITA. 4 Q Okay. I mean, I think the record will be 5 clear that you did not point to any specific 6 portions or any specific reasons why the Figure 1 7 embodiment does not -- it doesn't matter. I don't 8 need to argue to you. I still believe you didn't 9 answer my question, but I'm not going to beat a 10 dead horse. 11 MS. BACT: It might be a good time to take 12 a meal break, seeing that we are just a couple of 13 minutes before your requested time, Dr. Mahon. 14 THE WITNESS: That would be great. 15 MS. BACT: How long would you like? 16 THE WITNESS: Say, how about quarter after 17 or 20 after the hour? 18 MS. BACT: Okay. So let's say 20 after 19 the hour. 20 MR. SCHMIDT: And just before we go off 21 the record, I disagree and I object to the 22 statement by counsel about the witness's 23 testimony. 24 MS. BACT: I can withdraw that statement. 25 I don't need to have that there.
74 1 BY MS. BACT: 2 Q So you are telling me that the entire 3 disclosure of Figure 1 is consistent with your 4 opinion. Please list the aspects of the 5 description of the Figure 1 embodiment that you 6 rely on. 7 A My analysis is based on what's disclosed 8 in the patent specification, including this 9 section. I include that in terms of my analysis 10 and understanding of what this term means with 11 respect to what's being disclosed in the claim 12 terms and the specifications. And I discuss that 13 in my declaration, and, therefore, this section is 14 consistent with that opinion. 15 Q Okay. So it's the entire disclosure is 16 consistent with your opinion is your answer; is 17 that fair? 18 A Well, if we look at my opinion and you 19 want to point me to something that -- specific to 20 discuss, if that's what this process was about, I 21 would say, yes, my opinion is consistent with 22 what's being disclosed here as far as this 23 embodiment. 24 If there's a certain aspect of the 25 embodiment that my opinion in my declaration in	76 1 THE VIDEOGRAPHER: Off the record at 2 10:42 a.m. 3 (WHEREUPON, a recess was had.) 4 THE VIDEOGRAPHER: Back on the record at 5 11:19 a.m. 6 BY MS. BACT: 7 Q Welcome back, Dr. Mahon. 8 During the break, did you speak with your 9 counsel? 10 A I did not speak with him directly, no. 11 Q Okay. Did you speak with him indirectly? 12 A No, I didn't have any substantive 13 discussion with counsel. 14 Q Okay. So I'm going to move on within the 15 topic of wireless networking device to your 16 declaration at Paragraph 55. 17 Will you -- 18 A 50 -- 19 Q -- let me know when you're there. 20 A 55? 21 Yes, I'm there. 22 Q Okay. So in Paragraph 55 you opine: "A 23 POSITA would understand that the distinction 24 between a 'wireless networking device' and a 25 'recipient' is more than just a matter of network

77 1 perspective from which the claim is drafted." 2 Did I read that correctly? 3 A Yes. 4 Q And can you tell me what you mean by "a 5 matter of network perspective"? 6 A From what a POSITA understands what the 7 word "network" is, as well as how it operates. 8 Q Okay. Do you -- so you go on to say -- or 9 sorry. Let me back up. 10 In the paragraph prior, 54, you're talking 11 about the distinction between a wireless 12 networking device, which is the subject of the 13 claim, and a recipient device with which the 14 wireless networking device associates and 15 ultimately communicates; is that correct? 16 A That is what I state in that paragraph, 17 yes. 18 Q So when you're talking about a matter of 19 network perspective, are you talking about who's 20 the transmitter and who's the receiver, or 21 something like that, or is that not where you're 22 going? 23 A It's comprehensive of that. Meaning, how 24 a network operates, what devices are traditionally 25 found, and how they have been used, and what	79 1 So, therefore, my answer to your question 2 is when I say it's from the -- what -- the network 3 perspective, it's not just you point to a 4 structure or, you know, a layout of a network and 5 say, well, that's -- that's a networking device 6 because it's located here. 7 Well, what function does it perform? How 8 does it relate to a POSITA's understanding of that 9 device with respect to what's being disclosed in 10 the claim and in the specification? 11 Q Okay. So let me just see if I can try to 12 understand your opinion. 13 It's your opinion that, because of the 14 functions assigned to a wireless networking device 15 and a recipient, they are different and distinct 16 from one another; is that correct? 17 A They are -- they are different, as 18 disclosed within the -- in how the wireless 19 networking device is disclosed within the claim 20 and the specification, that it's clear, based on 21 my analysis, that there needs to be a distinction 22 between the term "wireless networking device," 23 and, for example, "recipient" or "user" based on 24 what's disclosed from the perspective of a POSITA 25 in the plain and ordinary meaning of those terms
78 1 those -- how those devices function within a 2 network. So it's comprehensive within that, yes. 3 Q I'm just trying to understand your opinion 4 about the distinction between the wireless 5 networking device and the recipient, and I take it 6 that your opinion is -- and correct me if I'm 7 mischaracterizing -- that the wireless networking 8 device has, you know, the claimed qualities that 9 are recited of transmitting to the recipient, and 10 the recipient is the receiver of the transmission 11 from the wireless networking device; is that 12 correct? 13 A Well, what I say in the sentence 14 specifically that you were pointing to and then 15 within my opinions as disclosed in this section is 16 how that term, the "wireless networking device," 17 is disclosed within the claims and also within the 18 claim itself using the term "recipient," and 19 what's disclosed in the patent specification with 20 respect to "user," for example. 21 And then also what's disclosed in the -- 22 the specification associated with the embodiments 23 and inventive aspects of the patent for providing 24 capabilities or providing a wireless networking 25 system for devices.	80 1 given what's disclosed, yes. 2 Q Okay. Thank you. 3 So that is your opinion, and now I'm going 4 to try to understand a little bit of the why 5 behind your opinion. 6 So in that Paragraph 55, where I was just 7 directing you, you said it's more than just a 8 matter of network perspective from which the claim 9 is drafted. 10 And then you follow up by saying: 11 "Elsewhere, the independent claims recite that the 12 wireless networking device's utilization of the 13 available bandwidth of its transceiver does not 14 prevent other wireless networking devices from 15 utilizing a range of frequencies corresponding to 16 the remaining portion of the bandwidth 17 availability of those transceivers"; is that 18 correct? 19 A Yes. 20 Q Okay. So part of the basis of your 21 opinion that there's a distinction between a 22 "wireless networking device" and a "recipient" is 23 that the claim recites, quote, other wireless 24 networking devices; is that correct? 25 A Well, as I amplify my opinion that --

81 1 based on my analysis: "The claims" -- as I have 2 here in the last sentence, for example -- 3 "contemplate other wireless networking devices 4 within the wireless network even though the 5 recited association of the wireless networking 6 device is with the recipient." 7 So I'm pointing to that quote that you 8 just asked me about, as well as other aspects of 9 what are in the claims, as well as within the 10 specification of saying, yes, this is definitely 11 being disclosed as a distinct device from a 12 "recipient" or a "user." 13 Q Okay. And, functionally, the recited 14 "other wireless networking devices" are engaged in 15 the same functions as the claimed wireless 16 networking device; would you agree? 17 A They -- the quote I have is "other 18 wireless" -- "other wireless networking devices," 19 which would be associated with, again, analysis of 20 the claim term that we're talking about. 21 So, yes, they would be considered to have 22 the disclosed wireless networking system in them 23 to provide that capability. 24 Q Right. And we can actually look at the 25 claim language that you're quoting if that's okay	83 1 A Yes, I do see that. 2 Q Okay. And that's an accurate 3 representation of the quoted material that you 4 included in your declaration? 5 A That's correct. 6 Q Okay. And when we look at the rest of the 7 sentence about what the, quote, other wireless 8 networking devices are doing, we see that they are 9 utilizing a range of frequencies corresponding to 10 the remaining portion of the bandwidth 11 availability of the first, second, and third 12 wireless transceivers for data transmission 13 purposes, correct? 14 A Correct. 15 Q Okay. And I just read that language 16 through line -- what is it? -- 51 of column 12, 17 correct? 18 A Correct. 19 Q Okay. So the other wireless networking 20 devices that are recited in the claim are 21 transmitting data, correct? 22 A It's disclosing that the other device is 23 consistent with the contemplated wireless 24 networking devices, meaning the other wireless 25 networking devices have a transceiver for data
82 1 with you. 2 Let me put back up Exhibit 5, which is the 3 '591 patent. And I have it displayed at a small 4 zoom right now just so we can agree that I'm 5 showing you Exhibit 5, the '591 patent from its 6 header at the top, and I'm showing you columns 11 7 and 12. 8 Is that correct? 9 A You are, yes. 10 Q And we can see at the bottom of the screen 11 that claim 1 begins at the bottom of claim -- 12 column 11? 13 A That is -- that is correct. 14 Q Okay. And I'm just scrolling back up to 15 the top of column 12. I'm going to make it bigger 16 for everybody. 17 And the language that you quoted: "Does 18 not prevent other wireless networking devices from 19 utilizing a range of frequencies corresponding to 20 the remaining portion of the bandwidth 21 availability." 22 I'm going to highlight. 23 So do you see where I've highlighted on my 24 screen, the language I just read from column 12, 25 lines 47 through 50?	84 1 transmission. So yes. 2 Q Okay. And, presumably, they are 3 transmitting to a recipient, right? 4 A Well, they're performing a transmission. 5 In terms of whether it's to another wireless 6 networking device or a recipient, it -- you know, 7 that's not discussed here, but certainly there's 8 somebody else receiving that wireless 9 transmission. 10 Q So would you agree with me, Dr. Mahon, if 11 I said that the claimed wireless networking 12 device, you know, of claim 1 that says, you know, 13 "a wireless networking device comprising," that 14 wireless networking device is transmitting data to 15 a recipient, correct? 16 A Well, as I point out, the distinction of 17 the language and then also within claim 1 that 18 we're talking about here, certainly at lines -- in 19 column 12, lines 19 through, looks like, 24, it's 20 talking about an association between a recipient 21 and the first MAC and PHY interfaces, et cetera. 22 So the term is -- the term "recipient" is being 23 used within the claim itself here. 24 And as far as generically wireless 25 transmission of data, it's going to be --

85 1 someone's going to be receiving that data. 2 So I'm not sure if you're specifically 3 talking about this part of the claim element or if 4 you're just talking about in general, if data 5 transmission is received by some other -- is 6 intended to be received by some other wireless 7 component within a given context, but the answer 8 to the latter would be, yes, it's certainly -- 9 somebody is receiving -- intended to receive it. 10 Q Okay. Great. 11 And what I was just thinking of was a 12 little bit further down in the claim where we see 13 that, at line 35-ish of column 12: "Preparing the 14 first data stream for simultaneous transmission to 15 the recipient" and that entire paragraph explains 16 the transmission of a data stream to a recipient. 17 Would you agree with me, given the 18 recitation of claim 1 that we both just cited to, 19 that the wireless networking device claimed in 20 claim 1 is transmitting data to a recipient, at 21 least as part of its function? 22 A Yes, that's what's being disclosed here. 23 You have data for transmission to a recipient as 24 discussed in claim 1. 25 Q Okay. Great.	87 1 and the recipient, both can be receiving 2 transmissions. 3 Q Okay. So I'm going to take this down -- 4 well -- I'll put it back up if we need it. 5 So I want to come back to your declaration 6 then. And you -- you know, you're describing the 7 basis for your opinion that a POSITA would 8 understand that -- the distinction between a 9 wireless networking device, and a recipient is 10 more than just a matter of network perspective 11 from which the claim is drafted. 12 So we talked about the fact that the 13 claims recite a "wireless networking device," they 14 recite a "recipient," and they recite "other 15 wireless networking devices." 16 And is that part of the support for your 17 distinction between a wireless networking device 18 and a recipient? 19 A I'm citing to, again, in terms of 20 amplifying my analysis here and opinion is that 21 the wireless networking device is being used, and 22 as we just looked at in claim 1 for the purposes 23 of creating an association with a recipient and 24 that -- consistent with the claims, as well as the 25 specification, is that there's a distinction
86 1 So the wireless networking device of 2 claim 1 and then the other wireless networking 3 devices also recited in claim 1, are both 4 transmitting data to their respective recipients, 5 correct? 6 A Certainly, the -- yeah, the claim is 7 talking about the section of the claim we're 8 talking about is you're utilizing frequencies that 9 aren't going to interfere with other trans- -- 10 other wireless networking devices transmitting. 11 So the general understanding would be 12 those devices would be transmitting data to either 13 each other or some other device. 14 Q I'm sorry. A wireless networking device 15 could transmit data to another wireless networking 16 device? 17 A Well, there's no restriction on that in 18 this claim in terms of a wireless networking 19 device sending data to another wireless receiver, 20 whatever that wireless receiver's function is -- 21 Q And that -- 22 A -- whether it's the claimed wireless 23 networking device or a recipient, as disclosed as 24 we've discussed within the spec and the 25 distinction between the wireless networking device	88 1 between the wireless networking device and a 2 recipient. 3 But, yes, I am pointing to the examples, 4 and, specifically, yes, claim 1 does contain those 5 disclosures that we've been discussing. 6 Q Okay. And then another part of your 7 analysis that follows from this begins in the next 8 paragraph, 56, where you describe that there are 9 embodiments of the specification that describe 10 something called a "user"; is that correct? 11 A Yes. 12 Q Okay. And then 57 you cite to the 13 Figure 7 embodiment; is that correct? 14 A Yes. 15 Q Okay. And on the next page where 16 Paragraph 57 carries over, you actually reproduce 17 Figure 7; is that correct? 18 A Yes, I do. 19 Q Okay. So you state that: "Node 612A, for 20 example, includes multiple radios A1 and A2," 21 citing the '591 patent at columns 6, 58 22 through 60. 23 Do you agree? 24 A Yes. 25 Q Okay. And then, would you characterize

89 1 these radios as access points? 2 Or let me withdraw and rephrase. 3 And then you state that Radio 1 is, quote, 4 able to broadcast and receive signals within its 5 coverage area to users that are in the area 614, 6 thereby serving as a wireless access point for 7 that area, again, quoting the '591 patent; is that 8 correct? 9 A Yes. 10 Q Okay. So A1 and A2 are radios serving as 11 access points, correct? 12 MR. SCHMIDT: Objection to form. 13 BY THE WITNESS: 14 A The specification discloses that relay 15 radio A2 is a -- well, is a relay. So it's acting 16 as a relay in this disclosed system. 17 BY MS. BACT: 18 Q Okay. Thank you for that clarification. 19 Would you agree that it is your opinion 20 that A1 and A2, being an access point and a relay 21 respectively, are wireless networking devices of 22 the asserted patents? 23 A Yes. 24 Q Okay. And if you could look at Figure 7 25 itself in the middle of Page 17, can you locate A1	91 1 receiving function. It has to decode a wireless 2 signal. 3 Q And would you say that A1 is acting as a 4 wireless networking device when it transmits to 5 A2? 6 A Well, an access point is understood by a 7 POSITA to be a wireless networking device as 8 disclosed within the claim terms. So A1 is 9 certainly acting as a wireless networking device 10 within this figure. 11 Q And is A2 acting as a wireless networking 12 device? 13 A Again, as I discuss within this section of 14 my declaration that A2 is being disclosed as a 15 relay and it is providing a relay capability, 16 which, with respect to the other devices, it's 17 relaying that signal to, yes, it's performing a 18 function of a wireless networking device. 19 Q Okay. And when A1 is acting as a wireless 20 networking device in this scenario, who is the 21 recipient? 22 A Well, in Figure A1 -- I'm sorry, Figure 7, 23 A1 is being disclosed -- and I do cite to this, 24 that there's user, U1, in order to access the 25 internet is using A1 as an access point.
90 1 and A2? 2 A Okay. I see them. 3 Q And there's a double-headed arrow between 4 them, correct? 5 A Yes, there is. 6 Q What does a double-headed arrow mean to a 7 POSITA? 8 A Well, it depends upon the context. Here, 9 based on the fact that A2 is a relay, it's -- to a 10 POSITA, reading the specification and then looking 11 at this diagram, illustration, Figure 7 is that A1 12 is with -- or I should say, A2 is within the 13 propagation range of A1, and it's receiving A1. 14 And then as a relay, as further 15 illustrated here, it's going to relay that message 16 on to, in this case, B1 or this -- this second 17 area. 18 So that's what the double-headed arrow is 19 signifying to a POSITA. 20 Q So A2 is receiving a transmission from A1, 21 and then relaying that transmission to B1? 22 A A2 is acting as a relay, which means it's 23 sensing that signal coming out of A1, and it's 24 basically copying that signal and passing it on. 25 As part of that process, it's performing a	92 1 So within the claim terms of recipient and 2 user and, again, how that's disclosed within the 3 claims and the specification, my answer would be, 4 in this case, U1. 5 Q So imagine I cover up the bottom of the 6 circles and we just are looking at the 7 transmission from A1 to A2 to B1. Is A1 acting as 8 a wireless networking device when it transmits to 9 A2? 10 A Well, A1 is an access point. 11 Q Uh-huh. 12 A And, again, that is a term of art. So 13 term of art says it's a wireless networking 14 device, which means devices use it to connect to 15 networks. That's how Wi-Fi and other wireless 16 systems work with an access point. 17 It's going to transmit whether there's a 18 relay there or not. It's -- you know, if a relay 19 is there, well, then the signal is being 20 duplicated and sent on its merry way. So that 21 doesn't affect how a POSITA understands A1 in the 22 disclosure here. 23 Q Well, so is it -- when I say, when it -- 24 is it acting as the wireless networking device of 25 claim 1, I mean, is it doing the steps of claim 1

93 1 when it transmits to A2? 2 A Well, as I discuss in my declaration, 3 certainly, A1 is -- is encompassed within the 4 understanding of a POSITA with what a wireless 5 networking device is, as disclosed in claim 1. 6 The recipient, as we've discussed in 7 claim 1 and within the understanding of how that 8 is disclosed in the claims and in the patent 9 specification, A1 is acting like a wireless 10 networking device. 11 If you're asking me if A2 is the distinct 12 recipient that I'm talking about in my 13 declaration, the answer's no. 14 Q So if A1 transmits to A2 who relays to B1, 15 is that consistent with performing claim 1 by this 16 embodiment? 17 A Well, that functionality is consistent 18 with what a wireless networking device is. 19 Q Okay. And is it performing the steps of 20 claim 1? 21 A Well, this illustration is specifically 22 just disclosing and providing to a POSITA of how 23 the inventive aspect is maybe used within a given 24 environment and providing, quite frankly, context 25 to what the claim terms mean, which is exactly why	95 1 on that and narrowing scope to that, that's just 2 an aspect of it that would be informing a POSITA 3 of what a wireless networking device is doing. 4 Are A2 and -- I mean, sorry, A2 and B1 as 5 well as the other devices receiving signals from 6 each other? Sure. 7 Q So you do not -- so they're receiving 8 signals, but you do or do not think they are 9 recipients? 10 A I -- as I've said before, no, they're -- 11 based on my analysis, they are not recipients in 12 terms of what that term -- how that is being used, 13 specifically within the claims and the distinction 14 between the types of devices within the 15 specification and within the claims as understood 16 by a POSITA. 17 Q Okay. And when you say "in the 18 specification," where do you mean? 19 A Just the entire -- I'm just referring to 20 the entire disclosures of the specification. 21 Which I'm pointing out specific disclosures here, 22 that's what we've been talking about, that support 23 my understanding and my analysis of what those 24 claim terms mean, and that the entire 25 specification as well as the claims support a
94 1 I'm discussing it. 2 So my answer is: Within that context, the 3 A1 being access point, it being a wireless 4 networking device, this is an illustration of what 5 the con- -- inventive concepts or what the -- what 6 is being disclosed in the claim is doing and how 7 it can be understood. 8 Q Okay. So let me just ask one more time 9 and see if I can get an answer that is what I'm 10 looking for, and otherwise we can move on. 11 In the portion of Figure 7 that depicts A1 12 transmitting to A2 which relays to B1, would you 13 identify a wireless networking device and 14 recipient as you see it in terms of the 15 construction that you've offered? 16 A And as I've tried to articulate, again, 17 there's a distinction within the patent 18 specification associated with wireless networking 19 device and the devices in general, including a 20 recipient being different than that wireless 21 networking device. 22 So Figure 7 is disclosing aspects of that 23 including the users, as we've discussed. But that 24 particular functionality that you just mentioned, 25 that trace functionality, if you're just focusing	96 1 distinction between those devices as opposed to 2 just saying all those devices are the same. 3 They're not, based on my analysis. 4 Q Okay. So you mentioned the users, U1, U2, 5 and U3, correct? 6 A Yes, I do point to those. 7 Q Okay. And we mentioned earlier that a 8 user is not just a person; it's a person holding a 9 device, right? 10 A I don't remember that. I -- certainly, a 11 user in this context is a device. Whether there's 12 someone holding it there, I don't -- I don't see 13 it pictured. 14 Q Fair enough. A user is not -- a user must 15 involve a device, correct? 16 A Yes, that's reasonable. I know of no one 17 that can receive -- human, that can receive a 18 wireless signal by themselves without some form of 19 electronics. 20 Q Okay. That -- that's all I was looking 21 for. Sorry if that got a little absurd. 22 Okay. And you also quote at the bottom of 23 Paragraph 57: "User U1 thus may access the 24 internet via radio A1," quoting column 7, lines 2 25 through 3 of the '591 patent; is that correct?

97 1 A Yes. 2 Q Okay. And so what does that mean to 3 access the internet? 4 A Well, it would be understood by a POSITA, 5 the general term means being able to send and 6 receive data to go out to the internet to obtain 7 services or to have your data delivered to 8 somewhere, or receive data from some other server 9 somewhere in the internet. 10 It means being able to access the internet 11 wirelessly, is what literally it says. 12 Q So when U1 sends data to the internet, 13 that's received by somebody else or some other 14 device, correct? 15 A So the internet, obviously, is a 16 distributed system. In order for it to get your 17 data to be handled by that distributed system or, 18 quote/unquote, internet, you have to have some 19 type of access to that structure, that infra -- 20 that structure that provides that. 21 So, yes, A1 is providing a mechanism for 22 taking the transmitted signal from U1 and passing 23 it on to the -- further on to the various routers 24 and switches within the system that make up the 25 internet.	99 1 may comprise network end-points. This class of 2 devices do not necessarily provide or relay 3 network access to other devices, but, rather, may 4 be mere consumers of network services"; is that 5 correct? 6 A That is correct. 7 Q Okay. And so in the situation that we 8 were just discussing where U1 was, say, a phone 9 sending an email, is that being a mere consumer of 10 network service? 11 A Well, within that context of if I'm a -- 12 if I'm using my phone and it's only sending or 13 receiving data or a mere consumer of data of 14 network or -- and/or network services, in that 15 context, that's a user and it's a recipient 16 because, in that context, that I'm talking about 17 here, it's just an end-point; it's not providing 18 network access to any other devices. 19 Q Okay. So when I'm send -- I'm User 1, me 20 and my cell phone are User 1, okay -- or my cell 21 phone. We don't have to make me a part of it. 22 Not -- no human. 23 My cell phone, Rebecca's cell phone is 24 User 1. I send you an email. Is my phone sending 25 you an email a mere consumer of network services
98 1 Q Okay. And for the first leg of the 2 communication, U1 sends a transmission and A1 3 receives it, correct? 4 A As depicted here, U1 is using A1 as an 5 access point, which means it's sending data to A1 6 in order to have that relayed on, whether it's 7 through A2 or through -- directly through another 8 point of presence from an internet service 9 provider to get to the internet. 10 Q Okay. So is it your position that if 11 something is relayed on, that it is not received 12 by the device that is performing the relay 13 function? 14 A No, I didn't say that. What I said was 15 it -- the signal's being transmitted. A1 is 16 obviously receiving that signal, decoding it, and 17 then doing what it has to do in order to interact 18 with next element within the network. 19 And access points are well-known to use 20 modems and other things to send data in order to 21 get that data to the internet. 22 Q Okay. So moving on a little bit in your 23 declaration. 24 In Paragraph 60 you say: "On the other 25 hand, the network includes, quote, users, which	100 1 when I send the email? 2 A If, again, within what I'm talking about 3 here is it's an end-point, then yes. 4 Q So I understand your conclusion is that an 5 end-point is not a wireless networking device, but 6 what is the basis for that conclusion? 7 A Based on how the term "wireless networking 8 device" is disclosed within the claims and in the 9 patent and my understanding from the perspective 10 of a POSITA, that that is providing networking. 11 And in your example, if that phone is not 12 providing networking capability to other devices, 13 then it's what I'm talking about here, which is 14 it's just a mere consumer of data. So the answer 15 would be yes. 16 Q Okay. And what is the basis in the 17 specification? You know, think of it, what is 18 your hook for your conclusion that my phone has to 19 provide networking to another device to be more 20 than a mere end-point? 21 A Well, I'm talking about here -- again, my 22 entire discussion is about the distinction 23 between, as disclosed, of wireless networking 24 device and what that term means. And when I say: 25 "On the other hand, the network includes users

101 1 which may comprise networking end-points, this 2 class of devices do not necessarily provide or 3 relay network access to other devices, but, 4 rather, may be mere consumers," so I'm pointing 5 out that that class of devices, which means that 6 it's an end-point, is not acting as a relay, it's 7 not acting as an access point, in that case, then 8 it's distinct from the wireless -- claimed 9 wireless networking device -- or distinction I 10 should say, it's consistent with the understanding 11 of the distinction of the term from a recipient" 12 or a "user." 13 Q So you say that "this class of devices," 14 meaning users, "do not necessarily provide or 15 relay access to other devices." But they could, 16 correct? 17 A If the wireless networking system is 18 embedded in that device, certainly it could 19 potentially then turn around and provide network 20 access to other devices, so yes. 21 Q So why does it need to provide network 22 access? 23 A Well, I'm drawing a distinction in my -- 24 again, trying to illustrate my understanding from 25 the perspective of a POSITA of how the term	103 1 it, but I've been doing that I think consistently 2 so far. 3 I'm saying there -- I'm looking and 4 presenting evidence of how those terms are being 5 used, how they're used within the context of the 6 claim, the specification as understood by a 7 POSITA, and then relying on disclosures and 8 pointing directly to the specification. 9 And in this case, we were just talking 10 about a figure within the specification that 11 provides the POSITA context and understanding of 12 what these terms mean. 13 I don't know how to better describe that. 14 Q And I just think we're not understanding 15 each other because I see your explanation of 16 Figure 7 as an example of how you apply the 17 distinction, but you're not giving me a reason for 18 why the patent makes that distinction. 19 So I'm asking you: What about Figure 7 20 compels the conclusion that a wireless networking 21 device must provide network access to another 22 device? 23 A I'm pointing to fig- -- my section of 24 this -- my report in this declaration, pointing to 25 Figure 7, is saying: "The specification discloses
102 1 "wireless networking device" is used within the 2 claims and specification. 3 And I'm just pointing that out from a 4 plain and ordinary meaning of the -- these various 5 terms in the context of the disclosure, is that 6 you have distinct capabilities of devices within 7 the context of a network, and you need to take 8 that into account when you're doing your analysis 9 of what these claim terms mean. 10 Q Okay. I understand you're making the 11 distinction; and I'm asking why are you making the 12 distinction. 13 On what do you base the distinction? 14 A I'm basing my distinction on what I'm 15 pointing to as evidence of my analysis. 16 Q And is there any -- could you list three 17 things for me that you're pointing to as elements 18 of your analysis for why there's a distinction? 19 A Well, my analysis would be comprehensive 20 of everything in Paragraph 51 through Paragraph 70 21 in this dec- -- my section of my declaration. 22 Q And, sitting here today, are you able to 23 summarize that for me as to why you make the 24 distinction? 25 A Well, I can go through this and summarize	104 1 users as different than other devices within the 2 network." 3 Okay. That's understood and that's clear. 4 So that supports my analysis. As well as 5 what's being pointed to in the operation of A1, 6 A2, B1, B2, et cetera, within Figure 7 is 7 consistent with my analysis. 8 And I have a fulsome discussion here of 9 how that is being discussed. And, again, those 10 terms that are used in the claims within that 11 perspective -- I'm not using this to say that this 12 is -- I'm using this to provide contextual 13 understanding from the perspective of a POSITA is 14 what I'm doing here. 15 Q Okay. So would you agree that an access 16 point is performing different functions than a 17 relay? 18 A You'd have to -- if you're not limiting 19 the context, then yes. If you're limiting the 20 context, meaning can an access point be programmed 21 to be only used as a relay? Theoretically, in 22 implementation, sure, you can do that, But 23 that's -- that's not, I don't think, the question 24 you're asking. 25 Q Okay. Does A1 perform different functions

105 1 than A2 in the context of Figure 7? 2 A As disclosed here, A1 is providing access 3 to users within its area of operation. A2 4 specifically discloses a relay. 5 As far as that's concerned, those are two 6 specific functions that are different from each 7 other for A1 and A2. 8 Q And U1 is also performing a different 9 function from A1, which is also different from A2, 10 correct? 11 A Correct. 12 Q And you have opined that A1 and A2 are 13 wireless networking devices, but U1 is not? 14 A Within this context, U1 is not a wireless 15 networking device. 16 Q Because it has different functions from 17 A1? 18 A Well, with -- again, with respect to how 19 that claim term is being used and understood, it 20 is not providing the capability that A1 is 21 providing or A2 is, for example, which those 22 devices, as we've discussed before, fall under the 23 context and scope of "wireless networking device" 24 where U1, this provides, again, contextual 25 understanding that that is different from the	107 1 communicate" -- "amongst themselves without the 2 need for an access point." 3 Is that correct? 4 A That's correct. 5 Q Okay. And going back to Figure 7 now, is 6 Figure 7 an example of ad hoc mode or 7 infrastructure mode? 8 A This is infrastructure mode. 9 Q Okay. And that's because the user is 10 communicating with the access point, correct? 11 A To a POSITA, that's clearly disclosing an 12 infrastructure mode for 802.11, yes, because 13 there's an access point, you have different BSSIDs 14 depicted to a POSITA, so, yes, that's 15 infrastructure. 16 Q Okay. Thanks. 17 I am going to bring up another exhibit and 18 ask you to look at it with me. 19 Okay. 20 A What exhibit number is this? 21 Q This is Exhibit 7. 22 MS. BACT: And I'll ask that the court 23 reporter mark it as such. 24 (WHEREUPON, Mahon Exhibit No. 7 was 25 presented to the witness.)
106 1 claimed wireless networking device. 2 Q So would you agree that A1 and A2 have 3 some overlap in function? 4 A As for -- as far as the purposes of those 5 devices within a wireless networking system and 6 under general capability, sure, they both have 7 overlapping capabilities and provide overlapping 8 functions. 9 Q And what about A1 and U1; do they also 10 have some overlapping functions? 11 A Do they both have baseband processors, do 12 they both have A to DCs and D to ACs and antennas. 13 They're going to have those components. 14 As part of those components and 15 transmitting and receiving signals, and the signal 16 processing, sure, they're going to have similar 17 functionality with -- within that context. 18 Q Okay. So moving on a little bit in your 19 declaration. 20 In Paragraph 66, you discuss two modes of 21 802.11: "Infrastructure mode involving clients 22 communicating with the network through one or more 23 wireless access points; and, on the other hand, 24 ad hoc mode involving devices that can directly 25 communication" -- I assume you mean "directly	108 1 BY MS. BACT: 2 Q If you can see, this is an International 3 Patent World -- WO 2013/126859 to Chincholi. 4 Do you see that? 5 A Yes, I do. 6 Q Okay. And have you seen this document 7 before? 8 A Yes, I have. 9 Q Okay. Great. And you -- 10 Okay. So I'm going to show you a figure 11 in Chincholi, and if you would like, just let me 12 know; we can look at the description of the 13 figure. 14 Can you see Figure 1 of -- excuse me, 15 Figure 1A of Chincholi on your screen? 16 A Yes, I do. 17 Q And this figure depicts a bunch of devices 18 labeled 102a through 102D that look kind of like 19 old cell phones; would you agree with that? 20 A Certainly, it's -- they do look like old 21 cell phones. I'd have to go back to the 22 specification to see what they're disclosed 23 specifically as, but -- if they're cell phones or 24 not, but, yes, that's -- 25 Q And --

109 1 A -- certainly what you understand -- 2 Q We can -- we can do that in a moment. 3 And then we see 10 -- 114a and 114b that 4 kind of look like towers; would you agree with 5 that? 6 A It's specifically labeled a radio access 7 network, which would be understood to be a base 8 station or cell tower to a POSITA. 9 Q Okay. Great. 10 So let's just look at the specification 11 just to confirm that understanding. 12 So I'm going to take you to PDF Page 9. 13 We have been on PDF Page 93, but we're going to 14 Page 9. 15 Is that text readable to you, or would you 16 like it larger? 17 A Page 9? 18 Q Yes. 19 A I can see it. 20 Q Okay. I am going to make it larger on my 21 own screen. 22 Now, I'm going to direct you to 23 Paragraph 75, and that's where I see a definition 24 of the 114a and b that are called a base station, 25 and then it says: "By way of example, the base	111 1 Q What mode would this be depicting, 2 infrastructure mode or ad hoc mode? 3 MR. SCHMIDT: Objection to form. This is 4 outside the scope. 5 BY THE WITNESS: 6 A So this is a general -- just a general 7 depiction of wireless capabilities within the 8 reference. 9 And I didn't rely on this to form my 10 opinions other than to check the reference for 11 what's being -- how the reference was cited in 12 terms of others' opinions. 13 So, certainly, we could talk about this, 14 but, again, it's -- it is outside the scope of my 15 declaration. I didn't rely on this. If you want 16 to cite to something in my declaration that is 17 relevant and germane to understanding the 18 difference between infrastructure and ad hoc 19 networks within 802.11, I'd be happy to discuss 20 those. 21 BY MS. BACT: 22 Q Well, I -- I just want to know if a POSITA 23 in possession of this -- which is a document that 24 XiFi cited as part of what it was relying on for 25 its claim construction opinions in which you said
110 1 stations 114a, 114b may be a base station" -- or 2 excuse me -- "a base transceiver station, a 3 Node-B, an eNode B..." and it goes on and -- 4 listing a number of things including an access 5 point and a wireless router and the like. 6 Do you agree? 7 A Yes, it does disclose that. 8 Q Okay. And then one paragraph back, in 9 Paragraph 74, we see the definition for those 10 devices that looked like old cell phones, 102a 11 through d, correct? 12 A Yes. 13 Q And those are wireless transmit receive 14 units, and they could be -- I'm looking down 15 towards the bottom of the paragraph, it could 16 include user equipment, a mobile station, a fixed 17 or mobile subscriber unit, a pager, a cellular 18 telephone, a personal digital assistant, a 19 smartphone, a laptop, et cetera, et cetera. 20 Do you agree? 21 A Yes. 22 Q Okay. So now I'm going to take us back to 23 Page 93 and Figure 1a. 24 Are you there, Dr. Mahon? 25 A Yes.	112 1 you reviewed in that context in forming your 2 opinions, if a POSITA in possession of this 3 document looking at this image would understand it 4 to be infrastructure mode or ad hoc mode? 5 A In -- 6 MR. SCHMIDT: Counsel, did you represent 7 that the witness testified that he relied on this 8 document that you placed before him for his 9 opinions? Because I think -- 10 MS. BACT: I -- 11 MR. SCHMIDT: -- that's a 12 mischaracterization. 13 MS. BACT: No, I would say that he 14 considered it because it was part of what XiFi 15 listed on its 402 disclosure. 16 MR. SCHMIDT: Well, that's a 17 mischaracterization that he considered or relied 18 on or opined on this document -- 19 MS. BACT: Okay. I -- 20 MR. SCHMIDT: -- his declaration is clear. 21 I mean, this is -- this is well outside of the 22 scope of the witness's opinions. 23 MS. BACT: Okay. Well, it can be outside 24 the scope, and you can raise that if you want to. 25

113 1 BY MS. BACT: 2 Q But I would like an answer if you 3 understand the question, Dr. Mahon. 4 Would a POSITA understand this image in 5 Figure 1A to be an infrastructure mode or ad hoc 6 mode? 7 A Well, my answer to that would be: In my 8 declaration, I'm referring to the 802.11 disclosed 9 architectures of infrastructure and ad hoc for 10 802.11 systems. 11 I didn't perform an analysis of this 12 reference to see if what is disclosed is 13 consistent with what would be comprehensive of 14 802.11 architecture discussions. 15 In general, the 802.11 infrastructure mode 16 requires an access point. The ad hoc mode 17 specifically does not. 18 And so I'll leave it at that, and if 19 somebody else wants to perform the analysis or you 20 want me to later on perform an analysis and come 21 back to you, I'd be happy to do that. 22 BY MS. BACT: 23 Q So, for example, if Dr. Almeroth performed 24 an analysis of this image, would you agree with 25 Dr. Almeroth's analysis?	115 1 Q Mm-hm. Okay. One last question and then 2 we can move on. 3 Does this figure, as a POSITA, from your 4 perspective, depict any communication between the 5 stations directly between the stations 102a 6 through d with each other? 7 A Again, I -- 8 MR. SCHMIDT: Objection to form. Scope. 9 BY THE WITNESS: 10 A I haven't -- I haven't read this -- the 11 spec for that purpose. I haven't gone through and 12 done an analysis, so I can't answer that question. 13 BY MS. BACT: 14 Q Would you like me to put the description 15 back up? 16 A Well, you can certainly put it up. I'm 17 going to have to read the entire disclosures in -- 18 through the -- throughout the spec to make sure 19 I'm not overlooking anything. 20 I don't know -- I can't recall whether -- 21 I'd have to read the entire spec to make sure, 22 it -- what it's disclosing about that 23 functionality. You can do that if you want, but 24 it's going to take me a lot of time to read 25 through it.
114 1 MR. SCHMIDT: Objection to form. 2 Hypothetical. 3 BY THE WITNESS: 4 A I would have to see what his opinion was. 5 I'd have to, again, look at this analysis and then 6 compare it to both his analysis and then what is 7 disclosed as far as I'm pointing to in the 802.11 8 spec to come up with an answer to that question. 9 BY MS. BACT: 10 Q Okay. Would you agree that the stations 11 102a through d are communicating with the base 12 stations 114a through B? 13 A Well, again, I didn't -- I didn't rely on 14 this document for any of my opinions in terms of, 15 you know, what I present with -- in my declaration 16 in this section, as well as any other part that I 17 can recall. 18 Certainly, this is depicting a 19 transmission going between the devices. Other 20 than that, I don't -- I haven't performed an 21 analysis. I haven't taken the time to perform a 22 claim analysis with respect to the claim terms of 23 this reference because it was not something that I 24 cited to. 25 So, you know, I'll leave it at that.	116 1 BY MS. BACT: 2 Q Okay. We don't have to do that. 3 So what I'm understanding is that you are, 4 sitting here today with your expertise, unprepared 5 to offer an opinion looking at this figure as to 6 whether this figure -- a POSITA looking at this 7 figure would understand the stations to be 8 directly communicating with each other; is that 9 correct? 10 A No, what I'm saying is I didn't perform an 11 analysis on this, and it's out -- it's outside the 12 scope of my declaration and my opinions of this 13 specifically, especially in this section. 14 You're pointing to this figure, and 15 certainly there are arrows or lightning bolts 16 going between the devices and the access point. 17 Other than that -- and what those devices appear 18 to be, other than that, I can't characterize it 19 more distinctly. 20 Q So it's your opinion in this case, is it 21 not, that a POSITA would understand that the 22 802.11 modes of ad hoc mode versus infrastructure 23 mode would be informative as to whether something 24 qualified as a wireless networking device of the 25 asserted patents; is that correct?

117 1 A Well, I'm using -- 2 MR. SCHMIDT: Objection to form. 3 BY THE WITNESS: 4 A I'm using the 802.11 disclosures as an 5 illustration, specifically in this section, to 6 discuss the fact from a -- that a POSITA would be 7 well aware of how 802.11 since the beginning has 8 had an infrastructure mode and an ad hoc mode. 9 And, again, it provides additional context 10 for the support of the differentiation of these 11 devices within the entire idea of a network and 12 that devices can have different capabilities and 13 may be more limited in terms of what they can do 14 within different architectures. That's why I'm 15 pointing to this. 16 BY MS. BACT: 17 Q Okay. Well, let's just look at 18 Paragraph 68 of your declaration. 19 Let me know when you're there. 20 A Okay. I'm there. 21 Q Okay. In the last sentence of 68 you say: 22 "The client devices in the infrastructure mode, 23 however, would not qualify as a wireless 24 networking device, as they are merely end-users 25 and do not relay or provide network access to	119 1 BY THE WITNESS: 2 A Thank you for asking that clarifying 3 question because I thought you would be talking 4 about Figure 423 from the 802.11 standard. 5 Again, I haven't -- I'd have to look at 6 the disclosures within Chin- -- this reference, 7 Chincholi. And taking the figure out of context, 8 again, without doing an analysis and not having 9 relied on it, I wouldn't be able to give you an 10 answer to that question right. 11 BY MS. BACT: 12 Q Understood. I'm not asking you to perform 13 an analysis; I'm saying that it's your opinion 14 that this piece of, you know, prior art, if a 15 POSITA wanted to compare it to the asserted 16 patents, they would have to analyze whether this 17 figure was an infrastructure mode or ad hoc mode, 18 correct? 19 MR. SCHMIDT: Objection to form. Scope. 20 BY THE WITNESS: 21 A Again, I would have to do a comparison of 22 what's disclosed within this reference and compare 23 it to its disclosed mode with respect to Wi-Fi and 24 say whether that maps to an infrastructure mode or 25 not.
118 1 another device." 2 Did I read that correctly? 3 A Yes. 4 Q Okay. So, in your opinion, a POSITA would 5 have to understand whether a client device was in 6 infrastructure mode or ad hoc mode to understand 7 if that device will qualify as the wireless 8 networking device of the asserted patents, 9 correct? 10 A Well, I'm saying that as disclosed in the 11 802.11 standard of what a -- how a client is 12 operating within infrastructure mode that a POSITA 13 would understand, yes, that the clients are not be 14 disclosed or fall under -- underneath a wireless 15 networking device within the patent, so I'm 16 pointing to that. And so that's consistent with 17 that discussion. 18 Q So if a POSITA wanted to figure out if 19 this figure depicted wireless networking devices 20 of the asserted patents, would they be able to? 21 MR. SCHMIDT: What figure, Counsel? 22 MS. BACT: Figure 1A of Chincholi, 23 Exhibit 7. 24 MR. SCHMIDT: Objection. Outside the 25 scope.	120 1 I haven't performed that analysis. I 2 would have to be able to have some time to do that 3 to be able to give you an answer. 4 BY MS. BACT: 5 Q Okay. Well, let's back out. Let's zoom 6 out a little. 7 I'm not only talking about Chincholi; I'm 8 thinking about any system. Any -- in order to 9 understand if a client device, like a phone, 10 qualified as a wireless networking device of the 11 asserted patents, it's your opinion, that were it 12 to be in an 807.11 framework, a POSITA would have 13 to analyze whether it were operating in 14 infrastructure mode or ad hoc mode to determine if 15 it's a wireless networking device? 16 MR. SCHMIDT: Objection, form. 17 BY THE WITNESS: 18 A Yeah, so my opinion here is with respect 19 to the claim term and my analysis in my 20 declaration, is that consistent with my analysis 21 and the perspective of a POSITA, that the 22 infrastructure and ad hoc modes are examples that 23 provide, again, additional support for my analysis 24 for a POSITA and how this claim term is used. 25 I am not using it as a filter for saying

121 1 yes or no just based on that alone; it's within 2 the entire context of my analysis and that this is 3 consistent with that. 4 If you want to go down a rabbit hole of a 5 given scenario, we'd have to provide a lot more 6 detail to say whether or not that's, I guess, 7 positive proof of one way or the other. 8 I just didn't -- my section of my report 9 isn't -- it's not how it's presented; it's not how 10 it's discussed here. I don't know if that answers 11 your question, but that's what I understand you're 12 asking. 13 BY MS. BACT: 14 Q So when you say: "The client devices in 15 infrastructure mode, however, would not qualify as 16 a wireless networking device," would that not 17 suggest that a POSITA would have to determine 18 whether or not the device was in infrastructure 19 mode to determine if it were a wireless networking 20 device? 21 A No, what I'm saying is that if the device 22 is operating within the infrastructure mode, then 23 it's within the infrastructure mode. And if it's 24 a client in that mode, as illustrated here with 25 802.11 infrastructure mode, it's operating as --	123 1 between the devices, client devices, and using the 2 ad-hoc-versus-infrastructure example within 802.11 3 itself, that it's -- that construction is 4 consistent with this, it preserves the distinction 5 between these devices as disclosed within 802.11, 6 and that's why I'm pointing to it here, within 7 these paragraphs. 8 Q Okay. And I just want to come back to 9 something you said earlier, and I'm reading off my 10 real-time, so I hope it's an accurate quote. 11 You said that: "When devices are in 12 ad hoc mode, they are, quote, providing some type 13 of access to each other's datasets, for example, 14 or sharing data." 15 And that is sufficient, in your mind, to 16 be providing network access; is that correct? 17 A No. Certainly, they're constructing a 18 network within the context of providing network 19 access to the internet, that's not happening here; 20 that's specifically for the -- why the ad hoc mode 21 is disclosed. 22 It's an ad hoc network, it's designed to 23 be temporary, come up, share data, go away. 24 Music, for example. 25 So I'm discussing that with respect to the
122 1 as I just said, a client device and, therefore, it 2 would not fall under the scope of the claim term 3 "wireless networking device." 4 Q Okay. So for a client device operating in 5 802.11 to be a wireless networking device, in your 6 opinion, it has to be in ad hoc mode, correct? 7 MR. SCHMIDT: Objection to form. 8 BY THE WITNESS: 9 A Again, I didn't -- what I'm saying is 10 ad hoc mode is an example of where an 802.11 11 specifically is saying that you don't have an 12 access point; it's actually not operating in the 13 infrastructure mode, so, therefore, this is a 14 separate mode; and that the devices are allowed to 15 communicate to each other directly; and, 16 therefore, are providing some type of access to 17 each other's datasets, for example, or sharing 18 data. And that's a separate mode from the 19 infrastructure mode. 20 And I think I say here -- let me just read 21 my declaration. 22 Yeah, so within my declaration here within 23 these paragraphs and specifically pointing to this 24 to support my analysis that Samsung's construction 25 is consistent, and it preserves the distinction	124 1 ad hoc mode and certainly drawing a distinction 2 between that and the infrastructure mode where 3 there's a disclosed access point in a -- in a 4 different construction. 5 Yes, they do send data to each other. Is 6 that forming an ad hoc network? Yes. Is it 7 providing network access while within that local 8 ad hoc network? Yes. 9 Q Can you explain to me how sharing data or 10 datasets provides network access? 11 A Well, ad hoc networks are point-to-point 12 temporary networks that are set up; for example, 13 for doing music sharing. 14 So if you have five students that are 15 together in a room and they have pieces of -- or 16 various downloads of music and they want to share, 17 they can create an ad hoc network, they can share 18 all their files together, and it goes away. 19 So that sets up a temporary network to do 20 that sharing and then it -- is ephemeral; it goes 21 away. 22 Q So let's look at the image that you have 23 reproduced on Page 21 of your declaration. 24 There are two sub-images, one is of 25 infrastructure mode, and one is of ad hoc mode;

125 1 would you agree? 2 A Yes. 3 Q And there's -- the ad hoc mode picture is, 4 like, three laptops with double-headed arrows 5 connecting each of them; is that fair? 6 A Yes. 7 Q And that would be, for example, three 8 college students in a room sharing music with each 9 other? 10 A That could be, yes. 11 Q Okay. And within each laptop, how is it 12 that they join the ad hoc network? 13 A They follow a protocol for establishing 14 communications and deciding on how to -- how to 15 share the data. 16 Q And is that within each laptop, or is one 17 laptop doing that for all of them? 18 A Oh, with -- by definition, with respect to 19 an ad hoc network, each node is coming and going 20 and has to provide capabilities to communicate 21 with other nodes. 22 There is no -- if you're asking whether 23 there's a server within that system, no, there's 24 no server within an ad hoc network. 25 Q So each laptop is providing its own	127 1 Yes, you -- you know, can you join? 2 That kind of thing. You agree to join the 3 ad hoc network. You do whatever you need to do 4 and then it goes away. 5 Q I'm just trying to understand which part 6 of that description that you just gave me is one 7 laptop providing the other laptop network access? 8 A Oh, I see what you're saying. 9 So if, for example, I'm laptop 2 and I'm 10 receiving a piece of-- let's just say there's 50 11 laptops. If I'm laptop 2 and I'm receiving a 12 chunk of data that's associated with a particular 13 music file or video -- let's do video, it's easier 14 because they're bigger -- a particular chunk of 15 video from another laptop, let's say using 16 laptop 1, and laptop 48 needs that chunk of data 17 but they can't talk to laptop 1 because it's 18 outside of range, well, laptop 2 can send that 19 piece of chunk of data. 20 So, in that respect, it's taking 21 information from one laptop, one device, and it's 22 providing it to another device. 23 And so that happens within the ad hoc 24 network, that data -- that's how data sharing 25 works within an ad hoc network.
126 1 network access, correct? 2 A No, it's -- what it's doing is connecting 3 to other devices to -- to share data, which is, 4 again, the collection of devices is forming, you 5 know, quote/unquote, a network -- temporary 6 network, to share that data. 7 Q So there's a connection between devices? 8 Can you tell me more about that? 9 A Well, the 802.11 standard, which it points 10 out here, very adroitly, is that since the ad hoc 11 mode doesn't really provide much capability, it's 12 not very popular because you're not accessing the 13 internet. But what's happening is, is you have 14 each device is communicating with adjacent devices 15 within a given range based on the RF transmissions 16 and agreements to join the ad hoc network. 17 And so each device is performing that 18 functionality. They have to do it at the same 19 time, otherwise they'll miss each other and can't 20 form the, quote/unquote, ad hoc network that they 21 want to. 22 Within those limitations, each one of them 23 is following a procedure to be able to send out 24 information to say: Hey, I'm here. Is anybody 25 else there? Can I join?	128 1 Q Mm-hm. And so transmitting data -- so 2 okay. 3 One device receives data from another 4 device and then transmits it to a third device, 5 and that is providing network access to the third 6 device? 7 A Well, that's an example of how that data's 8 shared. It's when the -- in the context of an 9 ad hoc network. 10 And so, again, a -- if a particular 11 wireless device within that ad hoc network is not 12 talking directly to another device within that 13 ad hoc network, it must get access -- and that's 14 by design -- through an intermediary device, which 15 either, you know, has to have that information 16 you're after in order to be able to provide 17 that -- that data. 18 And, again, that is -- it's time-dynamic, 19 but that's how it works. 20 Q I'm sorry. I'm still not understanding. 21 So access to data is the same as access to 22 a network? 23 A I'm not sure I understand your question. 24 Q I'm still not understanding how, for 25 example, the wireless networking device of claim,

129 1 you know, 22 of the '414 patent, which is a phone 2 in ad hoc mode, under your interpretation 3 satisfies the construction. 4 A So if the phone is operating in ad hoc 5 mode and it's providing, as I said, network 6 access -- which, in this case, is an ad hoc 7 network -- to other devices, then it's satisfying 8 that claim term. 9 What is the network? The network is the 10 ad hoc network itself. And what's the internet? 11 It's all the devices within the internet, the 12 routers and the switches, for example. 13 So I'm pointing to that saying you have 14 these devices, they're forming an ad hoc network, 15 and a device within that context is providing 16 capability through the network and to both -- 17 well, to other devices within that network, and 18 other devices within that network are using it to 19 maintain, construct, obtain data within this 20 ad hoc network. 21 Q So because they're both existing and 22 they're both joining the network, they're 23 providing network access to each other? 24 A That's one -- yeah, that's one way to 25 describe it, yes. The network is set up. It	131 1 BY MS. BACT: 2 Q Okay. And when you say -- and you're 3 quoting from the Tanenbaum textbook that you're 4 reproducing in your declaration -- "Ad hoc 5 networks are not very popular," what percentage of 6 the time are devices employing 802.11 employing 7 ad hoc mode? 8 A That is an impossible question to answer, 9 but the standard itself is saying, us as engineers 10 recognize that this is not a very popular mode 11 because of the fact that it's ephemeral. 12 So I don't know -- I can't give you a 13 specific number, but it's certainly not nearly the 14 majority of the time; it's tiny. 15 But what exact -- I don't know. I don't 16 think anybody's ever done a study on that. 17 Q You know, under 10 percent of the time 18 802.11 is used? 19 MR. SCHMIDT: Objection to form. Asked 20 and answered. 21 BY THE WITNESS: 22 A Yeah, I wouldn't be able to provide a 23 context. I don't know. I haven't seen in all my 24 years an analysis of how often it's used other 25 than the general characterization such as in the
130 1 didn't exist before. They have to agree to 2 participate. What is that agreement? I have data 3 to share, I'm willing to share it, I'm willing to 4 consume. 5 I'm providing a -- basically, a relay 6 function to another device that can't see you, for 7 example, Device A. I'm Device B. I'm relaying 8 whatever I get from Device A out to any other 9 device that may want it and request it, so I'm 10 communicating with those other devices. That 11 forms a network. 12 Q Okay. And that's the only context in 13 which a client device could be a wireless 14 networking device of these patents, according to 15 you; is that correct? 16 MR. SCHMIDT: Objection to form. 17 BY THE WITNESS: 18 A Yeah, I don't limit my opinion. This is 19 just an example, a specific example to illustrate 20 the distinctions. 21 There's other examples I'm sure I can come 22 up with to say that this is when a -- any device 23 that has the claimed wireless networking system 24 embedded in it is acting as -- and providing 25 network access to other devices.	132 1 standard here. 2 Which, if you're an engineer and have been 3 practicing in the field, you -- you can't disagree 4 with that general statement, but I can't put a 5 number on it either. 6 BY MS. BACT: 7 Q Okay. And the ad hoc and infrastructure 8 modes, those are not mentioned in the 9 specification, correct? 10 A The specification mentions 802.11 but not 11 specifically these infrastructure or ad hoc modes, 12 that I can recall. I can take a look, but I don't 13 recall that being discussed. 14 Q Okay. And there's nothing else that we 15 haven't already discussed that you can point to 16 that would support your opinion that a recipient 17 and a wireless networking device are distinct, 18 correct? 19 MR. SCHMIDT: Objection to the form of the 20 question. 21 BY THE WITNESS: 22 A Again, my entire section here is 23 comprehensive of my analysis, which also included 24 my examination of other support and opinions. 25 I'm not excluding those within this

133 1 presentation of my -- my declaration. I think my 2 declaration is clear of my opinion and how I 3 formed my analysis, but I'm not using this to 4 exclude things that I -- I'm relying on in terms 5 of my experience or anything else like that. 6 BY MS. BACT: 7 Q Okay. That's a fair statement. 8 So can you -- 9 (Reporter request for a break.) 10 (WHEREUPON, discussion was had off the 11 stenographic record.) 12 BY MS. BACT: 13 Q You said an ad hoc network is an example 14 of a client device serving as a wireless 15 networking device of the asserted patents. And 16 you said you could think of other examples. 17 What are those examples? 18 A Well, I said I could spend some time to 19 think about it. 20 Certainly, any time a device is acting as 21 a conduit for network access. Typically we think 22 of our -- our device, let's say it's a, you know, 23 a tablet or an iPad or something, and I'm using it 24 to provide hot -- hotspot capability -- excuse 25 me -- to some other device, certainly in that	135 1 MS. BACT: Okay. 2 THE VIDEOGRAPHER: Off the record at 3 12:43 p.m. 4 (WHEREUPON, a recess was had.) 5 THE VIDEOGRAPHER: Back on the record at 6 12:56 p.m. 7 BY MS. BACT: 8 Q Okay. Welcome back, folks. 9 Dr. Mahon, just to double-check, did you 10 speak substantively with your counsel about this 11 case during the break? 12 A No, I did not. 13 Q Okay. And I'm very sorry to do this to 14 all of you, but I am going to pop another exhibit, 15 which is just the '105 patent from this case, into 16 the chat. 17 Let me know if you have received that and 18 can download it. I'm also going to put it on my 19 screen. 20 A Let me take a second to download it. 21 Q Sure thing. 22 (WHEREUPON, Mahon Exhibit No. 14 was 23 presented to the witness.) 24 BY THE WITNESS: 25 A Okay. I have the '105 patent.
134 1 mode, it's -- it's implementing a network access 2 for the other device that's connecting to it. 3 But, you know, I mean, there's just -- any 4 time that mode is happening, then it's providing 5 access to the network for a device connecting to 6 it, so it's a wireless networking device. 7 Q Okay. And in terms of your declaration, 8 ad hoc mode is the only example that you provided 9 where a client device would be a wireless 10 networking device of the patents, correct? 11 A Well, it's a specific example I pointed to 12 within my -- that section of the declaration. 13 I didn't go through and do a 14 voluminous -- because I didn't -- it's pretty 15 clear, especially since we're talking about the 16 802.11 standard here within the patent and how 17 it's used and disclosed, it's the strongest one, 18 and I chose that one is the reason I put it here. 19 Q Okay. 20 MS. BACT: Let's take a break. 21 Michelle, how long would you like? 22 MS. REPORTER: Ten minutes would be great. 23 MS. BACT: Anybody want more than ten 24 minutes? 25 THE WITNESS: I'm good.	136 1 BY MS. BACT: 2 Q Great. And, just to confirm, I'm also 3 sharing my screen to show you Patent 4 Number 11,950,105 to Manapragada, the '105 patent 5 in this case, correct? 6 A Correct. 7 Q Okay. And I'm just going to take you to 8 claim 1 of the '105 patent, which is at 9 column 12 -- or, I guess, column 11 into 10 column 12, but I'm going to take you to a place in 11 the end of the claim, the last limitation that 12 begins at column 12, line 41, and goes through 13 line 49, and I have that highlighted on my screen. 14 Do you see it either on my screen or your 15 screen, Dr. Mahon? 16 A Yes, I do see it. 17 Q Okay. And this is similar to the 18 limitation that we were looking at in the 19 '591 patent that discusses the other wireless 20 networking device. 21 And this one discusses, rather than "other 22 wireless networking devices," it discusses "any 23 wireless networking devices." So that's, I'm 24 sure, a typo, but, you know, wireless networking 25 devices other than the wireless networking device

Transcript of Mark Mahon, Ph.D.
Conducted on February 26, 2026

35 (137 to 140)

137 1 that is being claimed here. 2 And here it says: "It does not prevent 3 any wireless networking device from utilizing a 4 range of frequencies corresponding to the 5 remaining portion of the bandwidth availability of 6 the first wireless transceiver for data 7 transmission or reception purposes." 8 Did I read that correctly with the 9 exception of omitting the extra word "devices"? 10 A Yes. 11 Q Okay. So this claim 1 of the '105 patent 12 refers to the "any wireless networking device" 13 having data transmission or reception purpose, 14 correct? 15 A That is correct. 16 Q Okay. So a wireless networking device can 17 transmit and receive, correct? 18 A That's correct. 19 Q Okay. So, at some times, with a plain and 20 ordinary meaning of the word, a wireless 21 networking device would be a recipient of a data 22 transmission, correct? 23 A As is discussed here, certainly it would 24 be receiving, just like an access point does when 25 it's connecting to an end-point user within a	139 1 availability of wireless transceivers." 2 Is that correct? 3 A Yes. 4 Q Okay. So the parties agree on, quote, 5 current, correct? 6 A That's my understanding, yes. 7 Q Okay. So that would not cover, for 8 example, historical statistics or averages 9 regarding bandwidth availability, correct? 10 MR. SCHMIDT: Objection to form. 11 BY THE WITNESS: 12 A My understanding is that they've agreed 13 that it involves current. As far as my 14 understanding with respect to specific context, I 15 don't -- I haven't performed an analysis of 16 whether there's a context of what -- whether 17 statistical can come into play under current or 18 not. 19 So I haven't done that analysis, so I 20 can't give you a specific answer to that question 21 as of yet. 22 BY MS. BACT: 23 Q Fair enough. 24 So moving on to Paragraph 74, you say: 25 "In my opinion, a POSITA would understand that the
138 1 network, so yes. 2 Q Okay. Thank you. 3 And I appreciate all of your patience as 4 we work through "wireless networking device," and 5 I'm ready to move on to "bandwidth 6 availabilities." 7 So I'll take you back to your declaration 8 and your Section C beginning at Paragraph 71, 9 which relates to the information regarding the 10 "bandwidth availabilities" claim term. 11 Are you there with me? 12 A Yes. 13 Q Great. 14 MS. BACT: And, I'm sorry, just for the 15 record, I would ask -- and I know it's out of 16 order -- for the court reporter to mark the 17 '105 patent as Exhibit 14. And hopefully, we'll 18 fill in the rest as we go along. 19 BY MS. BACT: 20 Q So I'm now scrolling to Paragraph 72 and 21 73 of your declaration. 22 In Paragraph 73, you say: "The parties 23 appear to agree that this term requires the 24 information fed back or provided as information 25 regarding the, quote, current bandwidth	140 1 claim language clearly contemplates providing or 2 feeding back information regarding current 3 bandwidth availabilities of, quote, each of the 4 wireless transceivers that are recited in their 5 respective claims," correct? 6 A Yes, that's correct. 7 Q Okay. So let's talk about "each." I'm 8 going to mark a couple more patents. 9 MS. BACT: So I'm pulling up on my screen 10 what I'd ask to be marked as Exhibit 8. 11 (WHEREUPON, Mahon Exhibit No. 8 was 12 presented to the witness.) 13 BY MS. BACT: 14 Q And can you either see that on my screen 15 or that you've pulled up on your side, Dr. Mahon? 16 A One second, please. 17 Q Take your time. 18 A Okay. I have Exhibit 8 open. 19 Q Okay. And is that U.S. Patent 11,974,143 20 to Manapragada? 21 A That is correct. 22 Q And that's the asserted '143 patent in 23 this case? 24 A Yes. 25 Q Okay.

141 1 MS. BACT: So I'm just going to mark 2 another one real quick so we can move through a 3 little bit more quickly, hopefully. 4 BY MS. BACT: 5 Q I'm opening up Exhibit 9. If you could do 6 the same, that would be great. 7 MS. BACT: And I ask that this be marked 8 as Exhibit 9 at the reporter's convenience. 9 (WHEREUPON, Mahon Exhibit No. 9 was 10 presented to the witness.) 11 BY MS. BACT: 12 Q Let me know when you're there, Dr. Mahon. 13 A I have it open. 14 Q Okay. Great. 15 And this is U.S. Patent 12,015,933 to 16 Manapragada? 17 A That's correct. 18 Q Okay. Great. 19 And this is the asserted '933 patent in 20 this case, correct? 21 A That's correct. 22 Q Okay. So now let's go -- sticking with 23 Exhibit 9, let's scroll to claim 1, again 24 beginning -- oh, this one actually begins in 25 column 12.	143 1 A Yes. 2 Q Okay. And now going on the other side of 3 the claim language that we're thinking about for 4 construction, the next limitation that starts at 5 about 12-36 says: "Wherein, the processing 6 interface is configured to, after the circuitry 7 has been connected to the application interface 8 and when the wireless networking device is being 9 used..." 10 And then it goes on to list a number of 11 functions. And I want to direct you to the one 12 that begins at 12-47 marked with a little (b). 13 "(b): Identify at least one first portion 14 of the first actual bandwidth of the first 15 transceiver, the identified at least one first 16 portion comprising a set of given resources." 17 Do you see that? 18 A I do. 19 Q Okay. And then looking at the (a) through 20 (d) there, is there anything that ever talks about 21 the second bandwidth availability? 22 Or the second actual bandwidth? 23 A One second. 24 That -- those lines, approximately 42 in 25 that column all the way down to 63 --
142 1 So I'm in column 12 -- and I'll make this 2 bigger. And the claim term that we're looking at 3 is in the limitation that's about 12-29 to 12-35, 4 correct? 5 A I'm sorry. That you're highlighting, is 6 that what you mean? 7 Q Yeah. We're talking about this feed 8 information regarding the "bandwidth 9 availabilities" term, right? 10 A That is within that column 12 within those 11 lines that is contained within there, yes. 12 Q Okay. Great. 13 So just looking together at the rest of 14 the claim, can I direct your attention to in the 15 limitation prior to that that begins at about 16 line 20, it says that -- or it claims: "The first 17 and second wireless transceivers respectively have 18 first and second bandwidth availability up to a 19 first and second actual bandwidths." 20 Is that correct? 21 A Yes. 22 Q Okay. So when we're talking about 23 "feeding the bandwidth availabilities," we're 24 talking about that first and second bandwidth 25 availability that we just looked at, correct?	144 1 Q Mm-hmm. 2 A -- don't con- -- contain the word 3 "second." It certainly is referencing a first 4 portion of a bandwidth. 5 So I would say the second portion of the 6 bandwidth is -- those words specifically don't 7 show up, but it certainly discusses a first 8 portion. 9 Q Right. So we -- and we have the first -- 10 the first actual bandwidth is what's -- you know, 11 there's a first portion of the first actual 12 bandwidth. 13 And so, going back to the first limitation 14 that we looked at together all the way up at 15 line 24. So: "The first and second wireless 16 transceivers respectively have a first and second 17 bandwidth availability up to first and second 18 actual bandwidths." 19 So would you agree that there are two 20 transceivers, the first and second transceivers in 21 this claim? 22 A Well, certainly, the claim right above 23 those lines says specifically: "Associating first 24 and second wireless transceivers with first and 25 second actual PHY interfaces."

145 1 So it's -- the language is saying "first 2 and second wireless transceivers." 3 Q Okay. And each of those first and second 4 transceivers has an associated bandwidth 5 availability up to an actual bandwidth, right? 6 So the first transceiver has a first 7 bandwidth availability up to a first actual 8 bandwidth, and the second transceiver has a second 9 actual bandwidth -- or second bandwidth 10 availability up to a second actual bandwidth? 11 A So the claim at line 24 says it's a first 12 and a second. In 1, as you mentioned: "First and 13 second bandwidth availability up to a first and 14 second actual bandwidths." 15 And then, 2: "Are adapted to emit radio 16 signals in the first and second different 17 bandwidth." 18 So it's clearly discussing first and 19 second bandwidths, transmitting in those 20 bandwidths, and that there is a first and second 21 transceiver. 22 I mean, that's just kind of the plain and 23 ordinary meaning. I'm not sure if you're asking a 24 specific question that I'm not discerning here 25 but...	147 1 A Well, there's no specific discussion of it 2 within that -- those elements. 3 Q Okay. So there's no requirements in the 4 claim for anything about the second actual 5 bandwidth, correct? 6 MR. SCHMIDT: Objection to form. 7 BY THE WITNESS: 8 A Yeah, that's not the way I read it, 9 certainly, within the context of the claim. 10 Specifically, as I just pointed out, and as you 11 pointed out, right above that discussing the first 12 and second bandwidths, certainly based on my 13 analysis, I don't -- I don't see it excluding the 14 second bandwidth here. 15 It's not -- it's certainly only mentioning 16 the first bandwidth. So I don't see it excluding 17 it, though, and based on my analysis, as I have in 18 my declaration, I discussed that. 19 BY MS. BACT: 20 Q Understood. 21 Can we agree that in these (a) through (d) 22 functions recited in the limitations of claim 1 of 23 the '933 patent from column 12, line 37 through 24 line 63, only the first actual bandwidth of the 25 first wireless transceiver has required functions
146 1 Q I guess I'm trying to ask you if you would 2 agree, as a POSITA, that the first transceiver 3 goes with the first bandwidth availability, which 4 goes with the first actual bandwidth; and the 5 second transceiver goes with the second bandwidth 6 availability, which goes with the second actual 7 bandwidth? 8 Is that how you read the claim language? 9 A Yes, I think in my declaration, I'm 10 discussing that and -- with respect to -- I think 11 your lead into this whole section was my analysis 12 and support for that -- regarding each of the -- 13 the current bandwidths for each of the wireless 14 transceivers. 15 Q Okay. So we -- there are two transceivers 16 recited with two bandwidth availabilities and two 17 actual bandwidths, right? Each -- there's two of 18 each. 19 But then when we come down to the 20 functions that are described at 12-37 21 through 12-63, only the first actual bandwidth of 22 the first wireless transceiver is discussed; we do 23 not see any discussion of the second actual 24 bandwidth of the second wireless transceiver; is 25 that correct?	148 1 which are to have a first portion of the first 2 actual bandwidth identified and evaluated? 3 A Within the limitations associated with 4 lines 37 through 63, it's addressing, based on the 5 setup above that in the claim, the first portion 6 being evaluated and identified within the system. 7 It does not discuss within that -- those 8 lines and that limitation the second portion. 9 Q Okay. And just finishing out claim 1 -- 10 and I'm sorry that it's across two pages -- 11 looking at lines 65 -- or, excuse me, 63 through 12 column 13, line 6, is there any mention of the 13 second wireless transceiver, the second bandwidth 14 portion, or the second actual bandwidth? 15 A Well, this is also a "wherein" clause, so 16 it's obviously being amplified from the claim term 17 so far, but within that -- those lines from 18 column 12-64 -- 63 through 13-6, it is not talking 19 about -- or it doesn't use the word "second." It 20 doesn't address "second" within that -- those 21 words of that claim -- 22 Q Okay. 23 A -- at that portion. 24 Q Thank you. And apologies for talking over 25 you at the end there.

149 1 All right. Now let's go back to 2 Exhibit 8, the '143 patent that we already marked 3 together, and let's visit claim 1 again. And this 4 one begins at the bottom of claim 11 and carries 5 up to claim 12. 6 So I have that on my screen. I don't know 7 if you're looking at it on my screen or your 8 screen, but if my screen is too small for you, let 9 me know. 10 A I have my own copy open. 11 Q Okay. Great. 12 Well, I'm looking at the top of column 12 13 at line 6. This patent has three transceivers, 14 correct; the first, second, and third wireless 15 transceivers? 16 A That's correct. 17 Q Okay. And then if we look at the little 2 18 in that same limitation at about line 10, we have 19 a first, second, and third bandwidth availability 20 up to a first, second, and third actual 21 bandwidths, correct? 22 A Correct. 23 Q Okay. And then at around line 18, we see 24 the feed information regarding the bandwidth 25 availabilities, that language that we're talking	151 1 So it's saying that that portion is of a 2 first selected transceiver from the three 3 transceivers is what it's saying. 4 Q Right. So we're choosing one out of the 5 three, and that's happening first, right? 6 A Yes. 7 Q Okay. And in this section that we're 8 looking at with a little 1 through little 4, are 9 we talking about any of the other transceivers, 10 anything happening with them, or is it just that 11 first selected transceiver? 12 A Well, outside of the context that 13 obviously when you're selecting one of the 14 transceivers, it's between the three, and those -- 15 all three are involved as part of that selection, 16 otherwise you wouldn't be selecting between three. 17 Let me just keep reading here to make sure 18 I'm not overlooking something. 19 It does not mention anything other than 20 that first selection. 21 Q Okay. And so then if we continue down to 22 the next portion of the claim beginning at about 23 line 46 of -- excuse me, line 44 of column 12 and 24 extending to about line 58 of column 12, this 25 refers to a second selected wireless transceiver,
150 1 about, correct -- that we're construing, correct? 2 A Yes, feed information regarding the 3 bandwidths of the first, second, and third 4 transceivers back, yes. 5 Q Okay. And then we have another "wherein 6 the processing interface is configured to" section 7 with a list of functions beginning at about 8 column 12, line 23 and going down to column 12, 9 line 43. 10 Do you see that? 11 A Yes. 12 Q Okay. And in this one, again, we have: 13 "Identifying a -- at least a portion of the 14 bandwidth available for communication of a first 15 selected wireless transceiver of the first, 16 second, and third wireless transceivers." 17 Do you see that? 18 A Yes. 19 Q Okay. So it's not saying which 20 transceiver, but it's saying identify a portion 21 for one of them, right? 22 A The language says: "Identify at least a 23 portion of the bandwidth available for 24 communication of a first selected receiver of the 25 first, second, and third wireless transceivers."	152 1 correct? 2 A Yes. 3 Q Okay. And it involves identifying at 4 least a portion of bandwidth available for 5 communication of that second selected wireless 6 transceiver? 7 A It says "a selected," which is once it's 8 selected, it would be the -- yes. 9 Q Sorry. Thank you for clarifying. 10 So in the section we looked at above, we 11 were talking about a first selected transceiver; 12 in the section we're looking at here, we're 13 talking about the second selected transceiver; and 14 each of those as having an identi- -- a portion of 15 bandwidth available identified from its resources, 16 correct? 17 A Yes. 18 Q Okay. And then if you look at the rest of 19 claim 1, which extends to the bottom of column 12 20 and then all the way through column 13, line 14 or 21 13, it's hard to tell which, there's no mention of 22 a third selected transceiver, correct? 23 A It's discussing -- it is not discussing a 24 third selection within those lines of the claim. 25 Q Okay. Thank you.

153 1 Shifting gears a little bit back to your 2 declaration. So moving down to Paragraph 78, you 3 reproduce Figure 4 of the common specification in 4 this portion of your declaration, correct? 5 A That's correct. 6 Q And is it your opinion that Figure 4 is an 7 illustration of feeding back information regarding 8 the bandwidth availabilities? 9 MR. SCHMIDT: Objection to form. 10 BY THE WITNESS: 11 A Give me a second to review my declaration 12 in this section. 13 BY MS. BACT: 14 Q Sure thing. 15 A Okay. Would you reask your question, 16 please? 17 Q Sure. My question was: Is it your 18 opinion that Figure 4 is an illustration of 19 feeding back information regarding the bandwidth 20 availabilities? 21 MR. SCHMIDT: Objection to form. 22 BY THE WITNESS: 23 A So I'm pointing to Figure 4 for my 24 analysis of the -- providing what's -- 25 what's -- the claim terms are requiring feeding	155 1 describe a system in which information regarding 2 the bandwidth availabilities of each of the 3 wireless transceivers is fed back or provided to 4 the virtual MAC to enable pre-transceiver 5 evaluation." 6 So if I remember your question 7 specifically, I'm saying here that based on my 8 analysis and what I see within the spec is that 9 the system is disclosing or used as support for 10 the -- the bandwidth availabilities of each of the 11 wireless transceivers being fed back to the 12 virtual MAC is what I'm pointing to Figure 4 for 13 here. 14 Q Okay. And so I understand that you're 15 using it as support for Samsung's construction and 16 your opinion that it should be each transceiver, 17 but my question was, more generally, does this 18 depict the feeding back of the information 19 regarding bandwidth availabilities that is the 20 claim term that we're construing? 21 MR. SCHMIDT: Objection to form. 22 BY THE WITNESS: 23 A So I'm pointing to the disclosures in the 24 spec with regard to Figure 4; I'm not -- and I'm 25 not pointing to a specific element here, meaning
154 1 back information -- feeding back or providing 2 information regarding current bandwidths 3 availabilities and of each wireless transceiver. 4 And then I'm using Figure 4 for support 5 and -- let me just look at this. 6 Specifically I'm citing to the virtual MAC 7 and PHY layers; performing an evaluation; and that 8 the transceiver resources are depicted. 9 Let's see... 10 Q I might direct you to Paragraph 79 of your 11 declaration. 12 A Right. And I'm just there. So here I'm 13 saying the Figure 4 explains how the virtual MAC 14 interfaces with the virtual PHY to determine 15 device availability. 16 And then I'm citing to another section, 17 which says: That involves a determination at the 18 PHY layer as to the actual availability of 19 initially assigned transceiver resources. 20 And then I'm supporting that with a cite 21 to the fact that: "Should a given resource be 22 unavailable as through insufficient bandwidth or 23 already being used, a replacement resource may be 24 identified and assigned, thus, again, a POSITA 25 would understand the intrinsic evidence to	156 1 an arrow or something to say it's being fed back 2 based on this. 3 I'm pointing to the actual description as 4 well as what's illustrated in the Figure 4 to come 5 to that conclusion or support my analysis. 6 So if you're asking me for something in -- 7 if it's illustrated in Figure 4 that provides me 8 detail of saying, yeah, it's being fed back, I 9 would have to say I would -- looking at this 10 figure, I have to read the spec to see what's 11 going on to be able to make that determination, 12 and that's what I did in my declaration. 13 BY MS. BACT: 14 Q Okay. I didn't mean this to be a gotcha; 15 I just wanted this to be a placesetter, okay? 16 So you cite to Figure 4. Let's pull up 17 the '591 patent, which is the one that you're 18 citing, Exhibit 5, and let's go to the sections 19 that you're citing, which is about the end of 20 column 4. 21 A One second, please. 22 Q Yeah. Take your time. 23 And there's a spot at about line 45 that 24 says: "Referring to Figure 4." 25 Let me know when you're there.

157 1 A This is column 4? 2 Q Yes, column 4 about line 45. 3 A Line 45: "Referring to Figure 4." 4 Q And if you're able to look at Figure 4 and 5 the spec at the same time, whether it's the 6 Figure 4 that's reproduced in your declaration or 7 otherwise, that would be wonderful, but -- 8 A Okay. 9 Q -- we can flip back and forth if that's 10 something that you need to do. 11 A Okay. 12 Q So you say in 78 of your declaration that: 13 "Figure 4 and its associated description explains 14 how the virtual MAC and PHY layers involve an 15 evaluation of availability transceiver resources 16 to meet peak bandwidth demands of applications 17 running in the application layer." 18 And that's '591 patent at 445 to 48. 19 Do you see that either in your declaration 20 or in the patent? 21 A Yes. 22 Q Okay. And then you say: "The transceiver 23 resources in Figure 4 illustrated as Device 1 and 24 Device 2," citing to lines 50 and 51 of the patent 25 spec, correct?	159 1 A Yes. 2 Q Okay. And within those transceiver 3 resources, there's a little box that says: 4 [As read] "PHY: RF1 available. Yes" in Device 1. 5 And in Device 2, it says: [As read] "PHY RF2 6 available. No." 7 Do you agree? 8 A I do. 9 Q Okay. And then from those Device 1 and 2, 10 there are arrows connecting up to the virtual PHY, 11 correct? 12 A There are arrows from Device 1 to up to 13 the box that is titled "virtual PHY," correct. 14 Q Great. And so then when we look within 15 that box that says "Virtual PHY," it replicates 16 that information that we got below that Device 1 17 is available yes and Device 2 is available no, 18 right? 19 A Yes. 20 Q Okay. And so what do you take the line 21 that is -- or the line that comes from the two 22 devices going up to the virtual PHY to be? 23 A Well, I take it to be an illustration of 24 what's disclosed in the specification, which we 25 just read through in terms of the cite for the --
158 1 A That's correct. 2 Q Okay. And then moving on in the spec and 3 in your declaration: "The virtual MAC 302 4 interfaces with the virtual PHY 304 to determine 5 device availability, which involves a 6 determination at the PHY layer as to the actual 7 availability of the initially assigned transceiver 8 resources," correct? 9 A Yes -- 10 Q I'm referring -- I'm reading from your 11 declaration in Paragraph 79, and that's quoting 12 column 4, 52 through 56 of the patent. 13 A Yes, I do see that, and that's correct. 14 Q Okay. So let's go back to Figure 4 15 together. We can look at after Paragraph 78 in 16 your declaration or I can move it -- go in the 17 patent. 18 Oh, it's so big. 19 Okay. So I've got Figure 4 on my screen, 20 and you can look at it wherever it suits you best. 21 Do you see at the bottom the structures labeled 22 "Device 1" and "Device 2"? 23 A Yes. 24 Q And we discussed that those are the 25 transceiver resources, correct?	160 1 my analysis of that information being provided -- 2 or used within the MAC and PHY layers 302 and 304 3 and obtained from the -- based upon the 4 transceiver resources from Device 1 and 2 -- or of 5 Device 1 and 2 resources is what I take it to 6 mean. 7 Q Mm-hm. And the specification says -- and 8 this is quoted in your declaration at 9 Paragraph 79 -- that this involves a determination 10 at the PHY layer as to the actual availability of 11 the initially assigned transceiver resources, 12 correct? 13 A That is what the patent discloses, yes. 14 Q Okay. And then that information is 15 communicated to the virtual PHY? 16 Or let me put it this way: The virtual 17 PHY obtains the information to do the evaluation 18 of the resources -- withdrawn. Hold on. 19 So there's a determination at the PHY 20 layer, and then that information is provided to 21 the virtual PHY, correct? 22 A The determination is done at the PHY layer 23 itself, and then, based upon the disclosures we've 24 been talking about, that is provided to the 25 virtual PHY layer.

161 1 Q Okay. So we've been in Paragraphs 78 and 2 79 -- and, I'm sorry. I've been assuming I was 3 sharing my screen, but I haven't been -- 4 A I've been -- 5 Q -- that correct -- you've been looking at 6 your own. I'm sorry. I thought I was showing you 7 Figure 4, and I haven't been; I apologize. Thank 8 you for looking at it on your screen. 9 Okay. So moving on to Paragraph 80, you 10 state: "This conclusion is also consistent with 11 the prosecution history. For example, during the 12 prosecution of the application that became the 13 '756 patent, the applicant submitted an 14 August 15th, 2024 preliminary amendment arguing in 15 connection with Figure 1 that each actual" -- 16 excuse me -- "that, quote, each actual MAC and 17 each actual PHY in a particular wireless 18 networking device communicates directly with the 19 processing layer, brackets, shown by the two-way 20 arrow in Figure 1 connecting the MAC 114 and PHY 21 116 with process layer 104, close brackets, to 22 allow it to receive information regarding 23 bandwidth availabilities from the wireless 24 transceiver associated with each MAC/PHY pair." 25 Did I read that correctly?	163 1 term? 2 MR. SCHMIDT: Objection. It's asked and 3 answered. 4 BY THE WITNESS: 5 A Yeah, I -- so my analysis is that, again, 6 based on what the claim terms -- the words the 7 claim terms use and the proposed constructions is 8 that, based on the proposed constructions, you 9 know, my opinion is obviously that Samsung's 10 construction should be accepted because of the 11 clarity; it doesn't add additional complications 12 or, basically, confuse the plain and ordinary 13 meaning. 14 I'm pointing to those disclosures as 15 support, but I'm not saying that those are what 16 inform me; I'm saying that those also provided 17 additional context for my evaluation as to whether 18 whose opinion was more correct in terms of how a 19 POSITA would -- would understand the claim terms. 20 So it's within only the scope that I'm 21 talking about here in Paragraph 80, not expanded 22 as a general statement. 23 BY MS. BACT: 24 Q Okay. But you used the text that you 25 quoted to provide additional context for your
162 1 A That's correct. 2 Q Okay. And it's your opinion that this 3 selection from the file history would inform a 4 POSITA's understanding of the scope of this claim 5 term? 6 MR. SCHMIDT: Objection to form. 7 BY THE WITNESS: 8 A Well, I'm using this to specifically 9 reference support for analysis of -- of the claim 10 term which is whether each actual MAC and each 11 actual PHY are involved because the construction 12 is each of the wireless transceivers proposed by 13 Samsung versus what's proposed by XiFi. 14 And the claim terms themselves don't use 15 the word directly, but that's used in that 16 reference that I cite to. 17 But I'm citing to that for support for 18 each -- the word "each" in -- or if there were -- 19 yeah, "each" being required as part of the claim 20 construction. 21 BY MS. BACT: 22 Q Thank you. I'm asking you something more 23 general, which is whether you think this selection 24 of the file history that you quoted is helpful in 25 informing a POSITA as to the scope of the claim	164 1 evaluation as to how a POSITA would understand the 2 claim terms? 3 A I did use it, yes, to provide additional 4 context and to make a determination of whether the 5 proposed constructions provided clarity or added 6 ambiguity or added additional elements that 7 shouldn't have been there, so yes. 8 Q Okay. Great. Thank you. 9 And so like I had just read out loud when 10 I read that text, there were some brackets, 11 correct? 12 A Let me just get back there. Sorry. 13 Q No problem. It's in Paragraph 80. When 14 you quoted that selection, you bracketed some 15 text; is that correct? 16 A I -- there are brackets, yes, within that 17 quote. 18 Q Okay. So I just want to look at that 19 original source. I'm going to pull it up. 20 MS. BACT: Do you -- this is going to be, 21 please, marked as Exhibit 10. 22 (WHEREUPON, Mahon Exhibit No. 10 was 23 presented to the witness.) 24 BY MS. BACT: 25 Q And can you see on your screen a lovely

Transcript of Mark Mahon, Ph.D.
Conducted on February 26, 2026

42 (165 to 168)

165 1 certificate of the File History of Patent 2 Number 12,169,756? 3 A Sorry. One second, please. 4 Q Take your time. 5 A Okay. I do see the seal application 6 number, yes, ending in '267. 7 Q And the patent number a little bit below 8 that ending in '756, correct? 9 A Correct. 10 Q Okay. Great. 11 And this has the Bates number 12 XIFI_0012343, which is the begin Bates that you 13 cited in Paragraph 80 of your declaration, 14 correct? 15 A Correct. 16 Q Okay. And I will represent to you that we 17 have excerpted this file history. This is only 18 those particular August 15th, 2024 preliminary 19 amendments and applicant remarks that you referred 20 to, so that's what's beginning on the next page. 21 And I'm just going to scroll to the page 22 that you cited, which is 13817. And if you're 23 doing that on your own screen, let me know when 24 you get there. 25 A Okay. I am on 817.	167 1 A Yes. 2 Q Okay. And flipping back a page, this is 3 reciting new claims 16 and 17, correct? 4 A Yes. 5 Q Okay. So I'm going to take this down. 6 And let's look together at the '756 patent. I'm 7 opening up what I'll ask the -- be marked as 8 Exhibit 11. 9 (WHEREUPON, Mahon Exhibit No. 11 was 10 presented to the witness.) 11 BY MS. BACT: 12 Q Let me know when you're looking at 13 Exhibit 11, Dr. Mahon. 14 A I have it open. 15 Q Okay. And this is U.S. Patent 12,169,756 16 to Manapragada, correct? 17 A Yes. 18 Q Okay. And that is the asserted 19 '756 patent in this case? 20 A Yes. 21 Q Okay. And we were just looking at the 22 file history for this patent, right? 23 A Correct. 24 Q Okay. So let's look at those dependent 25 claims. Scrolling down. And they actually ended
166 1 Q Okay. And you see the numbered Paragraph 2 Number 1 at the top? 3 A Yes. 4 Q Okay. And so the text that you quoted is 5 in the final sentence of the paragraph, correct? 6 Where it says: "Each actual MAC..." and 7 continues? 8 A Yes. 9 Q Okay. And so the -- I'm just going to 10 read this to you fully. 11 "A two-way arrow connects the dashed box 12 with a, quote, process layer 104. This discloses 13 that each actual MAC and each actual PHY in a 14 particular wireless networking device communicates 15 directly with the processing layer to allow it to 16 receive information regarding bandwidth 17 availabilities from the wireless transceiver 18 associated with each MAC-PHY pair." 19 Did I read that correctly? 20 A Yes. 21 Q Okay. Great. 22 So when you bracketed that text, you 23 basically brought down that sentence into the 24 text, the sentence beginning "a two-way arrow..." 25 down into the text of the next sentence, correct?	168 1 up being 15 and 16, not 16 and 17, I believe. 2 Let's see if you agree with me. 3 So looking at claim 15, it says: "The 4 wireless networking device of claim 1, wherein the 5 information provided by the resource monitoring 6 interface to the virtual MAC interface is received 7 by the resource monitoring interface directly from 8 at least one of the first and second actual PHY 9 interfaces." 10 Did I read that correctly? 11 A "MAC interfaces," yes. 12 Q I was reading claim 15, which says -- 13 A Oh. 14 Q -- "PHY interfaces." 15 Do you see that? 16 A I do. 17 Q And then the -- because I think we are on 18 the same page. The next claim is identical except 19 it says: "From at least one of the first and 20 second actual MAC interfaces in claim 16," 21 correct? 22 A Correct. 23 Q Okay. So in each of these, the resource 24 monitor and interface is providing to the virtual 25 MAC interface only -- from only one of the first

169 1 and second interfaces, whether it's MAC or PHY, 2 correct? 3 MR. SCHMIDT: Objection to form. 4 BY MS. BACT: 5 Q Well, let me -- 6 A It says -- 7 Q -- one at a time. 8 A It says: "At least one of the first and 9 second." So it's saying that it's taking it from, 10 again, one of the first and second actual PHY. So 11 it has to be at least and it's from both. 12 Q It's from both? How is it from both? 13 A Well, at least one of. So it has -- it's 14 looking at both, first and second actual MAC 15 interfaces. So it's -- it's monitoring interface 16 directly from at least one of the first and 17 second. So -- 18 Q So, for example, looking -- oh, excuse me, 19 Dr. Mahon. Go ahead. 20 A No, all I'm saying is it has that 21 conjunctive term in there of "at least one of the 22 first and second." 23 Q Right. So let's say I'm looking at 24 claim 15, and the resource monitoring interface 25 provides to the virtual MAC interface the	171 1 constructions, I discuss whether the construction 2 of current bandwidths should be included, 3 whether -- current bandwidth availabilities, and 4 specifically both parties agreeing to that each -- 5 well, seemingly agree that each of the -- from 6 each of the wireless transceivers. And then 7 further discuss the additional language on XiFi's 8 construction with respect to the spec. 9 I don't have an -- I didn't provide a 10 specific opinion that I could see that is 11 supporting what you're asking in terms of one and 12 only one. My opinion is that it has to be back -- 13 based on the claim constructions, proposed claim 14 constructions and the disclosures that the 15 bandwidth availabilities have to be from each of 16 the wireless transceivers, or the information 17 regarding the current availabilities. 18 And that you're -- you're pointing to 19 claim 15 and 16 and whether a particular 20 construction which isn't there would be 21 consistent, I would have to take some time to do 22 that analysis. 23 I don't -- I don't recall citing to -- or 24 mentioning anything that would lead to that 25 conclusion in my analysis that you're -- you're
170 1 information directly from one and only one actual 2 MAC -- actual PHY interface; does that satisfy 3 claim 15? 4 MR. SCHMIDT: Objection to form. 5 BY THE WITNESS: 6 A Okay. So in my -- trying to relate your 7 question to the opinion I have in my declaration 8 and how you're asking for clarification based on 9 my opinion as expressed, and so I'm going to have 10 to take the -- ask you to repeat that after I do a 11 review of what I have disclosed here because it's 12 out of context that I can recall. 13 So ask your question again, please. 14 BY MS. BACT: 15 Q Sure. So in the context of claim 15, if 16 there is a wireless networking device of claim 1 17 wherein the resource monitoring interface provides 18 the recited information to the virtual MAC 19 interface and that information is received by the 20 resource monitoring interface directly from one 21 and only one of the actual PHY interfaces, does 22 that meet claim 15? 23 MR. SCHMIDT: Objection to form. Scope. 24 BY THE WITNESS: 25 A My analysis of the proposed claim	172 1 pulling from. 2 BY MS. BACT: 3 Q So you cited to file history excerpts that 4 relate to these claims; and you said that the file 5 history remarks that supported the allowance of 6 these claims support your construction; and these 7 are dependent claims which have to make sense with 8 your construction; would you agree? 9 MR. SCHMIDT: Objection to form. 10 BY THE WITNESS: 11 A My construction is associated with the 12 claim terms that were asked to be construed -- or 13 to be clarified and my analysis of each one of 14 those. I think my opinion is consistent with 15 both -- with the issued patent and the patents as 16 they stand. 17 As far as pointing back to the file 18 histories, it's, again, for additional context, 19 which I rely on those. I don't -- again, I don't 20 recall discussing those specific claim elements or 21 that -- those claim elements within that context. 22 So I'd have to go back, again, to look at 23 that to see if there's anything that I would add 24 to it, but I think my opinion is consistent with 25 what has been proposed and what is disclosed as

173 1 far as that claim language is concerned and that 2 Samsung's construction is more consistent with 3 that. 4 BY MS. BACT: 5 Q Okay. So in Paragraph 23 of your 6 declaration, you're reciting some legal standards 7 that you understand from counsel and you say: "I 8 am informed that a patent may include two types of 9 claims: Independent claims and dependent claims. 10 An independent claim stands alone and includes 11 only the limitations it recites. A dependent 12 claim incorporates all limitations of the 13 independent claim upon which it depends, plus the 14 additionally recited limitations." 15 Did I read that correctly? 16 A Yes. 17 Q Okay. So claim 15 and claim 16 depend 18 from claim 1 of the '756 patent, correct? 19 A Correct. 20 Q Okay. So they include all of the 21 limitations of claim 1, plus the "wherein" 22 language that is included explicitly in those 23 claims, correct? 24 A Well, the entirety of claim 1, correct. 25 Q And then the additional information that's	175 1 BY THE WITNESS: 2 A Okay. So certainly claim 15 adds the 3 additional "wherein" clause. As far as my 4 analysis of the claim terms with respect to the 5 proposed constructions, I discuss the requirements 6 as I've analyzed them. And specifically, I guess, 7 I would -- I think I address what you're talking 8 about here in my Paragraph 88 regarding the 9 proposed construction and trying to -- pointing 10 out support for XiFi's position. 11 But my analysis of that position 12 associated with the "at least" language and how 13 that plays into the requirements as understood by 14 a person of ordinary skill in the art of the terms 15 themselves overall, that it adds ambiguity based 16 upon how those terms would be understood. 17 So you're asking me of -- to do an 18 analysis which my opinion doesn't address. I 19 don't have -- I don't have an analysis of -- I 20 actually have the opposite analysis in my -- in my 21 declaration. 22 So certainly claim 15 has language that 23 you're citing to; and, yes, it's dependent on 24 claim 1. 25 I'm not sure how that addresses my
174 1 in each of the claims, right? 2 A The additional "whereins" in the 3 independent claims, yes. 4 Q Okay. Great. 5 So would you agree that a dependent claim 6 has to satisfy the independent claim? 7 MR. SCHMIDT: Objection to form. 8 BY THE WITNESS: 9 A So the dependent claim incorporates 10 everything from the independent claim, and that it 11 further narrows the independent claim. 12 BY MS. BACT: 13 Q So let me ask it this way: If I infringe 14 claim 15, I'm necessarily infringing claim 1, 15 correct? I definitely do all the stuff in claim 1 16 if I'm doing claim 15? 17 A Correct. 18 Q Okay. So claim 15 says that claim 1 can 19 be satisfied in a particularly narrow way if the 20 resource monitoring interface gives information to 21 the virtual MAC that it has received -- that the 22 resource monitoring interface has received from at 23 least one of the first and second actual PHY 24 interfaces, correct? 25 MR. SCHMIDT: Objection to form.	176 1 analysis and construction of what adds either 2 additional ambiguity or what adds clarity to the 3 claim constructions I guess is what I'm saying. 4 Q Okay. Thank you, Dr. Mahon. 5 So you mentioned Paragraph 88 of your 6 construction and that addresses XiFi's proposed 7 construction which does include the words "at 8 least"; is that correct? 9 A Correct. That they must be obtained 10 directly from at least the recited actual PHY and 11 the recited actual MAC interfaces. 12 Q Okay. And, just to be clear, that's 13 XiFi's proposed construction, not the claim 14 language of claims 15 and 16 of the '756 patent, 15 correct? 16 A Yes. 17 Q Okay. And is it fair to say that your 18 opinion does not contain an analysis of claims 15 19 and 16 of the '756 patent? 20 A I didn't do a claim analysis -- 21 claim-by-claim analysis; I did an analysis of the 22 proposed constructions and the terms and how 23 they're disclosed. And, in that context, I 24 reviewed the specifications, but, no, I did not 25 provide an analysis of claims 15 and 16.

177	1 Q Okay. Like, for example, in Paragraph 65 2 of your analysis, you -- of your declaration, 3 rather, you provide some discussion of the 4 dependent claims in regard to the term "wireless 5 networking device" and you specifically cite 6 particular dependent claims and how they're 7 consistent with your construction, correct? 8 A In the -- yes, in the context of how the 9 claims either narrow or -- yeah, narrow the 10 construction of an independent claim. 11 Q And you did not do a discussion in your 12 declaration of claims 15 and 16 of the '756 patent 13 with regard to the information regarding 14 "bandwidth availabilities" claim term, correct? 15 A I did not provide a specific analysis. As 16 I said, my analysis is based on the entire patent, 17 but I did not exclude 15 and 16. I did not do a 18 specific analysis on that. 19 Just on the proposed claim constructions 20 with respect to the entire specification of 21 disclosures and whether, from a POSITA's 22 perspective of what those terms mean, which 23 construction is more consistent and adds clarity 24 versus possible ambiguity to the constructions, 25 that's all.	179	1 As it's reproduced on Paragraph 88, 2 correct? 3 MR. SCHMIDT: Counsel, what are you 4 referring to when you say "must be"? 5 MS. BACT: Thank you for asking for 6 clarity. Let me rephrase. 7 BY MS. BACT: 8 Q You used the words "must be" directly 9 before the quoted material in the second sentence 10 of Paragraph 88 of your declaration, correct? 11 A I do use those words, yes. 12 Q Okay. But those are not within the 13 quotation marks, correct? 14 A Those are outside the quotation marks. 15 Q Okay. Please turn to Page 23 of your 16 declaration, and let me know when you're there. 17 A 23? 18 Q Page 23. 19 A Yes. 20 Q Paragraph 72, do you see the competing 21 constructions for the bandwidth availabilities 22 term? 23 A Yes, I do. 24 Q Okay. And you quoted a portion of XiFi's 25 construction that began at "obtained directly,"
178	1 Q Okay. Let's talk about Paragraph 88 since 2 you raised it. 3 Now, in Paragraph 88 of your construction, 4 you say -- and I'm reading the second sentence of 5 that -- 6 A One second, please. 7 Q Sorry? 8 A I'm just getting back there. 9 Q Let me know when you're there, please. 10 A I'm there. 11 Q Second sentence of Paragraph 88 of your 12 construction: "XiFi's proposal that the 13 information fed back or provided must be, quote, 14 obtained directly from at least the recited actual 15 PHY interfaces, and the recited actual MAC 16 interfaces seems to require that this information 17 be obtained directly from both the actual PHY 18 interfaces and actual MAC interfaces." 19 Did I read that correctly? 20 A Yes. 21 Q And the quote that you are quoting begins 22 at "obtained" and ends at "interfaces," right? 23 A That is correct. 24 Q And the words "must be" are not within the 25 quote, correct?	180	1 correct? 2 A Yes. 3 Q And what are the two words directly before 4 "obtained directly" in XiFi's actual construction? 5 A "Can be." 6 Q Is it your opinion that "can be" and "must 7 be" have the same meaning? 8 A Well, "can" is the ability; "must" is a 9 requirement. And based on my reading of XiFi's 10 position, the reason I used the word "must be" is 11 my characterization of their position -- 12 Q Okay. 13 A -- in that analysis. 14 Q Excuse me for talking over you. 15 So XiFi's construction says "can be," 16 which is an ability, correct? 17 A Yes. 18 Q Versus your characterization "must be," 19 which is a requirement, correct? 20 A Well, I'm not reading into XiFi's 21 construction; I'm just saying based on and -- when 22 I present this, that it's certainly clear that's 23 what they're saying. I'm not trying to read into 24 their construction and add words into the 25 construction; I'm trying to interpret their

181 1 construction in context, and so -- 2 Q Well, you said "can be" is a -- an 3 ability, correct? Or did you say a capacity? 4 Let me scroll back. 5 A No, "can" means basically you are -- you 6 have the ability to; meaning if you -- if you can 7 do something, you have the ability to do 8 something. 9 Q Okay. So XiFi's construction is that the 10 information regarding current bandwidth 11 availabilities of the recited transceivers has the 12 ability to be obtained directly from at least the 13 recited actual PHY interfaces and the ac- -- the 14 recited actual MAC interfaces. 15 Is that fair to swap out "can be" with an 16 "ability to"? 17 MR. SCHMIDT: Objection to form. 18 BY THE WITNESS: 19 A Yeah, I'm not -- I'm not trying to -- 20 again, I'm not trying to change their 21 construction; this is just my opinion based on my 22 analysis. 23 And I'm just pointing out here of that 24 particular element of their construction, that 25 obtained directly from, only makes sense from --	183 1 interfaces. That's what you said, correct? 2 A Yeah, it seems to require, yes. 3 Q And that's because you said the words 4 "must be," correct? 5 A I used the word "must be," yes. And, 6 again, that's part of my analysis for how I viewed 7 the proposed terms within the -- the proposed 8 constructions in support for those prose -- 9 proposed constructions. 10 And it -- I'm pointing out in this entire 11 paragraph that it's a little unclear to me exactly 12 what's being required and what isn't, and that's 13 the language I chose to use to make that 14 distinction. 15 So, yes, I used both those words at 16 those -- both places in that sentence. 17 Q Okay. And, just to be clear, XiFi used 18 the words "can be," correct? 19 MR. SCHMIDT: Objection. That question 20 has been asked and answered multiple times now, 21 and the construction and the declaration speaks 22 for itself. 23 BY THE WITNESS: 24 A Yeah, and I'll just repeat that I'm not -- 25 they're outside the quote for a reason. I am
182 1 based on my analysis that it has to happen based 2 on the construction and a POSITA's perspective of, 3 if that's a requirement, then I further go on here 4 to point out how that adds additional ambiguity to 5 what should be a clarifying construction. 6 So I wouldn't characterize it as, yeah, 7 I'm -- I need to swap out words or I should have 8 swapped out words, I'm just going to -- it's the 9 way I constructed the sentence based upon my 10 analysis. I'm not trying to add additional 11 language to their construction or misconstrue 12 their construction. 13 BY MS. BACT: 14 Q Okay. Well, Dr. Mahon, let's just back up 15 a minute because you said "can be" means an 16 ability to, correct? 17 A I did say that, yes. 18 Q And you said "must be" means a requirement 19 for? 20 A The word "must" in terms of the word 21 itself, yes. 22 Q Okay. And you said that XiFi's 23 construction, and I quote, seems to require that 24 this information be obtained directly from both 25 the actual PHY interfaces and actual MAC	184 1 giving my opinion of my analysis here, and I -- 2 those are the words I used to articulate my 3 opinion. 4 The constructions are what they are. I'm 5 not trying to change them other than do the 6 analysis, and that's what I present here in this 7 paragraph. 8 BY MS. BACT: 9 Q I just want to talk briefly about a couple 10 of paragraphs we skipped over in your declaration, 11 86 and 87. Can you tell me when you're looking at 12 Paragraph 86. 13 A Okay. I'm there. 14 Q Okay. Great. 15 So in this paragraph, you are discussing 16 certain structures. And you say that: "The 17 specification describes how the, quote, virtual 18 PHY layer may include a, quote, RF block or 19 multiple, quote, RF blocks to denote the virtual 20 use of two sets of allocated transceiver 21 resources," correct? 22 A Yes. 23 Q Okay. And then you discuss that the RF 24 blocks communicate directly with the ultra 25 streaming block about the actual resource

185 1 availability and the ultra streaming block sends 2 information back to the decision block in the 3 virtual block layer, correct? 4 A Yes. 5 Q Okay. And then you also quote that the 6 virtual PHY RF block may communicate with the 7 virtual MAC decision block and/or the processing 8 block? 9 A Yes. 10 Q Okay. So the RF block that you discuss is 11 part of the virtual PHY, correct? 12 (Reporter's request for a recess.) 13 BY THE WITNESS: 14 A Ask your question again, please? 15 BY MS. BACT: 16 Q Sure. As you say in the second sentence 17 of Paragraph 86, the RF block is included within 18 the virtual PHY layer, correct? 19 A Yeah, the cited section of the '591 patent 20 states that the virtual PHY layer 304 may include 21 an RF block 112. 22 Q Okay. Excellent. And then the other 23 structures that are recited in this paragraph 24 include the ultra streaming block, correct? 25 A Yes.	187 1 A Okay. 2 Q Are you there? 3 A Yes. 4 Q Okay. "The virtual MAC management layer 5 302 may include the decision block 106, the 6 processing block 108, and the ultra streaming 7 block 110. The virtual PHY layer 304 may include 8 the RF block 112." 9 Did I read that correctly? 10 A Yes. 11 Q And these are the structures that you 12 discussed in Paragraph 86, correct? 13 A Correct. 14 Q So all of these structures are in the 15 virtual MAC or the virtual PHY, correct? 16 A Yes. 17 Q And none of them are in the actual MAC 18 interface, right? 19 A What's being disclosed here is only 20 discussing the virtual MAC or virtual PHY. It's 21 not specifically mentioning the actual PHY or MAC 22 here. 23 Q Thank you very much. You anticipated my 24 next question and answered it, so we can skip 25 that. Thank you very much.
186 1 Q And do you agree that the ultra streaming 2 block is part of the virtual MAC? 3 A It says it can include that or may 4 include, yes. 5 Q Okay. And then, additionally, this 6 discusses the decision block, correct? 7 A That -- oh, and specifically it says: 8 "The disclosure is actually the virtual MAC 9 management layer may include the decision block 10 and that" -- to answer your question, that the 11 information -- let's see -- "sends the information 12 back to the decision block in the virtual MAC." 13 And that is... 14 Yes, that's in the patent specification 15 discloses that the decision block in the 16 virtual MAC layer, so yes. 17 Q Okay. And the same is true of the 18 processing block that you also mention, correct? 19 A The virtual MAC decision block and/or the 20 processing block -- processing block. And you're 21 asking specifically about the processing block? 22 Q Right. So if I could direct you to 23 column 4 of the '591 patent which you're quoting 24 from at about line 33. 25 You can let me know when you're there.	188 1 If you would turn to Paragraph -- 2 (Reporter's request for a recess.) 3 MS. BACT: Yes. Let's take a break for 4 Michelle. I'm so sorry. 5 (WHEREUPON, discussion was had off the 6 stenographic record.) 7 THE VIDEOGRAPHER: Off the record at 8 2:26 p.m. 9 (WHEREUPON, a recess was had.) 10 THE VIDEOGRAPHER: Back on the record at 11 2:37 p.m. 12 BY MS. BACT: 13 Q Okay. Welcome back, Dr. Mahon. 14 Did you substantively discuss this case 15 with your counsel in the break? 16 A I did not. 17 Q Okay. Great. 18 So I just want to talk about one more 19 paragraph of your declaration with regard to the 20 "bandwidth availabilities" term, and that is 21 Paragraph 87. 22 If you could tell me when you're there. 23 A Okay. I'm there. 24 Q Okay. Great. In that paragraph, you 25 state that the specification further provides that

189 1 various ways for determining availability of 2 resources include common memory, host interfaces, 3 common threads and/or cues or other data 4 structures. 5 Is that correct? 6 A That's correct. 7 Q Okay. And you are citing to column 8, 8 lines 14 through 17 of the '591 patent? 9 A Yes. 10 Q Okay. Could you go there, please, which 11 is Exhibit 5. I can share my screen, but you 12 are -- 13 A I'm there. 14 Q You're there? Okay. Great. Me too. 15 So I just read you that sentence from 14 16 to 17, and now I'm going to read you the sentence 17 immediately before it, which begins at column 8, 18 line 11. 19 "While not explicitly shown in Figure 8, 20 the ultra streaming block carries out a monitoring 21 function more fully described below that feeds 22 back wireless resource availability to the 23 decision block 716." 24 Did I read that correctly? 25 A Yes.	191 1 A Okay. 2 Q I am looking at Paragraph 91 of your 3 declaration. 4 Let me know when you're there. 5 A I'm there. 6 Q Okay. You say that you disagree with 7 XiFi's proposed construction because it does not 8 give sufficient meaning to how a POSITA would 9 understand, quote, without requiring the 10 disassociation of the recipient in the context of 11 the claims, the extrinsic evidence, and XiFi's 12 statements in the parallel PTAB proceedings, 13 correct? 14 A That is correct. 15 Q Okay. And, rather, you think Samsung's 16 construction, "while maintaining association of 17 the recipient," is more accurate, correct? 18 A Yes, based upon, again, the references 19 that I cite. 20 Q Okay. And XiFi's construction, to be 21 clear, is plain and ordinary meaning, correct? 22 A Yes. 23 Q You have a section in your declaration 24 about legal standards, correct? 25 A Yes, I do.
190 1 Q Is it fair to say that the sentence that 2 you quote in your declaration is characterizing 3 various ways that the ultra streaming block 4 carries out its monitoring function? 5 A It's within that context, and I'm 6 referring to it also within that context of saying 7 that, in general, in both these paragraphs, 86 and 8 87, that other elements in terms of the overall 9 feedback can be involved or other -- yeah, other 10 entities. 11 Q Okay. And the ultra streaming block and 12 the decision block are the structures that are 13 mentioned in the sentence that I just read, 14 correct? 15 A Correct. 16 Q And those are both part of the 17 virtual MAC, correct? 18 A Yes. 19 Q Okay. That's all I wanted to ask you 20 about bandwidth availabilities. 21 So if we can shift gears and continue on 22 in your declaration. And I do want to move as 23 quickly as possible, especially based on, you 24 know, changing circumstances, but let's talk about 25 "without requiring disassociation" very briefly.	192 1 Q And that's from Paragraph 22 to 2 Paragraph 33? 3 A Yes. 4 Q Okay. And do you discuss within that what 5 a negative limitation is? 6 A I don't discuss that within that section 7 of my report. 8 Q Okay. And do you discuss that elsewhere 9 in your report? 10 A Within this section associated with the 11 "construing without requiring the disassociation 12 of the recipient," yes. 13 Q What is a negative limitation? 14 A It's -- 15 MR. SCHMIDT: Objection to form. 16 BY THE WITNESS: 17 A Yeah, so I'm -- I'm not a lawyer, but my 18 understanding of it is is that a negative 19 limitation is requiring something that -- to not 20 happen or is saying that, in order for -- to meet 21 this claim construction or element, you don't do 22 something. 23 So it negates a function or action or 24 element or capability, I guess you could say. 25

193 1 BY MS. BACT: 2 Q Okay. And what's a positive limitation? 3 A Well, that would include specific 4 functionality like we've been discussing for other 5 claim terms that requires this or it requires 6 that. 7 Q So you state in Paragraph 99 of your 8 declaration that: "The plain and ordinary meaning 9 of the term, quote, without requiring 10 disassociation standing alone could be interpreted 11 broadly to simply preclude a system mandating or, 12 quote, requiring disassociation. Thus, allowing 13 for a system that does, in fact, disassociate 14 despite no requirement to do so"; is that fair? 15 A Well, those -- that's what I state there 16 in that paragraph, yes. 17 Q Okay. But you say that because of what 18 XiFi said in its POPRs at the PTAB, a person of 19 ordinary skill in the art would understand XiFi to 20 have rejected this interpretation, correct? 21 A That they did so based on my analysis, and 22 I provide that support here. 23 Q Okay. Well, let's look at that support 24 together. So you -- 25 A I'm sorry, Counsel. I would also say	195 1 number that I just read. It relates to Patent 2 Number 12,250,564, which is the '564 patent 3 asserted in this case. Do you agree? 4 A Yes. 5 Q So I'm just going to scroll to the page 6 that you cite, which is 76 and note 17. Let's see 7 if I can get there a little faster. 8 A Page 76, right? 9 Q Page 76, note 17. That is the cite. 10 A Okay. 11 Q Okay. And then you cite this language: 12 "Rather than describing an exclusion or an 13 absence, a POSITA would understand the, quote, 14 without requiring disassociation limitation in 15 light of the entire claim to be one of two 16 alternative choices for system configuration, 17 quote, make before break rather than break before 18 make." 19 Is that correct? 20 A Yes. 21 Q And then it goes on after citations: "Any 22 fact, quote, without requiring disassociation is a 23 positive limitation indicating to a POSITA that a 24 system would imply, quote, make before break." 25 Is that correct?
194 1 that, based upon my understanding of the changing 2 circumstances, that this is really a moot point 3 between the parties is what my understanding is; 4 that we agree on, essentially, the construction 5 associated with this term. 6 Q Thanks very much. I understand that we 7 said that we were still going to ask the questions 8 in the deposition while this is being worked out. 9 Okay? 10 A Okay. 11 Q But you may well be right, and that could 12 certainly be something that happens in the near 13 future. 14 So I'm just going to pull up another 15 exhibit, which is the -- XiFi's PGR -- POPR, 16 sorry, Patent Owner's Preliminary Response from 17 PGR2025-00069, which is the one that you cite. 18 And I'll show it to you and ask that it be 19 marked as Exhibit 12. 20 (WHEREUPON, Mahon Exhibit No. 12 was 21 presented to the witness.) 22 BY MS. BACT: 23 Q Can you see that, Dr. Mahon? 24 A Yes, I can. 25 Q Okay. So this document bears the PGR	196 1 A That's correct. 2 Q So can you tell me if anywhere in that 3 footnote that I just read to you if the word 4 "maintaining" is present? 5 MR. SCHMIDT: I'm going to object and note 6 that the document speaks for itself. 7 MS. BACT: Well, I'm looking for the 8 statement that supports Dr. Mahon's proposal, and 9 I want to know if the word in the proposal is 10 present in the statements about -- 11 MR. SCHMIDT: I'll stipulate that the word 12 "maintaining" is not in the footnote, Counsel. 13 Okay? 14 MS. BACT: Sure. 15 BY MS. BACT: 16 Q All right. Let's just take a look at the 17 declaration that was cited in that document. 18 You reference that it's supported by 19 expert testimony in Paragraph 98. And I'm now 20 going to pull up what I'm going to mark as 21 Exhibit 13. 22 (WHEREUPON, Mahon Exhibit No. 13 was 23 presented to the witness.) 24 BY MS. BACT: 25 Q Which is the declaration of Dr. Robert

197 1 Akl, who is XiFi's expert in the same PGR. 2 Do you see that document? 3 A One second, please. 4 Q Take your time. 5 A Okay. I have it open. 6 Q Okay. And there is a reference to 7 Paragraph 119 in the POPR. I'm going to take us 8 to that section and ask us to look at 118 and 119. 9 A I'm sorry. This is in Dr. Akl's 10 declaration? 11 Q Yeah, this is in Dr. Akl's declaration. 12 A Okay. 13 Q So we've got 118 and 119 -- or, sorry, 14 rather let's... 15 Okay. Well, let's start with 119, which 16 is what was cited. 17 This paragraph says: "I also disagree 18 with Dr. Almeroth's opinion that without requiring 19 disassociation as a negative limitation based on 20 the word without, in quotes, recites Dr. Almeroth. 21 My understanding is that a negative limitation 22 states what it excludes. The quote without 23 requiring disassociation is not indicating to a 24 POSITA a set of choices that are unavailable, but 25 rather indicates to the POSITA that the system is,	199 1 based on that and what my opinion is based on the 2 analysis, I certainly agree that, you know, 119 3 has words in it, and, again, I'll affirm that 4 those words -- 119 contain the words that they 5 contain. 6 BY MS. BACT: 7 Q Okay. And I'm just coming back to what 8 you declared in your declaration, that a person of 9 ordinary skill in the art would have understood 10 XiFi's statements in the POPR to have rejected 11 what you deem the plain and ordinary meaning of 12 the term. And I want to understand what 13 statements XiFi made in the POPR that you were 14 relying on. 15 Is it merely the quoted language that you 16 replicated in Paragraph 98? 17 A My analysis cites to that language based 18 on the evidence -- so multiple documents, multiple 19 pieces of evidence, Dr. Akl's declaration, what 20 was said as far as from XiFi and the documents I 21 cite, and the understanding a POSITA, how they 22 would understand that, and then I present my 23 opinions in this declaration based on that. 24 BY MS. BACT: 25 Q So you're relying on statements by XiFi,
198 1 quote, make before break as opposed to break 2 before make; any fact the POSITA would understand 3 without requiring disassociation as a positive 4 command to implement make before break system." 5 Is that a fair reading of that paragraph? 6 A Yes. 7 Q Okay. And does that include the word 8 "maintain"? 9 MR. SCHMIDT: Objection. Document speaks 10 for itself. 11 BY MS. BACT: 12 Q Okay. There's no statement, you agree, 13 Dr. Mahon, that XiFi said that without requiring 14 disassociation means maintaining an association? 15 MR. SCHMIDT: You could confirm the words 16 on the page, Doctor. 17 BY THE WITNESS: 18 A Yes, the meaning I can confirm those -- 19 the words in Paragraph 119 are what they are, so I 20 don't know how else to -- again, how else to go 21 beyond. 22 In terms of my opinion contained in the 23 paragraphs we're looking at, I -- my analysis is 24 what it is. And with respect to the documents 25 that we're looking at and how I formed my opinion	200 1 but you can't read them to me, for example? 2 MR. SCHMIDT: Objection. 3 Mischaracterization. 4 BY THE WITNESS: 5 A Yeah, so -- 6 BY MS. BACT: 7 Q Okay. I'm asking a different question. 8 When you wrote this declaration and you 9 swore to it and you signed it and you said that 10 XiFi rejected the plain and ordinary meaning of 11 "without requiring disassociation" based on its 12 statements in the POPR, exactly what statements 13 were those? 14 A I state in Paragraph 99: "A person of 15 ordinary skill in the art would understand XiFi's 16 statements in the POPR to have rejected this 17 interpretation." 18 And right above that I go through the 19 discussion of how the -- this was discussed in the 20 POPR, as well as cite to specific quotes from the 21 POPR, as well as Dr. Akl. 22 And then taking that into account, for 23 example, saying that the -- the limitation can be 24 taken one of two ways, and the one way it should 25 be taken is make before break, not break before

201 1 make. And if that's the case and those are your 2 options, you're excluding one possible option. 3 And then you're saying that it's make 4 before break; well, make before break means you're 5 connecting to something before you break it, and 6 then that would -- based on my analysis of what 7 they're relying on for the term "disassociation." 8 So I'm -- I'm citing to it and I'm citing 9 support to it specifically, so I don't know how 10 you can say that I'm not citing to specific things 11 within the -- either the POPR or the declaration 12 to come to the conclusion from the perspective of 13 a POSITA. 14 BY MS. BACT: 15 Q So it's your testimony today that by 16 saying "make before break," that's equivalent to 17 "while maintaining an association"? 18 A What I'm saying is that, to a POSITA, it's 19 well-known what make before break means for 20 decades, and that -- 21 Q So -- 22 A -- make before break means you are 23 maintaining a connection before you break the 24 connection. 25 Q Are you required to maintain the	203 1 any wireless context that would say that make 2 without break, how it might be construed within 3 this context and comparing it to that, but, 4 certainly, make without break could -- could take 5 into various possibilities. 6 Certainly make before break would be part 7 of that possible -- possible understanding. 8 BY MS. BACT: 9 Q And do you agree that the language you 10 quote on Paragraph 101 contrasts "make without 11 break" with "break before make"? 12 A While that does cite to "which allows, for 13 example, a switch between bands to be made without 14 needing to first break the current association." 15 So it's talking specifically about that within 16 that citation. 17 Q I was going to look at that language with 18 you. Thank you. 19 So when XiFi defined "make without break," 20 they defined it as "a switch between bands to be 21 made without needing to first break the current 22 association," correct? 23 A Yes. 24 Q And that's not the same as "while 25 maintaining the association," correct?
202 1 connection or can you maintain the connection? 2 A The term "make before break" means just 3 that, you make the connection before you break the 4 connection in wireless systems. 5 Q Okay. So let's look at Paragraph 101 of 6 your declaration. 7 Tell me when you're there. 8 A Okay. I'm there. 9 Q And that quotes XiFi's complaint that 10 refers to something called "make without break"; 11 do you agree? 12 A Yes. 13 Q And is it your opinion that make without 14 break is equivalent to make before break? 15 MR. SCHMIDT: Objection to form. 16 BY THE WITNESS: 17 A I am pointing to that as XiFi's 18 explanation. Certainly, just from the perspective 19 of a POSITA and the ordinary understanding of what 20 they have of the words "make without break" in the 21 context of a wireless system, it's certainly 22 consistent with their understanding; that is "make 23 without break." 24 I haven't done an analysis on possible 25 uses of "without." I don't recall anything from	204 1 MR. SCHMIDT: Objection to form. 2 BY THE WITNESS: 3 A So ask the question again, please. 4 BY MS. BACT: 5 Q Sure. Without needing to first break the 6 current association is not the same as "while 7 maintaining the current association," correct? 8 A I'm sorry. Where is -- where is the 9 language "needing" in this paragraph? 10 Q Sure. It's in the last sentence of the 11 quoted text that you bolded -- 12 A I see. 13 Q -- Paragraph 101. 14 So XiFi said: "Make without break is a 15 switch between bands to be made without needing to 16 first break the current association." And then 17 Samsung's construction is: "Maintaining the 18 association." 19 And my question is: "Maintaining 20 association" is not the same as "without needing 21 to break the current association," correct? 22 A Well, from the perspective of a POSITA, 23 that's not clearly distinct. Again, that's why 24 the positions here are, quite frankly, a little 25 bit, on XiFi's side, muddled.

205 1 Certainly that's within the possibility of 2 meaning the same thing to a POSITA. 3 Q So at 99 you said: "Without requiring 4 stand" -- "without requiring disassociation, 5 standing alone could be interpreted broadly to 6 simply preclude a system mandating or requiring 7 disassociation, thus allowing for a system that 8 does, in fact, associate despite no requirement to 9 do so." 10 You said that, correct? 11 A Yes. I'm pointing out the broad aspect of 12 what this could mean, yes. 13 Q And that's not different, correct, from a 14 switch between bands being made without needing to 15 first break the first -- the current association, 16 correct? 17 You can associate, but you don't have to? 18 A Well, certainly, again, I'm -- I'm 19 discussing from the perspective of a POSITA here 20 how the ambiguity associated with the proposed 21 construction and whether the actual limitation is 22 a negative limitation or not and what has been 23 stated by both XiFi and Dr. Akl. 24 And I -- basically, I'm performing an 25 analysis on what a POSITA would understand here.	207 1 ordinary meaning. 2 And then I go through the analysis in this 3 section of that and how I understand it from the 4 perspective of a POSITA and what's been disclosed 5 and why that is ambiguous and could be taken 6 apparently multiple ways and what positions have 7 finally been taken that, in order to clarify that, 8 that Samsung's proposed construction is 9 reasonable. 10 And, again, pointing to what Dr. Akl said 11 in his deposition apparently, it certainly seems 12 to align with what Samsung is proposing as 13 reasonable language to clarify what that term 14 means. 15 Q And, again, you haven't read the 16 transcript of Dr. Akl's deposition, right? 17 A Correct. 18 Q And you had not considered Dr. Akl's 19 deposition when you wrote this declaration? 20 A That's correct. 21 Q We can move on. 22 So the final term of the day: "Different 23 bands of frequencies." That begins in your 24 declaration at Paragraph 104. 25 So in Paragraph 107 of your declaration --
206 1 Certainly my analysis within these 2 paragraphs say that, based on all of the evidence, 3 it -- the construction that seems to be reasonable 4 is as proposed with "while maintaining an 5 association" based on all that context. 6 Specifically does the word "without 7 requiring," what does that mean? Again, it could 8 mean multiple things. And so in that context, the 9 meaning that seems to be most representative of 10 all the evidence is Samsung's construction from 11 the perspective of a POSITA, but I have a hard 12 time characterizing it any other way than that. 13 Q And when you say "ambiguity" with XiFi's 14 construction, you acknowledge that XiFi's 15 construction is plain and ordinary meaning, 16 correct? 17 A And -- yes, and that the construction that 18 Samsung has presented is also based on plain and 19 ordinary meaning of the terms based on the 20 evidence and the perspective of a POSITA, yes. 21 Q Okay. But you said that there was 22 ambiguity in the construction, and I've been 23 trying to understand what you meant by that. 24 A Well, I mean, if you examine the evidence 25 in the case, what does XiFi mean by plain and	208 1 let me know when you're there. 2 A I'm there. 3 Q You say: "A POSITA understands that the 4 ranges of frequencies available for these types of 5 wireless networks are regulated by local 6 government agencies; e.g. in the United States, 7 the Federal Communications Commission or FCC, and 8 are often formalized in industry standards." 9 Is that correct? 10 A Yes. 11 Q Okay. So when you say "they're often 12 formalized in industry standards," they are not 13 always, correct? 14 A I can't think of a single hertz within the 15 available spectrum that some standardization 16 organization hasn't claimed to and/or have to 17 follow the FCC rules. 18 So I guess the answer to that question is 19 there's no free spectrum. There's allocate -- 20 there's spectrum that's allocated for multiple 21 uses and -- by the public, an ISM band for 22 example, but it's still an allocated band for that 23 purpose. 24 Q Okay. But you said "often formalized in 25 industry standards"; you didn't say "always

209 1 formalized in industry standards?" 2 A I did not. 3 Q Okay. And in Paragraph 108, you discuss 4 this in the Wi-Fi context. And a POSITA would 5 know that a Wi-Fi network may operate within any 6 one of the so-called 2.4 gigahertz band, the 7 5 gigahertz band, and the 6 gigahertz band; is 8 that correct? 9 A That's correct. 10 Q Okay. And within the 5 gigahertz band, 11 wouldn't a POSITA be aware of high and low bands 12 within the 5-gigahertz band? 13 A There are sub-bands in the 5-gigahertz 14 band, yes. 15 Q Okay. And those are well-known? 16 A Sub-bands? Yes. 17 Q Okay. And are those described in the 18 standard? 19 A Those are allocated based on the 20 5-gigahertz band being the band in which Wi-Fi was 21 approved, and those are the bands that Wi-Fi was 22 approved to operate in. So that's incorporated 23 into the standard, those sub-bands within the 24 5-gigahertz band. 25 Q Okay. And would a person of skill in the	211 1 A Correct. 2 Q Okay. And you understand "for example" to 3 mean providing one or more instances of a 4 particular thing, correct? 5 A "For example" does provide examples which 6 would be a particular instance of something, yes. 7 Q Right. And "for example" would not need 8 to provide the total set of something, correct? 9 A Well, it -- I don't know the context, but 10 certainly a POSITA reading this is taking that as 11 saying, hey, here's examples of what we're talking 12 about, and those are three that are mentioned 13 within Wi-Fi. 14 Q Okay. Here are examples of what we're 15 talking about. That's great. 16 So I'm scrolling ahead to Paragraph 114 of 17 your declaration, and I'm going to just read from 18 it to you, and you can tell me if it's correct. 19 "I understand that XiFi has contended that 20 different bands of frequencies/different bands"-- 21 excuse me. I'll start again. 22 You say: "I understand that XiFi has 23 contended that different bands of 24 frequencies/bands of frequencies being 25 different/frequency bands being different from
210 1 art understand those sub-bands to be two different 2 bands? 3 A No, they would understand it based on 4 what's disclosed here within the use of the bands 5 in the patents and the references to the band use 6 in the patents that they would understand those 7 distinctly as sub-bands within the 5-gigahertz 8 band. 9 And that's what I'm pointing to and 10 actually pointing out. Not specifically 11 mentioning that 5 gigahertz has sub-bands, but 12 that's what I'm pointing out in these paragraphs. 13 Q Mm-hm. Okay. Looking at 109, you cite 14 some remarks that say -- include the phrase "for 15 example, 2.4 gigahertz, 5 gigahertz, and 16 6 gigahertz" as different bands of frequencies, 17 correct? 18 A I'm sorry. Which paragraph are you 19 looking at? 20 Q I'm looking at the block text in the 21 middle of Paragraph 109 of your declaration, and 22 it says, quote: Wi-Fi radios emit radio waves in 23 different bands of frequencies, such as, for 24 example, 2.4 gigahertz, 5 gigahertz, and 25 6 gigahertz; is that correct?	212 1 each other requires no construction and instead 2 should be interpreted according to its plain and 3 ordinary meaning. Apparently this is because XiFi 4 intends to read different bands of frequencies to 5 refer to any arbitrary range of frequencies." 6 Did I read that correctly? 7 A Yes. 8 Q On what do you base the last sentence 9 beginning "apparently"? 10 A Based upon what I've seen in terms of 11 what's being presented, I would have to go back 12 and look for particular cites for that, but 13 certainly that in -- those -- that evidence 14 supported this -- my opinion in this statement -- 15 Q Okay. 16 A -- just not recalling; I'd have to go back 17 and look. 18 Q Okay. So XiFi's construction of this term 19 is plain and ordinary meaning, correct? 20 A That's their proposed construction, yes. 21 Q And do you agree that plain and ordinary 22 meaning is that meaning as understood by a person 23 of ordinary skill in the art at the time of the 24 invention? 25 A Yes, and in the context of what's being

213 1 disclosed and/or in this -- other evidence that 2 could be presented of what those words mean by the 3 parties, yes. 4 Q So the meaning of the term as proposed by 5 XiFi would be constrained by the understanding of 6 a POSITA at the time of the invention, correct? 7 A My analysis is based on a POSITA at the 8 time of the new invention, yes. 9 Q Well, I'm saying -- I'm asking you a 10 little bit of a different question, which is: You 11 know, you're saying XiFi intends to read different 12 bands of frequencies to refer to any arbitrary 13 range of frequencies, and I'm asking you, isn't 14 XiFi's proposal for plain and ordinary meaning 15 going to mean that the term is not arbitrary, but, 16 rather, contain -- constrained by the 17 understanding of a person of skill in the art at 18 the time of the invention? 19 MR. SCHMIDT: Objection to form. 20 BY THE WITNESS: 21 A Yeah, you'd have to ask -- well, you guys 22 would have to tell me what you plan to assert 23 based on plain and ordinary meaning. 24 We wouldn't be talking about this if the 25 parties didn't have a disagreement on what these	215 1 else, which, again, in light of all the evidence 2 and what's presented in the patent specification 3 and the claim language, that there's 4 disagreements. 5 Plain and ordinary meaning is -- you know, 6 that term is designed to be: Okay, what does a 7 POSITA understand. And that's how I did my 8 analysis at the time of the -- you know, with 9 respect to the time of the invention. 10 I can't characterize other than what I've 11 read and what I've seen of what XiFi is going to 12 ultimately -- what position they're going to take 13 on what that term means. 14 Q Okay. So you don't actually know what 15 XiFi is intending to convey by saying "plain and 16 ordinary meaning"? 17 A Well, what I'm saying is the evidence that 18 I've looked at appears to say they're leaning -- 19 or trying to articulate a context and a meaning 20 that encompasses sub-bands or arbitrary chunks of 21 frequency within a given band, which is 22 inconsistent with the use of the terms. 23 And, if that's the case, well, here's my 24 opinion based on that analysis -- or my 25 understanding.
214 1 could mean in the context of the evidence to date 2 in case, so which is why I had to look at it. 3 And, again, taking that into account, 4 it's, again, my analysis and/or, I guess, my 5 implication is that it seems to be XiFi is going 6 to make that argument. And this is my analysis 7 based on my understanding of that, as well as 8 here's the plain and ordinary meaning of these 9 terms and which one is more consistent with the 10 proposed construction. 11 BY MS. BACT: 12 Q So it's your understanding that when a 13 party proposes plain and ordinary meaning for a 14 term, they can incorporate any arbitrary meaning 15 of that term? 16 MR. SCHMIDT: Objection -- 17 BY THE WITNESS: 18 A Well, they can -- 19 MR. SCHMIDT: -- form. 20 BY THE WITNESS: 21 A I don't -- I don't know what's permitted 22 by the Court. I do -- I do know that I've run 23 into cases where certainly two people have a 24 disagreement on plain and ordinary meaning because 25 one is focusing or trying to encompass something	216 1 Q Okay. I think we can move on. I'm going 2 to bring back up the '591 patent one last time. 3 Could you join me in column 12 of the 4 '591 patent in your favorite format, whether it's 5 my shared screen or on your own. 6 A This is what exhibit, Exhibit 1? 7 Q Exhibit 5. 8 A Oh, Exhibit 5. Oh, one second. 9 Q Take your time. 10 A Exhibit 5. And where am I going? 11 Q The bottom of column 12 to claims 4 and 5. 12 A Claims 4 and 5, okay. 13 Q Are you there? 14 A Yes. 15 Q Okay. So claim 4 of the '591 patent 16 recites: "The wireless networking device of 17 claim 1 wherein at least one of the first, second, 18 and third wireless frequency bands are specified 19 in at least one member of the IEEE 802.11 20 standards." 21 Did I read that correctly? 22 A Yes. 23 Q Okay. So if only one of the first, 24 second, and third frequency bands are specified in 25 the 802.11 standard, claim 4 could be met,

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217 1 correct? 2 A At least one of the bands are within the 3 802.11, then, yes, the claim element 4 -- I mean 4 claim 4 can be satisfied by the fact that one is 5 in the 802.11 bands. 6 Q So the other two bands that are recited, 7 the second and third bands, do not need to be 8 within the 802.11 standard, correct? 9 A It doesn't provide that stipulation. 10 Q But it could be met with only one being 11 within the 802.11 standard, correct? 12 A Well, it says at least one, so yes. 13 Q Okay. 14 MS. BACT: I think that's all I have. 15 MR. SCHMIDT: Pass the witness? 16 MS. REPORTER: Anything else on the 17 record? 18 MR. SCHMIDT: Have you passed the witness? 19 MS. BACT: Yeah. 20 MR. SCHMIDT: I have no questions. 21 Reserve the right to review and sign. 22 THE VIDEOGRAPHER: If there's no more 23 questions, I'll take us off the record. 24 This concludes this video-recorded 25 deposition of Dr. Mark Mahon. Going off the	219 1 ACKNOWLEDGMENT OF DEPONENT 2 I, MARK MAHON, Ph.D., do hereby 3 acknowledge that I have read and examined the 4 foregoing testimony and the same is a true, 5 correct, and complete transcription of the 6 testimony given by me and any corrections appear 7 on the attached errata sheet signed by me. 8 9 _____ 10 (SIGNATURE) (DATE) 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
218 1 record at 3:20 p.m. 2 (WHEREUPON, discussion was had off the 3 record.) 4 (WHEREUPON, the deposition was concluded 5 at 3:21 p.m. CST.) 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	220 1 CERTIFICATE OF REPORTER 2 3 I, MICHELLE M. YOHLER, a Certified 4 Shorthand Reporter within and for the County of 5 Will, State of Illinois, do hereby certify: 6 That previous to the commencement of the 7 examination of the witness, the witness was duly 8 sworn to testify the whole truth concerning the 9 matters herein; 10 That the foregoing deposition transcript 11 was reported stenographically by me, was 12 thereafter reduced to typewriting under my 13 personal direction and constitutes a true record 14 of the testimony given and the proceedings had; 15 That the said deposition was taken 16 remotely before me at the time and place 17 specified; 18 That I am not a relative or employee or 19 attorney or counsel, nor a relative or employee of 20 such attorney or counsel for any of the parties 21 hereto, nor interested directly or indirectly in 22 the outcome of this action. 23 24 25

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Conducted on February 26, 2026

56 (221 to 224)

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1 IN WITNESS WHEREOF, I do hereunto set my
2 hand and affix my seal of office at Chicago,
3 Illinois, this 3rd day of march, 2026.
4
5

6 *Michelle M. Yohler*
7

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