

1 UNITED STATES PATENT AND TRADEMARK OFFICE
2 BEFORE THE PATENT TRIAL AND APPEAL BOARD
3 CHARTER COMMUNICATIONS,)
4 INC.,)
5 Petitioner,) IPR2024-01287
6 v.) U.S. Patent No.
7 IARNACH TECHNOLOGIES,) 9,287,982
8 LTD.,)
9 Patent Owner.)

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12 DEPOSITION OF KERRY I. LITVIN, PH.D.
13 APPEARING REMOTELY

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15 July 31, 2025
16 10:05 a.m. CST

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22 REPORTED BY: WENDY A. KILLEN, CSR, RPR

23 LICENSE NO.: 084-003772

24 APPEARING REMOTELY

Exhibit 1017 Charter Comm. v. Iarnach Tech. IPR2024 - 01287

Page 2 1 REMOTE APPEARANCES 2 FOR THE PETITIONER: 3 MARSHALL, GERSTEIN & BORUN LLP, by 4 RAYMOND R. RICORDATI, III, ESQ. 5 6300 Willis Tower 6 233 South Wacker Drive 7 Chicago, Illinois 60606-6357 8 rricordati@marshallip.com 9 10 FOR THE PATENT OWNER: 11 HEIM PAYNE & CHORUS LLP, by 12 WILLIAM B. COLLIER, JR., ESQ. 13 609 Main Street, Suite 3200 14 Houston, Texas 77002 15 wcollier@hpcclp.com 16 17 * * * * * 18 19 20 21 22 23 24	Page 4 1 THE COURT REPORTER: Due to the need 2 for this deposition to take place remotely, the 3 attorneys will stipulate that the court reporter 4 may swear in the witness over videoconference. 5 Please indicate your agreement by 6 stating your name and agreement on the record 7 beginning with the noticing attorney. 8 MR. RICORDATI: My name is Ray 9 Ricordati. I'm with Marshall, Gerstein & Borun 10 representing Petitioner, Charter Communications, 11 and I agree. 12 MR. COLLIER: My name is Wills Collier 13 from the law firm Heim, Payne & Chorush 14 representing Patent Owner, Iarnach Technologies, 15 and I agree. 16 (Whereupon, the witness was 17 duly sworn.) 18 KERRY I. LITVIN, PH.D., 19 having been first duly sworn, was examined and 20 testified as follows: 21 EXAMINATION 22 BY MR. RICORDATI: 23 Q. Good morning, Dr. Litvin. 24 A. Good morning.
Page 3 1 INDEX TO EXAMINATION 2 WITNESS: KERRY I. LTIVIN, PH.D. 3 PAGE 4 EXAMINATION BY MR. RICORDATI 4 5 EXAMINATION BY MR. COLLIER 100 6 FURTHER EXAMINATION BY MR. RICORDATI 114 7 FURTHER EXAMINATION BY MR. COLLIER 117 8 9 INDEX TO EXHIBITS 10 MARKED DESCRIPTION PAGE 11 Petitioner 12 Exhibit 1 Patent US 9,287,982 7 13 Exhibit 2 Patent US 8,831,425 29 14 Exhibit 3 Patent US 8,160,448 41 15 Exhibit 4 Declaration of Kerry Litvin 16 in Support of Patent Owner's 17 Response to Petition of Inter 18 Partes Review of U.S. Patent 19 No. 9,287,982 8 20 Exhibit 5 Declaration of Dr. Kerry 21 Litvin Regarding Claim 22 Construction Issues 98 23 Patent Owner 24 Exhibit 6 Declaration of Paul Min 107 25 26 * * * * * 27 28 29 30	Page 5 1 Q. Before we begin, is there a particular 2 way you prefer to be referred to? 3 A. No. Dr. Litvin, if you prefer. 4 Kerry, if you'd like. Either way. 5 Q. Excellent. 6 Have you ever been deposed before, 7 Dr. Litvin? 8 A. One other time. 9 Q. Was that in connection with a patent 10 case? 11 A. Yes. 12 Q. So I'll just go over the procedure a 13 little bit. So I'm going to ask you a series of 14 questions and you must answer those to the best 15 of your ability. If there is any particular part 16 of the question that you don't understand, please 17 ask me to clarify and I'll do my best to rephrase 18 the question in a manner that you can understand. 19 If you do answer, I'll assume that you understood 20 my question. 21 Because we are remote, please try 22 to not talk over one another. Just wait until I 23 finish my question, and then provide your answer. 24 And I'll do my best to not talk over you as well.

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Page 6 1 So that way, the reporter can get all of our 2 statements on the record. 3 Is there any reason why you 4 couldn't provide truthful testimony today? 5 A. No. 6 Q. Did you bring anything with you to 7 this deposition? 8 A. No. 9 Q. Did you do anything to prepare for 10 this deposition? 11 A. Yes. 12 Q. What was that? 13 A. I read -- 14 MR. COLLIER: I'll instruct the 15 witness not to reveal any privileged information. 16 So don't discuss the specifics of any 17 communication you've had with any of the 18 attorneys for Iarnach. 19 THE WITNESS: Certainly. 20 I simply reviewed the petition, 21 Dr. Min's report, and the cited patents. 22 MR. RICORDATI: Okay. So have you 23 guys both logged into the ExhibitShare 24 functionality?	Page 8 1 What does the phrase DPOE system 2 mean to you? 3 A. The phrase DPOE system, I'll have to 4 refer to my report, but we did have a definition 5 there which I've used. 6 Q. Do you have a copy of your report with 7 you? 8 A. If you don't mind, I can open it up 9 and have it. 10 MR. RICORDATI: I've got one marked. 11 I will just introduce that as well. Just give me 12 one second. 13 Okay. If you look at 14 ExhibitShare, you should see it's been already 15 pre-stamped as Petitioner's Deposition Exhibit 4. 16 (Whereupon, Petitioner's DX 4 17 was marked for 18 identification.) 19 BY MR. RICORDATI: 20 Q. That should be a copy of your report, 21 but if you can open that. 22 A. Okay. 23 Q. Do you recognize this document? 24 A. Yes, I do.
Page 7 1 MR. COLLIER: Yes. 2 MR. RICORDATI: Okay. I have 3 introduced a document that's been marked 4 Petitioner's DX 1. 5 (Whereupon, Petitioner's DX 1 6 was marked for 7 identification.) 8 BY MR. RICORDATI: 9 Q. Do you see that? 10 A. Yes. 11 MR. RICORDATI: In the folder, you can 12 download a copy of that file or just open it in 13 your browser, whatever is easier for you. 14 BY MR. RICORDATI: 15 Q. Dr. Litvin, do you recognize this 16 document that's been marked as Petitioner's DX 1? 17 A. Yes. It's the patent in question. 18 Q. That's the '982 Patent, correct? 19 A. Yes. 20 Q. I'd like to direct your attention to 21 Claim 1, which is in Column 8. 22 A. Okay. 23 Q. And specifically at Line 35, the claim 24 refers to the DPOE system.	Page 9 1 Q. And what is it? 2 A. It's my declaration. 3 Page 17, DPOE System: One or more 4 devices, software and/or firmware that provide 5 DPOE functionality within a network. 6 Q. So it's fair to characterize a DPOE 7 system as a combination of software and hardware? 8 A. Yes, those are components, yes. 9 Q. If we return back to Claim 1 of the 10 '982 Patent, what element performs the step of 11 acquiring a configuration file from a back-office 12 management system? 13 A. What element? 14 MR. COLLIER: Objection, scope. 15 THE WITNESS: Yeah, I don't believe 16 that I, in the context of my report, my 17 declaration, define that or specify that. 18 BY MR. RICORDATI: 19 Q. So looking at the claim, can you 20 determine what the claim says? 21 Does the claim recite the DPOE 22 system acquiring a configuration file from a 23 back-office management system? 24 A. The claim says, The DPOE system

Page 10 1 acquiring a configuration file from a back-office 2 management system. 3 Q. So would it be fair to say that the 4 DPOE system is the element that performs the step 5 of acquiring a configuration file from a 6 back-office management system? 7 MR. COLLIER: Objection, scope. 8 THE WITNESS: Again, I didn't render 9 an opinion on that, but verbatim, that's what 10 this claim says. 11 BY MR. RICORDATI: 12 Q. Did you analyze Claim 1 with respect 13 to when you analyzed the petition? 14 MR. COLLIER: Objection, form. 15 THE WITNESS: I was asked to analyze 16 and consider the petition and Dr. Min's arguments 17 and the evidence they cite with regard to those 18 arguments. 19 BY MR. RICORDATI: 20 Q. And were you asked to review the 21 entire petition? 22 A. I did read the petition. 23 Q. And did the petition make an argument 24 with respect to whether or not the DPOE system of	Page 12 1 BY MR. RICORDATI: 2 Q. And does your declaration set forth 3 every disagreement that you have with respect to 4 the arguments and evidence presented in the 5 petition and Dr. Min's declaration? 6 A. Can you repeat that? 7 MR. RICORDATI: Sure. 8 Can you read that question back, 9 please? 10 (Whereupon, the record was 11 read as requested.) 12 THE WITNESS: Yes. It's a complete 13 analysis. 14 BY MR. RICORDATI: 15 Q. So is it fair to assume that if you 16 didn't present an argument challenging a 17 particular limitation of a claim, that you don't 18 have a disagreement with that argument? 19 MR. COLLIER: Objection, scope. 20 THE WITNESS: I would say not 21 necessarily that I don't have a disagreement. 22 Nevertheless, the counterarguments that I provide 23 were the ones that I felt were the strongest and 24 made the most weighty points.
Page 11 1 certain prior art references performed the step 2 of acquiring a configuration file from a 3 back-office management system? 4 MR. COLLIER: Objection, scope. 5 THE WITNESS: Again, referring to my 6 report, I only provided opinion with regard to 7 what Dr. Min and/or the petition argued and with 8 regard to their use of the cited evidence. 9 BY MR. RICORDATI: 10 Q. It's your understanding that the 11 petition set forth arguments with respect to 12 every limitation of Claim 1, correct? 13 A. I believe that it did, to my 14 recollection. 15 Q. So when you were analyzing the 16 petition, you considered the arguments and 17 evidence presented in the petition and/or by 18 Dr. Min with respect to every element of 19 Claim 1, correct? 20 MR. COLLIER: Objection, scope. 21 THE WITNESS: I was asked to analyze 22 Dr. Min's arguments and the petition's arguments 23 and the evidence cited within those documents. 24	Page 13 1 BY MR. RICORDATI: 2 Q. As you sit here today, can you think 3 of any disagreements you had with the arguments 4 set forth in the petition or in Dr. Min's 5 declaration that are not in your declaration? 6 MR. COLLIER: Objection, scope. 7 THE WITNESS: I have no opinion on 8 that. I don't recall. 9 BY MR. RICORDATI: 10 Q. Is there any document that you could 11 review that would refresh your recollection as to 12 whether you have any disagreements with the 13 arguments in the petition or Dr. Min's 14 declaration that are not in your declaration? 15 MR. COLLIER: Objection, scope. 16 THE WITNESS: I don't have any 17 personal notes available. 18 BY MR. RICORDATI: 19 Q. Other than your personal notes, are 20 there any documents that might refresh your 21 recollection as to whether there's any additional 22 arguments that you have disagreements with? 23 MR. COLLIER: Objection, scope. 24 I'm going to direct the witness

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Page 14 1 not to respond or reveal any communication with 2 me or any other attorneys who represent Iarnach 3 in this case. 4 THE WITNESS: There are none. 5 BY MR. RICORDATI: 6 Q. Okay. So let's look back at the 7 language of the Claim 1. It looks like it starts 8 at Line 41. 9 Can you tell me what element 10 performs the step of analyzing the acquired 11 configuration file? 12 MR. COLLIER: Objection, scope. 13 THE WITNESS: Again, I only provided 14 opinion commentary with regard to Dr. Min and the 15 petition, and I formed no opinion on that. 16 BY MR. RICORDATI: 17 Q. So you didn't form an opinion with 18 respect to the step of analyzing the acquired 19 configuration file, is what you're saying? 20 MR. COLLIER: Objection, form. 21 THE WITNESS: I made a determination 22 that analyzing and converting are two different 23 steps. 24	Page 16 1 configuring of the OLT and meanwhile configuring 2 the ONU, is that performed by the DPOE system? 3 MR. COLLIER: Objection, scope. 4 THE WITNESS: Again, I was asked to 5 provide opinions with regard to the arguments 6 that Dr. Min made and the evidence that he 7 cited. 8 BY MR. RICORDATI: 9 Q. So reading Line 45 through 49, you 10 can't determine what element has performed this 11 step of configuring the OLT locally and meanwhile 12 configuring the ONU? 13 MR. COLLIER: Objection, scope. 14 THE WITNESS: It says, The DPOE system 15 configuring the OLT locally and continues on. 16 BY MR. RICORDATI: 17 Q. So based on this language that we just 18 discussed in Claim 1, does the DPOE system 19 perform all of the recited steps? 20 MR. COLLIER: Objection, scope. 21 THE WITNESS: Again, referring to my 22 report, I didn't provide any opinion on the 23 question as asked. 24
Page 15 1 BY MR. RICORDATI: 2 Q. So you did provide an opinion with 3 respect to the step of analyzing the acquired 4 configuration file, correct? 5 A. The report gives an example of what 6 analyzing is. 7 Q. And based on the language of Claim 1, 8 does that analyzing need to be performed by the 9 DPOE system? 10 MR. COLLIER: Objection, scope. 11 THE WITNESS: Line 41 says, The DPOE 12 system analyzing the acquired configuration file. 13 BY MR. RICORDATI: 14 Q. You had also mentioned that you 15 rendered an opinion as to converting. Claim 1, 16 Line 53, is the converting which you provided an 17 opinion on. 18 Was that also performed by the 19 DPOE system, according to the language of 20 Claim 1? 21 A. The DPOE system further converts the 22 configuration information and so forth. 23 Q. And then at Line 45, it says, The 24 DPOE -- does the language of Claim 1 require that	Page 17 1 BY MR. RICORDATI: 2 Q. As an expert witness in the technology 3 described in the '982 Patent, you can't form an 4 opinion as to whether or not the DPOE system is 5 performing all of the steps cited in Claim 1, is 6 that your testimony? 7 MR. COLLIER: Objection, scope. 8 THE WITNESS: I wasn't asked to 9 perform an opinion with regard to that. I was 10 asked to perform an opinion with regard to what 11 Dr. Min argued and what the petition argued and 12 the evidence that was cited in those documents. 13 BY MR. RICORDATI: 14 Q. Does the petition argue that the DPOE 15 system performs all of those steps recited in 16 Claim 1? 17 MR. COLLIER: Objection, scope. 18 Objection, foundation. 19 THE WITNESS: Again, I only provided 20 commentary with regard to Dr. Min's arguments and 21 the petition's arguments. 22 BY MR. RICORDATI: 23 Q. Right. 24 And my question is: In reviewing

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Page 18 1 the petition and Dr. Min's arguments, did those 2 arguments allege the DPOE system of certain prior 3 art references performs each of the steps recited 4 in Claim 1? 5 MR. COLLIER: Objection, form. 6 Objection, foundation. 7 THE WITNESS: The petition and 8 Dr. Min attempted to make those arguments. 9 BY MR. RICORDATI: 10 Q. Does the body of Claim 1 require that 11 the configuration file comprise both 12 configuration information of an optical network 13 unit and configuration information of an optical 14 line terminal? 15 MR. COLLIER: Objection, scope. 16 THE WITNESS: Reading verbatim, it 17 says, The configuration file comprises both 18 configuration information of an optical network 19 unit and configuration information of an optical 20 line terminal. 21 BY MR. RICORDATI: 22 Q. So that answer then is yes, the claim 23 does recite that the configuration file includes 24 both ONU and OLT configuration information,	Page 20 1 be different and only apply to one? 2 MR. COLLIER: Objection, scope. 3 THE WITNESS: Again, I didn't form an 4 opinion on that. I have no opinion on that. 5 BY MR. RICORDATI: 6 Q. It is your opinion that Claim 1 is 7 directed to an service auto-configuration method, 8 correct? 9 MR. COLLIER: Objection, form. 10 THE WITNESS: I believe, according to 11 the claim construction, both parties agree that 12 service auto-configuration is a limitation. 13 BY MR. RICORDATI: 14 Q. That wasn't my question. 15 My question is: Is it your 16 opinion that Claim 1 is directed to an 17 auto-configuration method? 18 MR. COLLIER: Objection, scope. 19 THE WITNESS: The preamble of Claim 1 20 says a service auto-configuration method. 21 BY MR. RICORDATI: 22 Q. It's your opinion that that phrase is 23 a limitation, correct? 24 MR. COLLIER: Objection, scope and
Page 19 1 correct? 2 MR. COLLIER: Objection, form, 3 foundation, and scope. 4 THE WITNESS: I don't know that I 5 specifically -- let me rephrase that. 6 Reading verbatim, that's what that 7 says. 8 BY MR. RICORDATI: 9 Q. And it's your understanding that the 10 words of the claim recite limitations, is that 11 correct? 12 A. The words of the claim recite 13 limitations, that's the question? 14 Q. Yes. 15 A. Yes, the claim provides limitations. 16 Q. ONU configuration information is 17 different than OLT configuration information, is 18 that correct? 19 MR. COLLIER: Objection, scope. 20 THE WITNESS: There's combinations of 21 information that can apply to either or one or 22 the other. 23 BY MR. RICORDATI: 24 Q. Is there also information that might	Page 21 1 foundation. 2 THE WITNESS: It's my opinion that the 3 parties agreed to that. 4 BY MR. RICORDATI: 5 Q. So you didn't form an independent 6 opinion about that? 7 A. No. 8 Q. Excluding the preamble, are the 9 limitations recited in the body of Claim 1 10 consistent with your view that the claim is 11 directed to an auto-configuration method? 12 MR. COLLIER: Objection, scope, form, 13 and foundation. 14 THE WITNESS: Again, referring to my 15 report, I did not form an opinion on that. 16 BY MR. RICORDATI: 17 Q. Turning to Paragraph 42 of your 18 declaration, which has been marked as 19 Petitioner's DX 4, you state, There is nothing in 20 these disclosures that describes, for example, 21 the automatic configuration of the OLT and ONU, 22 as the '982 Patent discusses, is that correct? 23 A. Yes. 24 Q. What's your basis for that statement?

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Page 22 1 A. The basis for that statement are 2 outlined or discussed in Paragraphs 39, 40, 41. 3 Shall I read them to you? 4 Q. What's your understanding of the 5 automatic configuration of the OLT as described 6 in or as discussed in the '982 Patent? 7 MR. COLLIER: Objection, form. 8 Objection, scope. 9 THE WITNESS: It would be summarized 10 in Column 8 of the '982 Patent starting on 11 Line 19 through 31. 12 BY MR. RICORDATI: 13 Q. So let's turn to that. The '982 14 Patent has been marked as Petitioner's DX 1. 15 Can you read that passage that 16 you've just cited? 17 A. The DPOE system and the service 18 auto-configuration method and network based on 19 that system provided by the embodiments of the 20 present document complete the automatic 21 configuration of the OLT and the ONU at the same 22 time through a configuration file, including the 23 configuration information of the ONU and the 24 configuration information of the OLT in the DPOE	Page 24 1 MR. COLLIER: Objection, scope. 2 THE WITNESS: Meanwhile doesn't 3 necessarily mean at the exact same time. 4 BY MR. RICORDATI: 5 Q. What's your understanding of the term 6 meanwhile? 7 MR. COLLIER: Objection, scope. 8 Objection, relevance. 9 THE WITNESS: Meanwhile could be 10 talking about a physical system. Meanwhile means 11 within a reasonably short timeframe, not 12 necessarily at the exact same time. It could be, 13 but not necessarily depending on the capabilities 14 of the hardware. 15 BY MR. RICORDATI: 16 Q. What is your understanding of the 17 phrase at the same time? 18 MR. COLLIER: Objection, scope and 19 relevance and foundation. 20 THE WITNESS: In this instance, at the 21 same time being within a reasonably short 22 timeframe so as not to impact the operational 23 performance of the system. So that could 24 encompass simultaneous, but that's not, in all
Page 23 1 system; after the process of the ONU 2 initialization is completed, the service can be 3 opened without performing further configuration 4 to the OLT individually. Especially, when more 5 complex configurations are needed to be performed 6 on the OLT correspondingly for the key service 7 operation on the ONU, it can improve the 8 configuration efficiency of the whole system very 9 well. 10 Q. So is it your understanding then that 11 a service auto-configuration method includes or 12 must configure the OLT and ONU at the same time? 13 MR. COLLIER: Objection, scope. 14 Objection, foundation. 15 THE WITNESS: The claim says 16 meanwhile, not at the same time. 17 BY MR. RICORDATI: 18 Q. What does meanwhile mean to you? 19 MR. COLLIER: Objection, scope. 20 THE WITNESS: I don't have an opinion 21 on what exactly meanwhile means. 22 BY MR. RICORDATI: 23 Q. Do you understand the term meanwhile 24 to be different than the term at the same time?	Page 25 1 likelihood, physically possible depending on the 2 precision of your time measure. 3 BY MR. RICORDATI: 4 Q. Returning back to the paragraph you 5 said was the basis for your opinion, a service 6 auto-configuration method requires the use of a 7 configuration file, including the configuration 8 information of the ONU and configuration 9 information of the OLT, correct? 10 MR. COLLIER: Objection, form, 11 foundation. 12 Counsel, which paragraph are you 13 reading? 14 MR. RICORDATI: The paragraph cited by 15 the witness that's in Column 8, Line 19 to 31. 16 MR. COLLIER: Thank you. 17 THE WITNESS: The question was again? 18 Sorry. 19 BY MR. RICORDATI: 20 Q. It's your understanding that the 21 service auto-configuration method requires the 22 use of a configuration file, including 23 configuration information of the ONU and 24 configuration information of the OLT, correct?

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Page 26 1 MR. COLLIER: Objection, scope. 2 THE WITNESS: Again, can you refer me 3 to my report where I give an opinion on this? I 4 don't believe that I gave a specific opinion on 5 this matter. 6 BY MR. RICORDATI: 7 Q. Sure. In Paragraph 42 of your 8 declaration, you said, There is nothing in these 9 disclosures that describes, for example, the 10 automatic configuration of the OLT and ONU as the 11 '982 Patent discusses, and then you cited this 12 very paragraph that we're referring to, Column 13 8:19 to 31. 14 A. Okay. 15 Q. And in the Column 8:19 to 31 it states 16 that the service auto-configuration method of the 17 present document automatically configures the OLT 18 or completes the automatic configuration of the 19 OLT and ONU at the same time through a 20 configuration file including the configuration 21 information of the ONU and the configuration 22 information of the OLT in the DPOE system. 23 So my question is: Is it your 24 opinion that the service auto-configuration	Page 28 1 that neither of the prior art references have 2 disclosures similar, but you -- 3 A. They don't discuss service 4 auto-configuration at all. 5 Q. Why is that? 6 A. There is no mention of it. 7 Q. No mention of what? 8 A. Service auto-configuration. 9 Q. So they don't use the word service 10 auto-configuration, is that what your testimony 11 is today? 12 MR. COLLIER: Objection, scope. 13 THE WITNESS: Dr. Min's declaration, 14 after reviewing, I could not identify any 15 meaningful discussion of a claims service 16 auto-configuration method or network. The 17 petition and Dr. Min only cite Bernstein's 18 discussion of a DOCSIS passive optical network 19 system and separate references to an ethernet 20 PON. The citations do not discuss service 21 auto-configuration. The sections cited by 22 Dr. Min only describe Bernstein and PON networks 23 at a high level. 24 MR. RICORDATI: I've just introduced
Page 27 1 method requires the use of a configuration file, 2 including the configuration information of the 3 ONU and the configuration information of the OLT? 4 MR. COLLIER: Objection, scope. 5 THE WITNESS: If the service to be 6 opened requires both the OLT and the ONU to be 7 configured, then the configuration file would 8 contain information relevant to both. 9 BY MR. RICORDATI: 10 Q. Are there services that may be opened 11 without configuring both the ONU and the OLT? 12 MR. COLLIER: Objection, scope. 13 THE WITNESS: No opinion on that. 14 BY MR. RICORDATI: 15 Q. Is it your opinion that the service 16 auto-configuration method might include a 17 configuration file that only includes 18 configuration information of the ONU? 19 MR. COLLIER: Objection, scope. 20 THE WITNESS: No opinion on that. 21 BY MR. RICORDATI: 22 Q. In your declaration you state that you 23 have an understanding of the automatic 24 configuration of the OLT and ONU enough to state	Page 29 1 another exhibit. It's been marked Petitioner's 2 Deposition Exhibit Number 2. 3 (Whereupon, Petitioner's DX 2 4 was marked for 5 identification.) 6 BY MR. RICORDATI: 7 Q. Please open that file. 8 A. Okay. 9 Q. Do you recognize this document? 10 A. It's the Bernstein patent. 11 Q. Does the Bernstein reference describe 12 configuring an ONU? 13 MR. COLLIER: Objection, scope. 14 THE WITNESS: I didn't provide an 15 opinion on that. I provided an opinion on the 16 way Dr. Min or the petition cited the Bernstein 17 evidence. 18 BY MR. RICORDATI: 19 Q. So as you sit here today, you can't 20 determine whether or not the Bernstein reference 21 describes configuring an ONU, correct? 22 MR. COLLIER: Objection, scope. 23 THE WITNESS: Again, I didn't provide 24 an opinion on that.

Page 30 1 BY MR. RICORDATI: 2 Q. And if you had a disagreement with the 3 arguments in the petition with respect to 4 Bernstein describing configuring an ONU, you 5 would have put that in your report, correct? 6 MR. COLLIER: Objection, scope. 7 THE WITNESS: I only commented or 8 provided opinion on Dr. Min's use of his 9 citations of Bernstein with regard to the 10 arguments that he made. 11 BY MR. RICORDATI: 12 Q. Did Dr. Min make any arguments that 13 Bernstein describes configuration of an ONU? 14 MR. COLLIER: Objection, scope. 15 THE WITNESS: Can you point me to the 16 section in my disclosure that referred to this? 17 BY MR. RICORDATI: 18 Q. You said you reviewed the petition and 19 Dr. Min's declaration. I'm just asking you about 20 the process of your review. 21 In reviewing the petition and 22 Dr. Min's declaration, did either of those 23 documents set forth any arguments as to whether 24 Bernstein describes configuring an ONU?	Page 32 1 ONU as the '982 Patent discusses, what that 2 phrase means? 3 MR. COLLIER: Objection, scope. 4 THE WITNESS: The opinions I formed 5 are in my report. 6 BY MR. RICORDATI: 7 Q. I just read from your report. I'm 8 asking: Do you have any other basis for that 9 statement other than what you've cited in this 10 report? 11 MR. COLLIER: Objection, form. 12 Objection, scope. 13 THE WITNESS: The opinions are based 14 on what I've cited in the report. 15 BY MR. RICORDATI: 16 Q. In your report you used this phrase, 17 the automatic configuration of the OLT and ONU as 18 the '982 Patent discusses. 19 What's your understanding of that 20 statement? 21 In other words, what do you mean 22 by the automatic configuration of the OLT and ONU 23 as the '982 Patent discusses? 24 MR. COLLIER: Objection, form.
Page 31 1 MR. COLLIER: Objection, scope. 2 THE WITNESS: Whether or not Dr. Min 3 did or did not discuss configuring an ONU, it's 4 my opinion that the evidence cited by him with 5 regard to any particular argument that he was 6 making did not render the claim language obvious. 7 BY MR. RICORDATI: 8 Q. What claim language are you referring 9 to in that answer? 10 A. That's just my general opinion. None 11 of his arguments rendered any of the claim 12 language obvious. 13 Q. So you disagree with Dr. Min's 14 analysis of every limitation described in any 15 claim of the '982 Patent? 16 MR. COLLIER: Objection, scope. 17 Objection, form. 18 THE WITNESS: My objections -- my 19 disagreements are specifically outlined in my 20 report. 21 BY MR. RICORDATI: 22 Q. Outside of Column 8, Lines 19 to 31 of 23 the '982 Patent, do you have any understanding of 24 what the automatic configuration of the OLT and	Page 33 1 THE WITNESS: My understanding would 2 be limited to what is claimed. 3 BY MR. RICORDATI: 4 Q. So by that statement, you are 5 referring to the entirety of Claim 1? 6 A. Claim 1 generally, I would say, 7 encompasses -- Claim 1 encompasses steps that 8 comprise a service quota configuration method. I 9 have no opinion whether that's complete or not. 10 Q. What do you mean by complete? 11 A. Well, for example, there are dependent 12 claims that may also be part of what could be 13 considered service auto-configuration. 14 Q. Besides the pending claims, is there 15 anything else? 16 MR. COLLIER: Objection, scope. 17 THE WITNESS: No opinion. 18 BY MR. RICORDATI: 19 Q. What about Claim 6, does Claim 6 also 20 generally encompass steps that comprise the 21 service auto-configuration? 22 MR. COLLIER: Objection, scope. 23 THE WITNESS: I didn't provide an 24 opinion on this.

Page 34 1 BY MR. RICORDATI: 2 Q. You didn't provide an opinion on 3 whether or not Claim 6 encompasses -- I guess it 4 technically is a service auto-configuration 5 network. 6 Does Claim 6 generally encompass 7 steps that comprise a service auto-configuration 8 network? 9 MR. COLLIER: Objection, form. 10 Objection, scope. 11 THE WITNESS: I didn't form an opinion 12 on that. 13 Can you point to a section in my 14 report where I discuss this? 15 BY MR. RICORDATI: 16 Q. In Paragraph 39 you say that the 17 preamble of Claims 1 and 6 claims "a service 18 auto-configuration method." And right above that 19 you say, Grounds 1 & 2: Bernstein in view of 20 Tsuge does not render obvious "a service 21 auto-configuration" method/network. And then in 22 Paragraph 42 you say, A POSITA would not 23 understand the cited disclosure in Bernstein to 24 render the preamble of Claims 1 and 6 obvious.	Page 36 1 Claim 6, the body of Claim 6 generally describes 2 a service auto-configuration network? 3 MR. COLLIER: Objection, scope. 4 THE WITNESS: I didn't provide an 5 opinion of what specifically encompasses a 6 service auto-configuration network. 7 BY MR. RICORDATI: 8 Q. But you have an opinion here that 9 Bernstein doesn't disclose such a limitation in 10 Paragraphs 39 through 42, Section IX(A) of your 11 report? 12 MR. COLLIER: Objection, foundation. 13 Objection, misstates the document. 14 THE WITNESS: Yes. Based on what is 15 cited there by Min or the petition, there is 16 nothing there that encompasses service 17 auto-configuration. 18 BY MR. RICORDATI: 19 Q. And to come to that opinion, you had 20 to first determine what is meant by service 21 auto-configuration, correct? 22 A. I just said based on the claim 23 language. 24 Q. And with respect to Claim 6, you are
Page 35 1 MR. COLLIER: Objection, form. 2 THE WITNESS: Again, I stand by the 3 opinions that I presented in the report. 4 BY MR. RICORDATI: 5 Q. And one of those opinions is 6 Paragraph 42 here that you refer to the automatic 7 configuration of the OLT and ONU as the '982 8 discusses in this section discussing Claim 6. 9 My question is: What is your 10 understanding of the phrase the automatic 11 configuration of the OLT and ONU, as the '982 12 Patent discusses with respect to Claim 6? 13 MR. COLLIER: Objection, form. 14 Objection, foundation. Objection, scope. 15 THE WITNESS: My answer would be with 16 regard to Claim 1 what is claimed. 17 BY MR. RICORDATI: 18 Q. Is that your full answer? 19 A. You asked me what's my understanding 20 on the service auto-configuration network. 21 Q. So with respect to Claim 1, you said 22 that Claim 1 generally encompasses the steps that 23 comprise a service auto configuration method. 24 Would it be fair to say then for	Page 37 1 referring to the entire claim, is that correct? 2 MR. COLLIER: Objection, foundation. 3 Objection, scope. 4 THE WITNESS: Yes. That's what I used 5 to guide. 6 BY MR. RICORDATI: 7 Q. You are not contesting that the 8 Bernstein reference discloses a DPOE system, 9 correct? 10 MR. COLLIER: Objection, scope. 11 THE WITNESS: Bernstein discusses 12 their version of a DOCSIS-PON. I believe that's 13 what he called it. 14 BY MR. RICORDATI: 15 Q. And you are not contesting that the 16 Bernstein DOCSIS-PON configures both the OLT and 17 ONU at generally the same time, correct? 18 MR. COLLIER: Objection, scope. 19 THE WITNESS: I didn't form an opinion 20 on that. I only formed an opinion on what Min 21 and the petition cited with regard to the 22 arguments of obviousness in each case. 23 BY MR. RICORDATI: 24 Q. Do you recall if the petition and/or

Page 38 1 Min offered an opinion as to whether the 2 Bernstein DOCSIS-PON configured both the OLT and 3 ONU at the same time? 4 MR. COLLIER: Objection, scope. 5 THE WITNESS: Can you cite in my 6 report where I discuss this? Because I don't 7 believe that I discussed this and didn't provide 8 an opinion on this. 9 BY MR. RICORDATI: 10 Q. Your declaration includes all your 11 disagreements with the petition and Min's 12 analysis, correct? 13 A. It includes all those arguments that a 14 -- it includes all of the opinions where we can 15 make the strongest argument for nonobviousness. 16 Q. And in your declaration, you are not 17 contesting that the DPOE system in Bernstein 18 configures both the OLT and ONU at the same time, 19 correct? 20 A. I didn't provide an opinion on that. 21 Q. So the answer is yes, that in your 22 declaration you are not contesting that the DPOE 23 system in Bernstein or, as you referred to it, 24 the Bernstein DOCSIS-PON configures both the OLT	Page 40 1 DOCSIS-PON configures both the OLT and ONU during 2 an initialization process for an ONU, correct? 3 MR. COLLIER: Objection, asked and 4 answered. 5 THE WITNESS: Repeat your question. 6 Sorry. 7 MR. RICORDATI: Can you please read 8 that back? 9 (Whereupon, the record was 10 read as requested.) 11 MR. COLLIER: Objection, asked and 12 answered. 13 THE WITNESS: I don't comment on that 14 configuration with regard to Bernstein during 15 initialization. 16 BY MR. RICORDATI: 17 Q. You are not alleging that Bernstein 18 teaches configuration of an OLT as performed 19 manually by a human, correct? 20 MR. COLLIER: Objection, scope. 21 THE WITNESS: I didn't provide any 22 opinion on that. 23 MR. RICORDATI: I have just introduced 24 another exhibit that's been marked Petitioner's
Page 39 1 and ONU at the same time, correct? 2 MR. COLLIER: Objection, form. 3 THE WITNESS: I didn't form an opinion 4 on that. 5 BY MR. RICORDATI: 6 Q. In your declaration you are not 7 contesting that the Bernstein DOCSIS-PON 8 configures both the OLT and ONU using a 9 configuration file containing configuration 10 information for the ONU and configuration 11 information for the OLT, correct? 12 A. I was asked to address the citings of 13 Dr. Min and the petition. If that was not cited, 14 I didn't comment on it. 15 Q. In your declaration you are not 16 contesting that the Bernstein DOCSIS-PON 17 configures both the OLT and ONU during an 18 initialization process for an ONU, correct? 19 A. Again, I was asked to provide an 20 opinion on the arguments made by Dr. Min and the 21 evidence in Bernstein that he cited in direct 22 regard to each argument. 23 Q. And in your declaration you don't 24 comment on whether or not the Bernstein	Page 41 1 DX 3. 2 (Whereupon, Petitioner's DX 3 3 was marked for 4 identification.) 5 BY MR. RICORDATI: 6 Q. Please take a look at that file and 7 tell me if you recognize that document. 8 A. The Tsuge '448 Patent. 9 Q. Did you analyze this patent in 10 preparation of your declaration? 11 A. I was asked to analyze what Dr. Min 12 argued and what the petition argued. So to the 13 extent that they cited Tsuge, I examined their 14 citations. 15 Q. Did you examine any portions of Tsuge 16 outside of the citations in the petition or by 17 Dr. Min? 18 A. I read through the patent, but only 19 commented and provided opinion on the citations 20 that they referenced. 21 Q. Same question for Bernstein, did you 22 analyze the Bernstein reference in the 23 preparation of your declaration? 24 A. I read the Bernstein patent, but I was

Page 42 1 only asked to comment -- provide opinion 2 regarding citations to Bernstein by the petition 3 or Dr. Min. 4 Q. Okay. So returning to the Tsuge 5 reference, in your declaration, you are not 6 contesting that Tsuge discloses a DPOE system, 7 correct? 8 MR. COLLIER: Objection, scope. 9 Objection, foundation. 10 THE WITNESS: I didn't form an opinion 11 as to whether or not this is or is not a DPOE 12 system. 13 BY MR. RICORDATI: 14 Q. As an expert for technologies 15 described in the '982 Patent, do you have an 16 understanding of whether Tsuge describes a DPOE 17 system? 18 MR. COLLIER: Objection, scope. 19 Objection, asked and answered. 20 THE WITNESS: He describes a concept 21 and claims a concept for allowing DOCSIS to be 22 used on a PON. 23 BY MR. RICORDATI: 24 Q. Is Tsuge's concept of allowing DOCSIS	Page 44 1 on a PON configures both the OLT and ONU using a 2 configuration file containing configuration 3 information for an ONU and configuration 4 information for an OLT, correct? 5 MR. COLLIER: Objection, scope. 6 THE WITNESS: I didn't provide an 7 opinion on that. 8 BY MR. RICORDATI: 9 Q. If you had a disagreement with that, 10 you would have put it in your declaration, 11 correct? 12 MR. COLLIER: Objection, scope. 13 THE WITNESS: It would have been in 14 the declaration if I felt it bolstered the 15 nonobviousness arguments. 16 BY MR. RICORDATI: 17 Q. And in your declaration you are not 18 contesting that the Tsuge concept for using 19 DOCSIS on a PON includes configuring both the OLT 20 and ONU during an initialization process for an 21 ONU, correct? 22 MR. COLLIER: Objection, scope. 23 THE WITNESS: Again, I didn't provide 24 an opinion on that.
Page 43 1 to be used on a PON in your estimation a DPOE 2 system? 3 MR. COLLIER: Objection, scope. 4 THE WITNESS: It's a concept or his 5 invention that allows DOCSIS to be used on a PON. 6 BY MR. RICORDATI: 7 Q. In your declaration, you are not 8 contesting that Tsuge's concept for DOCSIS on a 9 PON includes configuring both the OLT and ONU at 10 the same time, correct? 11 MR. COLLIER: Objection, scope. 12 THE WITNESS: I didn't provide an 13 opinion on that. 14 BY MR. RICORDATI: 15 Q. So yes, in your declaration you are 16 not contesting whether the Tsuge concept for 17 implementing DOCSIS on a PON includes configuring 18 both the OLT and ONU at the same time, correct? 19 A. I have no opinion. 20 MR. COLLIER: Objection, asked and 21 answered. Objection, form. 22 BY MR. RICORDATI: 23 Q. In your declaration, you are not 24 contesting that the Tsuge concept of using DOCSIS	Page 45 1 BY MR. RICORDATI: 2 Q. In your declaration, you are not 3 alleging that Tsuge teaches that configuration of 4 an OLT is performed manually by a human, correct? 5 MR. COLLIER: Objection, scope. 6 THE WITNESS: I didn't provide an 7 opinion on that. 8 BY MR. RICORDATI: 9 Q. I'd like to direct your attention back 10 to your declaration, which is Petitioner's 11 Deposition Exhibit 4, specifically Paragraph 51. 12 A. Yes. 13 Q. What are you describing in Paragraph 14 51? 15 A. I am describing analyzing a 16 configuration file and contrasting that to 17 conversion. 18 Q. What type of configuration file are 19 you discussing in Paragraph 51 of your 20 declaration? 21 A. It's the TLV binary config file 22 discussed in DOCSIS 3.1. 23 Q. Was DOCSIS 3.1 a standard at the time 24 of the invention described in the '982 Patent?

Page 46 1 MR. COLLIER: Objection, scope. 2 THE WITNESS: Whether it was or was 3 not, the configuration file format had changed 4 over the versions of DOCSIS. 5 BY MR. RICORDATI: 6 Q. So the TLV format that you are 7 describing in Paragraph 51 was in effect at the 8 time of the invention, is that correct? 9 A. Yes. 10 Q. And the TLV format you describe in 11 Paragraph 51, that's mandated by DOCSIS, is that 12 correct? 13 A. In Paragraph 51? 14 Q. Yes. 15 A. Yes. 16 Q. In Paragraph 51, it looks like second 17 to last sentence, you refer to configuration 18 settings? 19 MR. COLLIER: Objection, form. 20 THE WITNESS: In that specification, 21 the configuration file consists of a number of 22 configuration settings. Is that what you're 23 talking about? 24	Page 48 1 TLVs and some couldn't certainly, some could. 2 BY MR. RICORDATI: 3 Q. Is there a particular order in which 4 configuration settings must be arranged in a 5 DOCSIS configuration file? 6 MR. COLLIER: Objection, scope. 7 THE WITNESS: Not to my knowledge. 8 BY MR. RICORDATI: 9 Q. Are there any breaks or other record 10 markers in a DOCSIS configuration file used to 11 delineate configuration settings? 12 MR. COLLIER: Objection, scope. 13 THE WITNESS: According to the DOCSIS 14 specification, there are no record markers. 15 BY MR. RICORDATI: 16 Q. When a DPOE system receives a DOCSIS 17 configuration file, the DPOE system does not know 18 what is contained in the file, correct? 19 A. Correct. 20 Q. When a DPOE system receives a DOCSIS 21 configuration file, the DPOE system does not know 22 how the configuration settings are ordered, 23 correct? 24 A. That's my understanding, yes.
Page 47 1 BY MR. RICORDATI: 2 Q. Yes. That's fine. 3 What do you mean by the phrase 4 configuration settings there? 5 MR. COLLIER: Objection, foundation. 6 THE WITNESS: That's a quote from a 7 DOCSIS specification. And the configuration 8 settings are the settings that are used to 9 provision the ONU or the OLT. 10 BY MR. RICORDATI: 11 Q. In accordance with DOCSIS, would those 12 settings also be used to configure a cable modem? 13 MR. COLLIER: Objection, scope. 14 THE WITNESS: There are settings for a 15 cable modem that are available. Certainly within 16 the DOCSIS specification, there are any number of 17 TLVs. 18 BY MR. RICORDATI: 19 Q. Generally speaking, do these 20 configuration settings relate to services 21 provided to end customers? 22 MR. COLLIER: Objection, scope. 23 Objection, foundation. Objection, form. 24 THE WITNESS: There are any number of	Page 49 1 Q. When a DPOE system receives a DOCSIS 2 configuration file, the DPOE system must analyze 3 the file before any format converting could take 4 place, correct? 5 A. Yes. 6 Q. When a DPOE system is converting a 7 DOCSIS configuration file, the DPOE system would 8 need to extract the individual configuration 9 settings from the file, correct? 10 A. The conversion would take place after 11 the analysis, after the determination of what 12 each of these TLVs are and what they are meant to 13 configure. 14 Q. When a DPOE system is converting a 15 DOCSIS configuration file, the DPOE system would 16 need to determine the intent of those extracted 17 configuration settings extracted from the file 18 before it could take an appropriate action, such 19 as converting it to a different format, correct? 20 A. The file would have to be analyzed 21 before conversion -- a second step could take 22 place. 23 Q. I'd like to direct your attention to 24 the Tsuge reference, which has been marked

Page 50 1 Petitioner's DX Exhibit 3, and particularly to 2 Figure 12. 3 My question is: Does Figure 12 in 4 Tsuge describe the same DOCSIS TLV configuration 5 file format that you described in Paragraph 51 of 6 your report? 7 MR. COLLIER: Objection, scope. 8 THE WITNESS: It appears to be 9 schematically similar. 10 BY MR. RICORDATI: 11 Q. It appears to be a DOCSIS 12 configuration file, correct? 13 MR. COLLIER: Objection, scope. 14 THE WITNESS: Again, I didn't provide 15 an opinion on whether this is or is not a DOCSIS 16 configuration file. 17 BY MR. RICORDATI: 18 Q. It appears to use the same format as a 19 DOCSIS configuration file, correct? 20 MR. COLLIER: Objection, scope. 21 Objection, asked and answered. 22 THE WITNESS: It has similarities. 23 BY MR. RICORDATI: 24 Q. What similarities does the	Page 52 1 element labelled 1220? It's marked CM MIC. 2 A. Yes. 3 Q. Does that element correlate to any 4 aspect of the DOCSIS configuration file format 5 described in Paragraph 51 of your declaration? 6 MR. COLLIER: Objection, scope. 7 THE WITNESS: As I say, superficially 8 they schematically look similar. Whether or not 9 they are identical, I couldn't tell you. 10 BY MR. RICORDATI: 11 Q. Well, you have the Tsuge reference 12 there, which includes the description of 13 Figure 12, and you have commented on the scope of 14 Figure 12 in your declaration later on in 15 Paragraph 78. 16 A. That was with reference to saving a 17 file. 18 Q. So you didn't analyze Figure 12 fully 19 in preparing your declaration? 20 MR. COLLIER: Objection, foundation. 21 THE WITNESS: I analyzed it to the 22 extent that Min used it in his example of saving 23 a file. That's all that was needed. 24
Page 51 1 illustration in Figure 12 of Tsuge have to a 2 DOCSIS configuration file? 3 A. It shows definitions of 4 type-length-value, TLV. 5 Q. Are there any other similarities 6 between the format illustrated in Figure 12 of 7 Tsuge and the DOCSIS configuration file format 8 described in Paragraph 51 of your declaration? 9 MR. COLLIER: Objection, scope. 10 THE WITNESS: Without reading the 11 detailed description of what is depicted in 12 Figure 12, I can't comment. In other words, this 13 Figure 12 does not make any -- does not state 14 specifically whether or not there are, for 15 example, record markers or there are not. They 16 may simply not be shown here. 17 There is certainly a line, 18 vertical line, separating one setting parameter 19 from the next. Does that indicate that there are 20 record markers or not, it doesn't say that, but 21 certainly in the DOCSIS specification it says 22 there are no record markers. Is that a schematic 23 way of indicating a record marker, I don't know. 24 Q. In Figure 12 of Tsuge, do you see the	Page 53 1 BY MR. RICORDATI: 2 Q. Let me direct your attention then to 3 Tsuge Column 16, Line 30. 4 A. Column 16? 5 Q. Yes. 6 A. Hang on. Okay. Line 30? 7 Q. Yes. Can you read that sentence? 8 Can you please read that sentence? 9 A. You want me to read it out loud? 10 Q. Yes. 11 A. Although the CM setting information 12 file format according to the DOCSIS standard has 13 been used in the above description, the invention 14 can be also embodied even if it does not conform 15 with such a format. 16 Q. So now based on that understanding of 17 the format described in Figure 12, is it fair to 18 say that Figure 12 of Tsuge is a DOCSIS 19 configuration file? 20 MR. COLLIER: Objection, scope. 21 THE WITNESS: It just says Figure 12 22 is a frame constructional diagram showing an 23 example of a construction of the cable modem 24 setting information file. It's just a schematic

Page 54 1 of a generalized potential cable modem setting 2 file. 3 BY MR. RICORDATI: 4 Q. So you don't believe that the 5 description at Line 30 that refers to the CM 6 setting information file format according to 7 DOCSIS has been used in the above description 8 applies? 9 A. Not definitive. 10 Q. In your declaration you are not 11 contesting that Tsuge teaches the step of 12 analyzing the acquired configuration file 13 limitation, correct? 14 MR. COLLIER: Objection, scope. 15 THE WITNESS: Let me go back to where 16 we discuss analyzing. Hang on. 17 It's simply saying that nothing 18 that Dr. Min cited -- I hope you don't hear all 19 that noise outside. 20 BY MR. RICORDATI: 21 Q. I do not. 22 But what paragraph are you 23 referring to in your declaration? 24 A. You are talking about analyzing and	Page 56 1 acquired configuration file, correct? 2 A. I only address the evidence that Min 3 cited, and that discussion is of DOCSIS services 4 in a GE-PON network. 5 Q. Which paragraphs are you referring to 6 in your declaration? 7 A. In my declaration, it looks like 8 Paragraph 59. 9 Q. So it looks like there's several 10 sections that refer to Grounds 3 and 4 in your 11 declaration. There's Section D here on 12 Page 26. There's a Section E that starts on 13 Page 27. There's a Section F that starts on 14 Page 30. There's a Section G, which begins on 15 Page 33. There's a Section H that begins on 16 Page 36. 17 My question is: In any of those 18 sections, do you contest that Tsuge fails to 19 teach the step of analyzing the acquired 20 configuration file? 21 MR. COLLIER: Objection, form. 22 THE WITNESS: In those sections, those 23 were not the arguments that were being made with 24 regard to Tsuge's analyzing. It wasn't
Page 55 1 converting, right? 2 Q. Well, I'm asking with respect to the 3 Tsuge reference. I'm saying in your declaration 4 you are not alleging that Tsuge fails to teach 5 the analyzing the acquired configuration 6 limitation, is that correct? 7 A. I am alleging that Bernstein in view 8 of Tsuge does not render obvious DPOE system 9 analyzing the acquired configuration file. 10 Q. With respect to Grounds 3 and 4, which 11 allege that Tsuge, in view of Bernstein, renders 12 the claims of the '982 Patent invalid, with 13 respect to those grounds, you are not making a 14 claim that Tsuge fails to teach analyzing the 15 acquired configuration file, correct? 16 A. Did you say Grounds 3 and 4? 17 Q. Correct. 18 A. It's arguing that Tsuge, in view of 19 Bernstein, does not render obviously service 20 auto-configuration method or network in Grounds 3 21 or 4. 22 Q. Well, my question, though, was: With 23 respect to Grounds 3 or 4, you are not contesting 24 whether Tsuge teaches the step of analyzing the	Page 57 1 addressed. 2 BY MR. RICORDATI: 3 Q. Were there any arguments made with 4 respect to Tsuge's analyzing? 5 MR. COLLIER: Objection, asked and 6 answered. 7 THE WITNESS: Analyzing was addressed 8 in Section B. 9 BY MR. RICORDATI: 10 Q. And that relates to Grounds 1 and 2, 11 correct? 12 A. Yes. 13 Q. Outside of Section B, are there any 14 arguments that address the step of analyzing the 15 acquired configuration file limitation? 16 MR. COLLIER: Objection, form. 17 THE WITNESS: No. That's where 18 analyzing was addressed. 19 MR. COLLIER: Counsel, we've been 20 going for about two hours. Can you come up with 21 a good point for a break? 22 MR. RICORDATI: Yes. We're at a good 23 one now. I was going to suggest the same. 24 How long do you guys want to break

Page 58 1 for? 2 We can go off the record, I guess. 3 MR. COLLIER: Yeah, let's go off the 4 record. 5 (Whereupon, a break was 6 taken.) 7 BY MR. RICORDATI: 8 Q. Dr. Litvin, during the break, did you 9 discuss the deposition with counsel? 10 A. No, I did not. 11 Q. I'd like to direct your attention back 12 to your report or your declaration, specifically 13 Paragraph 31. 14 A. 31. Okay. 15 Q. In Paragraph 31 you refer to a Trivial 16 File Transfer Protocol request. 17 What does the term Trivial File 18 Transfer Protocol refer to? 19 A. The protocol for requesting and 20 sending files. 21 Q. How does that protocol work? 22 A. The requester sends a request and the 23 file is then transmitted back to it by the 24 serving device.	Page 60 1 file downstream to the requesting device. 2 BY MR. RICORDATI: 3 Q. If the TFTP serving device doesn't 4 have the requested file, is there an error that's 5 triggered? 6 MR. COLLIER: Objection, scope. 7 Objection, foundation. Objection, relevance. 8 THE WITNESS: I did not address this 9 in my report. I don't have an opinion on it. 10 BY MR. RICORDATI: 11 Q. Well, how does the TFTP serving device 12 transmit a file back to -- 13 A. Only -- 14 MR. COLLIER: Objection, scope. 15 Objection, relevance. 16 You can answer. 17 THE WITNESS: An error would be 18 generated if the request was directed to the 19 wrong TFTP server or if it was even to the 20 correct TFTP server, if the TFTP server didn't 21 recognize the file name. 22 BY MR. RICORDATI: 23 Q. What do you mean by the TFTP server 24 not recognizing the file name?
Page 59 1 Q. What is the format of a TFTP request? 2 A. I believe it's sent via the SNMT, 3 Simple Network Management Protocol. 4 Q. What information is contained in a 5 TFTP request? 6 MR. COLLIER: Objection, scope. 7 THE WITNESS: I provided no commentary 8 on this in my report. 9 BY MR. RICORDATI: 10 Q. Well, in Paragraph 31 you say, The vCM 11 then sends a traditional DOCSIS configuration 12 request to a back-office management system in the 13 form of a Trivial File Transfer Protocol. 14 A. Yeah. Well, I didn't finish my 15 comment. But obviously it needs to be 16 directly -- the request needs to be directed to 17 the correct device that is configured to send the 18 file, and it also has to contain the appropriate 19 file name. So at least that much information is 20 there. 21 Q. What does the serving device do in 22 response to receiving a TFTP request? 23 MR. COLLIER: Objection, scope. 24 THE WITNESS: It relays the requested	Page 61 1 MR. COLLIER: Same objection. 2 THE WITNESS: If a file name, for 3 example, were configured in error, it would not 4 be available for the TFTP server to, for example, 5 look up and determine if that file could be made 6 available. 7 BY MR. RICORDATI: 8 Q. So if I'm understanding you correctly, 9 the TFTP server checks to see if the requested 10 file -- if it has the requested file and if it 11 has the requested file -- 12 A. If it's a valid request one way or 13 another. 14 MR. COLLIER: Objection, form. 15 BY MR. RICORDATI: 16 Q. Can you continue your answer? 17 A. Yeah, I didn't say the TFTP server has 18 the file. I said the file could be made 19 available to it. 20 Q. What do you mean that the file could 21 be made available to it? 22 MR. COLLIER: Objection, relevance and 23 scope. 24 THE WITNESS: One way or another, the

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Page 62 1 file is sent or made available to the TFTP server 2 so they can relay it downstream to the requesting 3 device. 4 BY MR. RICORDATI: 5 Q. What is one way that a file may be 6 made available to the TFTP server? 7 MR. COLLIER: Objection, scope and 8 form -- I mean, and relevance. 9 THE WITNESS: The TFTP server may, in 10 turn, be requested from another device or 11 potentially the file could be generated at the 12 TFTP server. 13 BY MR. RICORDATI: 14 Q. Is there any other ways that a TFTP 15 server may relay a file -- 16 MR. COLLIER: Objection, scope and 17 relevance. 18 BY MR. RICORDATI: 19 Q. -- in response to a request? 20 A. TFTP is only a protocol for requesting 21 and transmitting a file. So I have no other 22 opinion on that. 23 Q. So the only ways to provide -- 24 A. There may be other ways, but I have no	Page 64 1 MR. COLLIER: Objection, scope, 2 relevance, and foundation. 3 THE WITNESS: The file may be stored. 4 But, as I said, TFTP simply refers to the 5 protocol for requesting and sending a file. It 6 doesn't address file management or storage. 7 BY MR. RICORDATI: 8 Q. Does DOCSIS mandate the use of TFTP 9 protocol? 10 MR. COLLIER: Objection, relevance and 11 scope and foundation. 12 THE WITNESS: I don't have an opinion 13 as to whether DOCSIS mandates the TFTP. 14 BY MR. RICORDATI: 15 Q. In Paragraph 31 of your declaration 16 you say, The vCM then sends a traditional DOCSIS 17 configuration request to a back-office management 18 system in the form of a Trivial File Transfer 19 Protocol... 20 So this is clearly within the 21 scope of your request. 22 MR. RICORDATI: We've had a lot of 23 objections to scope today when we are dealing 24 with statements directly from his declaration
Page 63 1 further opinion on that and that was not really 2 part of my report. 3 Q. As you sit here today, the only way 4 that a TFTP server may provide a file in response 5 to a request for a file would be to either 6 request that file from another device or generate 7 a file at the time of the request? 8 MR. COLLIER: Objection, form, scope, 9 relevance, and foundation. 10 THE WITNESS: There may be other 11 mechanisms, but those are the examples I just 12 gave you. 13 BY MR. RICORDATI: 14 Q. What other mechanisms may there be? 15 MR. COLLIER: Objection, scope, 16 relevance, and foundation. 17 THE WITNESS: I don't have another 18 example. But, as I said, those are the examples 19 that I provide and I don't comment on that in my 20 report. 21 BY MR. RICORDATI: 22 Q. Is it possible that the TFTP server 23 may store a file and transmit it in response to a 24 request?	Page 65 1 that we may have to raise with the Board. 2 BY MR. RICORDATI: 3 Q. But you say here it's a traditional 4 DOCSIS configuration request in the form of a 5 Trivial File Transfer Protocol? 6 A. Traditional DOCSIS configuration 7 request refers to the configuration file itself. 8 Q. So the word request means file, is 9 that what you're saying in Paragraph 31? 10 MR. COLLIER: Objection, misstates the 11 declaration. 12 THE WITNESS: Your question was what 13 with regard to request? 14 BY MR. RICORDATI: 15 Q. So when you say a traditional DOCSIS 16 configuration request in Paragraph 31, you 17 actually mean a traditional DOCSIS configuration 18 file, is that what you're saying? 19 A. Yes, that would be correct. 20 Q. So the vCM then sends a traditional 21 DOCSIS configuration to a back-office management 22 system? 23 A. The vCM sends a traditional DOCSIS 24 configuration file request. The word file is

Page 66 1 missing. Request shouldn't be replaced. The 2 word file should be inserted. 3 Q. Okay. And that traditional DOCSIS 4 configuration file request is in the form of a 5 TFTP request, correct? 6 A. Yes. 7 Q. So my question is: Does DOCSIS 8 mandate the use of TFTP protocol for requesting 9 DOCSIS configuration files? 10 MR. COLLIER: Objection, scope. 11 THE WITNESS: I don't know that it's 12 mandated that every vendor must use TFTP, but 13 that is typically the example that's given in the 14 DOCSIS standards documents. So whether the word 15 mandate is there or not, I couldn't tell you off 16 the top of my head. 17 BY MR. RICORDATI: 18 Q. I'd like to direct you to the patent 19 again, the '982 Patent, which has been marked as 20 Exhibit 1 today. 21 A. Okay. 22 Q. And specifically Column 1, Lines 43 23 through 47. 24 Do you see there it says that the	Page 68 1 the request and downloading of a configuration 2 file. As I say, whether or not the TFTP protocol 3 is a mandate or if it's simply a convenient 4 example and which obviously is widely used, we'd 5 have to refer to the DOCSIS specification itself. 6 Q. What does it mean to download a 7 configuration file from a TFTP server? 8 A. As we just discussed, the file is 9 transmitted, I believe, typically in blocks, and 10 the device receives it and reconstructs the file 11 in its whole and checks for errors. 12 Q. Since we are in this section in 13 Column 1 entitled Background of the Related Art, 14 what is being described in the discussion of 15 Figure 2 that occurs between Column 1, Line 33 16 through -- I guess it continues on through 17 Column 2, Line 47, or maybe it might end at 38? 18 MR. COLLIER: Objection, scope. 19 THE WITNESS: 1:33 through what? 20 BY MR. RICORDATI: 21 Q. Let's do 2:38. 22 A. Describing the ONU initialization and 23 more or less prior art type of configuration of 24 the ONU and OLT.
Page 67 1 vCM and the DPOE system initiates an 2 initialization process -- 3 A. Sorry. Column 1, which line? 4 Q. Sure. 43 to 47. 5 A. Okay. 6 Q. It starts off S204 to 205. It says, 7 The vCM in the DPOE system initiates an 8 initialization process specified according to a 9 DOCSIS 3.0 specification, sends a TFTP request to 10 the back-office management system, and downloads 11 the configuration file from the TFTP server of 12 the back-office management system? 13 A. Yes. 14 Q. Based on that description, do you have 15 an understanding of whether or not a TFTP request 16 is specified according to DOCSIS 3.0? 17 MR. COLLIER: Objection, scope. 18 THE WITNESS: That's talking about the 19 initialization process that's specified according 20 to DOCSIS 3.0. 21 BY MR. RICORDATI: 22 Q. And that initialization process starts 23 with the TFTP request in this paragraph, correct? 24 A. The initialization process includes	Page 69 1 Q. Let's start with the first one. 2 How is the ONU configured in the 3 prior art according to the description here in 4 the Background of the Related Art section of the 5 '982 Patent? 6 MR. COLLIER: Objection, scope. 7 THE WITNESS: The configuration file 8 is downloaded and processed and the configuration 9 parameters for the ONU are sent to it via the PON 10 management channel where the configurations can 11 be applied essentially. 12 BY MR. RICORDATI: 13 Q. And according to this description, 14 those configuration settings you referred to, 15 those relate to service attributes and parameters 16 which are provided by the operator to users 17 connected to the ONU, is that correct? 18 A. Where are you reading that from? 19 Q. It's Column 1, Lines 48 to 53. 20 A. Yes, that's what it says. 21 Q. After the process described of 22 configuring the ONU is completed, as described in 23 Column 1, is the service described in those 24 configuration settings operational?

Page 70 1 A. You're asking me -- rephrase that, 2 please. 3 Q. Sure. 4 After the process defined in 5 Steps S201 through S208 are complete, is the 6 service described in the configuration file 7 operational? 8 A. I did not provide an opinion on this. 9 However, as you can clearly read starting on 10 Line 57, it also indicates that the OLT will also 11 need to be correspondingly configured. 12 Q. So according to this description, 13 configuration of the ONU alone does not make a 14 service operational? 15 A. That's correct. 16 Q. According to this description, a 17 service is only opened after both the ONU and OLT 18 are configured, correct? 19 A. That's what this is implying. 20 Q. What does the phrase services opened 21 by the ONU mean to you? 22 MR. COLLIER: Objection, scope. 23 MR. RICORDATI: Again, he's got an entire 24 argument section related to this limitation.	Page 72 1 forming an opinion as to what those words mean? 2 MR. COLLIER: Are you asking me or are 3 you asking -- 4 MR. RICORDATI: I'm asking the 5 witness. 6 BY MR. RICORDATI: 7 Q. Did you come to a conclusion as to 8 what the words services opened by the ONU means 9 in preparing your declaration? 10 A. Typically, services opened by the ONU 11 relates to the technical aspects of the services, 12 say, requested by a customer. So a customer 13 makes a request for particular services, the 14 business office enters those into the system. A 15 configuration file one way or another is 16 generated that would allow those services to be 17 opened. So services opened by the ONU relates to 18 the technical setup of the ONU to allow for 19 whatever services that were subscribed to to take 20 place or to be initiated. 21 Q. Referring again to the patent, in 22 Column 6, Line 40, it refers to an EVP-LAN 23 service? 24 A. Yes.
Page 71 1 MR. COLLIER: Well, if you can point 2 him to where it's in his declaration, but I don't 3 think he provided an opinion specifically on a 4 claim term like that. 5 BY MR. RICORDATI: 6 Q. Well, let's take a look. 7 Paragraph 54, Section C in your 8 declaration says, Claim 2 recites "the method 9 according to Claim 1, wherein, the configuration 10 information of the OLT is configuration 11 information related to services opened by the 12 ONU." 13 MR. COLLIER: Can you point to his 14 opinion on that? 15 MR. RICORDATI: In the very next 16 paragraph he says, I have reviewed the petition 17 and Dr. Min's declaration and cannot identify any 18 meaningful discussion of these elements. 19 MR. COLLIER: Okay. So as he 20 described what he believes that claim language 21 means there. 22 BY MR. RICORDATI: 23 Q. Do you have an opinion that they did 24 not meaningfully discuss those elements without	Page 73 1 Q. Is that an example of a service that a 2 customer might subscribe to? 3 A. It's an enterprise-type service. 4 Q. As you sit here today, are there any 5 other examples of services that may be requested 6 by a customer within a DPOE system? 7 A. There are. I don't have any specific 8 examples. 9 Q. Would internet service be an example 10 of a service that a customer may request from 11 within the context of a DPOE system? 12 A. Well, splitting hairs, but obviously 13 if you subscribe to a service provider, you are 14 going to get internet service, subscribing to 15 particular services, for example, IPTV or a 16 multicast service. 17 Q. Would voice over IP be an example of 18 another service a customer may subscribe to? 19 A. Yes. The patent specifically gives 20 sort of enterprise-type services as examples of 21 enterprise-type services with regard to metro 22 ethernet. 23 Q. I would like to turn to the Tsuge 24 reference, which was marked as Exhibit 3.

Page 74 1 Is it your opinion that the Tsuge 2 reference does not teach converting the 3 configuration information of the OLT into a 4 format which can be identified by the OLT? 5 A. He discusses reflecting the 6 configuration parameters of the OLT that are 7 contained in that file to the OLT. So there is 8 no discussion of converting with regard to the 9 OLT. 10 Q. Coming to that position, you read 11 Tsuge fully, correct? 12 A. I read Tsuge fully. And then, again, 13 as I said numerous times today, I only provided 14 opinions with regard to the arguments made by 15 Dr. Min and the petition and the relevant 16 sections they cited in the patent. 17 Q. And you read all of the portions cited 18 in the petition and Dr. Min's declaration to 19 Tsuge, correct? 20 MR. COLLIER: Objection, form. 21 BY MR. RICORDATI: 22 Q. I'll rephrase it. 23 And you read all of the cited 24 portions of Tsuge described in the petition and	Page 76 1 these diagrams? 2 MR. COLLIER: Objection, foundation, 3 misstates the document. 4 THE WITNESS: I'd have to refer back 5 to the petition or Min to tell us which colors 6 refer to which, but generally speaking. 7 BY MR. RICORDATI: 8 Q. In your declaration it says in 9 Paragraph 71, Figure 15 shows a CMTS/CM Apparatus 10 Management Network, is that correct? 11 MR. COLLIER: Objection, foundation. 12 THE WITNESS: Yes. That's what 13 Paragraph 71 states. 14 BY MR. RICORDATI: 15 Q. In your declaration in Paragraph 70, 16 is the CMTS/CM Apparatus Management Network 17 circled in purple? 18 A. Yes. Okay. 19 Q. And as shown in the diagram Figure 15 20 there in Paragraph 70 and stated in text in 21 Paragraph 71 of your declaration, that CMTS/CM 22 Apparatus Management Network includes a CMTS 23 Apparatus Management Server, CM IP Address 24 Allocation Server, a CM Management Information
Page 75 1 Dr. Min's declaration, correct? 2 A. Yes. 3 Q. Is it your understanding that a 4 back-office management system must include a DHCP 5 server? 6 A. I didn't form an opinion as to whether 7 or not a back-office system must include a DHCP 8 server. 9 Q. What is a DHCP server? 10 A. It's the device that provides 11 essentially IP addresses as requested. 12 Q. So is it fair to say that a DHCP 13 server allocates IP addresses as requested? 14 MR. COLLIER: Objection, form. 15 THE WITNESS: That's the typical 16 function of a DHCP server, to provide available 17 IP addresses. 18 BY MR. RICORDATI: 19 Q. I'd like to go to Paragraph 70 of your 20 declaration. So in Paragraph 70 you cite a 21 couple figures from Figure 9 and 15 of Tsuge that 22 have been annotated by Dr. Min and state that he 23 has identified a back-office management system. 24 Is that annotated in purple in	Page 77 1 Collecting Server, and a Time Synchronizing 2 Server, correct? 3 A. That's what is written there. 4 Q. And in the diagram in Figure 15, in 5 Paragraph 70 of your declaration, the CM IP 6 address allocation server is circled in purple, 7 correct? 8 A. Yes. 9 Q. And as depicted in Figure 15, as 10 stated in your declaration, that CM IP Address 11 Allocation Server is part of the CMTS/CM 12 Apparatus Management Network, correct? 13 A. That's contained within the purple 14 block. 15 Q. Let's turn to Tsuge again, Deposition 16 Exhibit 3, specifically Column 12, Lines 54 to 17 62. 18 A. Column 12? 19 Q. Yes. Lines 54 to 62. 20 Can you please read the sentence 21 starting on Line 54 that starts with the word 22 According? 23 A. Okay. According to the DOCSIS 24 standard, the DHCP is used and the packet

Page 78 1 transmission and reception are executed in order 2 of a transmission of a Discovery message to the 3 CM IP address allocation server, a reception of 4 an Offer message from the CM IP address 5 allocation server, a transmission of a Request 6 message to the CM IP address allocation server, 7 and a reception of an Acknowledgment message from 8 the CM IP address allocation server. 9 Q. Is that sentence describing use of a 10 DHCP process? 11 MR. COLLIER: Objection, scope. 12 THE WITNESS: Well, again, Dr. Min 13 doesn't discuss DHCP, as I pointed out. 14 Furthermore, this says, According to the DOCSIS 15 standard, the DHCP is used. Then it goes on and 16 says and. So the following steps after DHCP is 17 used and are not necessarily the steps of DHCP, 18 describing what's used in the Tsuge patent. 19 BY MR. RICORDATI: 20 Q. Based on your understanding as an 21 expert in the technologies described in the '982 22 Patent, does the DHCP process involve a discovery 23 message, an offer message, a request message, and 24 an acknowledgment message?	Page 80 1 Q. Sure. 2 A. I'm still scrolling here. Okay. 3 Q. You'll see there's a series of steps 4 in about the middle of Figure 6. It starts at, I 5 guess, 620, Register ONU Intrinsic Identifier 6 Into CM. Actually, I guess it starts at 631 and 7 goes through 634, which describes the same steps 8 that we just discussed, so that's 631, 632, 633, 9 and 634. 10 Based on this description in 11 Figure 6, do you have an understanding whether 12 those steps constitute a DHCP IP address 13 allocation sequence? 14 A. I haven't formed any type of opinion 15 on Figure 6. Dr. Min didn't cite Figure 6. 16 Q. Do you see the word DHCP Discovery as 17 the first step, 631? 18 MR. COLLIER: Objection, misstates the 19 document. 20 BY MR. RICORDATI: 21 Q. Sorry. DHCP Discover. 22 A. I read that. 23 Q. Then the next step at 632 is DHCP 24 Offer, is that correct?
Page 79 1 A. I have no opinion on that. 2 Q. So you don't know the specifics DHCP 3 process to obtain an IP address, is that correct? 4 MR. COLLIER: Objection, misstates 5 testimony. 6 THE WITNESS: I just said I don't have 7 an opinion on that. 8 BY MR. RICORDATI: 9 Q. I'm just asking about your general 10 knowledge as an expert in the technologies 11 described in the '982 Patent. 12 A. I would have to refer to the DHCP 13 standard to tell you exactly the sequence of 14 events that need to occur in order to receive the 15 IP address from the DHCP server. For example, 16 whether or not this outline here accurately 17 depicts DHCP, I cannot say definitively. 18 Q. This is referring to Figure 6. Let's 19 take a look at Figure 6. 20 A. Figure 6 of Tsuge? 21 Q. Yes. 22 According to the information 23 provided in Figure 6 -- 24 A. Hold on a second.	Page 81 1 A. That's what it says. 2 Q. And 633, DHCP Request, correct? 3 A. Yes. 4 Q. Then Step 634 is DHCP Acknowledgment, 5 is that correct? 6 A. Yes. 7 Q. So based on the combination of what's 8 shown in Figure 6 and the description that we 9 just read, is Tsuge discussing the use of DHCP IP 10 allocation sequence? 11 A. Again, I wasn't asked to form an 12 opinion on this. I was only asked to form an 13 opinion on what Dr. Min cited in reference to his 14 arguments and he doesn't discuss DHCP. 15 Q. Is it your understanding that DHCP is 16 required under the plain and ordinary meaning of 17 the term back-office system? 18 MR. COLLIER: Objection, scope. 19 BY MR. RICORDATI: 20 Q. I'm sorry. Back-office management 21 system. 22 A. I don't have an opinion on that. 23 Q. Let's start at Paragraph 76 of your 24 declaration. In this paragraph you provide a

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Page 82 1 copy of an annotated figure from Dr. Min's 2 declaration, which is a notation of Tsuge's 3 Figure 11, is that correct? 4 A. Yes. 5 Q. What's described in Figure 11 of 6 Tsuge? 7 A. Cable modem IP addresses, server 8 address, file -- I guess that's supposed to be 9 file names, and the ONU intrinsic identifier, 10 basically just the manufacturer's identifier for 11 a specific ONU. 12 Q. How is Figure 11 used in Tsuge? 13 A. In Tsuge, I believe it's just 14 presented as a table that's stored in the OLT for 15 reference. Although, I'd have to refer back to 16 Tsuge's exact description. That's my immediate 17 recollection. 18 Q. Okay. Well, we've got a copy of 19 Tsuge. If you need to refer to it, please take a 20 look. You said there's server information in 21 the -- well, the second thing you described was 22 server information. 23 I think you are referring to the 24 column marked 1102, is that correct?	Page 84 1 commented on the way in which Dr. Min used it in 2 his argument. 3 BY MR. RICORDATI: 4 Q. So you're making an opinion here that 5 this table fails to show certain elements of the 6 claim. I'm just asking you if that's based on 7 the totality of what it represents. I'm just 8 asking you what this table represents. 9 MR. COLLIER: Objection, misstates 10 testimony. 11 THE WITNESS: Again, it's just a 12 lookup table to the OLT. We can refer to it 13 efficiently as needed. 14 BY MR. RICORDATI: 15 Q. And why would it need to refer to the 16 CM IP address entries in this lookup table? 17 MR. COLLIER: Objection, scope. 18 THE WITNESS: Because the cable modem 19 IP address or the virtual cable modem corresponds 20 to -- each IP address corresponds to a particular 21 ONU on the PON, and the OLT manages the PON. 22 BY MR. RICORDATI: 23 Q. With respect to the next column 24 outlined in purple, which in your text you say is
Page 83 1 A. Just the IP address. 2 Q. And that's an IP address of what 3 specifically? 4 A. It says, just reading verbatim, cable 5 modem setting information management server IP 6 address. I'm trying to find the Figure 11 as 7 referenced in Tsuge or described. Column 6, Line 8 10, Figure 11 is constructional diagram of memory 9 showing an example of a construction of a cable 10 modem ONU correspondence table. So it's 11 basically just a lookup table provided to the 12 OLT, as I stated. 13 Q. Who provides that table to the OLT? 14 A. Service provider, the operator. 15 Q. So it's your opinion that the operator 16 provides the contents of -- 17 A. One way or another, yes. 18 Q. Okay. So let's start with the CM IP 19 column. We'll start with the first one. 20 How does that entry get provided 21 to the OLT? 22 MR. COLLIER: Objection, scope. 23 THE WITNESS: Again, I didn't form any 24 opinion on how this table was compiled. I just	Page 85 1 a TFTP, when would an OLT need to look up the 2 information in Column 1102? 3 MR. COLLIER: Objection, scope. 4 THE WITNESS: When would it need to 5 look that up? 6 BY MR. RICORDATI: 7 Q. Yes. 8 A. Oh, we're getting -- sorry. We're 9 having torrential downpours. I got a weather 10 service warning. Sorry. 11 When would it need to look that 12 up? 13 Q. Yes. 14 MR. COLLIER: Objection, scope. 15 THE WITNESS: Again, I didn't form an 16 opinion on that, but the -- as we discussed, the 17 IP address is required to identify the 18 appropriate place where the configuration file 19 will be downloaded from or relayed down from. 20 BY MR. RICORDATI: 21 Q. In the next column, is that the 22 configuration file you are referring to, 23 Column 1103? 24 MR. COLLIER: Objection, scope.

Page 86 1 THE WITNESS: Again, Figure 11 is a 2 constructional diagram, in other words, a 3 simplified schematic diagram of a memory showing 4 an example of a construction of a correspondence 5 table provided for the OLT. 6 BY MR. RICORDATI: 7 Q. Is it fair to say that this 8 information in Columns 1102 and 1103 would be 9 looked up by the OLT when it needs to configure 10 the ONU identified in Column 1104? 11 MR. COLLIER: Objection, scope. 12 THE WITNESS: It's not clear exactly 13 when it would use that information. 14 BY MR. RICORDATI: 15 Q. If you need to take a look at the 16 descriptions provided in Tsuge to answer that 17 question, please feel free. 18 A. Okay. 19 Q. I also direct your attention to 20 Figure 9 and its corresponding description. That 21 may refresh your recollection as to how that 22 information may be used. 23 A. Well, Column 15:59 through Column 16:8 24 says it's a lookup table of values that may be	Page 88 1 which you said is outlined in purple, correct? 2 MR. COLLIER: Objection, form. 3 THE WITNESS: I said it's outlined in 4 purple? Are you talking about the addresses on 5 that table? 6 BY MR. RICORDATI: 7 Q. Yes. 8 A. I didn't say anything about a TFTP 9 server. I just said -- 10 Q. In Paragraph 76 you say, In the above 11 annotation, the TFTP is outlined in purple. 12 A. Okay. Yeah. Sorry. 13 Q. Isn't this information then used to 14 request the files set forth in 1103 from the TFTP 15 server when it's time to configure an ONU 16 identified in Column 1104? 17 A. The DCM would make the request, the 18 DCM being integrated with the OLT. 19 Q. Right. Using this information set 20 forth in this CM-ONU correspondence table, 21 correct? 22 A. Yes. 23 Q. Do you have an understanding as to how 24 the CM setting information management server IP
Page 87 1 required. 2 Q. In Figure 9, do you see Step 902 [sic] 3 there says, Obtain CM IP Address, CM Setting 4 Information Management Server IP Address, and CM 5 Setting Information File Name of Setting Target 6 ONU from CM-ONU Correspondence Table? 7 A. Figure 9? 8 Q. Yes. 9 A. Well, again, Figure 11 is just a table 10 showing addresses or identifiers. Min used it 11 trying to show storage. And this is just a bunch 12 of labels in a table. 13 Q. So Figure 9 is also, I note, in your 14 declaration in Paragraph 70. But we're talking 15 about information here that's used by the OLT in 16 various instances. Yes, this shows that it's 17 stored in memory for use in various processes, 18 one of which is described in Figure 9 -- 19 MR. COLLIER: Objection, form. 20 BY MR. RICORDATI: 21 Q. -- which, as we've said, it retrieves 22 the CM setting information management server IP 23 address, CM setting information file name, and 24 then requests that file from the TFTP server,	Page 89 1 address and CM setting information file name get 2 into this CM-ONU correspondence table? 3 MR. COLLIER: Objection, scope. 4 THE WITNESS: I don't have an opinion 5 of how that occurs -- that may occur. 6 BY MR. RICORDATI: 7 Q. So you don't have an understanding of 8 how this information is -- 9 A. No. I said I don't have an opinion. 10 Q. Do you have an understanding as to how 11 this information is put into the CM-ONU 12 correspondence table? 13 A. The address requests are made during 14 the initialization process, as we've already 15 discussed. 16 Q. Which request are you talking about? 17 A. IP address, configuration file. 18 Q. Right. So once they are in the table, 19 a request to retrieve the files listed in 20 Column 1103 from the servers listed in 1102 can 21 be made. 22 But my question is: Before this 23 information is put into this CM-ONU 24 correspondence table, how would a new entry be

Page 90 1 added to this table? Where does that information 2 come from? 3 MR. COLLIER: Objection, form. 4 Objection, scope. 5 THE WITNESS: No opinion where that 6 may come from. 7 BY MR. RICORDATI: 8 Q. I'm not asking if you have an opinion 9 on that. I'm asking if you have an understanding 10 of how that happens. 11 MR. COLLIER: Objection, asked and 12 answered. Objection, scope. 13 THE WITNESS: During the 14 initialization process, a cable modem IP address 15 is requested. It's provided. And then a 16 configuration file is requested as well and the 17 address is provided. A corresponding address is 18 provided for that particular ONU given the IP 19 address. 20 BY MR. RICORDATI: 21 Q. So during initialization, the CM IP 22 address, the CM sending information in, the IP 23 address and a file name are provided to the OLT, 24 and then the OLT puts it into this table, ONU	Page 92 1 Let me direct you to Column 12, 2 Line 63, through Column 13, Line 6? 3 A. Column 12:63? 4 Q. Yes. 5 A. Through 13 what? 6 Q. 13:6. 7 A. Okay. 8 Q. So is it fair to say that the CM 9 setting information management server and file 10 name are provided by the back-office system when 11 requesting a new IP address for an ONU? 12 A. I can only say that the IP address is 13 provided for the ONU or the cable modem IP 14 address corresponding to the ONU identifier. 15 Q. Let me direct you to 12:66 through 16 13:6. It says, Other information obtained in 17 Steps 610 and 630 can be also recorded into the 18 CM-ONU correspondence table 551. For example, if 19 the protocol is based on the DOCSIS standard, 20 since the IP address of the CM setting 21 information management server and the file name 22 of the setting information are obtained in 23 Step 630, those information may be recorded into 24 the CM-ONU correspondence table 550.
Page 91 1 correspondence table, is that correct? 2 MR. COLLIER: Objection, scope. 3 THE WITNESS: It actually would depend 4 on the architecture of the system. 5 BY MR. RICORDATI: 6 Q. I'm asking you what does Tsuge 7 describe? 8 A. It just says the cable modem IP 9 addresses is obtained, the MAC address is 10 provided. Typically, it's embedded in the 11 hardware of the ONU. And then it just says, 12 Furthermore, for example, various kinds of 13 information, such as a cable modem setting 14 information management server IP address and the 15 cable modem setting information file name and the 16 like, which are set. Every cable modem may be 17 included in the cable modem ONU correspondence 18 table. 19 Q. Where are you reading that? 20 A. Where am I reading that? 21 Q. Yes. 22 A. Column 15 starting at 59 through 16:8. 23 Q. Right. And that's describing the 24 contents of the table.	Page 93 1 Doesn't that passage mean that the 2 CM setting information management server and file 3 name are provided by the back office to an OLT in 4 Step 630? 5 MR. COLLIER: Objection, scope. 6 THE WITNESS: Again, I wasn't asked to 7 comment on Figure 6 because Min did not cite 8 Figure 6. 9 BY MR. RICORDATI: 10 Q. He cited the CM-ONU correspondence 11 table, correct? 12 A. Yes. 13 Q. That's being discussed in this 14 paragraph here and you made an opinion as to what 15 the CM-ONU correspondence table means, and I'm 16 just asking you about that. 17 MR. COLLIER: Objection, misstates the 18 testimony. 19 BY MR. RICORDATI: 20 Q. I'll ask my question again. 21 Is the CM setting information 22 management server or the address of the CM 23 setting information management server and file 24 name provided by the back-office system in

24 (Pages 90 - 93)

Page 94 1 Step 630? 2 MR. COLLIER: Objection, scope. 3 THE WITNESS: Again, I was only asked 4 to provide an opinion with regard to the evidence 5 cited by Min in making his arguments. 6 BY MR. RICORDATI: 7 Q. So as you sit here today as an expert 8 in the technologies described in the '982 Patent 9 and having provided an opinion as to what the CMO 10 and new correspondence table -- what the breadth 11 of that disclosure is and whether or not it meets 12 certain claim elements, you can't tell me where 13 the information in that CM-ONU correspondence 14 table came from, correct? 15 MR. COLLIER: Objection, scope and 16 misstates testimony. 17 THE WITNESS: It's provided by the 18 system operator, and how it got there depends on 19 the particular architecture of their system. 20 BY MR. RICORDATI: 21 Q. Does Tsuge describe a particular 22 architecture? 23 It's referring to Step 630 in 24 Figure 6, which we talked about earlier. If you	Page 96 1 worry about is -- well, I guess let's start 2 there. It says, Other information obtained in 3 Steps 610 and 630 can be also recorded into the 4 CM-ONU correspondence table 551. For example, if 5 the protocol is based on the DOCSIS standard, 6 since the IP address of the CM setting 7 information management server 263 and the file 8 name of the setting information are obtained 9 in Step 630, those information may be recorded 10 into the CM-ONU correspondence table 551, 11 correct? 12 A. I agree that's what it says, yes. 13 Q. So my question is: Is it fair to 14 state based on the disclosure shown in Figure 6 15 and the corresponding description that we just 16 read that the CM setting information management 17 server address and the file name of the setting 18 information are provided by the back-office 19 system to the OLT? 20 MR. COLLIER: Objection, scope. 21 THE WITNESS: My answer is that the 22 MSO relays this information to the OLT where it's 23 recorded into this table. 24
Page 95 1 need to look at that to further understand the 2 architecture of Tsuge, please do. 3 Let me ask it a different way 4 here. Looking at Figure 6, you agree that it 5 shows a Step 630 on the left-hand side of the 6 diagram labelled CM IP address obtaining 7 sequence, correct? 8 A. That block of steps, yes. 9 Q. And then right below that there is a 10 Step 640 that says, Register CM IP Address, CM 11 Setting Information Management Server IP Address, 12 and CM Setting Information File Name Into CM-ONU 13 Correspondence Table, correct? 14 A. Yes. 15 Q. And in the description in Column 12, 16 Line 66 through 13:6, it states that the CM 17 setting information management server and the 18 file name of the setting information are obtained 19 in Step 630, correct? 20 MR. COLLIER: Objection, scope. 21 THE WITNESS: 12 what again? Sorry. 22 BY MR. RICORDATI: 23 Q. Column 12, Line 66 is where the 24 sentence starts. I guess really all we need to	Page 97 1 BY MR. RICORDATI: 2 Q. Then at a later time that information 3 is looked up from the table and used to download 4 a configuration file that is then used to 5 configure an ONU and OLT, correct? 6 MR. COLLIER: Objection, scope. 7 THE WITNESS: Again, I only formed an 8 opinion with regard to this table and the way it 9 was used in the construction of Min's argument. 10 BY MR. RICORDATI: 11 Q. And that relates to whether or not the 12 back-office system saves a configuration file, 13 correct? 14 A. The argument is with regard to the 15 back-office system saving the configuration 16 file. 17 Q. Okay. As an expert in the 18 technologies described in the '982 Patent, what 19 -- let me rephrase that. 20 As an expert in the technologies 21 described in the '982 Patent, does it require 22 more computer resources to transmit a stored file 23 or to generate a new file? 24 MR. COLLIER: Objection, scope and

25 (Pages 94 - 97)

Page 98 1 relevance and form. 2 THE WITNESS: What do you mean by 3 computer resources? 4 BY MR. RICORDATI: 5 Q. So computer processing and RAM. 6 MR. COLLIER: Same objections. 7 THE WITNESS: Does it take more 8 computer resources to generate a file? 9 BY MR. RICORDATI: 10 Q. To construct a configuration file on 11 the fly in response to a request or to transmit a 12 stored configuration file? 13 MR. COLLIER: Objection, form and 14 scope and relevance. 15 THE WITNESS: I don't have an opinion 16 on that. That would require a detailed technical 17 analysis. 18 MR. RICORDATI: I have just introduced 19 another document, which is labelled Petitioner's 20 DX 5. 21 (Whereupon, Petitioner's DX 5 22 was marked for 23 identification.) 24	Page 100 1 element just says, Plain and ordinary meaning; no 2 construction necessary, is that correct? 3 A. I see that, yes. 4 Q. Is it your understanding that neither 5 party is proposing that a back-office management 6 system requires a DHCP server? 7 A. Yes. 8 MR. RICORDATI: Okay. Why don't we 9 take a little break here? I'll run through my 10 notes and see if I have any more questions. 11 THE WITNESS: Okay. How long? 12 MR. RICORDATI: Ten minutes. 13 THE WITNESS: Okay. 3:20. 14 MR. RICORDATI: Let's go off the 15 record. 16 (Whereupon, a break was 17 taken.) 18 MR. RICORDATI: At this time, I have 19 no further questions. 20 EXAMINATION 21 BY MR. COLLIER: 22 Q. Dr. Litvin, what were you asked to do 23 with your declaration? 24 A. I was specifically asked to review the
Page 99 1 BY MR. RICORDATI: 2 Q. Do you see that document? 3 A. Hold on. Yes. 4 Q. Do you recognize this document? 5 MR. COLLIER: Object to the relevance 6 of this document. Objection, relevance. 7 BY MR. RICORDATI: 8 Q. Do you recognize this document? 9 A. Yes. 10 Q. What is it? 11 A. It is my opining declaration 12 concerning disputed terms, claim construction. 13 Q. I'd like to direct your attention to 14 Paragraph 26. 15 Do you see that paragraph? It's 16 at the bottom of Page 7. 17 MR. COLLIER: Objection, relevance. 18 THE WITNESS: Yes, I see it. 19 BY MR. RICORDATI: 20 Q. The next page, Page 8, it's the fourth 21 bullet point, do you see the term back office 22 management system? 23 A. Yes. 24 Q. And then the construction for this	Page 101 1 arguments made by Dr. Min and the petition and 2 the corresponding evidence that were cited in 3 those documents and to render an opinion on those 4 arguments and the cited evidence. 5 Q. And are your opinions related 6 specifically to whether or not the cited evidence 7 by Dr. Min and the petition render certain claim 8 elements of the '982 Patent obvious? 9 A. Yes. 10 MR. RICORDATI: Objection, leading. 11 MR. COLLIER: I'm sorry. What was 12 your objection? 13 MR. RICORDATI: Objection, leading. 14 BY MR. COLLIER: 15 Q. Did you provide any opinions related 16 to infringement? 17 MR. RICORDATI: Objection, leading. 18 THE WITNESS: The opinions were with 19 regard to obviousness. 20 BY MR. COLLIER: 21 Q. Other than with respect to the term 22 analyzing, have you provided any opinions in your 23 declaration related to claim construction? 24 MR. RICORDATI: Again, objection,

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Page 102 1 leading. 2 THE WITNESS: No. I accepted the 3 terms as noted in the construction table. 4 BY MR. COLLIER: 5 Q. Let's go to that table in your 6 declaration. So let's go back to Exhibit 4, the 7 declaration. Could you go to Paragraph 37 of 8 your declaration? 9 A. Yes, I'm here. 10 Q. What is that paragraph and chart 11 describing? 12 A. It's describing essentially disputed 13 terms in the claim language of the patent. 14 Q. Are those terms that are disputed by 15 the parties? 16 A. Yes. 17 Q. In your declaration, have you provided 18 any opinion on whether Bernstein and/or Tsuge 19 rendered any claims of the '982 -- excuse me. 20 Let me rephrase my question. 21 In your declaration, have you 22 provided any opinion on whether or not Bernstein 23 or Tsuge rendered any claims of the '982 Patent 24 obvious, irrespective of the arguments made by	Page 104 1 Do you see this is Section IX(A)? 2 What were you discussing in this 3 section? 4 A. I was discussing the fact that 5 Bernstein and Tsuge do not render obvious a 6 service auto-configuration method or network in 7 view of the arguments certainly made by Dr. Min. 8 Q. And then if you go down to 9 Paragraph 42, the first sentence there states, 10 quote, There is nothing in these disclosures that 11 describes, for example, the automatic 12 configuration of the OLT and ONU as the '982 13 Patent discusses. 14 A. Yes. 15 Q. Do you recall discussing this 16 paragraph with Mr. Ricordati earlier today? 17 A. Yes. 18 Q. When you say there's nothing in these 19 disclosures in that first sentence in 20 Paragraph 42, what disclosures are you referring 21 to? 22 A. The evidence cited by Dr. Min, 23 referring back to the Bernstein and Tsuge 24 patents.
Page 103 1 Dr. Min and the petition? 2 A. No, I have not. 3 Q. Go to Paragraph 39 of your 4 declaration. 5 A. Okay. 6 Q. Do you see in that paragraph where you 7 stated that, quote, I understand the parties 8 agreed that the preamble is limiting on Claims 1 9 and 6? 10 A. I do. 11 Q. Do you have a separate opinion on 12 whether or not the preamble is limiting for those 13 claims? 14 A. I do not. 15 Q. Is your opinion in this section then 16 based on the parties' agreed construction here? 17 MR. RICORDATI: Objection, leading, 18 mischaracterizes the evidence. 19 THE WITNESS: It is. 20 Are you waiting for me? 21 BY MR. COLLIER: 22 Q. No. I'm looking at my notes. 23 A. Okay. Sorry. 24 Q. Let's go to Page 18.	Page 105 1 Q. And in the next sentence where it 2 begins, for example, what is the auto 3 configuration of the -- scratch that. Ignore 4 that question, please. 5 A. Okay. 6 Q. Turning to another section of your 7 report, if you don't mind -- 8 A. Okay. 9 Q. -- go to Page 27 of your report. 10 A. 27? 11 Q. Yes. Please let me know when you're 12 there. 13 A. Okay. 14 Q. This Page 27 includes part of this 15 Section IX(E) of your report, correct? 16 A. Yes. 17 Q. What were you discussing in this 18 section? 19 A. I'm discussing the conversion of 20 configuration information of the OLT in a message 21 format that could be identified by the OLT and 22 whether or not the cited evidence rendered that 23 obvious. 24 Q. Do you recall discussing portions of

27 (Pages 102 - 105)

Page 106 1 this section of your report earlier today with 2 Mr. Ricordati? 3 A. Yes. 4 Q. Did you discuss specifically Figure 12 5 of Tsuge during that conversation? 6 A. Figure 12 of Tsuge? 7 Q. Yes. 8 Do you remember whether or not you 9 talked about Figure 12 of Tsuge with respect to 10 this portion of your declaration when conversing 11 earlier today with Mr. Ricordati? 12 MR. RICORDATI: Objection, 13 mischaracterizes testimony. 14 THE WITNESS: I'd have to refresh my 15 mind. I'm sorry. 16 BY MR. COLLIER: 17 Q. That's okay. We can just shortcut 18 this a little bit. 19 A. Figure 12 of -- 20 MR. COLLIER: I'll withdraw my 21 question. 22 I'm going to introduce Deposition 23 Exhibit 6, which is the declaration of Dr. Paul 24 Min in connection with this IPR.	Page 108 1 A. Okay. 152. 2 Q. In this section of Dr. Min's report, 3 which element of the claims of the '982 Patent is 4 it referring to? 5 MR. RICORDATI: Objection, leading. 6 Objection, scope. 7 THE WITNESS: Element 1-G converts 8 the configuration information of the OLT into 9 a message format which can be identified by the 10 OLT. 11 BY MR. COLLIER: 12 Q. And is this the section of Dr. Min's 13 report you were responding to in Section IX(E) 14 of your declaration that we were just looking 15 at? 16 A. Yes. 17 MR. RICORDATI: Objection, leading. 18 Objection, scope. 19 BY MR. COLLIER: 20 Q. In Paragraph 152 of Dr. Min's report, 21 what sections of Tsuge does Dr. Min cite? 22 MR. RICORDATI: Objection, scope. 23 THE WITNESS: 4:46 through 51 at 24 Figure 9.
Page 107 1 (Whereupon, Patent Owner's 2 DX 6 was marked for 3 identification.) 4 BY MR. COLLIER: 5 Q. Let me know when you've got that 6 document up. 7 A. I have it. 8 MR. RICORDATI: Objection, scope. 9 MR. COLLIER: I'm sorry? 10 MR. RICORDATI: Objection, scope. 11 This wasn't discussed during the 12 cross-examination. 13 MR. COLLIER: Your objection is noted. 14 BY MR. COLLIER: 15 Q. Dr. Litvin, you reviewed Dr. Min's 16 declaration in this IPR, correct? 17 A. Yes. 18 Q. In Section IX(E) of your report -- 19 MR. RICORDATI: Same objection. 20 BY MR. COLLIER: 21 Q. Could you please go on to 22 Paragraph 152 and 153 of Exhibit 6. 23 A. 152? 24 Q. Yes.	Page 109 1 BY MR. COLLIER: 2 Q. Any other sections? 3 A. Paragraph 152, 4:46 through 51, 4 Figure 9, 18:25 through 36. 5 Q. So let's go back to your declaration, 6 which is, again, at Exhibit 4. 7 Could you go to Paragraph 64 of 8 your declaration? 9 A. Yes. Okay. 64. 10 Q. You also cite to two sections of Tsuge 11 there in that first sentence. 12 Do you see that? 13 A. Yes. 14 Q. Why did you cite to those two 15 sections? 16 MR. RICORDATI: Objection, scope. 17 THE WITNESS: I cited to those two 18 sections because that's the evidence that Dr. Min 19 cited, and I was asked to provide an opinion on 20 his arguments and in relationship to the evidence 21 that he cited. 22 BY MR. COLLIER: 23 Q. I'm going to change topics slightly. 24 Could you go to Paragraph 31 of

Page 110 1 your report? 2 A. 31? 3 Q. 31. 4 A. Okay. 31. 5 Q. Do you recall discussing Paragraph 31 6 earlier with Mr. Ricordati? 7 A. Yes. 8 Q. In this paragraph of your declaration, 9 what were you describing? 10 A. The process for initializing an ONU. 11 Q. Were you describing the process 12 generally or the process as described by the '982 13 Patent? 14 A. Sorry. Yes, the process as described 15 by the '982 Patent for initializing an ONU. 16 Q. In your opinion, does the process 17 described here necessarily correspond to exactly 18 how these sorts of systems might work today? 19 MR. RICORDATI: Objection, leading. 20 THE WITNESS: The question is does the 21 description as presented by the '982 Patent 22 describe how a system could work today? 23 MR. RICORDATI: Objection, relevance 24 as well.	Page 112 1 In your opinion, does Dr. Min's 2 declaration describe any of those other services 3 you discussed? 4 A. No. 5 Q. So let's go down to Paragraph 76 of 6 your report, which is at the bottom of Page 33 7 and goes on to Page 34. 8 Let me know when you're there. 9 A. Yes. 10 Q. There you've included a version of 11 Tsuge's Figure 11, right? 12 A. Yes, the annotated version. 13 Q. This was annotated by Dr. Min, right? 14 A. Yes, correct. 15 Q. At the end of that paragraph, you 16 describe the annotations. 17 Are those the same annotations 18 that Dr. Min used? 19 A. Yes. 20 Q. Now, do you recall discussing this 21 Section IX(G) of your declaration, which includes 22 Paragraph 76, earlier with Mr. Ricordati? 23 A. Yes. 24 Q. And do you recall discussing Figure 9
Page 111 1 MR. COLLIER: I'll withdraw the 2 question. 3 BY MR. COLLIER: 4 Q. Dr. Litvin, I'll be sort of skipping 5 around back and forth as I go through this. 6 Let's go down to Paragraph 57 of 7 your declaration. 8 A. Okay. 9 Q. Do you remember discussing this 10 paragraph of your report earlier today? 11 A. I remember discussing the EVP-LAN 12 briefly, so yes. 13 Q. Do you remember talking with 14 Mr. Ricordati about services opened by the ONU in 15 connection with this paragraph? 16 A. Yes. 17 Q. Do you recall Mr. Ricordati asked you 18 about services opened by the ONU other than the 19 two examples you've listed here of the EVP-LAN or 20 the VLAN? 21 A. Yes. 22 Q. In your opinion, does Dr. Min's 23 declaration -- excuse me. Let me restart that 24 question over.	Page 113 1 from Tsuge during that conversation? 2 A. Yes. 3 Q. Does the section of Dr. Min's report 4 that you are responding to here reference 5 Figure 9? 6 MR. RICORDATI: Objection, leading and 7 scope. 8 THE WITNESS: No, it does not. 9 BY MR. COLLIER: 10 Q. Does that section of Dr. Min's report 11 discuss Column 12 from Tsuge? 12 MR. RICORDATI: Objection, leading and 13 scope. 14 THE WITNESS: No, it does not. 15 BY MR. COLLIER: 16 Q. Does that section of Dr. Min's report 17 discuss Step 630 of Tsuge? 18 MR. RICORDATI: Objection, leading and 19 scope. 20 THE WITNESS: No, it does not. 21 BY MR. COLLIER: 22 Q. So in your opinion, does Dr. Min's 23 description and annotation of Figure 11 describe 24 saving a file?

Page 114 1 MR. RICORDATI: Objection, leading and 2 scope. 3 THE WITNESS: No, it does not, and 4 that is what I opined upon. 5 BY MR. COLLIER: 6 Q. Do you recall earlier Mr. Ricordati 7 asked you about Tsuge's architecture? 8 A. Yes. 9 Q. Were you asked to form an opinion on 10 the architecture described by Tsuge? 11 A. I was not. 12 MR. COLLIER: I'll pass the witness. 13 FURTHER EXAMINATION 14 BY MR. RICORDATI: 15 Q. Dr. Litvin, can you please return to 16 Paragraph 37 of your declaration? 17 A. Claim construction. 18 Q. Yes. 19 You just testified that you 20 applied claim constructions as outlined in this 21 table, is that correct? 22 A. When writing this report, yes. 23 Q. You will see that some of the terms 24 have explicit constructions and some just say	Page 116 1 Which did you use? 2 A. I used Patent Owner's proposed 3 construction. 4 Q. What about for terms that are not in 5 this chart, how did you come to an understanding 6 of what those terms meant? 7 A. Based on my years of experience and 8 expertise and knowledge of PON systems. 9 Q. Based on your knowledge of PON systems 10 and years of experience, the term service 11 auto-configuration, is that a term of art used in 12 PON systems? 13 MR. COLLIER: Objection, scope. 14 THE WITNESS: That term is specific to 15 this patent. 16 BY MR. RICORDATI: 17 Q. So in your opinion, the patent defines 18 what a service auto-configuration -- what that 19 term means? 20 MR. COLLIER: Objection, scope. 21 BY MR. RICORDATI: 22 Q. Is that correct? 23 A. What was the question? 24 Q. So in your opinion, the patent
Page 115 1 either no construction necessary or plain and 2 ordinary meaning or don't say anything at all. 3 How did you determine what those 4 terms meant when there was simply a plain and 5 ordinary meaning listed in this column? 6 A. Just conventional use of the 7 language. 8 Q. So you did come up with your own 9 interpretation instead of just using this 10 party-provided testimony, is that correct? 11 MR. COLLIER: Objection, misstates 12 testimony. 13 THE WITNESS: No construction 14 necessary, plain and ordinary meaning. Plain and 15 ordinary meaning is simply that. 16 BY MR. RICORDATI: 17 Q. You're looking at the first column or 18 the first row after the headings in this table on 19 Page 16, is that correct? 20 A. For example, yes. 21 Q. So there's two constructions here. 22 One says no construction necessary, plain and 23 ordinary meaning, and the other provides a 24 specific proposed construction.	Page 117 1 explicitly defines what a service 2 auto-configuration method or network is? 3 MR. COLLIER: Objection, scope and 4 misstates testimony. 5 THE WITNESS: It defines what the 6 service configuration system or network is within 7 the confines of the patent claims. 8 MR. RICORDATI: No further questions. 9 FURTHER EXAMINATION 10 BY MR. COLLIER: 11 Q. Dr. Litvin, turn to Paragraph 38 of 12 your declaration. 13 A. 38? 14 Q. Yes. 15 A. Okay. 16 Q. You state there, quote, With the 17 exceptions noted below, my opinions set forth in 18 this declaration are the same under either 19 parties' construction, right? 20 A. Yes. 21 MR. RICORDATI: Objection, scope. 22 BY MR. COLLIER: 23 Q. Did you apply that understanding in 24 your declaration?

Page 118 1 MR. RICORDATI: Objection, leading and 2 scope. 3 THE WITNESS: Yes. Well, the 4 definitions or the construction really had little 5 bearing on my opinions as delineated in the 6 declaration. 7 BY MR. COLLIER: 8 Q. You earlier told Mr. Ricordati where 9 there was a disagreement in the terms you applied 10 Patent Owner's construction. 11 That was a misstatement, right? 12 MR. RICORDATI: Objection, leading, 13 mischaracterizes the testimony. 14 THE WITNESS: Yes, that would be a 15 misstatement. 16 BY MR. COLLIER: 17 Q. In your declaration, did you opine on 18 the meaning of the term service auto-configuration 19 method? 20 A. I did not. 21 Q. Does a particular meaning of that 22 phrase affect the opinions that you put forth in 23 your declaration? 24 MR. RICORDATI: Objection, leading,	Page 120 1 MR. COLLIER: I'll pass the witness. 2 MR. RICORDATI: No further questions. 3 MR. COLLIER: No further questions 4 from me. 5 FURTHER DEPONENT SAITH NOT. 6 (The deposition concluded at 7 2:55 p.m. CST) 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 (RESERVED)
Page 119 1 scope. 2 THE WITNESS: It does not. 3 BY MR. COLLIER: 4 Q. When you were just now talking with 5 Mr. Ricordati, I believe you stated that the 6 '982 Patent defines the auto-configuration 7 method. 8 Do you remember that? 9 A. Yes. 10 Q. What did you mean by defines in that 11 context? 12 A. I meant essentially the configuration 13 of the ONU and the OLT using the same 14 configuration file along with the automated steps 15 that it described in the spec and in the claims. 16 Q. Are you aware of any explicit 17 definition of the phrase service 18 auto-configuration method within the '982 Patent? 19 A. There is no place in the '982 Patent 20 where it says this is what service 21 auto-configuration is, and I believe the 22 paragraph just below the claims start is a 23 description of what the inventors conceive as a 24 service auto-configuration.	Page 121 1 STATE OF ILLINOIS) 2) SS: 3 COUNTY OF C O O K) 4 I, Wendy A. Killen, a certified shorthand 5 reporter in the State of Illinois, do hereby 6 certify: 7 That prior to being examined, the witness 8 in the foregoing proceedings was by me duly sworn 9 to testify to the truth, the whole truth, and 10 nothing but the truth; 11 That said proceedings were taken remotely 12 before me at the time and places therein set 13 forth and were taken down by me in shorthand and 14 thereafter transcribed into typewriting under my 15 direction and supervision; 16 I further certify that I am neither counsel 17 for, nor related to, any party to said 18 proceedings, not in anywise interested in the 19 outcome thereof. 20 In witness whereof, I have hereunto 21 subscribed my name. 22 Dated: August 1, 2025 23 <i>Wendy A. Killen</i> 24 Wendy A. Killen, CSR, RPR CSR No. 84-003772

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1 Veritext Legal Solutions
2 1100 Superior Ave
3 Suite 1820
4 Cleveland, Ohio 44114
5 Phone: 216-523-1313
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7 August 5, 2025
8
9 To: William Collier, Jr., Esq.
10
11 Case Name: Charter Communications, Inc. v. Iarnach Technologies Ltd.
12
13 Veritext Reference Number: 7510791
14
15 Witness: Kerry I. Litvin, Ph.D. Deposition Date: 7/31/2025
16
17 Dear Sir/Madam:
18
19 Enclosed please find a deposition transcript. Please have the witness
20 review the transcript and note any changes or corrections on the
21 included errata sheet, indicating the page, line number, change, and
22 the reason for the change. Have the witness' signature notarized and
23 forward the completed page(s) back to us at the Production address
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25 above, or email to production-midwest@veritext.com.
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27 If the errata is not returned within thirty days of your receipt of
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29
30 Sincerely,
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1 DEPOSITION REVIEW
2 CERTIFICATION OF WITNESS
3
4 ASSIGNMENT REFERENCE NO: 7510791
5 CASE NAME: Charter Communications, Inc. v. Iarnach
6 Technologies Ltd.
7 DATE OF DEPOSITION: 7/31/2025
8 WITNESS' NAME: Kerry I. Litvin, Ph.D.
9 In accordance with the Rules of Civil
10 Procedure, I have read the entire transcript of
11 my testimony or it has been read to me.
12 I have made no changes to the testimony
13 as transcribed by the court reporter.
14
15 Date _____ Kerry I. Litvin, Ph.D.
16 Sworn to and subscribed before me, a
17 Notary Public in and for the State and County,
18 the referenced witness did personally appear
19 and acknowledge that:
20
21 They have read the transcript;
22 They signed the foregoing Sworn
23 Statement; and
24 Their execution of this Statement is of
25 their free act and deed.
26
27 I have affixed my name and official seal
28 this _____ day of _____, 20____.
29
30 _____
31 Notary Public
32
33 _____
34 Commission Expiration Date
35

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1 DEPOSITION REVIEW
2 CERTIFICATION OF WITNESS
3
4 ASSIGNMENT REFERENCE NO: 7510791
5 CASE NAME: Charter Communications, Inc. v. Iarnach
6 Technologies Ltd.
7 DATE OF DEPOSITION: 7/31/2025
8 WITNESS' NAME: Kerry I. Litvin, Ph.D.
9 In accordance with the Rules of Civil
10 Procedure, I have read the entire transcript of
11 my testimony or it has been read to me.
12 I have listed my changes on the attached
13 Errata Sheet, listing page and line numbers as
14 well as the reason(s) for the change(s).
15 I request that these changes be entered
16 as part of the record of my testimony.
17
18 I have executed the Errata Sheet, as well
19 as this Certificate, and request and authorize
20 that both be appended to the transcript of my
21 testimony and be incorporated therein.
22
23 Date _____ Kerry I. Litvin, Ph.D.
24
25 Sworn to and subscribed before me, a
26 Notary Public in and for the State and County,
27 the referenced witness did personally appear
28 and acknowledge that:
29 They have read the transcript;
30 They have listed all of their corrections
31 in the appended Errata Sheet;
32 They signed the foregoing Sworn
33 Statement; and
34 Their execution of this Statement is of
35 their free act and deed.
36 I have affixed my name and official seal
37 this _____ day of _____, 20____.
38
39 _____
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42 _____
43 Commission Expiration Date

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1 ERRATA SHEET
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Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS

COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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