

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

COMCAST CABLE)
COMMUNICATIONS, LLC,)
)
Petitioner,)
)
VS.) CASE: IPR2024-00431
)
ENTROPIC COMMUNICATIONS,) U.S. Patent No.
LLC,) 7,295,518
)
Patent Owner.)

The deposition of ALBERT GARRETT, called by
the Petitioner for examination, taken before
Dawn M. Iseminger, Registered Professional Reporter
(RPR) and Notary Public within and for the County of
Porter, State of Indiana, at K&L Gates, 70 West Madison
Street, Suite 3300, Chicago, Illinois, on February 28,
2025, beginning at 9:00 a.m.

A P P E A R A N C E S

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On behalf of the Petitioner, Comcast Cable
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On behalf of the Patent Owner, Entropic

I N D E X

EXAMINATIONS

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ALBERT GARRETT

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Examination By Mr. Mckee

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1 ALBERT GARRETT,
2 having been first duly sworn to testify the truth,
3 the whole truth and nothing but the truth,
4 depose and saith as follows:

5 EXAMINATION

6 Q (BY MR. MCKEE) Morning, Mr. Garrett.
7 A Good morning.
8 Q Could you please state your full name?
9 A Albert Garrett.
10 Q And your city and state of residence?
11 A Gadsden, Alabama.
12 Q And you're appearing here today pursuant to Notice
13 of Deposition in IPR2024-00431; is that correct?
14 A I accept that.
15 Q Okay. Yes. And that concerns U.S. Patent
16 No. 7,295,518?
17 A Yes.
18 Q You understand that the testimony you're giving
19 today is under oath in this proceeding?
20 A Yes.
21 Q Is there any reason why you cannot give full and
22 truthful testimony here today?
23 A No.
24 Q You're serving as an expert witness on behalf of
25 the Patent Owner, Entropic Communications, LLC?

1 A Yes.

2 Q You were deposed recently in another IPR
3 proceeding; isn't that correct?

4 A Yes.

5 Q That was IPR2024-00393. I'll represent -- do you
6 recall the adverse party in that proceeding?

7 A Dish.

8 Q Okay. And that deposition just occurred on
9 January 15 of this year?

10 A Yes, sir.

11 Q And that IPR also concerned the '518 patent?

12 A Yes, sir.

13 Q Well, this deposition will proceed similarly.
14 I'll be asking you a series of questions, and
15 you'll be expected to provide clear, verbal
16 responses to those questions so that the reporter
17 here can take those down. I'll endeavor to be
18 clear with my questions, but if you do not
19 understand a question, please let me know so that
20 I might clarify it. We will take periodic breaks
21 as we go along.

22 If you need to take a break at any time, just
23 let me know and we can do that. However, if
24 there's a question pending, you'll be expected to
25 provide your answer first. Is that okay?

1 A Understood.

2 Q Also, you understand that with this deposition now
3 started, you are not to have any discussions with
4 your counsel concerning the subject matter of your
5 testimony or this case until the deposition has
6 concluded?

7 A Yes, sir.

8 Q During my questioning, your counsel may state
9 objections for the record. You understand that
10 you are to provide your response notwithstanding
11 any such objections, unless your counsel
12 specifically instructs you not to answer?

13 A Yes, sir.

14 Q Mr. Garrett, when were you engaged by Entropic for
15 this matter?

16 A Approximately?

17 Q Sure.

18 A August of 2024.

19 Q And who contacted you?

20 A I believe the first contact was through a search
21 firm.

22 Q Okay. It --

23 A The name of the firm?

24 Q Yeah. What was the name of the firm?

25 A IMS.

1 Q IMS?

2 A (Indicating.)

3 Q When did you first speak with attorneys from
4 K&L Gates?

5 A I believe sometime in that same month.

6 Q Okay.

7 A Just to correct it, it could have been July.

8 Q And you're being compensated for your services --

9 A Yes.

10 Q -- I presume?

11 What is that compensation?

12 A I'm paid an hourly wage for time spent.

13 Q Okay. And what is that?

14 A I guess my agreement with IMS is, we just agreed
15 not to disclose.

16 Q Well, are you claiming that's confidential and
17 privileged information?

18 MR. MCKEE: Counsel, maybe I should address
19 this to you?

20 MR. HALVERSON: On or off the record?

21 MR. MCKEE: We can go off the record.

22 (Off the record.)

23 MR. MCKEE: Let's go back on the record.

24 MR. HALVERSON: So Mr. Garrett has an
25 agreement with IMS that governs his relationship

1 with IMS; and that agreement, in the terms
2 therein, are governed by a confidentiality clause
3 in there. We're happy to try to find a way to
4 work around that confidentiality clause, but it's
5 my understanding that he's not allowed to testify
6 as to the -- what the actual rate is that he gets
7 per hour. It's not high. It's not juicy. It's
8 just considered confidential under that agreement.

9 So if you need it, we can go back to IMS
10 to see if they'll allow us to provide it. But
11 that's my understanding of where that answer
12 from him came from.

13 Q (BY MR. MCKEE) So can you describe what exactly
14 is the arrangement for IMS? They're
15 compensated, and then you're paid by IMS?

16 A Yes.

17 Q Okay. Are you aware of what IMS is being
18 compensated?

19 A I am not.

20 MR. MCKEE: Okay. We do think that is
21 information we're entitled to. It's obviously
22 relevant, but we can defer the issue for now and
23 discuss later.

24 MR. HALVERSON: Sounds good.

25 MR. MCKEE: Okay.

1 Q (BY MR. MCKEE) Besides this IPR, and the Dish
2 Network IPR -- that's 2024-00393 -- have you
3 been engaged by Entropic on any other matters?

4 A No, sir.

5 Q Okay. Approximately, how much time have you
6 devoted to this particular proceeding overall?

7 A Ballpark of 50 hours.

8 Q Did you prepare for your deposition today?

9 A Yes, sir.

10 Q How much time did you devote to that?

11 A Ballpark of seven; seven hours.

12 Q Did you meet with your lawyers to prepare?

13 A Yes, sir.

14 Q For how long?

15 A Approximately, three hours yesterday. Another
16 hour earlier in the week.

17 Q Okay. Did those meetings take place here in
18 Chicago?

19 A One was a phone call. The other was three hours
20 here, yesterday.

21 Q Okay. What documents did you review in preparing
22 for your deposition today?

23 A The '518, the Afshary patent, the Mir' patent, and
24 my declaration.

25 Q Okay. And it's understood when you say "Mir,"

1 you're referring to "Mirfakhraei," right?

2 A Yes.

3 Q That's how you pronounce it?

4 A Yes, sir.

5 Q I'm giving the reporter the full information.

6 Is that it, the things you reviewed?

7 A Yes, sir.

8 MR. MCKEE: I'd like to mark as a new exhibit
9 in this matter. This will be Exhibit 1026.

10 MR. HALVERSON: For the record, do we want to
11 use --

12 MR. MCKEE: We will.

13 (Petitioner's Exhibit 1026
14 marked for identification.)

15 Q (BY MR. MCKEE) Okay. Mr. Garrett, do you
16 recognize this as the transcript of your recent
17 deposition in the Dish IPR?

18 A Yes, sir.

19 Q And this is your testimony under oath in that
20 proceeding, correct?

21 A Yes.

22 Q Do you recall giving this testimony?

23 A Yes.

24 Q I presume you reviewed the transcript after your
25 deposition; is that correct?

1 A Yes, sir.

2 Q How recently was that -- your review --
3 approximately?

4 A Two weeks ago.

5 Q Two weeks ago, okay.

6 A That's my guess.

7 Q Okay. And does that transcript accurately present
8 your testimony?

9 A Yes, sir.

10 Q And that testimony was truthful?

11 A Yes, sir.

12 Q Since giving that testimony, have you identified
13 any errors, mistakes, or omissions in either your
14 testimony or the transcript of it?

15 A I guess an omission I think of was the reference
16 to DAVIC wasn't included.

17 Q The reference --

18 A Where I came away with a statement about DAVIC,
19 indicating that DSL would have to be modified in
20 order to work in a shared medium like coax. And I
21 went back and researched. I found that reference
22 by an Internet search. That information was left
23 out in that testimony.

24 Q Okay. Is that all?

25 A At least at the moment, that's all I recall.

1 Outside of that, just reviewing in my mind
2 different timelines for technologies.

3 Q Okay. So you stand by the testimony you gave as
4 accurate and truthful?

5 A Yes, sir.

6 Q Okay. Now, referring to your declaration -- let's
7 go ahead and introduce Mr. Garrett's declaration
8 in this matter, which is Exhibit 2001.

9 (Petitioner's Exhibit 2001
10 marked for identification.)

11 Q (BY MR. MCKEE) Referring to Paragraph 40, there
12 you state that you satisfied your definition of
13 a POSITA before the filing date of the
14 application leading to the '518 patent.

15 Do you see that?

16 A Yes, sir.

17 Q Okay. That statement is an error, isn't it?

18 A Yes, sir.

19 Q By your own previous admission in your previous
20 deposition, you did not satisfy that level of
21 skill at the time of the '518 patent filing; isn't
22 that correct?

23 A That's correct.

24 Q You don't claim to have attained that level of
25 skill until at least the end of 2006; is that

1 correct?

2 A Yes, sir.

3 Q And that was when you first started working with
4 MoCA at Conexant --

5 A Yes, sir.

6 Q -- is that correct? So it was the end of 2006,
7 beginning of 2007 time frame, I believe, by your
8 previous testimony?

9 A I believe that's correct.

10 Q Now, in your prior deposition testimony you also
11 admitted to an error in your CV concerning your
12 current employment. Do you recall that?

13 A Yes, sir.

14 Q Referring to your CV appended to your declaration
15 as Appendix A, it indicates that you have been
16 with ComplexIQ, Inc., from 2011 to present; is
17 that right?

18 A Yes, sir.

19 Q But that isn't correct?

20 A Yeah. In fact, this vitae or résumé is the one I
21 used as I left ComplexIQ and never updated. So it
22 wasn't updated after 2019.

23 Q Okay. That's when you left ComplexIQ?

24 A Yes, sir.

25 Q And in 2020 you joined the financial services

1 industry at Northwestern Mutual as a financial
2 advisor; is that correct?

3 A Yes, sir. Probably more appropriate to say,
4 "associate financial advisor" at the time.

5 Q Okay.

6 A So the difference doesn't matter here.

7 Q That's fine. And your current role is not
8 connected to your past work experience? "Your
9 current role" meaning with the financial with
10 Northwestern Mutual; it's not connected to your
11 past work experiences?

12 A In communication? No, sir.

13 Q Is it fair to say you left the communications
14 industry in 2019?

15 A Yes.

16 Q Okay. What, if any, experience do you have with
17 data networking over twisted pair wiring?

18 A I attended IT meetings for DSL. I forget the
19 number for that. But I also attended G.hn
20 meetings, which is an attempt of technology to
21 make an in-home communication technology that
22 operates on existing copper in a house, power
23 line, phone line, and coax.

24 Q And when was this for the two things you
25 mentioned?

1 A 2006 also would have been the year I was with
2 Conexant.

3 Q And the other thing you mentioned, G.hn meetings?

4 A Yes, sir.

5 Q Same time frame?

6 A Yes, sir.

7 Q What exactly was that work experience involving
8 twisted pair wiring?

9 A At the time, we were attempting to develop a
10 standard for a communication system for networking
11 on in-home wires. So that would have been
12 defining the physical layer; algorithms; the
13 physical layer components; configurations of an
14 OFDM system.

15 Q OFDM on twisted pair?

16 A Yes.

17 Q What, if any, relationship did that work have with
18 your coaxial cable-related experience?

19 A Commercially speaking, Conexant is building a
20 coaxial cable semiconductor to operate as a
21 network device. They wanted to have the broadest
22 applicability possible; so if an international
23 technology organization is trying to define the
24 same thing, they wanted to ensure their definition
25 matched the international definition.

1 Q Would you describe your work -- was it conducted
2 separately or sort of interrelatedly?

3 A Interrelatedly.

4 Q Okay.

5 A I was both the -- for lack of a better phrase, I
6 was both a standards engineer and an
7 implementation engineer.

8 Q Okay. Do you have an understanding of the term
9 "point-to-point" in a data communication
10 networking context?

11 MR. LUND: Objection, form.

12 A Could you explain?

13 Q (BY MR. MCKEE) Do you have an understanding of
14 what a point-to-point communication network is?

15 A I understand that to be a communication between
16 two devices.

17 Q Okay. And --

18 A With no others present.

19 Q With no others present, okay.

20 What is your familiarity with DSL
21 technologies?

22 A Educationally, I had some coverage of
23 multi-carrier communication technologies. No
24 direct work experience. Followed the technologies
25 just as a curious engineer in communication

1 systems; and then, the participation in the two
2 standards organizations with more limited exposure
3 to specifically ITU -- I can't recall the number
4 at the moment but the one that focused on DSL.

5 Q And what is your understanding of DSL?

6 MR. LUND: Objection, form.

7 A I guess what's the scope of "understanding"?

8 Q (BY MR. MCKEE) Yeah. What do you understand
9 DSL to be, in your words?

10 A Technology defined for networking of digital
11 communications over twisted pair using DMT, DSL
12 subsumes, I guess, HDSL, ADSL, ADSL+, VDSL, VDSL2.

13 And there's one more version in there with
14 bonding but I --

15 Q Okay. And as you mentioned, DSL employs DMT,
16 correct?

17 A Yes, sir.

18 Q And DMT is a multi-carrier modulation technique,
19 correct?

20 A I agree.

21 Q And OFDM is a type of DMT multi-carrier
22 modulation; would you agree with that?

23 A I agree.

24 Q To your knowledge, in the relevant time frame of
25 the application filing that led to the '518

1 patent, was the use of DSL and DMT over twisted
2 pair wiring limited to a point-to-point network?

3 MR. LUND: Objection, form.

4 A Limited to a point-to-point network?
5 Point-to-point, logically? Or point-to-point,
6 physically?

7 Q (BY MR. MCKEE) Physically.

8 A To my experience, yes.

9 Q And how about logically?

10 A To my experience, yes.

11 Q Do you have an understanding of the term
12 "multi-carrier modulation"?

13 A Yes, sir.

14 Q And what is that understanding?

15 A A communication signaling that uses more than one
16 carrier simultaneously to communicate information
17 between two points.

18 Q And what knowledge do you have of the origins of
19 multi-carrier modulation?

20 A That it predates my educational experience.

21 Q Is that the extent of your knowledge?

22 A Yes.

23 Q Okay. Do you know when communication systems
24 started using multi-carrier modulation?

25 A Any communication system?

1 Q Yes.

2 A I can't say for any. DSL moved to multi-carrier
3 with ADSL.

4 Q Okay. Do you know the time frame of that?

5 A '90s; 1990s.

6 Q Okay. Turn to your declaration again,
7 Paragraph 61. You cite there Mirfakhraei for the
8 proposition that DMT protocols were originally
9 developed for use over conventional telephone
10 lines, correct?

11 A Yes.

12 Q So you agree with that statement in Mirfakhraei?

13 A Yes. That's --

14 Q Sorry. Go ahead.

15 A I was just thinking that's different than your
16 question of when multi-carrier modulation first
17 began.

18 Q Yes.

19 A Okay.

20 Q Would you agree that DMT multi-carrier modulation
21 had been applied to coaxial cable networks prior
22 to the filing of the application that led to the
23 '518 patent?

24 A Multi-carrier modulation or DMT?

25 Q DMT is a multi-carrier modulation, correct?

1 A Is "a"; but is not the only.

2 Q Yes. To clarify, DMT-type multi-carrier
3 modulation.

4 A Can you repeat the question?

5 Q Sure. Would you agree that the use of DMT
6 multi-carrier modulation has been applied to
7 coaxial cable networks prior to the filing of the
8 application that led to the '518 patent?

9 A Is there any limit on the term "coaxial cable
10 networks"?

11 Q No, I'm not limiting that term.

12 A Has been applied.

13 Q And what applications are you aware of?

14 A I'm not aware of any applications. Aware of
15 people experiments to use a point-to-point
16 solution in coax. Not -- can't claim a commercial
17 application, in my recollection.

18 Cable at the time was using channeling;
19 multi-carrier 6 megahertz channels. They
20 didn't move to -- if I recall correctly, they
21 didn't move to OFDM until DOCSIS 3.1.

22 Is that what you're asking?

23 Q So to your knowledge, DMT had been applied to
24 coaxial cable networks in that time frame?

25 A Point-to-point system.

1 Q Point-to-point over coaxial cable. And explain
2 how -- exactly what you mean by "point-to-point
3 over cable."

4 A A system designed to communicate between, for
5 instance, a head-end and an end-device.

6 Q Okay.

7 A But it -- yeah.

8 Q Which could be point-to-point or
9 point-to-multipoint, correct?

10 A Point-to-multipoint, I think that's fair.

11 MR. MCKEE: Let's introduce a new exhibit.
12 We'll mark as Exhibit 1027 U.S. Patent No.
13 6,091,932 to Langlais.

14 (Petitioner's Exhibit 1027
15 marked for identification.)

16 Q (BY MR. MCKEE) Are you familiar with this
17 patent?

18 A No.

19 Q So you did not consider this in formulating your
20 opinions stated in your declaration?

21 A No.

22 Q Take a moment to review it and let me know if you
23 would agree that it discloses a two-way data
24 transmission system for communicating between an
25 upstream and downstream unit using OFDM.

1 MR. LUND: Objection, form.

2 A (Reviews the document.)

3 I'm sorry. Back to your question.

4 Q (BY MR. MCKEE) Sure. You'd like me to repeat
5 it?

6 A Yes, sir.

7 Q Now that you've taken some time to review it, it
8 is the '932 Langlais Patent? Can we go off the
9 record?

10 (Off the record.)

11 MR. MCKEE: So we marked that as 1027. It
12 was originally marked in this proceeding
13 Exhibit 1016, just for clarification.

14 Q (BY MR. MCKEE) So my question was: Would you
15 agree that it discloses a two-way data
16 transmission system for communicating between
17 an upstream and downstream unit using OFDM?

18 MR. LUND: Objection, form.

19 A I guess I would call the upstream communication
20 OFDMA.

21 Q How would you distinguish OFDMA from OFDM?

22 A OFDMA is a multi-access technology. It's a way of
23 sharing medium. And so each downstream unit only
24 uses a portion of the frequency ban.

25 Q Okay. And this reference also discloses the use

1 of OFDM multi-carrier modulation over coaxial
2 cable; would you agree with that?

3 A Yeah. Shared access.

4 Q And it discloses the use of OFDM multi-carrier
5 modulation in a point-to-multipoint data
6 transmission system such as cable, correct?

7 A Yes.

8 Q And would you also agree it uses multi-carrier
9 modulation to address channel impairments in a
10 cable network such as interference?

11 MR. LUND: Objection, form.

12 Q (BY MR. MCKEE) I'm sorry; I want to give you an
13 opportunity.

14 A That's okay. Repeat that question.

15 Q Would you agree it uses multi-carrier modulation
16 to address channel impairments in a cable network
17 such as interference?

18 MR. LUND: Objection, form.

19 A I agree.

20 Q (BY MR. MCKEE) Okay. It also addresses the
21 fact that with OFDM, more hardware can be
22 required but that is traded off in the
23 equalizer hardware requirements; would you
24 agree with that? And I'll reference a
25 particular portion, Column 3, Line -- I direct

1 your attention to Column 3, Lines 56 to 59.

2 A And what was your question?

3 Q Well, you would agree that this patent addresses
4 the fact that with OFDM, more hardware can be
5 required but that this is traded off in the
6 equalizer hardware requirements?

7 MR. LUND: Objection, form.

8 A No. I'd say that's too vague.

9 Q (BY MR. MCKEE) It's too vague?

10 A Yeah.

11 Q But you see it stated in --

12 A Oh. I see it plainly stated here, but they're
13 just looking at two components.

14 Q Okay.

15 A You're patenting a system, which requires analog,
16 radio, and everything that goes along with a
17 multi-carrier modulation. And they seem to imply
18 that there's a burden here, because they go to the
19 point of forcing OFDMA on the downstream units so
20 that the downstream units don't have to implement
21 the same size FFT and save hardware. So they
22 recognize some burden for this work and try to
23 mitigate it by using OFDMA.

24 Q It recognizes there's a trade-off involved, don't
25 they?

1 A Yes.

2 MR. MCKEE: Okay. Let's introduce another
3 exhibit. I'll mark this one as Exhibit 1028.

4 (Petitioner's Exhibit 1028
5 marked for identification.)

6 Q (BY MR. MCKEE) U.S. Patent 5,959,967 to
7 Humphrey, et al.

8 Mr. Garrett, do you recognize this patent?

9 A I do not.

10 Q Okay. So you're not presently familiar with it?

11 A No, sir.

12 Q Taking a moment to look at it, you would agree
13 that it discloses an OFDM transmission system used
14 to communicate over twisted pair loop; is that
15 correct?

16 A (Reviews the document.)

17 Back to your question. I'm sorry.

18 Q Sure. I'll repeat it.

19 You would agree that the '967 patent
20 discloses an OFDM transmission system used to
21 communicate over a twisted pair loop?

22 A Yes. With a caveat that it seems like it's,
23 again, an OFDMA system.

24 Q Okay. It also discloses an extension to
25 multipoint-to-point communication; do you agree

1 with that?

2 MR. LUND: Objection, form.

3 A I would say that's the OFDMA portion; the method
4 to share the medium.

5 Q (BY MR. MCKEE) So you would agree it does
6 disclose a multipoint-to-point application of
7 OFDM?

8 MR. LUND: Objection, form.

9 A I guess where I struggle is the devices in that
10 situation are not the same, and so I don't think
11 of it as strictly OFDM. That's why I keep
12 emphasizing OFDMA.

13 A device that is the multi-point device has a
14 smaller FFT than the device that is the
15 single-point device.

16 Q (BY MR. MCKEE) Okay.

17 MR. LUND: Counsel, we've been going about an
18 hour. Would it be okay to take a break?

19 MR. MCKEE: Yes. Makes sense.

20 (Recess taken.)

21 MR. HALVERSON: Counsel, I went back into our
22 contract with IMS and I can tell you what it is
23 that we are paying IMS. It doesn't tell me what
24 Mr. Garrett is receiving from IMS, but it will be
25 less than whatever it is than we are paying him.

1 And IMS is invoicing us \$745 an hour for his time
2 on this matter.

3 MR. MCKEE: Okay. Thank you. We'll consider
4 if we need any additional information.

5 Let's mark another exhibit -- a new
6 exhibit. This will be Exhibit 1029, Isaksson,
7 et al., U.S. Patent No. 6,438,174.

8 (Petitioner's Exhibit 1029
9 marked for identification.)

10 Q (BY MR. MCKEE) Mr. Garrett, is this a patent
11 you're familiar with?

12 A I haven't reviewed this specific patent. I guess,
13 we'll start with "no," until we get further into
14 it.

15 Q Okay. You say you --

16 A I recognize the name Isaksson.

17 Q Okay.

18 A I recognize a term here with MUSIC G2. I don't
19 think I've ever reviewed this specific patent.

20 Q Okay. And what's your familiarity with the name?

21 A In the other case for Dish, the name Isaksson was
22 one of the references.

23 Q Okay. Are you aware that this patent discloses
24 Discrete Multi-Tone modulation in a technique for
25 bit loading applied to point-to-point twisted pair

1 wiring?

2 MR. LUND: Objection, form.

3 A (Reviews the document.)

4 Okay. Back to your question.

5 Q (BY MR. MCKEE) Well, my previous question was:
6 Are you aware that this patent discloses
7 Discrete Multi-Tone modulation in a technique
8 for bit loading applied to point-to-point
9 twisted pair wiring? And so if you could
10 answer that question. You've taken, I don't
11 know, maybe five minutes to review. Could you
12 answer that at the time before your review
13 first; and then after your review, provide your
14 answer.

15 In other words, were you aware at the
16 initial --

17 A Okay. Before I looked at the patent, was I aware
18 that it was a DMT?

19 Q Before reviewing the patent, yes.

20 A I was unaware.

21 MR. LUND: Objection, form.

22 A I was unaware of the patent; so the answer is
23 "no."

24 Q (BY MR. MCKEE) Okay.

25 A After review, yes.

1 Q So you can agree with that?

2 A (Indicating.)

3 Q Okay. And this reference also discusses premises
4 distribution of VDSL signals over coaxial cable
5 systems; does it not?

6 A Can you point to that?

7 Q Yes. I'll direct your attention to Column 2,
8 Lines 7 to 16.

9 A Column 2?

10 Q Column 2, Line 7.

11 A And what was the question for that?

12 Q You would agree that this patent references
13 premises distribution of VDSL signals over coaxial
14 cable systems?

15 A No.

16 Q You would not agree?

17 A This patent references the DAVIC spec.

18 Q Correct. Specifically, it says, "However, the
19 DAVIC specification reverses this order to enable
20 premises distribution of VDSL signals over coaxial
21 cable systems, correct?

22 A That is exactly what it says, yes, sir.

23 Q Okay.

24 A But I interpreted your question to be: Does this
25 patent refer to VDSL over coax.

1 Q Well, that's a reference to VDSL over coax, isn't
2 it?

3 A I'm not sure what the DAVIC specification says in
4 regards to explaining this sentence.

5 Q Understood. But it's representing that the DAVIC
6 specification enables premises distribution of
7 VDSL signals over coaxial cable systems, correct?

8 A That is what it says.

9 Q Okay. We'll mark next, as Exhibit 1030, U.S.
10 Patent No. 6,529,746 to Levin, et al.

11 (Petitioner's Exhibit 1030
12 marked for identification.)

13 Q (BY MR. MCKEE) Are you familiar with this
14 patent, Mr. Garrett?

15 A No, sir.

16 Q Okay. Let's mark another new exhibit. This will
17 be Exhibit 1031.

18 (Recess taken.)

19 (Petitioner's Exhibit 1031
20 marked for identification.)

21 Q (BY MR. MCKEE) So Exhibit 1031 is ADSL/VDSL
22 principles by Dr. Dennis Rauschmayer, and
23 included are Chapters 2, 8, and 9.

24

25 Mr. Garrett, are you familiar with this

1 text?

2 A I think the cover looks familiar. I don't know
3 that I've reviewed this whole book.

4 Q Okay. Did you have maybe a little chance to
5 review during our break?

6 A Yes, sir.

7 Q It covers multi-carrier system architecture,
8 doesn't it?

9 A Yes, sir.

10 Q And it covers multi-carrier system architecture in
11 the context of DSL networks, correct?

12 A Yes, sir.

13 Q And it addresses DSL networks provided over
14 twisted pair, correct?

15 A Seems to be true, based on the table of contents.

16 Q Okay. And it describes an ADSL and VDSL
17 modulation schemes are designed to overcome and
18 mitigate transmission channel impairments over
19 twisted pair, doesn't it?

20 A Can you point to the reference?

21 Q Yes. Direct your attention to Page 23, which is
22 in Chapter 2.

23 A Second sentence, first paragraph?

24 Q I'm sorry?

25 A You're referring to the second sentence in the

1 first paragraph?

2 Am I on the wrong page?

3 Q That's correct, the first paragraph under the
4 bullets.

5 A Yes, sir.

6 Q So you understand?

7 A Noise, loss, and cross-talk.

8 Q Yeah. And it describes an ADSL and VDSL
9 modulation schemes are designed to overcome and
10 mitigate those impairments, correct?

11 A Yes.

12 Q Okay. You are familiar with the term "DMT"?

13 A Yes.

14 Q And for the record, what does that stand for?

15 A Digital [sic] Multi Tone.

16 Q Digital Multi Tone?

17 A Is that correct; Digital [sic] Multi Tone?

18 Q Or Discrete Multi Tone?

19 A Discrete Multi Tone. Yeah. Thank you.

20 Q And you're familiar with the term OFDM? We've
21 talked about that some?

22 A Yes, sir.

23 Q I believe we also talked about the fact that OFDM
24 is a type of DMT, correct?

25 A Didn't we say the OFDM is a type of multi-carrier

1 modulation?

2 Q Is it also an application of DMT?

3 A I guess I'm trying to refine those two. When I
4 think of DMT, it is -- includes bit loading.

5 Q Yes.

6 A OFDM does not necessarily include bit loading.

7 Q But may include bit loading?

8 A Yes.

9 Q DMT and OFDM, those are closely related
10 multi-carrier modulation techniques, correct?

11 A Closely related, yes, sir.

12 Q In your previous deposition in the Dish case, you
13 agreed that OFDM can be considered a subset of
14 DMT; a flavor of DMT? Do you recall that?

15 A I do recall that, and I spent some time reviewing
16 those two topics afterwards just trying to refine
17 my understanding.

18 DMT is -- I wouldn't consider OFDM a
19 subset of DMT because of the bit loading
20 aspect. But they're close cousins. Both use
21 FFTs.

22 Q What is your understanding of the term "bit
23 loading"?

24 MR. LUND: Objection, form.

25 Q (BY MR. MCKEE) In the context of communication

1 systems.

2 A Can you be a little more specific?

3 Q Well, I'd just like to hear you explain in your
4 own words what "bit loading communications"
5 context means.

6 A Restrict the answer to, to multi-carrier systems.
7 It's individually selecting the amount of
8 information that is placed on each sub-carrier.

9 Q You said you were restricting your answer to
10 multi-carrier systems. Are you saying bit loading
11 can apply outside of those?

12 A I guess just trying to speak generally, you could
13 consider bit loading to be done in the time
14 domain, or over CMA. In which case it doesn't
15 have anything to do with multi carriers, it's got
16 to do with codes.

17 Q But OFDM necessarily employs bit loading, correct?

18 A Not necessarily. I mean, Wi-Fi uses OFDM.
19 802.11(a) was the first instance, and there was no
20 bit loading. It was one constellation for all
21 sub-carriers.

22 Q Okay. You would agree that bit loading refers to
23 the use of different constellations on different
24 tones or sub-carriers?

25 A Yes, sir. One of your examples here had OFDM but

1 I wouldn't have called it DMT. It was the case of
2 point-to-multipoint. As far as I can tell, they
3 used the same constellation on all sub-carriers;
4 so I wouldn't call that DMT.

5 Q Okay. Thank you for that clarification.

6 Okay. We'll come back to this Exhibit 1031.
7 Let's put it aside for now. And we'll introduce
8 two exhibits, which are Exhibits 1010 and 1018 in
9 this proceeding.

10 (Petitioner's Exhibit 1010 and
11 1018 marked for identification.)

12 Q (BY MR. MCKEE) So why don't we take them
13 individually. Let's go in numerical order.

14 Exhibit 1010, Mr. Garrett, are you
15 familiar with this?

16 A I would say no. Immediately I recognize Jacobsen
17 as being referred to in the Dish case. I don't
18 think this was the reference; so ...

19 Q Okay. That's Exhibit 1010. How about 1018?

20 A I'd say 1018 looks very familiar.

21 Q Do you have an understanding of the reference?

22 A I believe so.

23 Q Okay. And what is that understanding?

24 A If I'm correct, this is a discussion on a trading
25 performance and mathematical efficiency of a

1 single-carrier system to a multi-carrier system.

2 Q Okay. What was the context of you becoming
3 familiar with this reference?

4 A That would have been the Dish IPR.

5 Q Okay. So you didn't consider it in connection
6 with this proceeding?

7 A No.

8 Q And same thing on 1010?

9 A I don't -- I'm not familiar with 1010.

10 Q Okay.

11 All right. Let's introduce Exhibit 1007 to
12 this proceeding.

13 (Petitioner's Exhibit 1007
14 marked for identification.)

15 Q (BY MR. MCKEE) Do you recognize this as a
16 reference at issue in this proceeding?

17 A Yes.

18 Q This is Mirfakhraei EP 1 087 586.

19 Does Mirfakhraei system, to your
20 understanding, employ multi-carrier modulation?

21 A Yes.

22 Q Does Mirfakhraei multi-carrier modulation employ
23 bit loading?

24 A Yes.

25 Q Are you familiar with the particular type

1 bit-loaded multi-carrier modulation that
2 Mirfakhraei employs?

3 A Can you expand the question?

4 Q Well, there are different types of bit-loaded
5 multi-carrier modulations, correct? Generally
6 speaking.

7 A Okay.

8 Q And so are you familiar with the type of
9 bit-loaded multi-carrier modulation that
10 Mirfakhraei employs?

11 A Akin to ADSL?

12 Q That's what I'm asking.

13 A Okay.

14 Q It employs DMT, correct?

15 A Yes.

16 Q And DMT is part of a DSL protocol, correct?

17 A Fair.

18 Q And -- okay. Mirfakhraei addresses channel
19 impairments, doesn't it?

20 MR. LUND: Objection, form.

21 A Generally speaking, yes.

22 Q (BY MR. MCKEE) The multi-carrier modulation
23 addresses channel impairments, doesn't it?

24 A On the twisted pair.

25 Q Okay. And those impairments include

1 signal-to-noise, correct?

2 A Yes, sir.

3 Q And signal attenuation, correct?

4 A Frequency-dependent attenuation?

5 Q Well, let's just speak generally first.

6 A It doesn't address bulk attenuation.

7 Q I'm sorry?

8 A Bulk attenuation, 20 dB loss between two devices.

9 It's a power issue. Bit loading is more about
10 variability between frequencies.

11 Q Okay. And you would agree that it does address
12 signal attenuation in that respect?

13 A Yes.

14 Q And Mirfakhraei addresses these impairments in
15 order to improve communication efficiency; isn't
16 that correct?

17 A Define "efficiency."

18 Q Well, I'll direct you, for example, to
19 Paragraph 4, which reads -- part of that reads,
20 "For efficient operation of DMT communications,
21 the capability of each sub-channel needs to be
22 determined to enable selection of optimal symbol
23 sets for each sub-channel."

24 Do you see that?

25 A Almost at the end of the paragraph?

1 Q Correct.

2 A Yeah, I guess my hesitation was only that optimal
3 signal set, even in Mir' it could be optimizing
4 power, or it could be optimizing through bit.
5 Those are two different efficiencies, I guess.

6 Q Okay. And it addresses both, correct?

7 A Yes.

8 MR. MCKEE: Let's introduce another exhibit.
9 This will be Exhibit 1006, which is the Afshary
10 referenced in this proceeding, Publication
11 2006/0218593.

12 (Petitioner's Exhibit 1006
13 marked for identification.)

14 A (Indicating.)

15 Q (BY MR. MCKEE) Afshary doesn't disclose the use
16 of multi-carrier transmissions, does it?

17 A I believe that was in my disclosure.

18 Q Your declaration?

19 A Declaration, yeah.

20 Q What was in there?

21 A Whether Afshary discloses multi-carrier. Do we
22 need to -- the answer is "no," but I think it's in
23 the disclosure.

24 Q And if you wish to address your -- look at your
25 declaration, that's fine. Or do you want to go --

1 is that your answer?

2 A If I could just have it, that would be great.

3 Q I think you do. I think it's already been
4 introduced. It's our Exhibit 2001.

5 A Okay. Thank you.

6 Q You got it. So feel free to --

7 A I got confused when we were talking through that
8 and it was the previous declaration.

9 Q So you agree Afshary does not disclose the use of
10 multi-carrier transmissions?

11 A Agree.

12 Q And it doesn't teach bit loading?

13 A Correct.

14 Q Okay. Afshary doesn't teach a DMT or OFDM system,
15 does it?

16 A No.

17 Q Okay. Afshary does disclose a coaxial cable Local
18 Area Network, or a LAN, correct?

19 A Yes.

20 Q And that is a home-based LAN, correct?

21 A Yes.

22 Q With communications occurring between nodes on the
23 network in the home?

24 A Yes.

25 Q And more specifically, as between cable LAN

1 adapters 24, as shown in Afshary Figure 1,
2 correct?

3 A No.

4 Q "No"? What do you disagree with that?

5 A 24 is the cable.

6 Q Oh. Okay. Sorry.

7 22, is that --

8 A 32.

9 Q Okay. There we are. Yeah. Thank you.

10 A Yes, sir.

11 Q Are you familiar with LAN communication protocols?

12 A Can you provide an example?

13 Q Well, just generally speaking protocols used for
14 communication between nodes on a Local Area
15 Network.

16 A Yes, sir.

17 Q Are you familiar with what communication protocols
18 exist and in the relevant time frame that is at
19 the time of filing of the application as a result
20 of the '518 patent?

21 A I believe so.

22 Q Okay. What are some of those known protocols?

23 A Generic recognized terms: Ethernet, Wi-Fi.

24 Q Okay. Anything else?

25 A My brain is stuck there at the moment.

1 Q Okay. That's fine. Speaking generally in the
2 relevant time frame, what types of protocols were
3 known for use in a coaxial cable LAN to allow the
4 nodes to communicate with each other?

5 MR. LUND: Objection, form.

6 A Can you ask that again?

7 (Readback provided)

8 "QUESTION: Speaking generally in the
9 relevant time frame, what types of protocols
10 were known for use in a coaxial cable LAN to
11 allow the nodes to communicate with each
12 other?"

13 A One more time.

14 (Readback provided)

15 "QUESTION: Speaking generally in the
16 relevant time frame, what types of protocols
17 were known for use in a coaxial cable LAN to
18 allow the nodes to communicate with each
19 other?"

20 A I think you're asking about access technologies,
21 like CSMA or TDMA.

22 Q (BY MR. MCKEE) Well, I don't want to answer the
23 question for you, but just whatever
24 protocols -- again, we're speaking about known
25 protocols at the time; and you're answering

1 TDMA was one.

2 A Yeah. I think you're asking me what protocols
3 were used to share the medium?

4 Q Yes.

5 A And the protocols I'm aware of -- related to --
6 are CSMA, TDMA, OFDMA.

7 Q And would such protocols have been suitable for
8 use in the coaxial cable LAN of Afshary?

9 A Yeah, so Afshary uses TDMA; Paragraph 34.

10 Q Okay. You mentioned ethernet. That's also a
11 protocol?

12 A Ethernet is, yeah, more of a technology.

13 Q And it was known for use in a coaxial cable LAN?

14 A Not this type of LAN.

15 Q Not this type of LAN?

16 A (Indicating.) Ethernet is a point-to-point
17 technology. It would have one coax cable between
18 two devices. It would have to have a HUB or
19 router in order to create a LAN.

20 Q But with those added components?

21 A That's right. Then it's just coax cable between a
22 HUB and a device, or multiple coaxial cables
23 between a HUB and multiple devices.

24 Q Now, the '518 patent describes the use of a time
25 division duplex protocol for communications,

1 correct?

2 A I think that's right.

3 Q And that's a form of Time Division Multiple
4 Access, or TDMA?

5 A I guess I'm missing the addition of the duplex. I
6 would just call it TDMA, yeah.

7 "Duplex," meaning it can go in multiple
8 directions.

9 Q Well, can you clarify for me? You mean -- how are
10 you missing the addition of the duplex?

11 A I guess, I think of duplex as either being
12 full-duplex or half-duplex. Half-duplex, meaning
13 only one guy is talking at the time; and so if I
14 were to put the word "duplex" in there, I'd have
15 to call it "half-duplex."

16 Q Okay. TDD being -- TDD is a half-duplex, correct?

17 A Yeah.

18 Q So it's a half-duplex form of TDMA, correct?

19 A Fair.

20 Q Okay. And with a TDD system and TDMA, generally,
21 different users can share a common frequency
22 channel with each user transmitting during a
23 different time interval, correct?

24 MR. LUND: Objection, form.

25 A I guess, can you or she repeat the question?

1 Q (BY MR. MCKEE) Let me restate the question.

2 In a TDMA system, different users can share a
3 common frequency channel with each user
4 transmitting during a different time interval,
5 correct?

6 A Yes.

7 Q And that applies with TDD as well?

8 A I understand TDD to be time -- TDMA half-duplex,
9 yeah.

10 Q Okay. Yeah. Was TDD a known protocol in the art
11 in the relevant time frame, predating the original
12 filing of the '518 patent application?

13 A I guess I'm not differentiating TDD from TDMA
14 half-duplex. And answer: Yes.

15 Q Okay. Would such a protocol have been suitable
16 for use in the system described by Afshary?

17 MR. LUND: Objection, form.

18 A I believe Afshary discloses that. Paragraph 34.

19 Q (BY MR. MCKEE) That was going to be my next
20 question. So, thank you.

21 Now, known protocols that would allow nodes
22 within a coaxial cable LAN to communicate with
23 each other included a mechanism for identification
24 of both the sender and the recipient of any
25 particular communication; isn't that correct?

1 MR. LUND: Objection, form.

2 A Yes.

3 Q (BY MR. MCKEE) And it's fair to call that
4 "message addressing"?

5 A "Message addressing"?

6 Q It is the mechanism for identification of both the
7 sender and the recipient of any particular
8 communication.

9 A That information is typically included in the
10 transmission.

11 Q Yeah.

12 A Yes.

13 Q Okay. And that's what the '518 patent
14 contemplates, correct; the use of such addressing?

15 A Do I have the '518?

16 Q We haven't introduced that yet. We will now.
17 '518 patent is Exhibit 1001.

18 A Thank you, sir.

19 (Petitioner's Exhibit 1001
20 marked for identification.)

21 A This is Afshary.

22 MR. JONES: Oh. Thank you.

23 COURT REPORTER: Same number?

24 MR. MCKEE: Yes. 1001.

25 A Yeah, apologies for the slow answer; but I

1 realized as you're speaking, I don't know that
2 '518 says anything about how the source or the
3 receiver are identified. It just declares that
4 there's a time slot for the source to transmit.

5 Q (BY MR. MCKEE) Okay. Would a POSITA understand
6 how that -- would POSITA understand that to
7 involve address?

8 A Either implied or explicit.

9 Q Yeah? How would that work in the '518 patent?
10 How would a POSITA understand that would work for
11 communications between nodes?

12 A In '518, it declares that there's a beacon that
13 determines scheduling and time reference.

14 Q And how about the messaging part of it -- I'm
15 sorry -- the addressing part of it?

16 A That would imply that the scheduler announces who
17 is transmitting.

18 Q Okay.

19 A So a POSITA would understand the transmitter is
20 known and the receiver is known.

21 Q So the '518 patent contemplates packet-based
22 messaging; is that correct?

23 A Yes, sir.

24 Q And those would include address headers?

25 A Could include.

1 Q Okay.

2 A They can be embedded in ethernet packets inside
3 the packet transmission.

4 Q Yeah. Okay. So as we've talked about, ethernet
5 protocols are suitable for use in LAN
6 communications, correct?

7 A I guess I consider ethernet a LAN communication.

8 Q And could be involved in the communications
9 between nodes of the '518 patent, correct?

10 A Could be involved? In what way?

11 Q Well, I believe you mentioned that ethernet could
12 be part of the messaging occurring.

13 A Yeah, I guess the data interface on a network
14 device could be an ethernet interface and the MAC
15 controller could simply encapsulate the ethernet
16 packet into a PH-y packet.

17 But the ethernet packet by itself would not
18 exist on the coax wiring, in '518 at least.

19 Q So as disclosed in the '518, how would the
20 addressing be carried out?

21 MR. LUND: Objection, form.

22 A As disclosed in the '518 --

23 Q (BY MR. MCKEE) Let me clarify as -- yeah, as
24 either disclosed or as would be understood by a
25 POSITA.

1 A As would be understood by a POSITA because the
2 '518 declares a scheduler, so then there must be
3 some form of request for bandwidth. A POSITA
4 would understand that there's a request generated
5 and transmitted to whatever scheduler this is, and
6 then the scheduler would announce transmitter and
7 receiver.

8 Q Okay.

9 A A POSITA might assume the same as included in the
10 packet but wouldn't be necessary.

11 Q The '518 patent does not describe the details of
12 its addressing scheme, does it?

13 A It does not.

14 Q But is it your opinion that those details would
15 have been understood by a POSITA?

16 A Yes.

17 MR. LUND: Counsel, we've been going another
18 hour. Is it a good time for a break after this
19 section of questioning?

20 MR. MCKEE: Yes. We can break now. That
21 will be fine.

22 (Recess taken.)

23 Q (BY MR. MCKEE) Mr. Garrett, are you familiar
24 with the OSI protocol model?

25 A Those would be the seven-layer model for

1 communication systems?

2 Q Yes. And it's illustrated, for example, in
3 Rauschmayer at Page 253 -- which is Chapter 8?

4 A Yes, sir.

5 Q Okay. Would your view with the OSI protocol model
6 have relevance to communications between nodes on
7 the '518 patent cable LAN?

8 A Yes.

9 Q Okay. The choice to use coaxial cable wiring,
10 that concerns the physical layer, correct?

11 A Yes.

12 Q And the addressing for communications between the
13 nodes on '518 cable LAN, which layer or layers
14 does that concern?

15 A That can either be layer one or layer two; or
16 potentially even layer three if the ethernet
17 packet -- if an encased ethernet packet is what's
18 used for addressing.

19 Q Okay. The '518 patent system, that uses
20 multi-carrier modulation in bit loading, correct?

21 MR. LUND: Objection, form.

22 A More specifically, it uses OFDM in bit loading.

23 Q (BY MR. MCKEE) And that OFDM in bit loading,
24 that's a form of DMT, correct?

25 A Yes.

1 Q The '518 patent uses multi-carrier modulation in
2 bit loading as a way of ameliorating the impact of
3 various types of channel improvements -- or I'm
4 sorry -- impairments, correct?

5 MR. LUND: Objection, form.

6 A I guess because "multi-carrier modulation" is a
7 broad bucket limited to OFDM.

8 Q (BY MR. MCKEE) I'm sorry. Can you --

9 A Repeat that?

10 Q Yes.

11 A Multi-carrier modulation could include two
12 6-megahertz transmissions that are not orthogonal.
13 So, I guess, my only hesitation in agreeing is
14 that MCM includes a lot of things. '518 is
15 specific about using OFDM.

16 Q And "MCM" being "multi-carrier modulation"?

17 A Yes, sir.

18 Q So what are some of the channel impairments that
19 the '518's MCM, as you call it, addresses?

20 A The channel impairment that only the OFDM
21 addresses?

22 Q Well, the OFDM with bit loading.

23 A So that would be ISI and frequency-dependent
24 attenuation.

25 Q And "ISI" stands for?

1 A "Intersymbol interference."

2 Q What are some of the causes of those channel
3 impairments you mention?

4 A Intersymbol interference in the '518 comes from
5 multi-path.

6 Q Okay. And the attenuation?

7 A Frequency-dependent attenuation also comes from
8 multi-path, in addition to filter responses.

9 Q Okay. The '518 patent doesn't seek to remove the
10 causes of these impairments, does it?

11 MR. LUND: Objection, form.

12 Q (BY MR. MCKEE) Let me clarify.

13 I'll ask you to confirm. The '518 patent
14 does not seek to remove the causes of the
15 impairments it addresses; rather it accepts
16 those channel impairments are going to exist
17 and proposes a way to deal with them; isn't
18 that right?

19 MR. LUND: Objection, form.

20 A Yes, the '518 has dual -- dual -- the '518 has
21 conflicting purposes for multi-path.

22 In one sense, it creates the channel that
23 allows communication between devices. In
24 another sense, it also causes deleterious
25 effects that OFDM helps address.

1 Q (BY MR. MCKEE) But the causes of the
2 impairments you mentioned, those don't go away.
3 The multi-carrier techniques allow you to deal
4 with that more effectively; isn't that right?
5 In the bit loading --

6 MR. LUND: Objection, form.

7 Q (BY MR. MCKEE) -- in particular?

8 A Two issues must be addressed. One is the
9 intersymbol interference, which is dealt with,
10 with the cyclic prefix. And the other is the
11 frequency-dependent attenuation -- I guess how I
12 said it previously. And OFDM enables you to deal
13 with those.

14 Q Okay. You've already got your declaration as
15 Exhibit 2001.

16 What was your involvement in the preparation
17 of that declaration?

18 A I submitted a first draft of the declaration and
19 then -- which was my opinion of the '518 of the
20 two patents in question: Mir' and Afshary in
21 Bertonis' declaration, and then worked from that
22 first draft with Jared and Erik to conclude in
23 this declaration.

24 Q And you mention in your declaration the documents
25 that you reviewed?

1 A Yes, sir.

2 Q That's a complete list, I think?

3 A Yes, sir.

4 Q Okay. Are you aware of any corrections that need
5 to be made to it --

6 MR. LUND: Objection, form.

7 Q (BY MR. MCKEE) -- as we sit here?

8 MR. LUND: Apologies. Objection, form.

9 A Aware of any corrections that need to be made to
10 what?

11 Q (BY MR. MCKEE) To your declaration.

12 A I believe we spoke to Paragraph 40.

13 Q Yes, we did discuss Paragraph 40 before.

14 A Okay. I indicated the Appendix A was outdated.

15 Q Right. Okay.

16 A Outside of that, I stand by it.

17 Q Okay. Now, at Paragraph 37 you state as a level
18 of skill that a POSITA would have at least a
19 bachelor's degree in electrical engineering, peer
20 engineering, or equivalent field with at least two
21 years of experience with coaxial cables, correct?

22 A Yes, sir.

23 Q And as you already testified, you did not satisfy
24 that level of skill in the relevant time frame,
25 correct?

1 A Not at the time of the '518 patent.

2 Q Now, you also state in Paragraph 40 that you now
3 consider yourself an expert in the relevant field
4 of technology for the '518 patent, correct?

5 A Yes, sir.

6 Q But you've also indicated you haven't held a
7 professional position in the field since at least
8 2019. That's correct?

9 A December 31st of 2019.

10 Q Now, at Paragraph 43 you state that you disagree
11 that a POSITA would not need at least a year of
12 coaxial-specific experience.

13 So I'm wondering, is it at least a year,
14 or is it two years? Is there a discrepancy
15 there with --

16 A Yeah, I would say the -- to reconcile the two
17 statements, you can have a year of education in
18 coax and a year of work experience in coax.

19 Q Okay. Now, turning to your Paragraph 79, you
20 opine that Mirfakhraei's system for determining
21 the bit loading for a discrete multi-tone DMT
22 communication signal is not reasonably pertinent
23 to the problems addressed by the '518 patent. Do
24 you see that?

25 A Yes, sir.

1 Q You would agree that multi-tone -- that is, DMT
2 with bit loading as a technique -- that's
3 certainly pertinent to the '518 patent, isn't it?

4 A Bit loading as a technique?

5 Q Multi-tone DMT, in other words, with bit loading
6 as a technique, that is pertinent to the '518
7 patent?

8 A My position is that's too broad a statement.

9 Mirf' is operating in a point-to-point
10 system. You alluded to Afshary and their
11 packetized system in '518, and its packetized
12 system that TDM structure is added because it's a
13 shared medium. Mirf' doesn't contemplate how to
14 share signaling between devices.

15 Q Okay. DMT, however, is a technique that the '518
16 patent employs, correct?

17 MR. LUND: Objection, form.

18 A Yes.

19 Q (BY MR. MCKEE) And the '518 patent references
20 and incorporates by reference multiple
21 documents for details concerning those
22 techniques; isn't that right?

23 A Yes.

24 Q Let's turn, next, to your Paragraph 86. You opine
25 there that Afshary's Digital modulation schemes

1 are single-carrier schemes. Do you see that?

2 A Yes.

3 Q Now, you reference the FSK and BPSK modulation
4 that Afshary discusses, correct?

5 A Yes.

6 Q Now, those are not limited to a single-carrier
7 system, are they, those types of modulation?

8 A Semantically, they have to be applied on a carrier
9 or a symbol-by-symbol basis. But those can be
10 applied to a multi-carrier system.

11 Q Yeah. They can be employed as lower orders of
12 modulation in a multi-carrier scheme; isn't that
13 correct?

14 A When you say "lower order"?

15 Q You're not familiar with the term "lower order"
16 with respect to constellations?

17 A I guess it assumes that there are always higher
18 orders.

19 Q Okay. Well, just lower than some of the QAM
20 levels? Q-A-M.

21 A And in QAM, they could be the lower orders.

22 Q Yeah, okay. Now, Afshary also discloses QPSK as a
23 suitable modulation, correct? I'll direct you to
24 Paragraph 37, towards the bottom.

25 A Yes.

1 Q Okay. QPSK is a level of QAM modulation, correct?

2 A Yes.

3 Q In other words, known as four-state QAM?

4 A It could be. There's also QPSK, and doesn't have
5 a different amplitude level.

6 THE REPORTER: "Have a different"...?

7 THE WITNESS: "Amplitude." "QAM" stands for
8 "Quadrature Amplitude."

9 Q (BY MR. MCKEE) And the '518 patent describes
10 the use of both QPSK and QAM in its
11 multi-carrier modulation scheme, doesn't it?

12 A Yes.

13 Q Okay. Now referring to your Paragraph 97, you
14 opine that the controller 130 of Mirfakhraei is
15 absent from Mr. Bertonis' combination. Do you see
16 that?

17 A Yes.

18 Q Now, Afshary discloses a controller as part of its
19 ASIC 78, as shown in Fig. 4, correct?

20 I direct you to Paragraph 30, for example.

21 A Thank you. Afshary discloses a burst controller.

22 Q Okay. Yeah, and the question was just that
23 Afshary discloses a controller as part of its ASIC
24 78, correct?

25 A I guess my hesitation is this burst controller is

1 in response to data presented to it.

2 Q Without addressing the functionality --

3 A The word "controller" is in the paragraph.

4 Q And it is part of the ASIC there, right?

5 A Fair statement.

6 Q There's no reason why additional controller
7 functions could not be incorporated into the
8 design of Afshary's ASIC 78, is there?

9 MR. LUND: Objection, form.

10 A No reason why additional functionality could not
11 be incorporated in the controller?

12 Q (BY MR. MCKEE) Into the design of Afshary's
13 ASIC 78.

14 A No reason why. I think we opined in the
15 disclosure that there would be a lot of
16 modifications required.

17 Q Okay. Referring to Mirfakhraei now, Exhibit 1007,
18 Figure 2. This is a -- I'm sorry, Figure 1.

19 That is a functional block diagram, isn't it?

20 A Yes, sir.

21 Q Okay. And the block labeled "Control 130," that
22 depicts a block of functionality, correct?

23 A Yes, sir.

24 Q Okay. Let's refer now to your Paragraph 101 of
25 your declaration. You state there, "Afshary's

1 system is designed to be used on a Local Area
2 Network within an in-home coaxial environment.
3 This environment has multiple splitters that are
4 connected to multiple endpoints that receive
5 identical data."

6 Do you see that?

7 A Yes, sir.

8 Q Okay. And would you say that statement accurately
9 characterizes the cable LAN of the '518 patent as
10 well?

11 MR. LUND: Objection, form.

12 A Restate your question. I'm sorry.

13 (Readback provided.)

14 "QUESTION: And would you say that
15 statement accurately characterizes the cable
16 LAN of the '518 patent as well?"

17 A As I continue reading that Paragraph No. 18,
18 "Coaxial cable splitters permit more than one
19 client to receive identical data by dividing the
20 cable into two or more cable wires."

21 Q (BY MR. MCKEE) I'm sorry. What are you reading
22 from?

23 A The same paragraph, last sentence -- next-to-last
24 sentence.

25 Q Your paragraph 101?

1 A Yes, sir.

2 Q So, I'm sorry, what's your answer to the question?

3 A I guess I was just referring to that. I don't
4 recall "receive identical data" being a '518
5 pursuit, if that's your question. Maybe we can go
6 back to the original question one more time.

7 Q Well, you've said Afshary's system is designed to
8 be used on a Local Area Network within an in-home
9 coaxial environment?

10 A That's right.

11 Q Would you say that that also describes the '518
12 patent LAN?

13 A Yes.

14 MR. LUND: Objection, form.

15 Q (BY MR. MCKEE) And this environment includes
16 multiple splitters that are connected to
17 multiple endpoints. Would you say that also
18 describes the '518 patent LAN?

19 MR. LUND: Objection, form.

20 A I guess I hesitate on the endpoints. They're
21 network devices but this is -- I'd say for our
22 purposes, yes.

23 Q (BY MR. MCKEE) And then you've said here "that
24 receive identical data." What is the basis for
25 your conclusion that Afshary is about receiving

1 identical data?

2 A That 18 is from Afshary.

3 Q I'm sorry. What do you mean by that?

4 So you're referring to the statement in
5 Paragraph 18 of Afshary; is that right? And what
6 it says?

7 A Yes.

8 Q And you're saying that's a distinction from the
9 '518 patent?

10 MR. LUND: Objection, form.

11 A In the moment, I interpret that to be a broadcast
12 transmission and the '518 is not concerned about a
13 broadcast transmission.

14 Q (BY MR. MCKEE) You don't read Afshary as being
15 limited to a broadcast transmission, do you?

16 A No.

17 Q Let's refer to your Paragraph 102 now. There you
18 state, "A POSITA would have understood that the
19 combined system could not characterize the proper
20 bit-loading schemes for bandwidth used on
21 Afshary's multi-point network."

22 What exactly do you mean by that?

23 A Mir' doesn't contemplate time constraints in his
24 handshake protocol that have to be considered for
25 a TDMA system.

1 Q What does that have to do with characterizing
2 proper bit-loading schemes for bandwidth used on
3 Afshary's multi-point network?

4 A In order to function on shared medium like a coax,
5 a multi-access approach must be imposed on the
6 signaling. Mirf' is a dedicated transmission in
7 each direction and doesn't contemplate what type
8 of or how much signaling and time is required to
9 determine the S&Rs for the bit loading.

10 Q Okay. Did you provide that explanation in your
11 declaration?

12 A That is the intent of Paragraph 102.

13 Q Okay. At your Paragraph 104, you state that,
14 "Mirfakhraei's system of determining, exchanging,
15 and optimizing bit loading between two points
16 requires a dedicated connection between the two
17 points."

18 Does that statement take account of
19 Mirfakhraei's observation at Paragraph 4 that the
20 differences between sub-channels may be difficult
21 to characterize and may vary from one
22 communication to the next?

23 MR. LUND: Objection, form.

24 A Can you repeat your question?

25 Q (BY MR. MCKEE) Sure. I'll break it up. At

1 Paragraph 104 you state that Mirfakhraei's
2 system of determining, exchanging, and
3 optimizing bit loading between two points
4 requires a dedicated connection between the two
5 points.

6 Do you see that?

7 A Yes, sir.

8 Q Okay. Does that statement take account of
9 Mirfakhraei's observation that the differences
10 between the sub-channels may be difficult to
11 characterize and may vary from one communication
12 connection to the next? And I'll refer you to
13 Paragraph 4 for that statement.

14 MR. LUND: Objection, form.

15 A I guess we'll have to try again. I'm missing
16 the --

17 Q (BY MR. MCKEE) That's fine. I don't want to
18 interrupt you. But this statement, let's focus
19 on that.

20 A Okay.

21 Q Mirfakhraei's observation at Paragraph 4 that the
22 differences between sub-channels may be difficult
23 to characterize can vary from one communication to
24 the next, doesn't this indicate that Mirfakhraei
25 contemplates multiple different connections?

1 MR. LUND: Objection, form.

2 A No. I took that to mean -- "one communication
3 connection," I took that to mean transmission.

4 Q (BY MR. MCKEE) So you're reading "one
5 communication connection to the next." You
6 mean from one transmission to the next?

7 A No. I'm sorry. I understand.

8 Communication and connection would be two
9 different pairs of transmitter-receivers.

10 Q Okay. Does the '518 patent disclose a broadcast
11 signal transmission scheme?

12 A Your question was: Does it disclose a broadcast
13 scheme?

14 Q Broadcast signal transmission scheme?

15 A No.

16 Q And what does that term, "broadcast signal," mean
17 to you in the context either -- in the context of
18 the '518 patent?

19 MR. LUND: Objection, form.

20 A I guess as a POSITA at the time, I would
21 understand that there are unicast and broadcast
22 transmissions packets in ethernet and a network
23 may define the same thing within its definition.

24 Q (BY MR. MCKEE) And that would apply to
25 communications between the nodes of the LAN?

1 Could apply?

2 A Could apply.

3 Q In the '518 patent?

4 A I guess the '518 doesn't mention "broadcast."

5 Q But it doesn't exclude broadcast?

6 A I guess I would say it neither speaks to nor
7 against it.

8 Q Okay. So what determines if a signal is broadcast
9 or a unicast?

10 A Either the source of the signal in the case of
11 user-generated data -- I guess I'm hesitating here
12 because that term can have different meanings. It
13 can be a network layer term or a PH-y layer term.
14 For instance, an ethernet packet may be a
15 broadcast packet. But the PH-y technology that's
16 used to communicate that across the LAN doesn't
17 have a broadcast so it transmits it as unicast.
18 Just to, I guess, cause confusion.

19 Q So in a unicast transmission, the message,
20 whatever it is, would be directed to a single
21 node, correct?

22 A Yes.

23 Q And then broadcast; it would go out to all the
24 nodes on the network, correct?

25 A That's where we get into this splitting hairs. If

1 it's a broadcast packet in a network that's
2 defined "broadcast," it would be transmitted with
3 the intent of every device receiving and
4 interpreting it.

5 Q And then generally speaking, there's also a
6 multi-cast node, correct?

7 A Yes.

8 Q How would that fit in?

9 A That may be destined to a subset of devices on a
10 LAN.

11 Q Whose addresses would be specified, or groups of
12 addresses?

13 A Getting into another domain. But, typically,
14 there's a multi-cast address and network devices
15 know whether they're subscribed to that multi-cast
16 or not.

17 Q Okay. Let's refer to your Paragraph 104 again.
18 You state there, "Further, that if instead
19 Mirfakhraei were to have a connection that had a
20 single point of origin with two potential
21 endpoints while implementing a broadcast signal,
22 it would assign a bit-loading scheme based on the
23 SNR profile to the worst-case end-point."

24 Do you see that?

25 A Yes.

1 Q Now, that issue you're describing, that would not
2 be a problem if the system was not implementing a
3 broadcast signal, would it?

4 A If the system were not implementing a broadcast
5 signal, that would not be a problem. But that
6 would mean that Mir's signal has to be packetized
7 with a defined preamble sufficient for OFDM
8 frequency interpretation in precision such that
9 those bit-loading messages are accurate.

10 '518 defines that patent, that packet.

11 Mir' just says there's a time domain to
12 sequence that is transmitted, and whenever it's
13 done you determine the SNRs and optimize them.

14 Q With that packeting that you've described, that
15 would include addressing information, correct?

16 A May or may not. Depends on the implementor of the
17 system.

18 Q Okay. Let's refer now to your Paragraph 108. Is
19 your Paragraph 108 addressing a non-broadcast
20 signal scenario, or a broadcast signal scenario?

21 A Non-broadcast.

22 Q So there in your Paragraph 108, you describe the
23 transmitting node would have to send a handshake
24 signal to every single client in the system and --
25 I'm skipping now, but you indicate this would

1 create several issues, including that the
2 transmitting node would receive many return
3 signals with no mechanism to determine where the
4 return signals originated.

5 Now, is there any reason why known message
6 addressing techniques couldn't have been used to
7 avoid this so-called problem of no mechanism to
8 determine where the return signals originated?

9 A I guess the problem is you have to determine how
10 to packetize this signaling.

11 Can a header be put on a packet that
12 includes addressing information? Yes.

13 Can Mirf's handshake signal be appended to
14 that header and work in the system? Unclear.

15 Q Okay. Now, let's move to your Paragraph 109. Are
16 we back to once again addressing a hypothetical
17 broadcast signal scenario here?

18 A Yes.

19 Q Okay.

20 A You have to struggle with one or the other. The
21 state of every device in the network impacts the
22 bit loading. That's something you learn as you're
23 addressing a shared coax medium. So return loss
24 from every device is different if it's
25 transmitting off or receiving. So you have to

1 decide the state of every device in the network in
2 order to get a reliable bit load that can be used.

3 Q And that's an issue that arises in a broadcast
4 signal scenario, not a non-broadcast signal?

5 A It arises in both. You have to deal with one of
6 those two scenarios. Either you characterize
7 every path in the system independently or you
8 characterize them all at the same time.

9 Q Okay. Let's move to Paragraph 112 of your
10 declaration.

11 There, you characterize the Afshary system as
12 follows: "The ability of Afshary's adapters to
13 use a frequency above the frequency bands used by
14 the cable service is possible because coaxial
15 cables are a very clear, clean medium capable of
16 handling operating frequencies of up to
17 2000 megahertz."

18 Is this a characteristic that you would say
19 is shared by the coaxial cable LAN of the '518
20 patent?

21 MR. LUND: Objection, form.

22 A Repeat the question.

23 Q (BY MR. MCKEE) Okay. Paragraph 112 has the
24 statement -- and I'll let you read it this
25 time. But it quotes from Afshary for the point

1 that coaxial cables are a clear and clean
2 medium capable of handling operating
3 frequencies of up to 2000 megahertz.

4 Is that characteristic you're referencing one
5 that you would say is shared by the coaxial cable
6 LAN of the '518 patent?

7 A I'd say that's how Afshary views the coaxial cable
8 plan.

9 Q And do you -- is that an accurate characterization
10 of coaxial cable plant to you?

11 A I would say that operating above, up to 2
12 gigahertz, I would say that view. Is it clear,
13 clean medium capable of handling operating
14 frequencies? It's capable of handling those
15 operating frequencies.

16 Q The '518 patent is?

17 A The '518 patent doesn't make that statement.

18 Q But I guess I'm asking you. It doesn't make that
19 statement; but would you agree that that's a fair
20 characterization of the system described in the
21 '518 patent?

22 MR. LUND: Objection, form.

23 A I would say the '518 says that it suffers from
24 intersymbol interference.

25 Q (BY MR. MCKEE) Do you view that as a

1 distinction from the Afshary network and not
2 just in terms of what's described, but how
3 these would be viewed by a POSITA?

4 MR. LUND: Objection, form.

5 A I would say that Afshary's view is different than
6 the '518. Afshary has built the system with a lot
7 of margin in it; and from his perspective, it's
8 clear and clean.

9 Q (BY MR. MCKEE) Now, your Paragraph 119 asserts
10 that Mr. Bertonis fails to identify a signal
11 instance of bit loading on a coaxial network in
12 any reference in this proceeding.

13 Do you see that?

14 A Yes, sir.

15 Q But we've discussed here today references that
16 discuss bit loading on a coaxial network; isn't
17 that correct? The Jacobsen articles, for example?

18 A In point-to-point systems (indicating).

19 Q So you would say those are limited to
20 point-to-point?

21 A Yes.

22 Q Now, your Paragraph 122 states that, "Afshary's
23 system does not include any variable frequency
24 responses caused by interference and signal
25 reflections."

1 Do you see that?

2 A Uh-huh.

3 Q What is the basis for that opinion that you've
4 stated there?

5 A I'm sorry. Restate.

6 Q I'm asking what is the basis for your statement
7 there that Afshary's system does not include any
8 variable frequency responses caused by
9 interference and signal reflections?

10 A Because if you read further, the only reference I
11 found in that regard was Paragraph 42.

12 Q Of Afshary?

13 A Of Afshary.

14 Is that right? Paragraph 42.

15 Approximately, the middle of the
16 paragraph, six lines down, "filters within
17 Baseband Section 90 filter out such reflected
18 signals."

19 Q So you're assuming there that the filters are
20 effective to remove those impairments?

21 A I guess I'm not assuming. I'm just reading his
22 statement. He says it does.

23 Q Wouldn't Afshary with its disclosure of a coaxial
24 cable LAN have been as prone to those types of
25 channel impairments as the '518 coaxial cable LAN?

1 MR. LUND: Objection, form.

2 A My opinion would be, no. He's chosen a
3 lower-order modulation type that has a lot of room
4 for error. Whereas, '518 discusses using 256 QAM.
5 So the two systems have different SNR requirements
6 and, therefore, different tolerances for
7 impairments.

8 Q (BY MR. MCKEE) You also state in Paragraph 122
9 that, "A POSITA would have understood that
10 Afshary addresses reflections by using its
11 filters within the Baseband Section 90 to
12 filter out such reflected signals."

13 Do you see that?

14 A Yes, sir.

15 Q And you state further that, "Because Afshary
16 provides a mechanism to address reflections, a
17 POSITA would not have viewed reflections as a
18 problem needing a solution."

19 Do you see that?

20 A Yes, sir.

21 Q Okay. Your second statement there, that assumes
22 that a POSITA would not employ more than one
23 approach for addressing a particular issue,
24 doesn't it?

25 A Assumes a POSITA would -- say that again.

1 Q Your second statement that we read, that assumes
2 that a POSITA would not employ more than one
3 approach for addressing a particular issue,
4 doesn't it?

5 A Not without a motivation. You need something to
6 be wrong.

7 Q And if the filters were ineffective in adequately
8 addressing the issues of reflections, you'd look
9 for other solutions, correct?

10 A If they were inadequate?

11 Q Yeah.

12 A I think that's fair. Just they don't appear to
13 be.

14 Q Based on Afshary's language?

15 A Yes, sir.

16 Q Okay. Doesn't the '518 patent itself suggest the
17 use of more than one approach for dealing with the
18 very issues that multi-carrier modulation with bit
19 loading addresses?

20 A Say that again.

21 Q Doesn't the '518 patent itself suggest the use of
22 more than one approach for dealing with these
23 various channel impairment issues that are
24 addressed by its multi-carrier modulation in bit
25 loading?

1 A Standing alone. Standing alone, it says that the
2 solution is this TDMA packetized OFDM on the
3 shared network to deal with multiple reflections.

4 Q Doesn't it also describe the use of that technique
5 in conjunction with others to address the channel
6 impairment of multi-path and high attenuations?
7 And let me direct you to Column 4, Lines 42 to 46.

8 A Those are disclosed in the spec. Bit loading,
9 power loading, adaptive power controller, and
10 frequency coordination.

11 Q Doesn't it describe the bit loading is used, or in
12 combination with other techniques, to implement a
13 network that overcomes the problems with
14 multi-path and high attenuation?

15 A It does say that. It only claims bit loading.

16 Q Doesn't that align with the approach a POSITA
17 would have to addressing issues of channel
18 impairment?

19 MR. LUND: Objection, form.

20 A I guess it -- starting from scratch, yes.

21 Q (BY MR. MCKEE) Now, let's turn to your
22 Paragraph 124.

23 A Yes, sir.

24 MR. HALVERSON: If we're going to move on,
25 can we take a break?

1 MR. MCKEE: Sure.

2 (Recess taken.)

3 Q (BY MR. MCKEE) So, again, referring to your
4 Paragraph 124, you opine that Mirfakhraei's
5 optimized bit loading would not improve
6 Afshary's network because Afshary already
7 includes bit-loading schemes that transmit in
8 an efficient and optimal manner for its
9 network.

10 Do you see that?

11 A Uh-huh.

12 Q Does that require correction in light of our
13 earlier discussion concerning the meaning of bit
14 loading in your other prior testimony?

15 A I don't think so. Earlier, when we talked about
16 bit loading, I said it could have various
17 definitions. In the context of bit loading and
18 cross sub-carriers, obviously Afshary doesn't have
19 that. But in the context of there's a bit load
20 for every symbol that's transmitted.

21 In this context, he offers FSK or BPSK,
22 which is 1 bit. And we talked about QPSK,
23 which is 2 bits. He's choosing that on a
24 transmission basis.

25 Q That's on a single carrier, correct?

1 A Yes, sir.

2 Q And so there's no deciding how to load the bits on
3 multiple sub-carriers, correct?

4 A That's correct.

5 Q So Afshary does not have bit loading associated
6 with multi-carrier modulation, correct?

7 A That's correct.

8 Q Okay. In your Paragraph 125 you state that,
9 "Afshary's modulation scheme already transmits
10 data on channels with less noise and interference
11 and does so using optimal power for its
12 architecture."

13 My question is: Less noise and
14 interference relative to what?

15 A Perhaps a fair question, poorly phrased. I'd just
16 say less than the maximum for reliable
17 communication in Afshary's system.

18 Q And is this -- sorry.

19 A That's okay. Said another way, Afshary purposely
20 built in margin of safety in his network.

21 Q And it's your opinion that this distinguishes
22 Afshary from the coaxial cable LAN for the '518
23 patent?

24 MR. LUND: Objection, form.

25 A Repeat that again. I captured half of it. I'm

1 sorry.

2 (Readback provided.)

3 "QUESTION: And it's your opinion that
4 this distinguishes Afshary from the coaxial
5 cable LAN for the '518 patent?"

6 Q (BY MR. MCKEE) And I'll just clarify. Is it
7 your opinion that this distinguishes Afshary
8 from the coaxial cable LAN of the '518 patent?

9 MR. LUND: Objection, form.

10 A I think I would say that Afshary's single carrier
11 distinguishes.

12 THE REPORTER: Repeat.

13 A I would say that Afshary's single carrier
14 distinguishes Afshary from the '518.

15 MR. MCKEE: No further questions.

16 MR. HALVERSON: Give us two minutes, please.

17 (Off the record.)

18 MR. MCKEE: So opposing counsel wishes to ask
19 some questions on redirect, and we let counsel
20 know that we objected to their preparation for
21 that in the presence of our witness here today.
22 And so we object to the redirect they're going to
23 provide on that basis.

24 MR. HALVERSON: Under the precedential
25 decision of Focal Therapeutics v. Senorx,

1 IPR2014-00116, PTAB makes it clear that counsel
2 are allowed to confer with witness after the
3 cross-examination period has concluded but before
4 any redirect portion has begun, and that's exactly
5 what we did.

6 Nevertheless, we have no redirect.

7 We're done.

8 THE REPORTER: Signature reserved or waived?

9 MR. HALVERSON: We will read and sign. We
10 will take a rough and a standard final.

11 MR. MCKEE: We will need a rough draft and
12 the final in two days.

13 THE WITNESS WAS EXCUSED.

14 DEPONENT FURTHER SAITH NOT.

15 SIGNATURE RESERVED.

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C E R T I F I C A T E

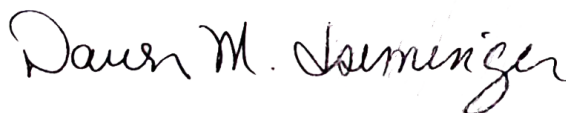
I, Dawn M. Iseminger, Registered Professional Reporter (RPR), and Notary Public within and for the County of Porter, State of Indiana, do hereby certify that there appeared before me the deponent, ALBERT GARRETT, at the above-stated address, on the 28th day of February, 2025, who was thereupon first duly sworn by me to testify the truth and nothing but the truth in response to questions propounded to said deponent at the taking of the foregoing deposition relating to the above-captioned cause now pending and undetermined in said court.

I further certify that I then and there reported in machine shorthand the testimony so given at said time and place, and that the testimony was then reduced to typewriting from my original shorthand notes, and the foregoing transcript is a true and accurate record of said testimony given by said deponent at said time and place.

I further certify that I am not related by blood or marriage to any of the parties to said suit, nor am I an employee of any of the parties or of their attorneys or agents, nor am I interested in any way, financially or otherwise, in the outcome of said litigation.

I further certify signature was not waived.

Dated this 2nd of March, 2025.



Dawn M. Iseminger, RPR
My Commission expires: 9/22/2025

1 Erik Halverson, Esq.

2 erik.halverson@klgates.com

3 March 3, 2025

4 RE: Comcast Cable Communications, LLC v. Entropic Communcations
5 2/28/2025, Albert Garrett (#7178720)

6 The above-referenced transcript is available for
7 review.

8 Within the applicable timeframe, the witness should
9 read the testimony to verify its accuracy. If there are
10 any changes, the witness should note those with the
11 reason, on the attached Errata Sheet.

12 The witness should sign the Acknowledgment of
13 Deponent and Errata and return to the deposing attorney.
14 Copies should be sent to all counsel, and to Veritext at
15 cs-midatlantic@veritext.com.

16 Return completed errata within 30 days from
17 receipt of testimony.

18 If the witness fails to do so within the time
19 allotted, the transcript may be used as if signed.

20
21
22 Yours,

23 Veritext Legal Solutions
24
25

Comcast Cable Communications, LLC v. Entropic Communcations, LLC
Albert Garrett (#7178720)

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REASON_____

Albert Garrett

Date

Comcast Cable Communications, LLC v. Entropic Communcations, LLC
Albert Garrett (#7178720)

ACKNOWLEDGEMENT OF DEPONENT

I, Albert Garrett, do hereby declare that I
have read the foregoing transcript, I have made any
corrections, additions, or changes I deemed necessary as
noted above to be appended hereto, and that the same is
a true, correct and complete transcript of the testimony
given by me.

Albert Garrett

Date

*If notary is required

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_____ DAY OF _____, 20____.

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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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