

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

COMCAST CABLE COMMUNICATIONS,)
LLC,)
Petitioner,) Case IPR
2024-00430
v.) Patent No.
8,284,690
ENTROPIC COMMUNICATIONS, LLC,)
Patent Owner.)
_____)

Deposition of JOHN HOLOBINKO
Charlotte, North Carolina
February 14, 2025
9:01 a.m.

Reported by: Karen K. Kidwell, RMR, CRR
Job No. 7140283

Deposition of John Holobinko
held at:

K&L Gates LLP
300 South Tryon Street
Suite 1000
Charlotte, NC 28202

Pursuant to Notice, when were present on behalf
of the respective parties:

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	B2, October 9, 2012	
Exhibit 1007		118
	United States Patent	
	Application Waxman, US	
	2007/0223402 A1, September 27,	
	2007	
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	DOCSIS 2.0, Radio Frequency	
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REPORTER'S NOTE: All quotations from exhibits are reflected in the manner in which they were read into the record and do not necessarily indicate an exact quote from the document.

1 CHARLOTTE, NORTH CAROLINA, FRIDAY, FEBRUARY 14, 2025

2 P R O C E E D I N G S

3 - - -

4 JOHN HOLOBINKO,

5 being first duly sworn, testified as follows:

6 EXAMINATION

7 BY MR. KRONENTHAL:

8 Q. Okay. Good morning, Mr. Holobinko. My
9 name is Craig Kronenthal, with Banner Witcoff, and I
10 represent, on behalf of Comcast, the petitioner.

11 Can you state your name and address for
12 the record?

13 A. John Holobinko. 2026 Carnoustie Court,
14 Indian Land, South Carolina.

15 Q. Okay. Thank you. And you understand
16 we're here today to question you because you
17 submitted a declaration in support of Entropics,
18 patent owner response in inter partes review for
19 patent number 8,284,690.

20 A. Yes.

21 Q. And the case number for the IPR proceeding
22 is IPR2024-00430. So if I refer to this proceeding
23 or this IPR, will you understand that I'm referring
24 to that IPR number?

25 A. Yes.

1 Q. Thank you.

2 Have you ever been deposed before?

3 A. Yes.

4 Q. About how many times?

5 A. Twice I believe.

6 Q. Twice. For IPRs or for District Court
7 litigations?

8 A. I believe District Court litigations.

9 Q. Is there anything that would prevent you
10 from providing truthful and accurate testimony today?

11 A. No.

12 Q. If I say anything that confuses you, would
13 you please say so?

14 A. Yes.

15 Q. All right. And unless you tell me
16 otherwise it's fair to agree that you heard and
17 understood my question?

18 A. Yes.

19 Q. And you agree not to -- you agree to
20 provide verbal answers and not questions by merely
21 shaking or nodding your head?

22 A. Yes.

23 Q. And you understand that if your attorney
24 objects to the form of the question, you're still
25 required to answer my question?

1 A. Yes.

2 Q. And as long as the attorney keeps it to a
3 simple objection to form, I'll just wait for your
4 answer then. Okay?

5 A. Yes.

6 Q. We'll plan to take several breaks, but if
7 you want any additional breaks, just let us know.

8 A. Thank you.

9 (Technology disruption.)

10 (A recess transpired from 9:03 a.m. to
11 9:12 a.m.)

12 MR. KRONENTHAL: Can we go back on the
13 record?

14 BY MR. KRONENTHAL:

15 Q. So I was just saying, if you want to take
16 any breaks, just let us know.

17 And you also understand not to discuss the
18 case with your attorneys, now that we've begun the
19 deposition?

20 A. Yes.

21 Q. What did you do to prepare for this
22 deposition today?

23 A. I reviewed my declaration, Bertoni's
24 declaration, the referenced patents that are part of
25 my declaration, and discussed back and forth with

1 counsel.

2 Q. And who did you meet with?

3 A. Matt and Vince.

4 Q. And when did you meet with them?

5 A. Yesterday.

6 Q. Just yesterday?

7 A. Just yesterday.

8 Q. About how long did you meet for?

9 A. The majority of the day.

10 Q. So eight hours?

11 A. Approximately, yes.

12 Q. And what materials did you review
13 yesterday?

14 MR. BLAIR: Caution the witness not to
15 reveal the substance of any discussions with
16 counsel.

17 MR. KRONENTHAL: Correct. Thank you.

18 BY MR. KRONENTHAL:

19 Q. I'm not asking for any actual substance,
20 just materials that you reviewed yesterday.

21 A. That -- I don't know how to answer.
22 Forgive me.

23 Q. Okay. Let me ask you this: Did you
24 review your declaration yesterday?

25 A. Yes. Thank you.

1 Q. Okay. And did you review the '690 patent
2 yesterday?

3 A. Yes.

4 Q. Okay. And you don't have any materials
5 with you right now, right?

6 A. That's correct.

7 Q. I'm going to provide you with a copy of
8 the patent.

9 MR. KRONENTHAL: This is Exhibit 1001.

10 (Exhibit 1001 was marked for identification.)

11 BY MR. KRONENTHAL:

12 Q. Do you recognize it?

13 A. Yes.

14 Q. And what is it?

15 A. It's the patent for a receiver determined
16 probe, ending in '690.

17 Q. And do you see it's marked "Exhibit 1001"
18 at the bottom right?

19 A. Yes.

20 Q. And does this appear to be a true and
21 accurate copy of the '690 patent?

22 A. Yes.

23 Q. Okay. And will you agree to refer to this
24 Exhibit 1001 as "the '690 patent" for this
25 deposition?

1 A. Yes.

2 Q. So how did you become involved in this
3 case?

4 A. I had been involved previously with the
5 Entropic case against Charter. And this was a
6 follow-on case to that.

7 Q. Okay. And when did -- so when did
8 Entropic first reach out to help you with this case?

9 A. In approximately September of last year.

10 Q. And is the only other time you worked with
11 Entropic for the Charter litigation?

12 A. No.

13 Q. No. When -- when else have you worked
14 with Entropic?

15 A. For MoCA, for some MoCA claims.

16 Q. For some MoCA claims?

17 A. Yes.

18 Q. Like another --

19 A. Patent claims.

20 Q. -- patent litigation?

21 A. Yes. Sorry.

22 Q. And who was the -- was -- was Entropic the
23 plaintiff in that other case?

24 A. Yes.

25 Q. And who was the defendant in that other

1 case?

2 A. I believe it includes -- I'd have to go
3 back, but I believe it includes Comcast and other
4 cable companies, plus Dish.

5 Q. Okay. And what was the subject matter of
6 that case?

7 A. Patent infringement on a series of patents
8 around MoCA.

9 Q. Anything particular about MoCA?

10 A. I'd have to go back to my notes and things
11 on that.

12 Q. Was the case about probes?

13 A. Again, I'd have to -- I'd have to go back
14 and -- and see.

15 Q. So you've worked on three different cases
16 for Entropic, total?

17 A. Yes.

18 Q. Have you ever worked with the K&L Gates
19 law firm before this case?

20 A. Yes.

21 Q. About how many times have you worked
22 with K&L Gates?

23 A. Only with regards to the Entropic matters.

24 Q. And how many times have you served as an
25 expert witness?

1 A. Three times now.

2 Q. So you've only ever served as an expert
3 witness for Entropic?

4 A. Yes.

5 Q. Did you review the '690 patent before you
6 were retained?

7 A. No.

8 Q. How much have you billed Entropic in the
9 past year?

10 A. Approximately a few hundred hours; the
11 lower three digits versus higher three digits.

12 Q. So you're saying closer to 100 hours
13 rather than 1,000 hours?

14 A. Yes.

15 Q. Would you say more or less than 500 hours?

16 A. Less than 500 hours.

17 Q. So somewhere between 100 and 500 hours?

18 A. That's correct.

19 Q. And that's in the last year?

20 A. No, that would be since the beginning of
21 my engagements with Entropic overall.

22 Q. And when would that be?

23 A. Over the last two years, I believe. I'd
24 have to go back to my records to recall exactly when
25 it started.

1 Q. And how much do you charge per hour for
2 your services?

3 A. I -- I am compensated \$350 an hour for my
4 services.

5 Q. But you -- you go through another avenue?

6 A. Yes.

7 Q. How much time did you spend preparing your
8 declaration in this proceeding?

9 A. Somewhere probably between somewhere
10 around 60 hours or so.

11 Q. Okay. So of that total, 100 to 500 hours,
12 you spent about 60 hours on the declaration in this
13 proceeding?

14 A. Yes.

15 Q. And of those 60 hours, does that include
16 the time you reviewed the '690 patent?

17 A. Yes.

18 Q. And include the time you looked at the
19 prosecution history?

20 A. Yes.

21 Q. And the time that you looked at
22 Mr. Bertonis's declaration?

23 A. Yes.

24 Q. And also the time that you looked at all
25 the references in the case?

1 A. Yes.

2 Q. In your prior expert witness testimony
3 experience, has the court or PTAB ever found that you
4 lacked credibility?

5 A. No.

6 Q. Did they ever find that you gave an
7 inconsistent statement?

8 A. No.

9 Q. And did they ever not give weight to your
10 testimony?

11 A. No.

12 Q. Are you sure?

13 A. Yeah, I -- I don't know of any. I've
14 never been given feedback that anyone has challenged
15 my testimony.

16 Q. So you earned a bachelor's degree in
17 electrical engineering, correct?

18 A. Yes.

19 Q. You don't have any other degrees?

20 A. No.

21 Q. And you're not an attorney, correct?

22 A. That's correct.

23 Q. You have several patents, correct?

24 A. Correct.

25 Q. Do any of your patents deal with probes?

1 A. No.

2 Q. When did you graduate college?

3 A. 1973.

4 Q. And what did you do after college?

5 A. I became an electrical engineer.

6 Q. So was that in 1974?

7 A. Actually late '73.

8 Q. Okay. Where did you work in '73 then,

9 right out of college?

10 A. The IBM Corporation.

11 Q. And what did you do at IBM?

12 A. I designed semiconductor memory circuits.

13 Q. And you co-founded American Lightwave

14 Systems in 1986. Is that correct?

15 A. That's correct.

16 Q. So did you leave IBM to do that?

17 A. No, I left IBM prior to that.

18 Q. Why did you leave IBM?

19 A. I actually changed careers within IBM,
20 then took an opportunity to compete against them for
21 another company, and ultimately got recruited into
22 the communications industry, in the early days of
23 fiber optics, for a company called Times Fiber
24 Communications, which today is known as Amphenol.

25 Q. Okay. You mentioned in your declaration

1 that you "helped create the industry's first Layer 4
2 to 7 programmable router/switch, the network virtuoso
3 in dynamic provisioning software." Does that sound
4 familiar?

5 A. Yes.

6 Q. And by "Layer 4 to 7," are you referring
7 to like Layers 4 to 7 of the OSI model?

8 A. Yes.

9 Q. Have you performed work in other layers of
10 the OSI model?

11 A. Certainly the Layer 1 physical layer, as
12 well as routing and switching. So virtually all the
13 layers of the OSI model.

14 Q. Would you say that you specialized in the
15 higher Layers 4 to 7?

16 A. No.

17 Q. You also worked for VPI, a data analytic
18 software company, for optimizing network capacity.
19 Is that correct?

20 A. Yes.

21 Q. And what -- what was -- what were you
22 doing there?

23 A. I was the CEO of the company.

24 Q. What do you mean by "optimizing network
25 capacity"?

1 A. Today what you would think of as
2 artificial intelligence and data analytics, looking
3 at all of the various links in a network and finding
4 ways to better balance out the traffic across all
5 those links, to improve the performance of the
6 network and to reduce the cost of the network.

7 Q. And what was your role there?

8 A. The CEO of the company.

9 Q. How large was that company?

10 A. \$10 million in sales.

11 Q. How many employees?

12 A. Oh. 50 or so.

13 Q. And you also worked at BigBand Networks.
14 Is that correct?

15 A. That's correct.

16 Q. And you were there full time from 2006
17 to 2010?

18 A. Yes.

19 Q. What does BigBand Networks do?

20 A. BigBand Network was an equipment supplier
21 to the cable TV industry, and to telcos. And they
22 had various products, one of which was a CMTS system
23 for DOCSIS. And they also provided video processing
24 equipment.

25 Q. Did the CMTS that BigBand's networks used

1 comply with the MoCA specifications?

2 A. CMTSS don't comply with MoCA
3 specifications. They conform to DOCSIS
4 specifications.

5 Q. And what DOCSIS specification did that
6 CMTS conform to?

7 A. At that time it was DOCSIS 2.0.

8 Q. Is that the DOCSIS 2.0 that's the
9 reference used in this case?

10 A. Yes.

11 Q. Was DOCSIS 2.0 widely implemented in 2006?

12 A. Yes.

13 Q. Did the CMTS have BigBand Networks send or
14 receive probes?

15 A. No.

16 Q. You indicated that the CMTS was -- at
17 BigBand Networks was the only one to support
18 DOCSIS 2.0, TDMA, and SCDMA? Is that correct?

19 A. That's correct.

20 Q. And TDMA and SCDMA are two examples of
21 well-known access schemes at the time, correct?

22 A. Correct.

23 Q. Is it your understanding that there were
24 no other CMTS supporting DOCSIS 2.0 TDMA at that
25 time?

1 A. No. It was the combination of TDMA
2 and SCDMA.

3 Q. So other CMTSS could have supported
4 DOCSIS 2.0 TDMA at that time?

5 A. Yes.

6 Q. And other CMTSS could have supported
7 DOCSIS 2.0 SCDMA at the time?

8 A. No.

9 Q. No?

10 A. No. The BigBand was the only one that
11 supported SCDMA.

12 Q. So BigBand was the only one that added the
13 SCDMA --

14 A. Correct.

15 Q. -- at the time?

16 (Reporter requests clarification.)

17 (A recess transpired from 9:28 a.m. to
18 9:29 a.m.)

19 MR. KRONENTHAL: Back on the record.

20 BY MR. KRONENTHAL:

21 Q. Why did BigBand Networks add SCDMA to the
22 DOCSIS 2.0 CMTS?

23 A. Because the DOCSIS 2.0 spec originally --
24 includes both SCDMA and TDMA. BigBand believed, to
25 gain market share, that it should support both

1 standards. The other vendors, who were larger,
2 decided against it, and were able to be approved even
3 though they did not technically fully conform to the
4 DOCSIS 2.0 standard, because they didn't support
5 SCDMA.

6 Q. Why did they choose not to support SCDMA?

7 A. SCDMA at the time was a complex
8 technology. If I recall correctly, there was only
9 one vendor making the integrated circuit chips that
10 would support it.

11 Q. So it was well known, just not
12 implemented?

13 A. Correct.

14 Q. And it was not implemented because it was
15 deemed too complex?

16 A. At that time, yes.

17 Q. And that complexity would be because
18 maybe -- or it would also attribute to it being
19 expensive?

20 A. I don't recall that as much as just the
21 added layer of managing the network with two
22 simultaneous upstream technologies running on it at
23 the same time.

24 Q. Do you agree that it would have been more
25 expensive to also implement SCDMA into this CMTS?

1 A. I'm not sure, recalling -- going back, if
2 that's true or not. I just don't have an opinion.

3 Q. So in your opinion, it's -- it didn't cost
4 any more to do TDMA and SCDMA as it did to do just
5 TDMA alone?

6 MR. BLAIR: Object to the form.

7 THE WITNESS: As I said to you before, I
8 don't recall now.

9 BY MR. KRONENTHAL:

10 Q. Do you need another chip to do SCDMA?

11 A. In the cable modem, no. The chip would
12 support both -- the same chip would support SCDMA and
13 TDMA.

14 Q. And what about at the CMTS? Could one
15 chip in the CMTS support both SCDMA and TDMA?

16 A. I don't recall anymore.

17 Q. What did BigBand Networks do to support
18 both TDMA and SCDMA?

19 A. Well, my recollection, primarily, it's a
20 matter of writing the firmware associated with
21 handling those different protocols and incorporating
22 that into the DOCSIS software stack, which is quite
23 extensive.

24 Q. So there were expenses associated with
25 writing that additional software, correct?

1 A. Yes. There was product development
2 expenses, yes.

3 Q. How would you characterize those expenses?

4 A. Significant.

5 Q. Have you participated in any standards
6 setting workgroups?

7 A. On a cursory basis, through people who
8 reported to me directly who participated in those
9 standards groups.

10 Q. Were you a member of any of those standard
11 groups?

12 A. No.

13 Q. So you haven't been a member of a DOCSIS
14 standard group?

15 A. That's correct.

16 Q. You haven't been a member of the WiMAX
17 standard group?

18 A. No.

19 Q. You haven't been a member of IEEE 802.11,
20 correct?

21 A. Correct.

22 Q. And you're not a member of any MoCA
23 standard group either?

24 A. That's correct.

25 Q. What familiarity do you have with how

1 those standards are developed?

2 A. They all tend to take similar paths, in
3 that there's a working group that starts out looking
4 at the requirements, the desired requirements, the
5 technologies to meet those requirements. The members
6 of those groups tend to be represented by some of the
7 major potential customers of that technology, as well
8 as the major vendors associated with that technology.
9 And so it is an iterative process to develop each
10 version of the standards of those groups.

11 Q. So it takes some time to develop the
12 standards, you would agree?

13 A. Yes.

14 Q. Do the setting standard groups borrow
15 concepts from one another?

16 A. From time to time, yes.

17 Q. So you would agree that the DOCSIS
18 standard group might borrow concepts from WiMAX?

19 A. Yes.

20 Q. And vice versa; you would agree that WiMAX
21 would adopt concepts from DOCSIS?

22 A. Yes.

23 Q. Sorry. I think I might have cut you off.

24 A. No.

25 Q. Did you say something?

1 A. No, I was -- I was the bad one.

2 Q. Were you going to say what I just asked
3 you, the "vice versa" part?

4 A. Yes.

5 Q. And would MoCA adopt concepts from DOCSIS?

6 A. It quite possibly would, yes.

7 Q. Do you think DOCSIS also might adopt
8 concepts from MoCA?

9 A. Less likely, but possible.

10 Q. Currently you're the managing director and
11 owner of Business Reimagined, LLC, correct?

12 A. Correct.

13 Q. Are you the founder?

14 A. Yes.

15 Q. How many employees do you have?

16 A. I'm the only employee.

17 Q. What services do you provide?

18 A. I provide technology- and investment-based
19 consulting to hedge funds, to private equity firms
20 who are looking to make investments in technology
21 areas of which I have expertise, as well as my role
22 serving as an expert witness.

23 Q. Do you do consulting for other patent
24 cases as well?

25 A. The only consulting for patent cases I've

1 done up until now have been the ones that we've
2 discussed already.

3 Q. So you don't do like due diligence for
4 other patent infringement lawsuits or anything?

5 A. No.

6 Q. Has anyone ever -- anyone else other than
7 Entropic asked to engage you for another patent
8 infringement case?

9 A. Well, during the course of my career, in
10 the various companies I worked for, I had to review
11 and look at various patent infringement cases as a
12 normal part of my work, but not -- not since I've
13 been an independent consultant.

14 Q. Okay. So no one other than Entropic has
15 asked you to be an expert witness before, correct?

16 A. That's correct.

17 Q. Have you ever designed a transceiver that
18 complies with the WiMAX standard?

19 A. No.

20 Q. Have you ever designed a transceiver that
21 complies with the 802.11 specification?

22 A. No.

23 Q. Have you ever designed a transceiver that
24 complies with MoCA?

25 A. No.

1 Q. I'm going to hand you Exhibit 2007.

2 (Exhibit 2007 was marked for identification.)

3 BY MR. KRONENTHAL:

4 Q. It's a copy of your declaration. Do you
5 recognize it?

6 A. Yes.

7 Q. And does it appear to be a true and
8 complete copy of your declaration?

9 A. Yes.

10 Q. Can you turn to page 48? And I'm
11 referring to the page number in the center middle,
12 there. I know there's another page number at the
13 bottom left, but --

14 A. Oh, I'm sorry. The bottom left, or the
15 center? There is no -- I don't see a 48, other than
16 the one on the bottom left.

17 Q. Oh, okay. So then bottom left in that
18 case, yes.

19 That's your signature page?

20 A. Yes.

21 Q. And is that your signature there?

22 A. Yes.

23 Q. If I refer to your declaration, will you
24 understand that I'm referring to this Exhibit 2007?

25 A. Yes.

1 Q. Who did most of the writing for your
2 declaration?

3 A. I did.

4 Q. What percentage of the declaration would
5 you say you wrote?

6 A. 65 percent, 70. What I did was I wrote my
7 declaration, my opinions, and counsel at times made
8 suggested additions or edits. I reviewed all of
9 those. And some I didn't like, so we changed; some I
10 did like, we included. And ultimately this
11 represents 100 percent my declaration.

12 Q. And how many hours did you spend on the
13 declaration?

14 A. As I said, approximately 60.

15 Q. When did you begin preparing your
16 declaration?

17 A. As I mentioned at the -- with the original
18 review, sometime at the end of late September.

19 Q. So you started in late September?

20 A. Yes.

21 Q. And you signed on December 6th, correct?

22 A. Correct.

23 Q. And you reviewed your declaration in
24 preparation for today's deposition, correct?

25 A. Correct.

1 Q. Did you find any errors in your
2 declaration?

3 A. No.

4 Q. Go to paragraph 35.

5 Are you at paragraph 35?

6 A. Yes. I'm reading it.

7 Q. Can you read the last sentence in
8 paragraph 35?

9 A. "It is important to analyze validity based
10 on the perspective of one skilled in the art at the
11 time of the invention, which for this case I have
12 been asked to assume is September 8th, 2011, which I
13 understand is the date Mr. Lett and the petition use
14 as the priority date of the '008 patent."

15 Q. That doesn't pertain to this case,
16 correct?

17 A. Correct.

18 Q. This is the '690 patent, correct?

19 A. Correct.

20 Q. So this part of your declaration is
21 referencing some other patent?

22 A. Correct.

23 Q. And Mr. Lett is not an expert or declarant
24 in this case, correct?

25 A. Correct.

1 Q. And the date December 8th, 2011, that's
2 not the date of this patent, correct?

3 A. Correct.

4 Q. So you would agree that this sentence is
5 more than a typo, correct?

6 A. Correct.

7 Q. Did you review your entire declaration or
8 only parts of it?

9 A. I reviewed my entire declaration.

10 Q. Could we go to paragraph 16.

11 Paragraph 16 lists some of the materials
12 you considered, correct?

13 A. Correct.

14 Q. And it refers to Appendix B. Can we flip
15 to Appendix B.

16 Can you take a minute to review
17 Appendix B.

18 A. Yes.

19 Q. Let me know when you're finished.

20 A. I'm finished.

21 Q. Okay. Do these represent all the
22 materials that you reviewed in preparation for this
23 deposition?

24 A. No, as it says at the top. "In forming my
25 opinions, I've considered numerous documents and

1 other materials, including but not limited to those
2 listed below."

3 Q. What other documents did you review?

4 A. I reviewed part of the DOCSIS 2.0
5 specification. I reviewed the deposition of
6 Bertonis, Mr. Bertonis.

7 Q. You said you reviewed parts of the
8 DOCSIS 2.0 specification. Did you not review the
9 entire DOCSIS 2.0 specification?

10 A. I was asked in this declaration to review
11 the testimony of Mr. Bertonis, so I've reviewed the
12 portions relevant to Mr. Bertonis's testimony.

13 Q. Did you review the entire WiMAX
14 specification?

15 A. Again, I reviewed the portions that
16 Mr. Bertonis referred to in his declaration and in
17 his testimony.

18 Q. So if Mr. Bertonis didn't refer to a
19 portion of WiMAX, you didn't review those sections?

20 A. There might have been various parts, but I
21 believe your question was, did I review the entire
22 WiMAX specification? And I didn't review the WiMAX
23 specification in its entirety.

24 Q. Yes, and I asked that question before.
25 But then my next question was, if Mr. Bertonis did

1 not cite to a portion of the WiMAX standard, did you
2 review those other portions?

3 A. No.

4 Q. So for clarity, you only reviewed the
5 portions that Mr. Bertonis cited to?

6 A. Yes.

7 Q. And you only reviewed the portions of the
8 DOCSIS standard that Mr. Bertonis cited to?

9 A. Yes.

10 Q. Appendix B lists 3 different patents; the
11 Grinkemeyer patent, Wu patent, and Mueller patent.
12 Did you look at any other patents?

13 A. I believe I did.

14 Q. Any other patents that are not an exhibit
15 in this proceeding?

16 A. These were the primary patents that I
17 reviewed. I wanted to be sure. I'm sorry.

18 Q. Did you finish?

19 A. Yes. Thank you.

20 Q. You rely on these three patents -- the
21 2003 to 2005 exhibits -- for the definition of
22 "probe," correct?

23 A. Those were -- those sources were included
24 in developing my opinion of a probe.

25 Q. Were there any other sources that you used

1 for developing that opinion?

2 A. My own expertise in communications
3 systems.

4 Q. No other papers?

5 A. The '690 patent.

6 Q. Do you recall how you found Exhibits 2003
7 to 2005?

8 A. I believe counsel provided those to me.

9 Q. Could we turn to paragraph 38 of your
10 declaration.

11 And in paragraph 38, it says "I treat
12 December 15th, 2008, as the priority date for the
13 '690 patent." Correct?

14 A. Correct.

15 Q. So you assume the '690 patent was entitled
16 to the date of its earliest priority claim, correct?

17 A. Correct.

18 Q. Did you analyze whether the '690 patent
19 was entitled to its earliest priority claim?

20 A. No.

21 Q. If we could go to paragraph 43.

22 In paragraph 43, you provide a definition
23 for the person of ordinary skill in the art for the
24 '690 patent. Correct?

25 A. Correct.

1 Q. And you considered factors that were in
2 paragraph 42 in coming to that definition, correct?

3 A. Yes.

4 Q. One of those factors is the type of
5 problems encountered in the art, correct?

6 A. Yes.

7 Q. What did you consider were the type of
8 problems encountered in the art?

9 A. The -- trying to understand the behavior
10 of -- searching for the right word.

11 Q. Take your time.

12 A. Thank you.

13 The challenge associated with determining
14 the performance of a network across the
15 communications channel.

16 Q. And what type of performance?

17 A. The behavior of the channel itself and its
18 impact on network overall performance.

19 Q. And what problems would be associated with
20 the channel?

21 A. The channel itself can exhibit nonlinear
22 behaviors which can impact signals or messages going
23 through that channel and cause either errors or
24 changes of the signal or the waveform or the symbols.

25 Q. Is noise a well-known problem?

1 A. Yes.

2 Q. Is timing a well-known problem with the
3 channel?

4 A. Yes.

5 Q. Interference is another well-known problem
6 with the channel?

7 A. Yes.

8 Q. Power level is another well-known problem
9 with the channel?

10 A. Yes.

11 Q. Those are all well-known problems that a
12 person of ordinary skill in the art would have
13 understood at the time of the '690 patent, correct?

14 A. Correct.

15 Q. What were the solutions to those problems?

16 A. Is there a specific question relative to
17 my declaration that you're -- that I can address with
18 regards to that?

19 Q. Sure. What I'm -- so if we can look at
20 that paragraph 42, Number 1 of the factors is the
21 type of problems encountered in the art, and then
22 Number 2 is the prior art solutions to those
23 problems.

24 A. Yes.

25 Q. So we've just agreed on a few well-known

1 problems at the time of the '690 patent, and now I'm
2 asking for what were some of those prior art
3 solutions to those problems at that time?

4 A. Okay. So at this time, in the art, you
5 mentioned a few of those problems. But there were
6 other problems as well that were not easily solved by
7 existing technology. Okay?

8 So -- so would you repeat --

9 Q. So let's start with noise. Noise was a
10 well-known problem, correct?

11 A. Yes.

12 Q. And how might you solve the noise problem?

13 A. You could manually take a spectrum
14 analyzer and put it on a link and look at the noise
15 across that link and try to determine the cause of
16 that noise. It was an iterative process and fairly
17 complex.

18 Q. Is bandwidth another problem at the time
19 of the art?

20 A. When you say "bandwidth," problems with
21 the linearity of the bandwidth is a problem, yes.

22 Q. Let me ask it -- is the number of users
23 using a set bandwidth, was that a well-known problem
24 at the time of the '690 patent?

25 A. I don't consider that a communications

1 channel problem. That's a higher-level problem than
2 the physical layer.

3 Q. Would you agree that giving access to
4 multiple users was a well-known problem at the time
5 of the '690 patent?

6 A. Giving access to multiple -- you would
7 have to be more specific.

8 Q. Yes. Let me ask a different question
9 here.

10 Was multiple access to a channel a problem
11 at the time of the '690 patent?

12 A. Again, it -- at the time of the
13 '690 patent, there were techniques in WiMAX, in cable
14 system for giving multiple access. The potential
15 challenges are when multiple people and multiple
16 devices are sharing the same bandwidth, you can have
17 issues associated with that.

18 Q. Okay. So there's bandwidth problems with
19 multiple users sharing the same access, correct?

20 A. Incorrect.

21 Q. So what is the bandwidth problem, then?

22 A. The bandwidth problem has to do with the
23 communications channel itself and the physical impact
24 of nonlinearities on that channel.

25 Q. And explain the multiple-user problem.

1 A. The multiple-user problem is simply if
2 you -- there's two different ones. If the
3 combination of all the demand for bandwidth from
4 multiple users exceeds the channel bandwidth, that in
5 fact is a problem, but it's not associated with the
6 communications path; it's associated with the
7 utilization.

8 The other problem is if there are multiple
9 devices on the network and one misbehaves, you could
10 have a problem associated with that device, amongst
11 multiple users, that could impact the network.

12 Q. And there were known multiple-access
13 schemes to address those problems, correct?

14 A. There were known multiple-access schemes
15 to enable the sharing of bandwidth by multiple users.
16 But the problems associated with multiple users were
17 still at times daunting.

18 Q. In paragraph 44, you identified
19 Mr. Bertonis's definition for the person of ordinary
20 skill in the art, correct?

21 A. Correct.

22 Q. And in paragraph 45, you said you
23 considered both definitions to be reasonable,
24 correct?

25 A. Correct.

1 Q. I'd like to agree on some nomenclature for
2 today. If I refer to a person of ordinary skill in
3 the art, or POSITA, for the '690 patent at any time,
4 would you understand that I'm referring to
5 Mr. Bertonis's definition of the person of ordinary
6 skill in the art?

7 A. Since my opinions are the same under both
8 definitions of a POSITA, I would agree with that,
9 under my paragraph 45.

10 Q. Okay. Thank you. I just didn't want any
11 confusion over the understanding of the person of
12 ordinary skill in the art.

13 If we could go to paragraph 23 of your
14 declaration. Let me know when you're there.

15 A. I'm there. Thank you.

16 Q. Do you see that it says that you
17 understand that the claims must be read in light of
18 the specification?

19 A. Yes.

20 Q. Is it your understanding that this means
21 that terms in the claims are limited to how they are
22 used in the specification?

23 MR. BLAIR: Object to form.

24 THE WITNESS: Would you repeat the
25 question?

1 BY MR. KRONENTHAL:

2 Q. Is it your understanding that this means
3 that terms in the claims are limited to how they are
4 used in the specification?

5 MR. BLAIR: Object to the form.

6 THE WITNESS: In the patent, there may be
7 terms which are common industry terms and other
8 terms which are specific to the patent.

9 BY MR. KRONENTHAL:

10 Q. I don't think that answers my question.
11 I'm wondering, what is your understanding of the
12 meaning when you wrote "I further understand that the
13 claims must be read in light of the specification"?

14 A. That the claims are read in light of how
15 they are explained and used in the patent.

16 Q. Are they limited to how they're used in
17 the patent?

18 MR. BLAIR: Object to form.

19 THE WITNESS: I think they're understood
20 in the context of the claim.

21 BY MR. KRONENTHAL:

22 Q. If we go to paragraph 24.

23 In paragraph 24, you stated it has been
24 explained to you that "for a statement by the
25 inventors to narrow the scope of a claimed invention,

1 the statement must clearly and unambiguously limit
2 the scope of an invention." Correct?

3 A. Correct.

4 Q. Are you relying on any such statement?

5 A. No.

6 Q. Are you aware of any such statement?

7 A. No.

8 Q. Could we go to paragraph 32.

9 In paragraph 32, you discuss the concept
10 of a predictable result. Do you see that?

11 A. Yes.

12 Q. You state that your understanding is that
13 it refers not only to the expectation that prior art
14 elements are capable of being physically combined,
15 but also that the combination would have worked for
16 its intended purpose, correct?

17 A. Correct.

18 Q. Did you find that the proposed
19 combinations in the petition, and in Mr. Bertonis's
20 declaration, were not predictable?

21 A. Let's -- if you can point to me to
22 specific ones, I can speak to each one of those.

23 Q. So I'm asking if you found any
24 unpredictable results.

25 A. No.

1 Q. Okay. Can we go to paragraph 33.

2 There you discuss the concept of teaching
3 away. Correct?

4 A. Yes.

5 Q. Do you recall whether you applied any
6 teaching away?

7 A. I don't recall.

8 Q. Can we go to paragraphs 36 and 37?

9 Here you discuss the concept of objective
10 indicia of nonobviousness, correct?

11 A. Correct.

12 Q. Did you find any objective indicia of
13 nonobviousness?

14 A. I did not look for that, in that my review
15 of this was based upon Mr. Bertonis's declaration.

16 Q. So you did not look for any objective
17 indicia of nonobviousness, correct?

18 A. Correct. The -- other than with regards
19 to the -- well, with regards to the points in here
20 and the other patents that are cited, yeah.

21 Q. Are you aware of any other objective
22 indicia of nonobviousness?

23 MR. BLAIR: Objection to scope.

24 THE WITNESS: Would you repeat the
25 question?

1 BY MR. KRONENTHAL:

2 Q. I think maybe you might have a hard time
3 understanding the question because I should have set
4 it up with some of the examples of secondary
5 considerations and objective indicia.

6 Did you read paragraph 37?

7 A. Yes.

8 Q. So industry praise is an example of an
9 objective indicia of nonobviousness, correct?

10 A. Correct.

11 Q. Are you aware of any industry praise?

12 A. Well, I'm aware that -- oh, I'm sorry.

13 MR. BLAIR: Objection to scope.

14 THE WITNESS: Well, I'm aware that this
15 ultimately has been incorporated as a key
16 technique in DOCSIS 3.1. It's used across the
17 industry. So from that standpoint, I'd say
18 that's pretty strong praise.

19 MR. KRONENTHAL: We've been going a little
20 over an hour. You want to take a break? Now
21 would be a good time. Okay.

22 (A recess transpired from 10:10 a.m.
23 until 10:20 a.m.)

24 MR. KRONENTHAL: Back on? Great.

25

1 BY MR. KRONENTHAL:

2 Q. Mr. Holobinko, I already provided you with
3 a patent; if you could take -- get ahold of that. If
4 you could go to column 1.

5 And starting at around -- at line 16, you
6 see the heading "Description of the Related Art"?

7 A. Yes.

8 Q. So this column under "Description of
9 Related Art" describes the background, correct?

10 A. Yes.

11 Q. Can you go to Column 1, lines 48
12 through 59. If you could take a minute to read
13 those. So it starts with the sentence "In some
14 instances."

15 A. Yes.

16 Q. So Column 1, line 48, starts with "In some
17 instances probes are sent between nodes of the
18 network in order to allow a receiving node on the
19 network to determine some of the characteristics of
20 the channel between the receiving node and the
21 transmitting node." Correct?

22 A. Correct.

23 Q. Then it says "These probes are typically
24 well defined." Correct?

25 A. Correct.

1 Q. And then it says "Accordingly, the
2 receiving node knows before reception what reference
3 signal was transmitted." Correct?

4 A. Correct.

5 Q. And after that, "By comparing the
6 reference probe with the actual received probe, the
7 receiver can determine some of the characteristics of
8 the channel between the transmitting and receiving
9 node." Correct?

10 A. Correct.

11 Q. Do you see where it refers to a reference
12 signal?

13 A. Yes.

14 Q. This is talking about prior art probes.
15 Correct?

16 A. Correct.

17 Q. Prior art probes used a reference signal,
18 correct?

19 A. I believe I made comments on that in my
20 declaration with regards to probes.

21 Q. Yeah, I think at paragraph 40 of your
22 declaration.

23 A. In addition to 40 -- yes, that's correct.

24 40, but also -- also if you look at some
25 of my references -- paragraph 50, 51, 52 -- it talks

1 about probes which have a reference in them as well,
2 in the prior art.

3 Q. Okay. Thank you.

4 And the probes that use a reference signal
5 mentioned in Column 1 of the '690 patent, those were
6 prior art probes, correct?

7 A. Correct.

8 Q. And the alleged invention of the
9 '690 patent was to improve upon those prior art
10 probes, correct?

11 MR. BLAIR: Object to the form.

12 THE WITNESS: Both to improve and to
13 enable the use of probes for purposes which they
14 couldn't be used before, to reveal information
15 which was -- which would have been difficult
16 with previous probes.

17 BY MR. KRONENTHAL:

18 Q. In Column 1, lines 57 through 62, the
19 '690 patent criticizes those prior art probes,
20 correct?

21 MR. BLAIR: Object to the form.

22 THE WITNESS: The patent points out that
23 those probes are inflexible, relatively
24 inflexible.

1 BY MR. KRONENTHAL:

2 Q. And the prior art -- I'm sorry. Let me
3 start over.

4 The '690 patent presents a receiver
5 determined probe to address those inflexibilities,
6 correct?

7 A. It -- it introduces both a probe request
8 and a probe.

9 Q. So the '690 patent introduces a receiver
10 determined probe so that you don't need to use a
11 reference signal, correct?

12 A. It -- it -- I answered it already. It
13 introduces a probe request that defines the form of
14 the probe, and the probe, so that that combination
15 you don't need the -- you don't need the reference as
16 before.

17 Q. Thank you.

18 Can we turn to figure 4 of the patent?

19 You there?

20 A. Yes -- oh, no, I'm not.

21 Q. Yeah.

22 A. Now I'm there.

23 Q. Okay. On the left-hand side of Figure 4,
24 there's a probe receiver, correct?

25 A. Yes.

1 Q. So there's a dotted line down the middle
2 of Figure 4; and on the left-hand side there's a
3 probe receiver, and on the right-hand side there's a
4 probe transmitter, correct?

5 A. Yes.

6 Q. The probe receiver transmits a probe
7 request at Block 200, correct?

8 A. Correct.

9 Q. And Figure 4 shows the probe transmitter
10 receiving the probe request at Block 201, correct?

11 A. Correct.

12 Q. And at Block 202, the probe transmitter
13 generates the probe based on the received probe
14 request, correct?

15 A. That is a summary.

16 Q. Okay.

17 A. But it's according to two sets of
18 parameters; the form, which is dictated by the
19 transmit request, as the patent states.

20 Q. Specifically the patent explains that the
21 probe request could provide like a modulation profile
22 that the transmitter uses to modulate the probe,
23 correct?

24 A. Correct.

25 Q. And modulating a probe is a way of

1 dictating the form of the probe?

2 A. It's one of many possible ways of defining
3 the form of the probe.

4 Q. And this feature of defining the form of
5 the probe using the probe request is the focus of the
6 '690 patent, correct?

7 A. So let me pause for a second here, because
8 my declaration is addressed to Mr. Bertonis's
9 declaration and not a declaration across the entire
10 '690 patent, but rather about Mr. Bertonis's claims.
11 So if you have a question with regards to that, I can
12 address that through my declaration.

13 Q. Okay. I -- you did review the entirety of
14 all the claims when you prepared your declaration,
15 though, correct?

16 A. Correct.

17 Q. So let's look at the claim. Let's look at
18 Claim 1.

19 Claim 1 ends with a "Wherein" clause. Do
20 you see that?

21 A. Yes. But again, do you have a specific
22 question relative to my declaration regarding
23 Mr. Bertonis?

24 Q. Yes, I do.

25 A. Okay.

1 Q. I -- my question is, where it says
2 "Wherein the probe has a form dictated by the first
3 plurality of parameters," did you analyze whether the
4 prior art cited teaches that element of the claim?

5 A. Repeat the question.

6 Q. Did you analyze whether the prior art
7 cited teaches the "Wherein the probe has a form
8 dictated by the first plurality of parameters"?

9 A. I reviewed it in the context of
10 Mr. Bertonis's claims.

11 Q. Did you contest his claims with respect to
12 that limitation?

13 MR. BLAIR: Objection to scope.

14 THE WITNESS: If we -- if you give me a
15 citing, I can speak to that. I don't --

16 BY MR. KRONENTHAL:

17 Q. Yeah, I didn't see it in your declaration
18 where you addressed that limitation. So I wanted to
19 ask whether you analyzed that limitation at all.

20 A. So repeat that question, please.

21 Q. Did you analyze whether the prior art
22 relied upon in this case teaches the "Wherein the
23 probe has a form dictated by the first plurality of
24 parameters"?

25 MR. BLAIR: Objection to scope.

1 THE WITNESS: My review is limited to
2 looking at the claims that Mr. Bertonis made and
3 the validity of those claims relative to the
4 '690 patent.

5 BY MR. KRONENTHAL:

6 Q. And Mr. Bertonis provided opinions on that
7 element of Claim 1, Step C, wherein the probe has a
8 form dictated by the first plurality of parameters,
9 correct?

10 A. Well, he -- he made opinions as to what
11 constituted a probe, but I don't believe he made an
12 opinion therefore on that particular point.

13 Q. So you don't believe Mr. Bertonis provided
14 any opinions on Step 1C in the -- particularly the
15 part where it says "Wherein the probe has a form
16 dictated by the first plurality of parameters"?

17 MR. BLAIR: Objection to scope.

18 THE WITNESS: The -- the opinions that I
19 expressed relative to Mr. Bertonis are in my
20 declaration.

21 BY MR. KRONENTHAL:

22 Q. And you read his whole declaration,
23 Mr. Bertonis's whole declaration?

24 A. Yes.

25 Q. And you only contested some of his

1 opinions, correct?

2 A. Yes.

3 Q. Did you contest his opinion with respect
4 to Element 1C?

5 MR. BLAIR: Objection to scope.

6 THE WITNESS: Yes.

7 BY MR. KRONENTHAL:

8 Q. Where did you contest his opinion with
9 respect to the "Wherein" clause in Step 1C?

10 A. Mr. Bertonis never established that any --
11 through any of his examples that there was a probe.
12 So by default, 1C would not be included.

13 Q. Could we look at Claim 9?

14 Claim 9 has a Step A, correct?

15 A. Yes.

16 Q. And the second half of Step A in Claim 9
17 says "the first plurality of probe parameters
18 comprising a form for the probe including a
19 modulation profile for the probe." Correct?

20 A. Correct.

21 Q. That feature is similar to the feature
22 that we were previously just discussing, the
23 "Wherein" limitation in Step 1C, correct?

24 MR. BLAIR: Objection. Scope.

25 THE WITNESS: Repeat the question, please?

1 MR. KRONENTHAL: Could you read back the
2 question.

3 (Whereupon the Court Reporter read the
4 previous question.)

5 THE WITNESS: I -- I guess I object to the
6 word "limitation." I don't understand your
7 context, your use of the word "limitation."

8 BY MR. KRONENTHAL:

9 Q. Okay. Is the feature in Step 9A about the
10 first plurality of probe parameters comprising a form
11 for the probe including modulation profile for the
12 probe similar to the feature in Step 1C, where it
13 says "Wherein the probe has a form dictated by the
14 first plurality of parameters"?

15 MR. BLAIR: Objection to scope.

16 THE WITNESS: I think 10-1 has modulation
17 in it; the other doesn't, I believe.

18 BY MR. KRONENTHAL:

19 Q. So a modulation profile is an example of a
20 way of dictating the form of the probe?

21 MR. BLAIR: Objection to scope.

22 THE WITNESS: Repeat?

23 BY MR. KRONENTHAL:

24 Q. Is using a modulation profile a way to
25 dictate the form of the probe?

1 A. No. A modulation profile can be one of
2 the elements associated with the probe, in the form
3 of the probe.

4 Q. So you receive a modulation profile, and
5 you can use that to generate the probe, correct?

6 MR. BLAIR: Objection to scope.

7 THE WITNESS: No. It's an attribute of
8 the probe. Potential attribute.

9 If -- let -- I would refer you to my
10 response. If we could go to page 17. And
11 actually, if we go to -- I'm sorry -- yes, to
12 page -- to paragraph 47.

13 A probe, in terms of the -- what a POSITA
14 would understand, refers to a particular kind of
15 signal or message having a form used to
16 characterize the communications channel between
17 two nodes.

18 So just because something has an attribute
19 of frequency -- or a modulation, as you say --
20 doesn't constitute that it's a probe.

21 BY MR. KRONENTHAL:

22 Q. Understood. I think I'm not being clear
23 with my question. What I'm trying to get at is that
24 the modulation profile defines the form of the probe?

25 MR. BLAIR: Objection to scope.

1 THE WITNESS: I disagree with that.

2 BY MR. KRONENTHAL:

3 Q. How would you describe the relationship
4 between the modulation profile and the form of the
5 probe?

6 MR. BLAIR: Objection to scope.

7 THE WITNESS: As the patent states, a
8 modulation profile can be an element within the
9 form of the probe. But the form of the probe is
10 the combination of all the things. It's not
11 just the modulation profile.

12 BY MR. KRONENTHAL:

13 Q. So the modulation profile is just one
14 aspect of how to form the probe?

15 MR. BLAIR: Objection. Scope.

16 THE WITNESS: The patent speaks clearly
17 to -- that there are a number of different
18 things that -- a number of different factors
19 that can be used to build the probe. And again,
20 they define the form of -- they, in combination,
21 define the form of the probe.

22 BY MR. KRONENTHAL:

23 Q. What do you mean by "form of the probe"?

24 MR. BLAIR: Objection. Scope.

25 THE WITNESS: Form of the -- the form of

1 the probe is made up of these various test
2 elements. And as the patent explains, there is
3 a preamble portion and a data portion; and
4 within the data portion are these various
5 elements, and they constitute the form of the
6 probe.

7 BY MR. KRONENTHAL:

8 Q. So it's the data that's in the probe that
9 is the form of the probe?

10 MR. BLAIR: Objection. Form.

11 THE WITNESS: I would refer you back to
12 the patent itself, because it's very clear.
13 Clearly defined in there.

14 BY MR. KRONENTHAL:

15 Q. Are you referring to Column 2 of the
16 patent? Let's look at Column 2, starting at line 3.

17 A. Excuse me? Which -- Column 2?

18 Q. Yes, of the '690 patent.

19 A. Yes. Starting at . . .

20 Q. Line 3.

21 A. Yes.

22 Q. "The receiving node may generate a probe
23 request that specifies a plurality of parameters to
24 be used in such a receiver determined probe to
25 generate a probe having the form specified by these

1 parameters."

2 A. Yes.

3 Q. So we're talking about this word "form."

4 A. Uh-huh.

5 Q. And I want to get an understanding of what
6 your understanding is of that word in this context.

7 A. Well --

8 MR. BLAIR: Objection to scope.

9 THE WITNESS: If we read further on in the
10 patent, I think it explains it. In one
11 embodiment, the parameters may further include
12 the modulation profile for the probe, the
13 payload content, the number of times, the number
14 of symbols, the number -- and reading on.

15 BY MR. KRONENTHAL:

16 Q. Those are just -- those are describing
17 parameters of the probe request, correct?

18 A. They -- that's -- these parameters, as it
19 says, to generate a probe having the form specified
20 by these parameters.

21 Q. So you use these parameters to generate
22 the form of the probe?

23 MR. BLAIR: Objection to scope. Objection
24 to form.

25

1 BY MR. KRONENTHAL:

2 Q. Let me ask a different question.

3 The modulation profile is one parameter
4 you can use to generate the form of a probe?

5 MR. BLAIR: Objection to scope. Objection
6 to form.

7 THE WITNESS: It can be one parameter in
8 the form of a probe, in the overall -- form of
9 the probe.

10 BY MR. KRONENTHAL:

11 Q. Is it your understanding that the probe
12 includes a modulation profile as a parameter in the
13 data portion of the probe?

14 MR. BLAIR: Objection. Scope.

15 THE WITNESS: Take me to a portion of my
16 declaration, because that's what we're supposed
17 to be discussing here, relative to Bertoni and
18 how -- what your question is relative to this,
19 please.

20 BY MR. KRONENTHAL:

21 Q. I'm not actually looking at the
22 declaration at the moment.

23 A. Okay.

24 Q. I'm looking at just the patent. I want to
25 know how the patent is using the modulation profile

1 to dictate the form of the probe.

2 MR. BLAIR: Objection to scope.

3 THE WITNESS: Well, in all fairness here,
4 I was asked to look at Mr. Bertonis's
5 declarations and his claims and to comment on
6 those, and so the majority of my work is
7 relative to that.

8 BY MR. KRONENTHAL:

9 Q. So you cannot describe how the modulation
10 profile is used to dictate the form of the probe?

11 MR. BLAIR: Objection to scope. Objection
12 to form.

13 THE WITNESS: As I said, it is described
14 within the patent language itself, and examples
15 are given. And I rely on the patent itself.

16 BY MR. KRONENTHAL:

17 Q. Would you say that the modulation of a
18 probe is an attribute that defines the form of the
19 probe?

20 MR. BLAIR: Objection to scope.

21 THE WITNESS: Did Mr. Bertonis make a
22 comment -- did he make an opinion regarding
23 that?

24 BY MR. KRONENTHAL:

25 Q. I'm not talking about -- I'm trying to get

1 at Column 2, these lines 3 through 19. And when they
2 talk about the word "form" -- and it's in quotes --
3 and I want to know what your understanding is of that
4 term in the context of just this patent.

5 MR. BLAIR: Objection to scope.

6 BY MR. KRONENTHAL:

7 Q. And I want to understand how the
8 modulation profile relates to the form of the probe.

9 MR. BLAIR: Objection to scope.

10 THE WITNESS: A modulation profile, as
11 described in this, would be relative to OFDM and
12 the various carrier -- subcarriers associated
13 with the OFDM. And so generating an OFDM
14 waveform for testing would be part of that
15 probe. That's distinctly different than sending
16 a probe on a frequency. It's a modulation
17 profile, and that refers back to OFDM.

18 BY MR. KRONENTHAL:

19 Q. Does the modulation profile indicate the
20 type of modulation that's used for the probe?

21 MR. BLAIR: Objection to scope.

22 THE WITNESS: Yes.

23 BY MR. KRONENTHAL:

24 Q. The modulation profile is not used to
25 determine what goes in the data portion of the probe,

1 correct?

2 MR. BLAIR: Objection to scope.

3 THE WITNESS: Incorrect.

4 BY MR. KRONENTHAL:

5 Q. Does the modulation profile provide the
6 data that's for the probe?

7 MR. BLAIR: Objection to scope.

8 THE WITNESS: You're confusing things. I
9 politely would say that you don't understand the
10 technology.

11 BY MR. KRONENTHAL:

12 Q. I want to make sure that we're on the same
13 page, that the data that's in the probe isn't
14 provided by the modulation profile. The modulation
15 profile just tells you how to modulate that data for
16 the probe.

17 MR. BLAIR: Objection to scope.

18 THE WITNESS: And that's incorrect.

19 Sorry.

20 MR. BLAIR: Sorry. Go ahead.

21 BY MR. KRONENTHAL:

22 Q. Would you say that the modulation profile
23 provides the payload for the probe?

24 MR. BLAIR: Objection to scope.

25 THE WITNESS: If you give me a second --

1 if you give me a minute, I can review the
2 portion of the patent that I believe speaks to
3 that. Would you like me to do that?

4 BY MR. KRONENTHAL:

5 Q. I think actually we can just move on.

6 A. Okay.

7 Q. Yeah.

8 Let's just get back to Figure 4 of the
9 '690 patent. So the discussion we just had was in
10 relation to that Block 202, right, about how to
11 generate the probe. Correct?

12 A. Correct.

13 Q. Can we agree that the modulation profile
14 is one aspect of how to generate the probe?

15 MR. BLAIR: Objection to scope.

16 THE WITNESS: Not how to generate the
17 probe; what's in the probe.

18 BY MR. KRONENTHAL:

19 Q. Okay. And once the probe is generated, in
20 Block 203, it's transmitted back to the probe
21 receiver, correct?

22 A. Correct.

23 Q. And the probe receiver receives it in
24 Block 204, correct?

25 A. Correct.

1 Q. And in Block 205, it processes the
2 received probe. Correct?

3 A. Correct.

4 Q. Okay. I want to talk about Block 205.
5 Can we go to the last paragraph in Column 6?

6 A. I'm sorry. I wasn't asked to opine on
7 this. My deposition is focused on the work of
8 Mr. Bertonis and his opinions, which -- and his --
9 his statements, which I believe are in error and
10 mischaracterize the patent. So that's what I'm
11 prepared to speak to you on.

12 Q. But you reviewed the '690 patent, correct?

13 A. Yes.

14 Q. So you're not able to opine on other parts
15 of the '690 patent?

16 MR. BLAIR: Objection --

17 THE WITNESS: I was asked --

18 MR. BLAIR: -- to form.

19 THE WITNESS: Sorry.

20 I was asked to specifically address the
21 declaration of Mr. Bertonis.

22 BY MR. KRONENTHAL:

23 Q. And I assure you that this relates to his
24 declaration, but -- so let me ask you -- I want to
25 ask you questions about Block 205. Are you not

1 willing to answer those questions?

2 A. Let me hear the question.

3 Q. Okay. Let's -- sounds good.

4 Going to Column 6, lines -- that last
5 paragraph, starts at like line 57. And the first
6 line in that paragraph talks about Block 204, just
7 says it's receiving the probe?

8 A. Yes.

9 Q. The next sentence then says that the
10 received probe is used in further processing
11 Block 205.

12 You agree that the probe is very much the
13 focus of this case, correct?

14 A. That is --

15 MR. BLAIR: Objection to form.

16 THE WITNESS: That is only part of this
17 case.

18 BY MR. KRONENTHAL:

19 Q. Okay. Is the Block 205 required -- let me
20 ask a different question.

21 Is the processing of the probe in
22 Block 205 required by the '690 patent?

23 MR. BLAIR: Objection to scope. Objection
24 to form.

25 THE WITNESS: If you look at the second

1 sentence there, line 58 -- forgive me if I'm off
2 a line -- "The received probe may then be used
3 in further processing in Block 205."

4 "May." Not "must."

5 BY MR. KRONENTHAL:

6 Q. So the further processing in Block 205 of
7 the probe is not required?

8 MR. BLAIR: Objection to scope. Objection
9 to form.

10 THE WITNESS: The -- it's -- it states
11 what it states. It may or may not.

12 BY MR. KRONENTHAL:

13 Q. Does the '690 patent describe processing
14 the probe to include comparing it with a reference
15 signal?

16 MR. BLAIR: Objection to scope.

17 THE WITNESS: I don't have an opinion on
18 whether it does or does not, and was not asked
19 to provide an opinion as part of my deposition.

20 As part of my "declaration." I used the
21 wrong word. Sorry.

22 BY MR. KRONENTHAL:

23 Q. Do you agree that the discussion for that
24 further processing in Block 205 continues on to
25 Column 7 and goes all the way to like line 11?

1 MR. BLAIR: Objection to scope.

2 THE WITNESS: Goes to line 11 on Column 7?

3 BY MR. KRONENTHAL:

4 Q. Yes.

5 A. Yes.

6 Q. So this portion from Column 6, line 57,
7 through Column 7, line 11, is discussing potential
8 processing of the probe, correct?

9 MR. BLAIR: Objection to scope.

10 THE WITNESS: Correct.

11 BY MR. KRONENTHAL:

12 Q. Does this portion of the '690 patent
13 discuss determining physical layer attributes of the
14 probe?

15 MR. BLAIR: Objection to scope.

16 THE WITNESS: The patent itself is about
17 communications channel probes.

18 BY MR. KRONENTHAL:

19 Q. And I was just asking -- go ahead; I'm
20 sorry.

21 A. Physical layer probes.

22 Q. Understood. And I was just asking about
23 this section where it's discussing the processing of
24 the probe and whether, in this section, you
25 understood it to be describing the determination of

1 any physical layer attribute.

2 MR. BLAIR: Objection to scope.

3 THE WITNESS: The purpose of the probe is
4 to do that. So it is -- the purpose of the
5 probe is to understand the characteristics of
6 the communications channel in a physical -- in a
7 physical layer probe, which is described in
8 here, is to characterize the communication
9 channel's physical communications layer
10 attributes, as I describe in my paragraphs 56
11 through 58 in my declaration.

12 BY MR. KRONENTHAL:

13 Q. And are any of the physical layer
14 attributes mentioned in Column 6, line 57 through
15 Column 7, line 11?

16 MR. BLAIR: Objection to scope.

17 THE WITNESS: A POSITA would understand,
18 reading this, that since the probe was
19 designed -- and the form of the probe was
20 designed around the characteristics of the
21 physical layer, what is being spoken about here
22 is consistent with that physical layer.

23 BY MR. KRONENTHAL:

24 Q. And I'm wondering if any of the words from
25 Column 6, line 57 through Column 7, line 11 say

1 explicitly what a physical layer probe is.

2 MR. BLAIR: Objection to scope.

3 BY MR. KRONENTHAL:

4 Q. Let me ask a different question. I'll
5 withdraw my question.

6 I'm looking for a particular word that
7 describes one of the physical layer attributes of the
8 probe in this section from Column 6, line 57 through
9 Column 7, line 11.

10 MR. BLAIR: Objection to scope.

11 THE WITNESS: You won't find it, because
12 this is the results of having received the probe
13 and the information that came out of the probe,
14 as opposed to the probe itself.

15 BY MR. KRONENTHAL:

16 Q. Can we look at Figure 5 of the patent?

17 Figure 5 shows different parameters that
18 may be used for generating the probe request,
19 correct?

20 A. Correct.

21 Q. To be clear, Figure 5 does not show
22 parameters for the probe, correct?

23 Let me ask a different question. I'll
24 withdraw that question.

25 To be clear, Figure 5 does not show

1 parameters that are in the probe itself, correct?

2 MR. BLAIR: Objection to form.

3 THE WITNESS: Ask your question again,
4 please?

5 MR. KRONENTHAL: Could you read the last
6 question back.

7 (Whereupon the Court Reporter read the
8 previous question.)

9 THE WITNESS: So on line -- on Column 7,
10 line 29, it says "Figure 5 illustrates examples
11 of parameters that may be modified or determined
12 for generating a probe request according to an
13 embodiment of the disclosed method and
14 apparatus."

15 So this illustration refers to the probe
16 request.

17 BY MR. KRONENTHAL:

18 Q. And not the probe, correct?

19 MR. BLAIR: Objection to form.

20 THE WITNESS: If we look at -- if we look
21 at the patent, the patent talks about the probe
22 request. If we look at Claim 1 -- right? Go to
23 Claim 1.

24 "Receiving in the first node, a probe
25 request specifying a first pluralities of

1 parameters associated with the generation and
2 transmission of the probe."

3 So that's the answer.

4 BY MR. KRONENTHAL:

5 Q. So I just want to be on the same page,
6 that the eight parameters that are in Figure 5 are
7 providing the parameters that are in the probe
8 request, and not the probe.

9 MR. BLAIR: Objection to scope.

10 THE WITNESS: If you go back to Figure 4,
11 202, it says "The probe is generated according
12 to the specified parameters," the parameters of
13 Figure 5.

14 BY MR. KRONENTHAL:

15 Q. So the parameters of Figure 5 are used to
16 generate the probe, correct?

17 A. Correct.

18 Q. Are the parameters themselves the same
19 parameters in the probe?

20 MR. BLAIR: Objection to form. Objection
21 to scope.

22 THE WITNESS: The parameters are used to
23 generate the form of the probe.

24 BY MR. KRONENTHAL:

25 Q. And does that mean that the parameters in

1 the request are placed into the probe?

2 MR. BLAIR: Objection to scope.

3 THE WITNESS: The patent doesn't say that.

4 BY MR. KRONENTHAL:

5 Q. The parameters in Figure 5 are part of the
6 probe request, correct?

7 MR. BLAIR: Objection to scope.

8 THE WITNESS: They're examples of
9 parameters that can be in the probe request.

10 BY MR. KRONENTHAL:

11 Q. And the probe request is sent by the
12 receiver, correct?

13 A. The probe request is sent by the
14 requesting node.

15 Q. Are any of the probe parameters -- I'm
16 sorry. Let me reask that. Withdrawn.

17 Are any of the parameters in the probe
18 request specifying the node that sends the probe
19 request?

20 MR. BLAIR: Objection to scope.

21 THE WITNESS: So not directly, but it is
22 known because of the form of the probe, which is
23 a MAC, a packet with a -- with a preamble, or a
24 header, and a payload. And so that information
25 would be in the preamble or the header.

1 BY MR. KRONENTHAL:

2 Q. You said "that information." What
3 information?

4 A. You asked about the originating point of
5 the request.

6 Q. So information identifying the originating
7 node that sent the request, that would be in the
8 preamble or the payload?

9 MR. BLAIR: Objection to scope.

10 THE WITNESS: It possibly could be there.
11 And if you gave me some time, I could look that
12 up and give you a definitive answer.

13 BY MR. KRONENTHAL:

14 Q. Is that information in one of the
15 parameters in the Figure 5 example?

16 MR. BLAIR: Objection to scope.

17 THE WITNESS: No.

18 BY MR. KRONENTHAL:

19 Q. Let's go to Column 2 of the '690 patent,
20 lines 20 to 27. You can take a minute to read those
21 lines to yourself.

22 A. Column 2, 20 to 27?

23 Q. Yes.

24 A. Okay.

25 Q. Column 2, lines 20 to 27 describe several

1 different examples, uses of a probe. Correct?

2 A. Correct.

3 Q. One of those uses is for reaching or
4 discovering a hidden node, correct?

5 A. Correct.

6 Q. Another use is for channel assessment,
7 correct?

8 A. OFDMA, yes, channels. But subchannel --
9 subchannel assessment.

10 Q. And another use is for offsite network
11 diagnostics, correct?

12 A. When it says it may be used for offsite
13 network diagnosis, a POSITA would understand that one
14 didn't have to be next to the network, but could
15 generate the probe and get the results without being
16 physically on the node.

17 Q. Okay. But you agree that another use for
18 the probe is for offsite network diagnosis, correct?

19 MR. BLAIR: Objection to scope.

20 THE WITNESS: We -- I defined what I
21 believe the term "use" to mean. It's -- the
22 probe is used to characterize the communications
23 channel, but one doesn't have to be in the
24 network to do that characterization in the
25 communications channel. And that's what's

1 referred to here.

2 BY MR. KRONENTHAL:

3 Q. Can we go to Column 4, line 35? If you
4 could read Column 4, line 35 through 38.

5 A. "However, even with more dynamic networks,
6 network probes can be used to diagnose problems. For
7 example, a probe can replicate a potential problem,
8 reach or discover a distant or previously undetected
9 node on the network, or assist with network
10 admissions procedures."

11 Q. This is describing example uses for a
12 probe, correct?

13 MR. BLAIR: Objection to scope.

14 THE WITNESS: It's describing additional
15 potential application -- uses of the probe. Not
16 a limiting use of the probe.

17 MR. KRONENTHAL: I think we've been going
18 for about an hour, and I was about to start in a
19 new section. So I don't know if now would be a
20 good time for break, or you want to go for a
21 little more longer, till lunch, or . . .

22 MR. BLAIR: Yeah, that's a good question.

23 MR. GALLUZZO: Do you want to go off the
24 record?

25 MR. BLAIR: Yeah, let's go ahead and go

1 off the record.

2 MR. KRONENTHAL: Sure.

3 (A recess transpired from 11:18 a.m. until
4 11:23 a.m.)

5 MR. KRONENTHAL: We can go back on the
6 record.

7 BY MR. KRONENTHAL:

8 Q. So if we could go to Claim 1 of the
9 '690 patent. We could look at Step A.

10 Specifically, there's a -- the last part
11 of Step A, where it starts with "Wherein"? Do you
12 want to take a second to read that?

13 A. Okay.

14 Q. Before that -- I'm sorry, let's start at
15 the beginning of Step A. It says "Receiving in a
16 first node a probe request." Right?

17 A. Yes.

18 Q. Then it says "A probe request specifying a
19 first plurality of parameters." Right?

20 A. Yes.

21 Q. That could mean that the first plurality
22 of parameters are part of the probe request, right?

23 A. They're associated with the generation and
24 the transmission of the probe.

25 Q. But it's those parameters that are

1 included in the probe request, right?

2 MR. BLAIR: Objection to form.

3 THE WITNESS: It says "Wherein the first
4 plurality of parameters at least specified the
5 content payload of the probe and a second node."

6 BY MR. KRONENTHAL:

7 Q. Yes. That's that second part. I was
8 still -- I just wanted --

9 A. But that's the modifier -- I'm sorry.
10 Forgive me. Finish your question.

11 Q. No, I just wanted to get on the second
12 page and orient ourselves. We're talking about the
13 probe request specifying a first plurality of
14 parameters. So those first plurality of parameters
15 are what could be in the probe, correct? A probe
16 request?

17 A. In a probe request or a probe? You said
18 two different things.

19 Q. Sure. The first plurality of parameters,
20 that's in the probe request, correct?

21 A. I think Claim 1 says precisely the answer
22 to your question.

23 Q. Which is?

24 A. That it specifies a plurality of
25 parameters associated with the generation and

1 transmission of a node, wherein the first plurality
2 of the parameters -- which are the ones you're
3 speaking about -- at least specified the content
4 payload of the probe and the second node.

5 Q. Okay. So let's talk about the "Wherein
6 the first plurality of parameters at least specified
7 content payload of the probe."

8 A. Well, before we do that, let me ask you --

9 Q. Well --

10 A. Before we do that, my -- you haven't asked
11 me a single question with regards to -- virtually a
12 single question with regards to my declaration, which
13 has to do with the validity of the claims of
14 Mr. Bertonis. Instead, you're asking me about the
15 patent, which is not something that I was prepared to
16 go into in depth.

17 And so if you want me to do that, I can
18 take a lot of time here and go in and research these
19 things; but my understanding was that the focus of my
20 deposition today was around my declaration. And I
21 didn't talk about these things in my declaration.

22 Q. You didn't talk about the "Wherein" clause
23 in Claim 1, Step A in your declaration?

24 MR. BLAIR: Objection to form.

25 THE WITNESS: Would you point to me in my

1 declaration where I did, please?

2 BY MR. KRONENTHAL:

3 Q. Sure. Let's -- we can look at this
4 page 26 of your declaration. And in the subheading
5 for Number 3 there, it says "WiMAX's ranging request
6 does not specify the content payload of the ranging
7 response." Correct?

8 A. Correct.

9 Q. That's in response to this "Wherein"
10 clause in Claim 1, Step A, right?

11 A. No, it's independent claims 1, 9, and 17
12 require a probe. Mr. Bertonis was saying that
13 WiMAX's ranging response is a probe. And I was
14 saying it is not a probe; therefore, WiMAX fails to
15 anticipate or render obvious any other challenged
16 claims.

17 Q. And I understand your opinions. But I
18 want to talk about the understanding of the claim
19 itself first.

20 So you can see in paragraph 69, you
21 wrote -- in a parenthetical, it says "Wherein the
22 first plurality of parameters at least specify
23 content payload of the probe." You see that?

24 A. Yes.

25 Q. So you looked at that portion of the

1 claim, correct?

2 A. Yes.

3 Q. Okay. And I want to understand what your
4 understanding of what that means is. So does that
5 mean that one of the parameters in the probe request
6 has to provide the exact same information that is put
7 into the payload of the probe?

8 MR. BLAIR: Objection to form.

9 THE WITNESS: Repeat the question.

10 MR. KRONENTHAL: Could you repeat that?
11 (Whereupon the Court Reporter read the
12 previous question.)

13 THE WITNESS: If we go back to Figure 5 --
14 actually to Figure 4, excuse me, Block 202. And
15 I addressed this before.

16 The parameters are specified, and the
17 probe is generated according to the specified
18 parameters. That doesn't mean that the
19 parameters themselves have to be in the probe.
20 But the probe is generated according to the
21 specified parameters.

22 BY MR. KRONENTHAL:

23 Q. Understood. And is that your -- is that
24 same interpretation how you were interpreting that
25 portion of Claim 1, Step A where it says "Wherein the

1 first plurality of parameters at least specified
2 content payload of the probe"?

3 A. Yeah, it doesn't say -- Claim 1 doesn't
4 say that those parameters are in the probe. It says
5 "A request specifying a first plurality of parameters
6 associated with the generation and transmission of
7 the probe." And that's consistent with the drawing.

8 Q. And what about the part of the claim right
9 after that, where it says "Wherein the first
10 plurality of parameters at least specified content
11 payload of the probe"?

12 A. It's similar. Similar interpretation.
13 So --

14 Q. Okay. I think I understand. But I want
15 to try to come up with an example.

16 So if the probe request included a
17 number 3, does the number 3 have to be put into the
18 data payload portion of the probe?

19 MR. BLAIR: Objection to form.

20 THE WITNESS: Hypothetically speaking,
21 because your example is very simple, something
22 representing a 3 could be put into the probe
23 without being the number -- having to be the
24 number 3.

25

1 BY MR. KRONENTHAL:

2 Q. So the values don't have to be identical?

3 A. That's why I said, you're on very gray
4 grounds, and that's why I was very careful the way I
5 answered you, because it's not so one-to-one, the way
6 you're trying to make it.

7 Q. So would your understanding of this
8 "Wherein the first plurality of parameters at least
9 specified content payload of the probe" include if
10 the probe request sent the number 2, and the probe
11 responded with the number 3?

12 MR. BLAIR: Objection to form.

13 THE WITNESS: It doesn't make sense, what
14 you're saying.

15 Again, the definition of a probe is in my
16 paragraph 13. And your example doesn't meet
17 that, because -- because it sends back a
18 number 3 doesn't characterize the channel.

19 BY MR. KRONENTHAL:

20 Q. Yeah, and I'm not actually talking about
21 the definition of the word "probe" at the moment.
22 I'm trying to understand your interpretation of
23 "Wherein the first plurality of parameters at least
24 specify content payload of the probe," and what needs
25 to be in the content payload of the probe.

1 A. So you wanted --

2 MR. BLAIR: Objection. Form.

3 THE WITNESS: So you wanted an example.

4 If I want to -- and it's given in the patent.

5 If I want to simulate an OFDM set of carriers, I

6 can specify that without including the carriers

7 themselves in the probe request. I can define

8 what I want, and the probe will be generated

9 based on my request.

10 That's very different than your example,

11 which is a simple message and an acknowledgment

12 of a message. That's not a probe. That's not

13 something that's represented by the patent.

14 BY MR. KRONENTHAL:

15 Q. So I understand your testimony to be that

16 the content payload of the probe doesn't have to be

17 identical to what's in the request?

18 MR. BLAIR: Objection to form.

19 THE WITNESS: As the patent says, the

20 probe request specifies the parameters that at

21 least specify the content payload, okay? And

22 there can be determining a second plurality of

23 parameters associated with the actual generation

24 and transmission of the node.

25

1 BY MR. KRONENTHAL:

2 Q. The second plurality of parameters doesn't
3 have to be the same as the first plurality of
4 parameters, correct?

5 A. Correct. But it's determining, so that's
6 the action word.

7 Q. Does one of the second plurality
8 parameters have to be the same as one of the first
9 plurality of parameters?

10 MR. BLAIR: Objection to scope.

11 THE WITNESS: The probe is generated,
12 according to C, in accordance with the first
13 plurality of parameters and the second plurality
14 of parameters, wherein the probe has a form
15 dictated by the first plurality of the
16 parameters. Okay? So the form is dictated by
17 the first.

18 But your question is, do they have to be
19 in there? No, the forms -- and that's
20 consistent with the example I gave you. The
21 form would be, "I want this test signal in
22 there." The actual probe would give you that
23 signal as part of the probe.

24 BY MR. KRONENTHAL:

25 Q. That "Wherein the first plurality of

1 parameters at least specify content payload of the
2 probe," that doesn't require one of the second
3 plurality of parameters to be the same as one of the
4 first plurality of parameters, correct?

5 MR. BLAIR: Objection to scope.

6 THE WITNESS: B says that's a
7 determination. It's "determine."

8 BY MR. KRONENTHAL:

9 Q. Yes. So I understand you to be agreeing
10 that the -- none of the second plurality of
11 parameters has to be the same as one of the first
12 plurality of parameters?

13 MR. BLAIR: Objection to form. Objection
14 to scope.

15 THE WITNESS: I think you're
16 word-salading, because the first set of
17 parameters defines the form and specifies the
18 content payload. It doesn't say what's in the
19 content. Okay? It says the content defines
20 what the content payload should be, but not the
21 values, so to speak.

22 BY MR. KRONENTHAL:

23 Q. Okay. Let's go to paragraph 47 of your
24 declaration.

25 I believe you're there. Right?

1 A. Yeah. Give me a second, though.

2 Q. Sure.

3 A. Okay.

4 Q. So here's where you define the term

5 "probe," correct?

6 A. Correct.

7 Q. You also later define the term "physical
8 layer probe," correct?

9 A. Correct.

10 Q. You don't have a separate definition for
11 the probe request, correct?

12 A. Correct.

13 Q. The probe request would just be a request
14 for the probe, as you defined it?

15 A. It would be a probe request that --
16 defined by the patent. So the patent defines what a
17 probe request is.

18 Q. Where does the patent define what a probe
19 request is?

20 A. Number 1. Claim Number 1. Receiving of
21 the first node, probe request. And it defines what
22 the probe request does.

23 Q. Is there something particular about a
24 probe request that causes the probe to be sent?

25 MR. BLAIR: Objection to scope.

1 THE WITNESS: It is a communications
2 request. So a POSITA would understand that a
3 request requires a reply and acknowledgment.

4 BY MR. KRONENTHAL:

5 Q. The request wouldn't necessarily need to
6 include something to tell the receiving device to
7 send back the response, correct?

8 MR. BLAIR: Objection to scope.

9 THE WITNESS: I think I just answered
10 that. You're requesting information from that
11 device, from that node. And so that is a
12 request followed by a reply, and the reply is
13 the probe.

14 BY MR. KRONENTHAL:

15 Q. Does the request have to include data that
16 asks for the reply?

17 MR. BLAIR: Objection to scope.

18 THE WITNESS: Include data that asks for
19 the reply? No, because the probe is issued as a
20 result of the request.

21 BY MR. KRONENTHAL:

22 Q. Would it be okay if the request had a
23 parameter that indicated to the node to send back the
24 probe?

25 MR. BLAIR: Objection to scope.

1 THE WITNESS: I can't comment on that.
2 That's something that wasn't in the scope of
3 what I looked at.

4 BY MR. KRONENTHAL:

5 Q. All right. Let's look at that
6 paragraph 47 again, where you define "probe."

7 A. Okay.

8 Q. How did you arrive at this construction?

9 A. Based on the patent. The patent language.

10 Q. Any particular language?

11 A. Yes. If you look at paragraph 49, you
12 read the patent explains that "Probes are sent
13 between nodes of the network in order to allow the
14 receiving node on the network to determine some of
15 the characteristics of the channel between the
16 receiving node and the transmitting node."

17 And the patent refers to these probes as
18 channel assessment probes and how they can be used to
19 diagnose problems in the network. So that's
20 primarily where I derive them from.

21 And also, as I cite, the claiming of the
22 probe, as I said here -- and that's what I'm
23 suggesting that this is, the plain meaning of a
24 probe -- is supported by the three previous uses of
25 the probe that I cite here in these patents, which

1 are four physical layer probes.

2 Q. Okay. Thank you.

3 And in paragraph 47, at the very end
4 there, it says -- you define the probe as referring
5 to, quote, "a particular kind of signal or message
6 having a form used to characterize the communication
7 channel between the two nodes," end quote. Right?

8 A. Yes.

9 Q. So I have a question about the word "form"
10 in that definition. This implies how the message is
11 generated, correct?

12 A. No, it refers to the message itself. The
13 probe itself has a form, not how it's generated.

14 And if I look at paragraph 48, and go
15 about halfway down, I think Mr. Bertoni agreed with
16 that.

17 Q. The word "form" has special meaning in
18 this '690 patent, correct?

19 MR. BLAIR: Objection to form.

20 THE WITNESS: I don't know what you mean
21 by "special meaning."

22 BY MR. KRONENTHAL:

23 Q. That's fair.

24 Let's go to Column 2 of the patent.

25 We talked about this earlier. In

1 Column 2, starting at line 3, that sentence, "The
2 receiving node." If you could read that sentence.

3 A. "The receiving node may generate a probe
4 request that specifies a plurality of parameters to
5 be used in such a receiver determined probe to
6 generate a probe having the form specified by these
7 parameters."

8 Q. So is your use of the word "form" in your
9 definition for "probe" the same as the use of the
10 word "form" in Column 2?

11 A. Yes.

12 Q. What if we removed the words "having a
13 form" from your definition in paragraph 47; would you
14 agree with that definition?

15 MR. BLAIR: Object to the form.

16 THE WITNESS: Yes. I would object to
17 removing the word "form."

18 BY MR. KRONENTHAL:

19 Q. So you would not agree to a definition of
20 the term "probe" to be a particular kind of
21 message -- I'm sorry. Let me withdraw.

22 You would not agree to a definition of a
23 "probe" to be a particular kind of signal or message
24 used to characterize a communication channel between
25 the two nodes?

1 A. Well, let me be very specific. As I said,
2 this was with regards to the '690 patent, the
3 definition of the probe. And the form is an
4 essential part of the definition of the probe and the
5 uniqueness of the '690 patent.

6 Q. So in your view, those words "having a
7 form" are important to the definition of "probe"?

8 A. Yes.

9 Q. If we go to paragraph 58.

10 A. Okay. I'm there.

11 Q. Great. And paragraph 58 deals with your
12 definition for the physical layer probe, correct?

13 A. Correct.

14 Q. Are all probes also physical layer probes?

15 A. Not necessarily.

16 Q. A physical layer probe relates to the
17 physical layer, correct?

18 A. Correct.

19 MR. BLAIR: Objection to form.

20 THE WITNESS: Sorry. It -- as I said in
21 my response in paragraph 56, a POSITA would
22 understand that a physical layer probe is a
23 probe that characterizes attributes of the
24 physical communications layer.

25

1 BY MR. KRONENTHAL:

2 Q. The physical layer is the bottom layer of
3 the OSI model, correct?

4 A. Yes. So it would be the coaxial cable,
5 the radio frequency, physical medium, the fiber optic
6 medium, the communications channel.

7 Q. There's seven layers in the OSI model,
8 correct?

9 A. Correct.

10 Q. Could there be probes between upper layers
11 of the OSI model?

12 A. In the -- in the context of the
13 '690 patent and what we're speaking about here, these
14 relate to the communications channel. And so the
15 upper layers of the OSI model don't refer to the
16 communications channel.

17 Q. Yes. So in the context of the
18 '690 patent, we're dealing with physical layer
19 probes, correct?

20 A. Not only, but it has to be associated with
21 the communications channel itself.

22 Q. It's not dealing with probes between
23 application layers of two different devices, correct?

24 A. Right. Correct.

25 Q. So there could be probes between

1 application layers, but those are not the probes
2 we're dealing with in this '690 patent?

3 A. Correct.

4 Q. So I want to look at that very last line
5 of that paragraph 58, where you provide the
6 definition for "physical layer probe."

7 It says "A signal or message having a form
8 used to characterize the communication channel's
9 physical communication layer attributes."

10 Did you mean to say that it characterizes
11 the attributes? Or did you mean to say that it
12 characterizes the channel?

13 MR. BLAIR: Objection to form.

14 THE WITNESS: It's the physical
15 communication layer attributes of the channel.

16 So we have the channel, and the channel
17 goes across the medium. We characterize both.
18 In one case we characterize the channel; in
19 another case we can characterize the physical
20 communications layer attributes of the channel.
21 It's still a communications channel between two
22 points.

23 BY MR. KRONENTHAL:

24 Q. Yeah, I think my question's kind of more
25 simple than that.

1 A. Sorry.

2 Q. I'm wondering about the use -- the
3 location of the word "attributes" in your definition.
4 Did you mean it to be at the end, or was it that the
5 attributes are used to characterize the communication
6 channel's physical layer?

7 A. It's the attributes of the physical
8 communications layer for that channel.

9 Q. Does the signal or message have to have
10 the attributes in the data to characterize the
11 channel?

12 MR. BLAIR: Objection to form.

13 THE WITNESS: Perhaps let me explain to
14 you in a different way that makes it clearer.

15 A channel in one portion of the spectrum,
16 or the physical communications layer, could
17 behave differently in one part of the spectrum
18 versus another part of the spectrum for a
19 similar channel. And so therefore,
20 understanding the physical communications layer
21 attributes is key.

22 BY MR. KRONENTHAL:

23 Q. Could you give me an example of a physical
24 communication layer attribute?

25 A. Sure. In a cable TV system, I have a

1 channel that's being transmitted. And it's going in
2 fine, but there's a dent in the cable somewhere which
3 is causing an attenuation, and I want to be able to
4 understand where that is and what's going on with it.

5 So I learn the physical attribute layer --
6 the physical communications layer attributes for that
7 channel. So I understand from my channel how my
8 channel is working; from the physical layer probe, I
9 understand how the underlying physical layer is
10 working.

11 Q. Yes. And so we're in agreement that the
12 probe wouldn't have to include the information that
13 there is a dent, correct?

14 Let me withdraw it.

15 A. That's kind -- yeah.

16 Q. The probe doesn't have to say that there
17 is a dent. The probe can be used to determine that
18 there is a dent?

19 A. Yes.

20 MR. KRONENTHAL: Okay, let's break for
21 lunch, then. Thank you.

22 We can go off the record.

23 (A luncheon recess transpired

24 from 12:03 p.m until 12:50 p.m.)

25 //

1 (Exhibit 1013 was marked for identification.)

2 BY MR. KRONENTHAL:

3 Q. Okay, Mr. Holobinko, I'm handing you what
4 is Exhibit 1013. Do you recognize this?

5 A. Yes.

6 Q. What is it?

7 A. The 802.16 standard communications.

8 Q. And it's commonly referred to as "WiMAX,"
9 correct?

10 A. WiMAX, yes.

11 Q. Would it be okay if we refer to it as
12 WiMAX for this deposition?

13 A. Yes.

14 Q. Great. Thank you.

15 And I -- you still have your declaration,
16 right?

17 A. Yes, I do.

18 Q. Could we go to paragraph 63?

19 A. Yes.

20 Q. You're already there? Great.

21 A. Just happened to be there.

22 Q. In paragraph 63, you opined that "WiMAX's
23 ranging response message is not a probe." Correct?

24 A. Correct.

25 Q. And that opinion is based on your claim

1 construction in paragraph 47, correct?

2 MR. BLAIR: Object to the form.

3 THE WITNESS: It's based on WiMAX and
4 Mr. Bertonis's claim that the ranging -- ranging
5 response message is a probe, and how WiMAX
6 defines the purpose of the ranging procedure.

7 BY MR. KRONENTHAL:

8 Q. Okay. I think my question was more
9 simple.

10 A. I'm sorry.

11 Q. I was just asking if your opinion is that
12 WiMAX's ranging response is not a probe under your
13 definition of "probe" in paragraph 47.

14 A. That is correct. My judgment is that it
15 doesn't constitute a probe under that paragraph 47.

16 Q. You did not give an opinion whether
17 WiMAX's ranging response meets a different definition
18 for "probe," correct?

19 A. That is correct.

20 Q. In paragraph 64, you say "WiMAX's ranging
21 procedure does not characterize the channel, but
22 rather negotiates parameters for messages to be
23 communicated over the channel." Is that right?

24 A. That's correct.

25 Q. Is it your understanding that probing does

1 not involve negotiating parameters?

2 A. No, it's that probing is used to
3 characterize the channel, and WiMAX's ranging doesn't
4 characterize the channel.

5 Q. Can probing involve negotiating
6 parameters?

7 A. A POSITA would not think of probing as --
8 as the purpose of probing to negotiate parameters.

9 Q. So you used the word "purpose" in your
10 answer, and that's not exactly what I was getting at.
11 What I'm wondering is if probing can include
12 parameters that are used to make adjustments.

13 A. In the context of '690, no. Because '690
14 defines the form of the probe and the probe that
15 comes back.

16 Q. Does your definition for the term "probe"
17 exclude using parameters in the probe to make
18 adjustments?

19 MR. BLAIR: Object to the form.

20 THE WITNESS: Yes. Because making
21 adjustments is not part of characterizing the
22 communications channel.

23 BY MR. KRONENTHAL:

24 Q. And in your opinion, characterizing the
25 communications channel explicitly excludes using any

1 parameters for negotiating power level or timing?

2 A. That --

3 MR. BLAIR: Object to the form.

4 THE WITNESS: That is a completely
5 different question you're asking.

6 BY MR. KRONENTHAL:

7 Q. Does your definition of the term "probe"
8 exclude using adjustment parameters?

9 MR. BLAIR: Object to the form.

10 THE WITNESS: If the adjustment parameters
11 were used in response to a first probe to create
12 a second probe, and therefore gain more
13 information about the communications channel in
14 the same way that the first one was done, it
15 would be included. But on their own, the way
16 you pose them, it would be excluded, because it
17 doesn't have anything to do with the
18 communications channel.

19 BY MR. KRONENTHAL:

20 Q. Is there a portion of the '690 patent that
21 you could point me to that excludes using adjustments
22 in the probe?

23 A. No, and I didn't say that.

24 THE WITNESS: Sorry.

25 MR. BLAIR: It's fine.

1 BY MR. KRONENTHAL:

2 Q. Let's look the bottom of paragraph 64 of
3 your declaration -- oh, I'm sorry; it's at the bottom
4 of page 23, but it's in paragraph 64 of your
5 declaration. That last part that starts with
6 "Specifically."

7 A. Uh-huh.

8 Q. If you could just read that.

9 A. "Specifically, 'ranging is the process of
10 acquiring the correct timing offset and power
11 adjustments such that the SS'" -- which is the
12 subscriber station -- "'subscriber station's
13 transmissions are aligned to a symbol that marks the
14 beginning of a minislot boundary in the cell station
15 and at the Sca PHY -- the SC and the Sca PHY are
16 aligned with the base station receive frame for OFDM
17 and OFDM PHY and received within the appropriate
18 reception thresholds.'"

19 Q. Is it your understanding that WiMAX's
20 ranging response includes only parameters for
21 adjusting the timing and power?

22 A. The response can include some other
23 parameters about the channel as well. But those
24 parameters are not determined by the ranging process.

25 Q. Let's go to page 35 of the WiMAX

1 specification.

2 Are you there?

3 A. Yes.

4 Q. Great. Figure 18 shows the format for a
5 MAC PDU, correct?

6 A. Correct.

7 Q. It includes a generic MAC header, correct?

8 A. Yes.

9 Q. It also includes a payload, correct?

10 A. An optional payload, yes.

11 Q. Let's turn to page 42. And specifically,
12 I'm looking at the bottom, that Section 6.3.2.3,
13 "MAC management messages."

14 A. Yes.

15 Q. MAC management messages are messages in
16 the payload of the MAC PDU we just discussed,
17 correct?

18 A. Correct.

19 Q. And page 43 has a Table 14, with a listing
20 of MAC management messages, correct?

21 A. Correct.

22 Q. The ranging request is on the list,
23 correct?

24 A. Correct.

25 Q. In the leftmost column for the row with

1 the ranging request, it says the ranging request
2 message is identified as Type 4. Correct?

3 A. Yes.

4 Q. And below the ranging request, there's the
5 ranging response, correct?

6 A. Correct.

7 Q. And in the leftmost column, that's a
8 Type 5 message, correct?

9 A. Correct.

10 Q. And in the rightmost column, for both the
11 ranging request and ranging response, it indicates
12 the connection as being either the initial ranging or
13 basic connection, correct?

14 A. Correct.

15 Q. This connection, indicating initial
16 ranging or basic, is describing that the base station
17 and subscriber station use the same basic connection
18 for communicating the ranging messages back and
19 forth. Correct?

20 A. I need for you to repeat that. I don't
21 believe that's correct, but I want to hear it again.

22 MR. KRONENTHAL: Could you repeat the
23 question?

24 (Whereupon the Court Reporter read the
25 previous question.)

1 THE WITNESS: No, they don't tell you
2 about the connection. This is a message across
3 the connection, but it doesn't tell you anything
4 about the connection.

5 BY MR. KRONENTHAL:

6 Q. It just tells you that they used the same
7 connection, correct?

8 A. No. The UCD and the DCD, zero and one,
9 tell you about the uplink and the downlink,
10 independent of the range request and the range
11 response.

12 Q. Yes, the UCD message and DCD messages
13 describe the different parameters for the uplink and
14 downlink channels, correct?

15 A. Correct.

16 Q. And the connection in the rightmost
17 column, that's not referring specifically to the --
18 withdrawn.

19 In the rightmost column, where it says
20 initial ranging or basic, that indicates that the
21 ranging request uses the initial ranging or basic
22 connection, correct?

23 A. Incorrect. It says that the range request
24 can be used for the initial ranging or basic ranging
25 over time. Or both.

1 Q. Lets go to page 49.

2 On page 49, there's a Table 19. This
3 shows the format for the ranging request message,
4 correct?

5 A. Correct.

6 Q. Shows that the ranging request includes
7 three parts, correct?

8 MR. BLAIR: Object to the form.

9 THE WITNESS: No. Oh. No, it just --
10 these are attributes of it, but it doesn't say
11 that the message is those. Because if you go
12 back, the message -- as you did in your first
13 illustration -- is a MAC message.

14 BY MR. KRONENTHAL:

15 Q. Okay.

16 A. Okay? Just to be technically correct.

17 Q. No, I understand. That's good. Thank
18 you.

19 Okay, so let me ask this: The ranging
20 request message format includes the management
21 message type, correct?

22 A. Correct.

23 Q. The "management message type equals 4"
24 identifies this message as being a ranging request
25 message, correct?

1 A. Correct.

2 Q. This ranging request message also includes
3 the downlink channel ID, correct?

4 A. Right.

5 Q. And the ranging request message also
6 includes TLV-encoded information, correct?

7 A. Yes.

8 Q. And these three -- I call them "parts";
9 the management message type, downlink channel ID, and
10 TLV-encoded information -- are part of the payload
11 for that MAC message, correct?

12 A. If they're in the TLV, then they're part
13 of the payload, yes.

14 Q. You said "If they're in the TLV, they're
15 part of the payload"?

16 A. Yeah.

17 Q. The TLV is one of those parts of the
18 payload for the MAC PDU, correct?

19 A. Yes.

20 Q. And the download channel ID is another
21 part, separate from the TLV information, but also
22 part of the MAC PDU, correct?

23 A. I think you may be correct, but I'd have
24 to look that up again.

25 Q. My understanding is the "management

1 message type equals 4" is another part of that
2 payload for the MAC PDU; is that correct?

3 A. No, the MAC management message type, from
4 Figure 21, is before the MAC message -- management
5 message payload. So the type would be the management
6 message type, which is probably your first 8 bits.

7 Q. So that part is in the header of the MAC?

8 A. Yeah.

9 Q. The TLV-encoded information, that's part
10 of the payload of the MAC PDU?

11 A. Yes.

12 Q. The "management message type equals to 4"
13 tells the base station that the message is arranging
14 a request message, correct?

15 A. Correct.

16 Q. That lets the base station know to send a
17 ranging response message, correct?

18 A. When you say it lets it know, it responds
19 to the message, as you -- as you said, to -- it
20 responds to it. Doesn't let -- maybe it's parsing
21 words, but I think there's a big difference.

22 It's what in telecommunications we would
23 call an ACK-NAC, okay? The ranging request is the
24 request, and the -- and the acknowledgment is the
25 ranging response.

1 Q. And the management message type being
2 equal to 4 is what the base station is going to use
3 in order to determine that it's going to send the
4 ranging response message?

5 MR. BLAIR: Object to form.

6 THE WITNESS: It's going to use that to --
7 excuse me.

8 MR. BLAIR: She's got it. Go ahead.

9 THE WITNESS: It's going to know what
10 operation to do, based on that.

11 BY MR. KRONENTHAL:

12 Q. And we're still looking page 49 with the
13 ranging request message?

14 A. Yes.

15 Q. That TLV-encoded information, that can
16 include variable information, correct?

17 A. It can include other parameters, as
18 defined in 11.5 in the specification. It says
19 downlink channel and -- and so there are a number of
20 different attributes that can be put in there, but
21 none that I've seen that relate to the channel
22 itself, or the quality of the channel.

23 Q. And you understand we're still talking
24 about the ranging request message, correct?

25 A. Yes.

1 Q. So in the TLV information for the ranging
2 request message, it could include the requested
3 downlink burst profile, correct?

4 A. Correct.

5 Q. And in the TLV-encoded information of the
6 ranging request message, it could include the SS MAC
7 address, correct?

8 A. Yes. And just going back -- excuse me --
9 to the burst profile, the burst profile is related to
10 timing, which is what I said in my response, that the
11 range request does, is it's coordinating timing, so
12 that things are coordinated at the beginning of that
13 burst.

14 Q. And the downlink channel ID that's in the
15 ranging request message, that lets the base station
16 know what downlink channel had a UCD message that
17 caused the ranging request to be sent in the first
18 place, correct?

19 A. Incorrect. It's not that it caused it to
20 be sent, but it is the downlink channel ID that it
21 was using. That's all that says. "I'm using this
22 downlink today; so if you update me, update this
23 downlink channel ID." Update the same one.

24 Q. But the downlink channel ID came from the
25 UCD message, correct?

1 A. It came --

2 MR. BLAIR: Objection to form.

3 THE WITNESS: It came as a result of
4 negotiations, and ultimately through the UCD,
5 yes, as a part of the connection process.

6 BY MR. KRONENTHAL:

7 Q. Do you see on -- like midway on page 49,
8 it gives -- it shows the downlink channel ID, and
9 then it kind of gives -- I guess, for lack of a
10 better term -- like a definition of it there, the
11 identifier of the downlink channel? Is that
12 accurate, that --

13 A. Yeah, that's accurate. I just added to
14 that, that that's not -- that's done after
15 negotiations during the initialization process. So
16 the initialization process takes place. It's decided
17 on in UCD tolls, then the channel that it should be
18 operating on.

19 Q. Okay. So you don't take issue with any --

20 A. No.

21 Q. -- with the description of what's there?

22 A. Right.

23 Q. Okay. Let's turn the page, to page 50,
24 the WiMAX specification.

25 Here we see a Table 20 showing the ranging

1 response format, correct?

2 A. Uh-huh. Yes. Sorry about that.

3 Q. And the ranging response message includes
4 a management message type equal to 5, correct?

5 A. Correct.

6 Q. And the management message type equal to 5
7 tells the subscriber station that the message it just
8 received is a ranging response message, correct?

9 A. Correct.

10 Q. And the ranging response message also
11 includes an uplink channel ID, correct?

12 A. Correct.

13 Q. And the uplink channel ID lets the
14 subscriber station know what uplink channel was used
15 for the ranging request that this ranging response is
16 responding to, correct?

17 A. I don't believe so. I believe that
18 the range response tells the station what uplink
19 channel ID it should be working on. The identifier
20 of the uplink channel on which the base station
21 received the range request in which this response
22 refers. So I defer on that. That's what that is.

23 Q. Oh, correct. So we can agree --

24 A. Yes, yeah.

25 Q. -- that that --

1 A. -- we can agree.

2 Q. -- is a good characterization of what
3 that --

4 A. Yes.

5 Q. -- uplink channel ID does?

6 A. Yes.

7 Q. Does the ranging response message need to
8 include the uplink channel ID?

9 MR. BLAIR: Objection. Scope.

10 THE WITNESS: It would appear that it
11 minimally, yes, needs to include the uplink
12 channel ID.

13 BY MR. KRONENTHAL:

14 Q. Without the uplink channel ID, the ranging
15 process might not work correctly, right?

16 MR. BLAIR: Objection. Scope.

17 THE WITNESS: The specification doesn't
18 discuss that. It just says that this is the
19 format of the message.

20 BY MR. KRONENTHAL:

21 Q. Does the uplink channel ID help the
22 subscriber station recognize the ranging response
23 message as being a response to the ranging request
24 message it previously sent?

25 MR. BLAIR: Objection to form.

1 THE WITNESS: No. Because it only
2 identifies the channel, and there are multiple
3 subscriber stations on the channel, so that the
4 way that you would know that you're going to a
5 particular station is through the CID.

6 BY MR. KRONENTHAL:

7 Q. The subscriber station can send out
8 ranging request messages on different uplink
9 channels, correct?

10 MR. BLAIR: Objection. Scope.

11 THE WITNESS: The UCD tells the subscriber
12 station what channels it can use. So when you
13 say "different," it would have to be defined by
14 the UCD, in my opinion.

15 BY MR. KRONENTHAL:

16 Q. Okay. Yeah. So the UCD could send one
17 channel ID that the subscriber station uses for one
18 probe request at one time, and then later the UCD
19 could send another channel ID that the -- that the
20 subscriber station uses for another probe request.
21 Correct?

22 MR. BLAIR: Objection. Scope.

23 THE WITNESS: I don't have an opinion on
24 that.

25

1 BY MR. KRONENTHAL:

2 Q. Do you think that the ranging request
3 message is always sent on the same uplink channel?

4 MR. BLAIR: Objection. Scope.

5 THE WITNESS: The ranging request message?

6 BY MR. KRONENTHAL:

7 Q. Yes.

8 A. Is always sent on the same up --

9 So on page 49 in the specification, where
10 it talks about the downlink channel ID, it says "the
11 identifier of the downlink channel on which the
12 subscriber station receives the UCD, describing the
13 uplink on which this ranging request is to be
14 transmitted."

15 And so it would take a separate UCD
16 somehow. But I don't see a way of defining a
17 separate channel for those requests versus the
18 channel that's used for normal communications. I
19 don't see a mechanism here that defines that.

20 Q. You agree that a subscriber station
21 doesn't just send a -- one ranging request message,
22 correct?

23 A. I agree.

24 Q. A subscriber station can send multiple
25 ranging request messages, correct?

1 A. When you mean "multiple" -- over a period
2 of time, yes.

3 Q. And a subscriber station could send a
4 first ranging request message with one channel ID,
5 and a second ranging request message with another
6 channel ID. Correct?

7 MR. BLAIR: Objection. Scope.

8 THE WITNESS: As I stated, according to
9 the specification and what's written here, it
10 would first need to have a different UCD, which
11 would change all of its traffic to the second
12 channel.

13 So it couldn't -- I don't see in the
14 specification how it could be on two channels at
15 the same time, if that's what you're driving
16 towards.

17 BY MR. KRONENTHAL:

18 Q. No, I'm talking about two different uplink
19 channels, sending the ranging request message on two
20 different uplink channels.

21 A. Yeah.

22 MR. BLAIR: Objection. Scope.

23 THE WITNESS: Yes.

24 BY MR. KRONENTHAL:

25 Q. It could do that?

1 A. To -- to the same base station?

2 Q. To two different base stations.

3 A. It would somehow have to be in negotiation
4 with two different base stations at the same time.

5 Q. Okay. Let's look at Table 20 --

6 A. Okay.

7 Q. -- again.

8 So just to be clear, I'm at Table 20.

9 That's the ranging response message format on page 50
10 of the WiMAX standard, right?

11 A. Yes.

12 Q. It also includes TLV-encoded information,
13 correct?

14 A. Yes.

15 Q. And there can be a number of parameters in
16 that TLV-encoded information, correct?

17 A. Correct.

18 Q. And this TLV-encoded information is part
19 of the payload for the MAC PDU, correct?

20 A. Correct.

21 MR. BLAIR: Objection to form.

22 THE WITNESS: Correct.

23 BY MR. KRONENTHAL:

24 Q. Let me clarify my question.

25 The TLV-encoded information in the ranging

1 response message can be part of the MAC PDU payload,
2 correct?

3 A. In -- part of the MAC PDU message payload,
4 yes.

5 Q. Maybe I misspoke, but I guess I'm -- the
6 realtime shows I said "ranging request," but we're
7 talking about the ranging response. So maybe -- let
8 me ask the same question.

9 A. Yeah, okay.

10 Q. The TLV-encoded information in the ranging
11 response message can be part of the MAC PDU payload,
12 correct?

13 A. Correct.

14 Q. And the TLV-encoded information includes
15 multiple parameters, correct?

16 A. Correct.

17 Q. One of the parameters in the TLV-encoded
18 information is the ranging status, correct?

19 MR. BLAIR: Objection to form.

20 THE WITNESS: You're referring to
21 Table 20?

22 BY MR. KRONENTHAL:

23 Q. Yes. Below the table, where it says "The
24 following parameters shall be included in the ranging
25 response message," and it lists the ranging status.

1 That ranging status can be part of the TLV-encoded
2 information of the ranging response, correct?

3 A. I'm sorry, I don't see the ranging status
4 here.

5 Q. Right below the Table 20.

6 A. Yes. "The following parameters" -- oh,
7 geez, right there in my -- sorry about that.

8 The ranging status, the first one.

9 Q. Okay. So I'll reask my question.
10 The ranging response message has
11 TLV-encoded information, which can include the
12 ranging status, correct?

13 A. Correct.

14 Q. And the TLV-encoded information of the
15 ranging response message could also include other
16 parameters, such as the timing adjust information and
17 power adjust information, correct?

18 A. Yes.

19 MR. BLAIR: Objection to form.

20 BY MR. KRONENTHAL:

21 Q. Let's go to paragraph 75 of your
22 declaration.

23 Okay. This section -- well, there's a
24 section -- paragraph 75 is the first paragraph of a
25 Section 4, correct? And that Section 4 discusses the

1 feature that's in Claim 11. Correct?

2 A. Correct.

3 Q. Claim 11 has a feature of transmitting two
4 probes simultaneously using OFDMA, correct?

5 A. Correct.

6 Q. About halfway through the paragraph 75,
7 there is a sentence starting with the word
8 "According." Do you see that?

9 A. Yes.

10 Q. Okay. Could you read that sentence and
11 the sentence that follows it?

12 A. Yes.

13 Q. You don't have to read it out loud,
14 but . . .

15 A. Oh, okay.

16 Okay. I've read them.

17 Q. So your argument is that WiMAX does not
18 show that the two ranging responses are transmitted
19 simultaneously; you're not arguing that the two
20 ranging responses would have been sent, correct?

21 MR. BLAIR: Objection to form.

22 THE WITNESS: I'm not -- I'm just
23 suggesting that in the standard, as a normal
24 thing, it does not specify that. Whether or not
25 that's possible I think is not germane to the

1 argument here.

2 BY MR. KRONENTHAL:

3 Q. So you emphasize the word "simultaneously"
4 at the end of that paragraph 75, correct?

5 A. Correct.

6 Q. And that's because you're arguing that the
7 two ranging responses would not be transmitted
8 simultaneously, correct?

9 MR. BLAIR: Objection to form.

10 THE WITNESS: No, my argument is that
11 there's nothing within WiMAX that calls for the
12 capability for them to be transmitted
13 simultaneously. And as I say in paragraph 76,
14 talk about that it -- if they're at the -- at
15 the same time, it's coincidental, but not a
16 planned capability, as is OFDMA.

17 BY MR. KRONENTHAL:

18 Q. So you just referred to paragraph 76, I
19 think more -- so let's look at those last two
20 sentences of that paragraph. I think that's what you
21 were referring to.

22 A. Yes.

23 Q. Do you want to just take a second to read
24 those?

25 A. Yes.

1 Yes. I've read them.

2 Q. So your argument is that just because you
3 send two ranging requests does not mean that two
4 ranging responses would be sent simultaneously,
5 correct?

6 A. My argument is, within WiMAX, that there
7 is nothing to dictate that they be sent
8 simultaneously, and there's no mechanism for doing --
9 for doing so.

10 And further, there was nothing that would
11 suggest that -- though, as I say in the end of 76,
12 that either WiMAX would teach or suggest such a
13 scenario.

14 Q. Okay. I'm going to provide you with a
15 copy of Exhibit 1007.

16 (Exhibit 1007 was marked for identification.)

17 THE WITNESS: Okay.

18 BY MR. KRONENTHAL:

19 Q. Do you recognize this exhibit?

20 A. Yes.

21 Q. What is it?

22 A. It's the Waxman patent we referred to.

23 Q. Great. Could we agree to just refer to it
24 as "Waxman"?

25 A. Yes.

1 Q. Let's look at Figure 2.

2 So Waxman describes a station sending a
3 probe request, 221, correct?

4 MR. BLAIR: Objection to form.

5 THE WITNESS: Waxman describes sending a
6 message out, which he refers to as a probe,
7 which we wouldn't agree is -- I wouldn't agree
8 is a probe.

9 BY MR. KRONENTHAL:

10 Q. Okay. And I --

11 A. Just to be clear. I mean, just . . .

12 Q. Yes. I understand you have a dispute over
13 whether the probe response meets your definition of a
14 probe. Correct?

15 A. Give me one moment, please.

16 Okay. Thank you for your indulgence.
17 Would you ask the question again, please?

18 Q. So it's your opinion that the probe
19 response of Waxman does not meet your definition of a
20 probe as you defined it in paragraph 47, correct?

21 A. Correct. In my interpretation, this is
22 nothing but a message.

23 Q. Okay. And so back to my original question
24 from a couple of questions ago: The station in
25 Waxman sends a probe request, correct?

1 MR. BLAIR: Objection to form.

2 THE WITNESS: You could -- under -- Waxman
3 calls it a probe request.

4 BY MR. KRONENTHAL:

5 Q. Okay. And that probe request goes from
6 the station to the AP, correct?

7 MR. BLAIR: Objection to form.

8 THE WITNESS: Yes. I paused a section
9 because he calls it a station. Yes.

10 BY MR. KRONENTHAL:

11 Q. And the AP responds with a probe response.
12 Correct?

13 MR. BLAIR: Objection to form.

14 THE WITNESS: It provides a message
15 response that Waxman refers to as a probe
16 response, but I would not constitute as a probe
17 response.

18 BY MR. KRONENTHAL:

19 Q. Waxman's probe response is being sent
20 within a communication network, correct?

21 MR. BLAIR: Objection to form.

22 THE WITNESS: That and all messages are
23 sent within a communications network.

24 BY MR. KRONENTHAL:

25 Q. The communications network in Waxman is

1 similar to the types of communication networks
2 described in the '690 patent, correct?

3 MR. BLAIR: Objection to form.

4 THE WITNESS: It sends these messages over
5 a -- a physical communications network, yes.

6 BY MR. KRONENTHAL:

7 Q. And the '690 patent describes similar
8 physical communications networks, correct?

9 A. Correct.

10 Q. You would agree that Waxman is in the same
11 field of art as the '690 patent, correct?

12 A. No. When you define "field of art," the
13 field of art of the '690 is very specific to this
14 unique new type of probe request and probe. And
15 Waxman was in a basic data exchange between a data
16 station and a node, and not dealing with the
17 attributes of the communication channel,
18 characterizing the channel.

19 Q. So is it your opinion that the '690 patent
20 doesn't describe sending probe requests and probes
21 between nodes in a data communications channel?

22 MR. BLAIR: Objection to form.

23 THE WITNESS: No, I interpreted your
24 question to be very different than that.

25

1 BY MR. KRONENTHAL:

2 Q. I think that's right. I think you
3 interpreted my question as it was not meant. My
4 question -- let me withdraw that.

5 Does the '690 patent exclude using
6 communications networks as those described in Waxman?

7 MR. BLAIR: Objection. Scope.

8 THE WITNESS: No.

9 BY MR. KRONENTHAL:

10 Q. So Waxman's communication network would be
11 one example within the scope of the '690 patent,
12 correct?

13 A. Correct.

14 MR. BLAIR: Objection to scope.

15 THE WITNESS: Sorry.

16 BY MR. KRONENTHAL:

17 Q. Let's go to paragraph 37 of Waxman.

18 Did you find paragraph 37?

19 A. Yes.

20 Q. Did you want a minute to read it first?

21 A. Please.

22 Q. Okay.

23 A. Okay.

24 Q. So looking at the second sentence of
25 paragraph 37, says "The probe response may, for

1 example, include an indication acknowledging or
2 approving the request embedded in the probe request."
3 Correct?

4 A. Correct.

5 Q. Do you agree that the use of "may include"
6 means that other things could be included in the
7 probe response?

8 A. No. Not that sentence by itself, no.

9 Q. So you read that second sentence of
10 paragraph 37 as excluding any other data from the
11 probe response, other than an acknowledgment?

12 MR. BLAIR: Objection to form.

13 THE WITNESS: No. This doesn't talk about
14 the rest of the probe. It just says -- it just
15 refers directly to an indicator acknowledging or
16 approving the request embedded in the probe
17 request -- the request embedded in the probe
18 request.

19 BY MR. KRONENTHAL:

20 Q. And you said "the rest of the probe."

21 A. The -- in -- I didn't mean to say that. I
22 was trying to read directly from the patent.

23 Q. What were you reading?

24 A. From -- the fourth line down -- excuse me,
25 the -- yes.

1 "The probe response may, for example,
2 include an indication acknowledging or approving the
3 request embedded in the probe request."

4 Q. Yes. And that says that there would be a
5 "rest of the probe," to use your words, correct?

6 MR. BLAIR: Objection. Form.

7 BY MR. KRONENTHAL:

8 Q. Let me withdraw my question.

9 A. Okay.

10 Q. The -- you would agree that the use of
11 "may include an indication acknowledging or approving
12 the request" doesn't limit the probe response to only
13 including an acknowledgment, correct?

14 MR. BLAIR: Objection to form.

15 THE WITNESS: It doesn't say here that a
16 probe request, based on the language of this
17 part of the patent, that a probe response could
18 be fine without including or acknowledging the
19 request embedded in the probe request. It
20 doesn't say anything more than that.

21 BY MR. KRONENTHAL:

22 Q. Does it suggest that there would be a
23 "rest of the probe" response?

24 A. No, it just says that there's a response,
25 and the response may include this. It doesn't talk

1 about the form of the response in this paragraph.

2 Q. So I didn't really ask about the form of
3 the probe response. To be clear, I'm asking if the
4 second sentence of paragraph 37 describes that there
5 may be other data in the probe response in addition
6 to the indication acknowledging or approving the
7 request embedded in the probe request.

8 MR. BLAIR: Objection to form.

9 THE WITNESS: The -- that would be
10 conjecture on your part. I don't read that in
11 that sentence at all.

12 BY MR. KRONENTHAL:

13 Q. What about that sentence limits the probe
14 response to only including an indication
15 acknowledging or approving the request embedded in
16 the probe request?

17 MR. BLAIR: Objection to form.

18 THE WITNESS: It only says that -- it
19 doesn't say anything about the probe response,
20 other than it may or may not include this piece.
21 That's all the sentence says.

22 BY MR. KRONENTHAL:

23 Q. And if the indication is in the probe
24 response, and it acknowledges or approves the request
25 embedded in the probe request, what would it be

1 acknowledging or approving?

2 A. It would be acknowledging the message that
3 it got from the -- I'll use "the station," because
4 we're going back and forth between the patents; the
5 base station -- that it got that request from the
6 station.

7 Q. So it says "approving the request embedded
8 in the probe request." Correct?

9 A. It may include, but it doesn't say it must
10 include. So in specification forms, if must include,
11 then it would have to be included. But this implies
12 that it may not be included, that it's not a
13 requirement.

14 Q. And if it was included, would it be
15 approving the transmission scheme that was requested
16 in the probe request?

17 MR. BLAIR: Objection to form.

18 THE WITNESS: It would be acknowledging or
19 approve -- or approving, which might just mean
20 "You asked me to go to frequency 256. I'm on
21 frequency 256." That's the context of this.

22 BY MR. KRONENTHAL:

23 Q. In Waxman, the probe request is requesting
24 the AP to use a particular transmission scheme,
25 correct?

1 MR. BLAIR: Objection to form.

2 THE WITNESS: That's correct.

3 BY MR. KRONENTHAL:

4 Q. And the probe response may include an
5 indication that it approves the use of that
6 transmission scheme, correct?

7 A. Correct.

8 MR. BLAIR: Objection. Form.

9 THE WITNESS: Oh, excuse me.

10 But we don't know why. If I have four
11 antennas, and you tell me "I want you to use
12 five antennas," I can disapprove it. I don't
13 have five antennas. Has nothing to do with the
14 communications path.

15 BY MR. KRONENTHAL:

16 Q. Would approving it tell the station that
17 the AP has the requested number of antennas?

18 MR. BLAIR: Objection to form.

19 THE WITNESS: The patent, to my knowledge,
20 doesn't go into that level of detail.

21 MR. BLAIR: Counsel, I think we've been
22 going about an hour.

23 MR. KRONENTHAL: Sure.

24 MR. BLAIR: Do you have much more on this?

25 MR. KRONENTHAL: No, we can take a break.

1 We can take a break.

2 MR. BLAIR: Okay. Let's go off the
3 record, then.

4 (A recess transpired from 1:55 p.m. until
5 2:03 p.m.)

6 MR. KRONENTHAL: Okay, let's go back on
7 the record.

8 BY MR. KRONENTHAL:

9 Q. Waxman's probe request requests a
10 transmission scheme, correct?

11 MR. BLAIR: Objection to form.

12 THE WITNESS: It requests attributes of a
13 particular transmission scheme, yes.

14 I mean -- let me take that back. It
15 requests a transmission scheme. Sorry about
16 that.

17 BY MR. KRONENTHAL:

18 Q. Okay. Thank you.

19 And Waxman's probe response is transmitted
20 back to the station that sent the probe request,
21 correct?

22 MR. BLAIR: Objection to form.

23 THE WITNESS: Yes.

24 BY MR. KRONENTHAL:

25 Q. And the probe response indicates an

1 acknowledgment or approval of the probe request,
2 correct?

3 MR. BLAIR: Objection to form.

4 THE WITNESS: What Waxman calls a probe
5 response, yes. And what we would call -- I
6 would call a message and an acknowledgment.

7 BY MR. KRONENTHAL:

8 Q. Waxman's probe response is not a probe
9 related to the application layer, correct?

10 A. Correct. It's --

11 Q. Do you have -- sorry.

12 A. It's -- it's not a related -- let me stop.
13 Withdraw any further answer on that, yeah.

14 Q. Okay.

15 A. Sorry.

16 Q. And to be clear, when I said "application
17 layer," you understand the application layer to be
18 the top layer of the OSI model, correct?

19 A. Correct.

20 Q. Let's look at paragraph 94 of your
21 declaration.

22 So just to get your bearings here,
23 paragraph 94 is in that Section 4, that starts on
24 page 34 of your declaration.

25 A. Yes.

1 Q. I guess it's the second-to-last paragraph
2 in that section.

3 A. Yes.

4 Q. This paragraph 94 in your declaration is
5 discussing Claim 11's feature of transmitting two
6 probes simultaneously, using OFDMA, correct?

7 A. Correct.

8 Q. In the second sentence of paragraph 94,
9 you discuss Waxman's back-off mechanism, correct?

10 A. Yes.

11 Q. You cite there to Exhibit 1007, which is
12 Waxman paragraph 38, correct?

13 A. Yes.

14 Q. Okay. Let's go to Waxman's paragraph 38.
15 Do you want a minute to read it?

16 A. No, I have it. Thank you very much.

17 Q. So you see in paragraph 38 it refers to
18 Waxman's back-off mechanism, correct?

19 A. Correct.

20 Q. Waxman has this back-off mechanism because
21 there would have been situations where multiple APs
22 would have transmitted probe responses to a station,
23 correct?

24 MR. BLAIR: Objection to form.

25 THE WITNESS: Because multiple access

1 points could potentially transmit at the same
2 time to the station, thereby overlapping their
3 communications and not being understood by the
4 station.

5 BY MR. KRONENTHAL:

6 Q. Paragraph 38, in that very first line,
7 says that this back-off mechanism can be optional.
8 Correct?

9 A. Correct.

10 Q. What would happen if it didn't have this
11 back-off feature?

12 MR. BLAIR: Objection to form.

13 THE WITNESS: There was no way, using a
14 single channel, for two stations transmitting at
15 the same frequency at the same time to be
16 understood. So the -- there's a high likelihood
17 that those messages would be lost and have to be
18 retransmitted.

19 BY MR. KRONENTHAL:

20 Q. You said the messages would be lost. Is
21 it due to like collisions?

22 A. Well, collision is a -- is a word that
23 means multiple -- multiple things. In one sense, I'd
24 say yes, collision. But it's -- I can't use my hands
25 in this because we aren't on video -- that the two

1 signals are on top of each other with different data,
2 so the receiver can't discern the signal at all. It
3 sees -- it can't, potentially, understand either of
4 them. And so they would not -- they would have to be
5 retransmitted.

6 Q. And OFDMA would solve that problem,
7 correct?

8 MR. BLAIR: Objection to form.

9 THE WITNESS: OFDMA and access points
10 speaking to a base station would solve that
11 problem.

12 BY MR. KRONENTHAL:

13 Q. Waxman's paragraph 38 doesn't mention
14 OFDMA, though, correct?

15 A. No, it doesn't. And the purpose of OFDMA,
16 and the way it does it, is very different than a
17 back-off mechanism.

18 Q. Nothing in paragraph 38 of Waxman tells a
19 POSITA not to use OFDMA, correct?

20 MR. BLAIR: Objection to form.

21 THE WITNESS: Paragraph A implies to a
22 POSITA that you don't want to -- ever, if you
23 can -- transmit at the same time, because of the
24 problem that I said. So they wouldn't be
25 inspired at this time to try to do that. They

1 try to avoid it.

2 BY MR. KRONENTHAL:

3 Q. But you would agree that paragraph 38
4 doesn't specifically tell a POSITA not to use OFDMA,
5 correct?

6 A. Correct.

7 Q. I think we finally got through Waxman. So
8 if you could put that aside, I'm going to give you
9 another exhibit.

10 A. Are we through with the WiMAX book?

11 Q. What's that?

12 A. Are we through with the WiMAX book?

13 Q. Yes.

14 A. Thank you. It's just a big hunch that --

15 Q. You can put that aside.

16 I'm handing you Exhibit 1010.

17 (Exhibit 1010 was marked for identification.)

18 BY MR. KRONENTHAL:

19 Q. Do you recognize this?

20 A. Hmm. I think so. DOCSIS 2.0
21 specification. The service interface specifications,
22 to be more specific.

23 Q. Great. And can we agree to refer to it as
24 "DOCSIS," or "DOCSIS 2.0"? And if I want to refer to
25 any other -- different version of DOCSIS, I'll

1 specifically say so; but if we just say "DOCSIS,"
2 we'll be talking about Exhibit 1010?

3 A. Yes.

4 Q. Great. Thank you.

5 MR. BLAIR: And Counsel, just to be clear,
6 if you refer to DOCSIS 2.0, you're referring to
7 this -- the RFI spec?

8 MR. KRONENTHAL: Yes.

9 MR. BLAIR: Or DOCSIS 2.0 in general?

10 MR. KRONENTHAL: If I refer to "DOCSIS" or
11 "DOCSIS 2.0," I'm referring to Exhibit 1010.

12 BY MR. KRONENTHAL:

13 Q. Is that understood?

14 A. Yes.

15 Q. Thank you.

16 Do you understand that petitioner relies
17 on the UCD message in DOCSIS for the claimed probe
18 request?

19 A. Yes.

20 Q. If we could go to paragraph 98 of your
21 declaration.

22 A. I'm there.

23 Q. Okay. In the last sentence of
24 paragraph 98 of your declaration, you describe the
25 UCD message. Correct?

1 A. Yes.

2 Q. You want a second to read that message --
3 I'm sorry, that sentence? That last sentence?

4 A. I'm there.

5 Q. Okay. Do you see at the end of that, you
6 cite to DOCSIS, Exhibit 1010, pages 246 to 250?

7 A. Yes.

8 Q. Okay. Let's go to those pages.

9 A. Sure.

10 Q. So we can start at 246.

11 A. Okay.

12 Q. Are you there?

13 A. Yes.

14 Q. Okay. On page 246, there's a Figure 11-4.
15 Do you see that?

16 A. Yes.

17 Q. And Figure 11-4 shows messages being sent
18 from the CMTS to the CM, correct?

19 A. Correct.

20 Q. One of the messages is the UCD message,
21 correct?

22 A. Correct.

23 Q. Actually, there's a -- several UCD
24 messages that may be sent from the CMTS to the CM,
25 correct?

1 A. Well, they're sent periodically. The same
2 message is sent over and over again.

3 Q. When you say "the same message," though,
4 you mean the same message in the sense that it's the
5 UCD message, not necessarily the same parameters in
6 that UCD message. Correct?

7 A. No, that's incorrect. The majority of the
8 time, the UCD sends the exact same message with the
9 same parameters in it.

10 Q. Okay. So it's your understanding that
11 the UCD message doesn't change its parameters -- let
12 me -- withdrawn.

13 You understand that the UCD message is
14 sent periodically, correct?

15 A. Correct.

16 Q. And it's your understanding that those
17 periodic UCD messages are all the same, correct?

18 MR. BLAIR: Objection to form.

19 THE WITNESS: No. The -- the vast, vast
20 majority of the time, they're the same. And
21 there's a field in the UCD that indicates if
22 there's any change in the current UCD from the
23 last UCD; and if there isn't, it's discarded by
24 the modem and not even looked at.

25

1 BY MR. KRONENTHAL:

2 Q. Okay. So then you agree that the UCD
3 message can change over time, correct?

4 A. Correct.

5 Q. And Figure 11-4 shows other messages being
6 sent from the CMTS to the CM, correct?

7 A. Yes.

8 Q. For example, it shows the sync message --

9 A. Yes.

10 Q. -- correct?

11 A. Sorry. I'm so sorry.

12 Q. No problem.

13 It also shows the CMTS sending a map
14 message, correct?

15 A. Yes.

16 Q. And at the bottom right of Figure 11-4, it
17 says that -- "Start ranging process." Correct?

18 A. Correct.

19 Q. So let's turn to -- now let's start
20 looking at page 247. So the other -- if you recall
21 your cite in the deck, you cited from 246 to 250.

22 So these other pages, 247 to 250, relate
23 to the ranging, correct?

24 A. Yes.

25 Q. And that ranging that's discussed

1 on 247 to 250, that's the same ranging that's being
2 referred to at the bottom right of that Figure 11-4,
3 correct?

4 A. Yes.

5 Q. Let's go to page 135 of the DOCSIS
6 specification.

7 So page 135 is the start of the
8 description for the UCD message, correct?

9 A. Correct.

10 Q. And the next page, page 136, that includes
11 a Figure 8-16 that shows the UCD message format,
12 correct?

13 A. Correct.

14 Q. And the UCD message format, it includes a
15 MAC management message header, correct?

16 A. Yes.

17 Q. It shows it after that, including several
18 other parameters, one of those parameters being the
19 TLV-encoded information, correct?

20 A. Correct.

21 Q. And on page 137, there's a Table 8-18
22 showing channel TLV parameters, correct?

23 A. Yes.

24 Q. This is showing the channel TLV parameters
25 that were in that TLV-encoded information for the

1 overall channel from Figure 8-16, correct?

2 A. Yes.

3 Q. Have you seen this Table 8-18 before?

4 A. Yes.

5 Q. The table goes on for a few pages,
6 correct?

7 A. Yes.

8 Q. Okay. And on page 139, the table includes
9 a ranging required parameter. Do you see that?

10 A. Yes.

11 Q. And the table shows that the ranging
12 required parameter may include one of three different
13 values, correct?

14 A. Correct.

15 Q. And if the value is zero, then no ranging
16 is required, correct?

17 A. Correct.

18 Q. But if the value is 1 or 2, ranging is
19 required, correct?

20 A. Almost. If in the previous UCD the values
21 stay the same, then ranging -- then it will ignore
22 the UCD message.

23 So if you go back to page 136 and you go
24 back to the configuration change count, which is
25 described at the top of 137, okay? It says "If the

1 value of the count in the subsequent UCD" -- it's
2 incremented by 1 whenever any of the values in the
3 channel descriptor change. Okay? That's part of the
4 channel descriptor.

5 "If the value of this count in a
6 subsequent UCD remains the same, the cable modem can
7 quickly decide that the channel operating parameters
8 haven't changed and may be able to disregard the rest
9 of the message. The values also reference from the
10 map," which is the time slot mapper. Okay?

11 So you could have a system running for a
12 month with the value of 2 or 1 on that 29 field, and
13 it wouldn't ask for any new ranging requireds under
14 that. Ranging requireds are done by the cable modem
15 every so many seconds, periodically, and they don't
16 require a range request in terms -- to do that as a
17 result of this message.

18 So that's -- this message -- that field is
19 only for exceptions, for when you bring up a new
20 modem, or you make a change to the entire system.
21 That's not a -- every one to every one.

22 Q. So it's your opinion that not every UCD
23 message has a ranging required field, correct?

24 MR. BLAIR: Objection to form.

25 THE WITNESS: No. I'm saying that not

1 every range -- not every range response --
2 excuse me. Not every range -- give me -- give
3 me a second to be technically correct.

4 I'll do it the way this specification
5 calls for it. The operation of ranging is not
6 reliant upon a request from the UCD.

7 BY MR. KRONENTHAL:

8 Q. You would agree there are some situations
9 where the UCD message includes a ranging required
10 parameter that's equal to 1 or 2, that causes
11 ranging, correct?

12 MR. BLAIR: Objection to form.

13 THE WITNESS: If the parameter was changed
14 to 1 or 2, then it would cause that across all
15 of the modems that receive that message, because
16 this is a broad -- a UCD is a broadcast message.

17 But on an ongoing normal basis, no.

18 BY MR. KRONENTHAL:

19 Q. Let's turn to paragraph 101 of your
20 declaration.

21 You understand that petitioner relies on
22 the ranging request message in DOCSIS 2.0 for the
23 claimed probe, correct?

24 A. Yes.

25 Q. Let's see paragraph 102 of your

1 declaration.

2 In the second sentence of paragraph 102 of
3 your declaration, you emphasize the word "request."
4 Do you see that?

5 A. Yes.

6 Q. Is it your opinion that a request cannot
7 be a probe?

8 MR. BLAIR: Objection to form.

9 THE WITNESS: No, my opinion is that the
10 DOCSIS ranging request is not a probe.

11 BY MR. KRONENTHAL:

12 Q. If the ranging request message in
13 DOCSIS 2.0 was measured by the CMTS, would that
14 message be a probe then?

15 MR. BLAIR: Objection to form.

16 THE WITNESS: Not in the context of
17 the '690.

18 BY MR. KRONENTHAL:

19 Q. Your opinion that the ranging request of
20 DOCSIS 2.0 is not a probe relies on your claim
21 construction for the term "probe" as stated in your
22 declaration, correct?

23 MR. BLAIR: Objection to the form.

24 THE WITNESS: Relies on the patent, my
25 knowledge of a POSITA, and within the DOCSIS

1 specification, what it says the purpose of the
2 probe is -- excuse me, what the purpose of the
3 ranging request is for, which is for timing and
4 power. That's the stated purpose of it within
5 DOCSIS.

6 BY MR. KRONENTHAL:

7 Q. So in that sentence in paragraph 102 -- it
8 is the third sentence; it says "The ranging request
9 does not have a form used to characterize the channel
10 to the CMTS." Do you see that?

11 A. Yes.

12 Q. That refers to your claim construction for
13 probe, correct?

14 A. In part, correct, yes.

15 Q. Because the claim construction for probe,
16 as you have it in your declaration, the signal or
17 message has to have a form used to characterize the
18 channel, correct?

19 A. Correct.

20 Q. So when you're comparing the ranging
21 request of DOCSIS 2.0 to the claimed probe, you're
22 applying your claim construction for the term
23 "probe," correct?

24 MR. BLAIR: Objection to form.

25 THE WITNESS: Mine, which I suggest is the

1 plain and ordinary meaning of a probe.

2 BY MR. KRONENTHAL:

3 Q. You're not applying a different claim
4 construction, correct?

5 A. Correct.

6 Q. Let's look at Claim 1 of the patent. I
7 believe you still have the patent.

8 I'll give you a chance to read Claim 1 to
9 yourself for a minute or two.

10 A. Okay.

11 Q. Does Claim 1 require the probe to be
12 transmitted at any particular point in time?

13 A. No. It -- it requires that it is
14 transmitted after a specific probe request.

15 Q. Does Claim 1 prior the probe request to be
16 transmitted at any particular time?

17 A. No.

18 MR. BLAIR: Objection. Scope.

19 THE WITNESS: Sorry.

20 BY MR. KRONENTHAL:

21 Q. Claim 1 refers to a first node and a
22 second node, correct?

23 A. Correct.

24 Q. Do those nodes need to be in any
25 particular operation at the time that they send or

1 receive the probe?

2 MR. BLAIR: Objection to form.

3 THE WITNESS: Since the invention has to
4 do with characterizing a communications channel,
5 there at least has to be a communications
6 channel or a physical communications channel set
7 up between them. It can't be just two devices
8 without a connection.

9 BY MR. KRONENTHAL:

10 Q. Does Claim 1 require that either the first
11 or second node be in a normal operation mode?

12 MR. BLAIR: Objection to form.

13 THE WITNESS: The invention doesn't talk
14 about what is normal or not normal.

15 BY MR. KRONENTHAL:

16 Q. The invention doesn't talk about different
17 modes of operation, correct?

18 A. Correct. Because it's talking about the
19 physical layer and communications across the physical
20 layer, and characterizing the physical layer, not the
21 devices.

22 Q. And let's look at Claim 9 now.

23 A. Okay.

24 Q. I'll give you a minute to read all of
25 Claim 9 first.

1 A. Okay.

2 Q. Does Claim 9 require the probe request to
3 be sent at any particular time?

4 MR. BLAIR: Objection. Scope.

5 THE WITNESS: No, but it associates a --
6 both 1 and 9 associate a probe with a probe
7 request.

8 BY MR. KRONENTHAL:

9 Q. And other than that association, there's
10 no limitation relating to the timing of these probes
11 or probe requests?

12 MR. BLAIR: Objection to scope.

13 THE WITNESS: There's no limitation of
14 timing, but a POSITA would understand that if
15 you're trying to characterize a network, and
16 characterizing a transmission path, if you send
17 a request today, and you get a response
18 tomorrow, it's not very realistic. So there is
19 an inherent expectation of a reasonably short
20 period of time between the request and the
21 response.

22 BY MR. KRONENTHAL:

23 Q. Okay. Thank you.

24 And what about the -- so Claim 9 also has
25 a first and second node, correct?

1 A. Yes.

2 Q. Does Claim 9 indicate any particular
3 operation that those nodes need to be in?

4 MR. BLAIR: Objection to scope.

5 THE WITNESS: No, other than the fact that
6 they have to be communicating together.

7 BY MR. KRONENTHAL:

8 Q. So Claim 9 doesn't say whether or not they
9 have to communicate within a normal mode of
10 operation, correct?

11 MR. BLAIR: Objection to scope.

12 THE WITNESS: The transmission layer
13 doesn't know about normal modes of operation.
14 Those are device attributes.

15 BY MR. KRONENTHAL:

16 Q. Okay. Let's go to paragraph 110 of your
17 declaration.

18 You there?

19 A. Yes.

20 Q. So this paragraph 110 of your declaration
21 is in the section discussing DOCSIS 2.0's testing
22 procedure, correct?

23 A. Yes.

24 Q. And you're addressing the test response
25 from DOCSIS 2.0 in paragraph 110, correct?

1 A. Correct.

2 Q. Your opinion is that the test response in
3 DOCSIS 2.0 is not a probe, correct?

4 A. Correct.

5 Q. In paragraph 110, you argue that the test
6 response is not characterizing the channel because
7 the UCD message is. Correct?

8 A. The UCD is conveying the -- is
9 communicating them to the modem via the UCD. That's
10 different than what you said.

11 Q. Yes. So we agree that the UCD message can
12 communicate channel characteristics from the CMTS to
13 a CM, correct?

14 A. Right. But the UCD itself has nothing to
15 do with establishing those characteristics. That's
16 the contrast I'm making.

17 Q. Okay. But it's because of the UCD's
18 existence that you opine that the test response
19 message does not characterize the channel, correct?

20 A. That's incorrect.

21 MR. BLAIR: Objection to form.

22 THE WITNESS: That's incorrect. Saying
23 because the cable modem already knows that
24 information, because it's been relayed by that
25 message, not that the message derived that

1 information in any way.

2 BY MR. KRONENTHAL:

3 Q. So it's your opinion, because the UCD
4 message already relayed channel characteristics to
5 the CM, that the test response message would not
6 relay channel characteristics to the CM?

7 MR. BLAIR: Objection to form.

8 THE WITNESS: One of many things. That
9 statement is correct, but it is not complete.

10 BY MR. KRONENTHAL:

11 Q. Okay. But you would agree, that's one
12 aspect of your opinion -- withdrawn. Let me state
13 that differently.

14 You would agree that that's one reason for
15 your opinion, that the test response message is not a
16 probe?

17 A. That -- that is one reason, yes.

18 Q. Is it your opinion that a communication
19 system cannot have two probes?

20 MR. BLAIR: Objection to form.

21 THE WITNESS: No. A communication system
22 could have multiple probes.

23 BY MR. KRONENTHAL:

24 Q. Applying your definition of the term
25 "probe," could two different messages be probes?

1 A. Yes.

2 MR. BLAIR: Objection to form.

3 THE WITNESS: Yes, but the test response
4 message isn't a message. It's called a test
5 response message, but it's simply a bunch of
6 symbols, and it doesn't meet the definition of a
7 message, even under DOCSIS 2.0.

8 BY MR. KRONENTHAL:

9 Q. Okay. But you would agree that two
10 different messages can both characterize a channel,
11 correct?

12 A. If the messages are in the form of probes,
13 as defined. But two messages themselves, no, I don't
14 agree with that. Simply because messages are going
15 across a physical layer doesn't mean that they're
16 probes.

17 And Mr. Bertonis tried to initially argue
18 that, and then agreed that that wasn't the case.
19 Otherwise every message across every communication
20 system would be a probe, and that's incorrect.

21 Q. Is it your opinion that a communication
22 system cannot have two separate messages that
23 function as a probe?

24 MR. BLAIR: Objection to form.

25 THE WITNESS: I take issue with your

1 characterization of a message functioning as a
2 probe. A probe is a probe, and a probe can be a
3 message or a symbol.

4 Can you have two different probes in the
5 same network? Well, 690 certainly accounts for
6 that. I can define multiple different probes
7 within the '690 patent, but they all have the
8 same very distinct characteristics, including
9 the request for the probe followed by the probe
10 itself, and -- as we've covered before; I don't
11 have to repeat myself.

12 BY MR. KRONENTHAL:

13 Q. Let's look at page 134 of DOCSIS.

14 A. Okay.

15 Q. Page 134 has a Table 8-17 listing a number
16 of different MAC management message types. Correct?

17 A. Yes.

18 Q. The UCD message is the second message
19 listed in the table, correct?

20 A. Yes.

21 Q. And you argue that the test response is
22 not characterizing the channel because the UCD
23 message is characterizing the channel. Correct?

24 A. No.

25 MR. BLAIR: Objection to form.

1 THE WITNESS: No. You said that. I never
2 said that.

3 BY MR. KRONENTHAL:

4 Q. Does the UCD message characterize the
5 channel?

6 A. No. The CMTS characterizes the channel.
7 And the UCD is the message which conveys that
8 information to the modem.

9 Q. Can another message also convey the
10 channel characteristics to the modem?

11 A. Within -- within DOCSIS, that UCD is
12 defined as the way that the modem understands the
13 characteristics of the upstream channel. There's a
14 downstream channel descriptor and an upstream --
15 upscream -- easy for me to say.

16 Upstream channel descriptor.

17 Q. Have you considered whether any of the
18 other messages in Table 8-17 also characterize the
19 channel?

20 MR. BLAIR: Objection to form, and
21 objection to scope.

22 THE WITNESS: So none of the messages
23 characterize the channel.

24 BY MR. KRONENTHAL:

25 Q. Okay. Let me -- so you take issue with

1 the messages characterizing channel, right. So using
2 your wording, right, you want to use conveying
3 information that characterizes the channel. Is that
4 right?

5 A. Conveying information about the parameters
6 of the channel. So -- and why I use parameters
7 versus characteristics, a probe will tell you the
8 characteristics of a channel in terms of where
9 they're -- I could make a probe in 690 that tells me
10 where there's aberrations in that panel, where
11 there's issues with that channel.

12 The UCD can't tell me that. The UCD can
13 only tell me things that are about the physical
14 characteristics of the channel: My time slot is this
15 long. My acceptable power window is this much.
16 My frequency is this much. So it's those
17 characteristics.

18 And that's why I -- I use the term
19 differently than you use it. And I think it's a very
20 important distinction.

21 Q. Let's go to paragraph 107 of your
22 declaration.

23 A. Okay.

24 Q. You want a minute to read that paragraph?
25 You can just read it to yourself.

1 A. Okay.

2 Q. In about the middle of that paragraph, you
3 stated that "DOCSIS 2.0 does not explicitly state
4 what the testing process is used for." Correct?

5 A. Correct.

6 Q. Did you read all of DOCSIS 2.0?

7 A. Yes.

8 Q. In that same sentence -- that's in the
9 middle; I think it's the second sentence -- you said
10 "A POSITA would understand it is a basic test that
11 simply confirms the cable modem is capable of
12 transmitting 1s and negative 1s in the amplitude and
13 phase." Correct?

14 A. Correct.

15 Q. What basis do you have for that statement?

16 A. That's how the test is defined. It only
17 has two different levels. It can send out a series
18 of all 1s, or 1s and minus 1s, which is basically a
19 square wave.

20 Q. So you're referring to the test on
21 page 185 of DOCSIS 2.0?

22 A. Yes.

23 Q. And just to be clear, so like the -- where
24 it has for the node being equal to 1 -- and has
25 the 1, negative 1, 1, negative 1 -- that is a square

1 wave, correct?

2 A. Yes.

3 Q. I want to talk about the last sentence of
4 your paragraph 107.

5 Do you want to take a second to read that?

6 A. Yes.

7 Q. Your sentence includes the parenthetical
8 "as opposed to randomized." Correct?

9 A. Yes.

10 Q. You contrast that with an ordered set
11 of 1s and negative 1s. Correct?

12 A. Correct.

13 Q. Could a signal with a random set of 1s and
14 negative 1s be used to characterize the channel?

15 MR. BLAIR: Objection. Form.

16 THE WITNESS: Not really.

17 BY MR. KRONENTHAL:

18 Q. So in your opinion, whether it's an
19 ordered set or a randomized set, 1s and negative 1s
20 cannot be used to characterize the channel, correct?

21 MR. BLAIR: Objection to form.

22 THE WITNESS: Both -- so two things: It's
23 not a good way to characterize the channel,
24 that's correct. Because it doesn't tell you
25 anything -- a channel works over multiple

1 frequencies. And by its very nature, a square
2 wave, whether it's randomized or not, is in
3 essence a single frequency. So that gives you a
4 limited view.

5 Also the way the test is defined in
6 DOCSIS, it's a one-shot test. So it's only
7 available when you first turn on a modem, before
8 the modem gets its first sync command. After
9 that, it's disabled in the modem. And while
10 it's running in the modem, it's running
11 continuously across the channel. So what that
12 means is that any upstream, you're clobbering
13 service for every other modem on that channel.

14 So with all of those things combined, it's
15 unrealistic that it was used to characterize the
16 channel.

17 BY MR. KRONENTHAL:

18 Q. Okay. So in short, it's your opinion that
19 a square wave would not be usable to characterize the
20 channel?

21 A. Yes. It would not be sufficient to
22 characterize the channel.

23 MR. KRONENTHAL: I can't remember when we
24 started.

25 MR. BLAIR: I think we started a few

1 minutes after 1:00 -- or 2:00 o'clock. My
2 computer is on Central time.

3 MR. KRONENTHAL: Do you want a break?

4 MR. BLAIR: Yeah, okay.

5 MR. KRONENTHAL: We can take a break.

6 Off the record.

7 (A recess transpired from 3:00 p.m. until
8 3:06 p.m.)

9 BY MR. KRONENTHAL:

10 Q. We were just talking about that test mode
11 on page 185 of DOCSIS 2.0, correct?

12 A. Correct.

13 Q. And you testified that the test response
14 could be a square wave, correct?

15 A. Correct. At the modulation rates that are
16 prescribed in Table 8-22.

17 Q. And you testified that a square wave is
18 not usable for characterizing a channel, correct?

19 MR. BLAIR: Objection to form.

20 THE WITNESS: I testified that it is not a
21 useful form, because it doesn't -- it can't
22 characterize the entire channel, just a very
23 small portion of the spectrum.

24 BY MR. KRONENTHAL:

25 Q. Can the claim probe be a square wave?

1 MR. BLAIR: Objection to form.

2 THE WITNESS: The claim for a probe could
3 include a square wave as part of its -- as part
4 of its probe. No POSITA would ever do that, but
5 it could include that.

6 BY MR. KRONENTHAL:

7 Q. Let's turn to paragraph 110 of your
8 declaration -- I'm sorry -- yeah.

9 At the end of paragraph 110, you mentioned
10 that "The cable modem using periodic UCD messages."
11 Correct?

12 A. The channel characteristics will have been
13 communicated to the cable modem via the UCD message,
14 yeah.

15 Q. And UCD messages are sent periodically,
16 correct?

17 A. Yes.

18 Q. Why does the CMTS send UCD messages
19 periodically?

20 A. For any new modem that registers, it needs
21 to know the attributes of the channel. And if the
22 system operator decides to make a change in the
23 channel for all the modems, then it would update all
24 the modems by sending a new UCD command.

25 Q. Okay. Let's go to paragraph 108.

1 You want to take a second to read
2 paragraph 108?

3 A. Yes.

4 Q. In paragraph 108, you state that the test
5 procedure occurs before the normal operation,
6 correct?

7 A. Correct.

8 Q. Is the UCD message sent in the normal
9 operation?

10 MR. BLAIR: Objection to form.

11 THE WITNESS: This is referring to the
12 TST-REQ message, not to the UCD message.

13 BY MR. KRONENTHAL:

14 Q. Yes, I understand. And in
15 paragraph 108 --

16 A. Yes.

17 Q. -- you state that the test procedure
18 occurs before the normal operation. Correct?

19 A. No. If you want to do the TST-REQ
20 procedure, the only opportunity that you ever, ever
21 have to do it is before you start operation. And
22 that's referenced on page 185 in the DOCSIS 2.0 spec.

23 In the paragraph that starts out -- I'll
24 read it, because it's short: "In normal operation,
25 the cable modem must ignore any TST-REQ message it

1 receives subsequent to receiving the first sync
2 message. Note that this makes it less convenient to
3 use this test mode with a CMTS, since the CMTS may
4 send a sync message before the CM sees a TST-REQ
5 message."

6 So it's a -- as I said before, it's a
7 one-shot to test the modem, and that's it.

8 Q. Understood.

9 And just for the record, and so we agree,
10 that when you said "TST-REQ," it's R-E-Q, right?

11 A. Yes.

12 Q. So it's TST-REQ?

13 A. Thank you.

14 Q. And we're referring to the test-request
15 message, correct?

16 A. Yes.

17 Q. Okay. So we understand that the test
18 procedure occurs before the normal operation, though,
19 correct?

20 A. If one were to do that, do that test
21 procedure on that modem, you would do it before that
22 modem was connected and operating with the CMTS, or
23 in the first 20 seconds, until that -- when that
24 first sync comes down, you're done.

25 Q. Would you do that before the UCD message?

1 MR. BLAIR: Objection to form.

2 THE WITNESS: A UCD message is very
3 different. If I have a new modem that comes on,
4 it doesn't see a previous clock count on
5 the UCD, so it always reads the first one at
6 initialization.

7 After that, unless it changes, it's going
8 to ignore all the UCD messages, because the
9 clock hasn't incremented for it. The clock-out
10 hasn't incremented.

11 BY MR. KRONENTHAL:

12 Q. Is the UCD message before a test request
13 message?

14 MR. BLAIR: Objection to form.

15 THE WITNESS: I don't believe that -- that
16 DOCSIS tells you that, because they occur
17 periodically, and it would depend when you plug
18 it in. So one could not guarantee that it would
19 be before or after.

20 BY MR. KRONENTHAL:

21 Q. One could not guarantee whether the UCD
22 message is sent before the test request message?

23 A. Correct. Because the test request message
24 is initiated manually by an operator. It's not
25 initiated by the system. So it's a random -- it's a

1 pseudo random-type thing, from that standpoint.

2 Q. So the test request message could be, in
3 some instances, sent before a UCD message, correct?

4 A. I would have to go back, but I think
5 without a sync, you can't receive anything -- any
6 other messages from the CMTS.

7 So I don't know for sure, but I would
8 suspect probably not. But I don't know for sure.
9 I'd have to go back. If you want me to check, I can
10 check on that in the spec.

11 Q. But this sync part message is part of the
12 normal operation, correct?

13 MR. BLAIR: Objection to form.

14 THE WITNESS: Sync message is -- is like
15 from the old World War II movies, "Synchronize
16 your watches"; it synchronizes all the cable
17 modems to the same time, so they know when that
18 time slot begins.

19 Each cable modem has a clock, internal
20 clock. So that's to synchronize the clocks.
21 And that's done periodically, to make sure that
22 those clocks are all in sync, so that the time
23 slots, which are equivalent to the bursts in the
24 wireless system, so that those -- the start and
25 stop of those time slots is all exact, across

1 all the modems.

2 So until you get a sync, you can't be sure
3 what your time is. So I would say, yeah,
4 probably can't.

5 BY MR. KRONENTHAL:

6 Q. So it's your understanding that you got to
7 send at least a sync message before the test request
8 message?

9 A. No.

10 MR. BLAIR: Objection to form.

11 THE WITNESS: If you get a test -- if you
12 get a sync message, if you've hooked up the
13 cable system, and you don't send a -- if you
14 hook up your cable modem to the system, power it
15 on, and you don't send -- manually send the test
16 sync signal within the first -- the command, the
17 request -- within the first 20 seconds, you will
18 get a sync message from the CMTS, and that first
19 CMTS message locks out the ability to use the
20 test request forever, until you de-power that
21 modem.

22 And that's described very clearly on
23 page 185.

24 BY MR. KRONENTHAL:

25 Q. So it's your testimony that the test

1 request message has to be sent before a sync message,
2 correct?

3 A. Yes.

4 Q. And the UCD message has to come after the
5 sync message, correct?

6 MR. BLAIR: Objection to form.

7 THE WITNESS: I said on that one, if you
8 want a definitive answer on that, I would have
9 to look at that.

10 BY MR. KRONENTHAL:

11 Q. So a UCD message could come before a test
12 request message, then, correct?

13 MR. BLAIR: Objection to form.

14 THE WITNESS: I don't know. Let's --
15 since you seem to be -- let's go back to the
16 reference on operations and look.

17 BY MR. KRONENTHAL:

18 Q. Are you looking at the DOCSIS standard?

19 A. Yes.

20 Q. What part are you looking at?

21 A. I think I want to go back to where
22 I referenced -- like five -- is it the -- is it
23 246 to 250, I think? Let me look at that again.

24 Q. 246 would show the sync message that you
25 have mentioned.

1 A. Yes.

2 Q. It also shows the UCD message from the
3 CMTS to the CM.

4 A. That's what I'm looking for. Thank you.
5 So the sync comes here before the UCD. So
6 if you don't have sync, you don't have UCD.

7 Q. Okay. And the test request has to come
8 before the sync, correct?

9 A. If you're ever going to do a test. But
10 the TST-REQ is not required at all.

11 Q. I understand.

12 A. Okay.

13 Q. If the test request was sent, it would be
14 sent before the UCD message, correct?

15 MR. BLAIR: Objection to form.

16 THE WITNESS: It would be sent before --
17 before the sync message, and therefore before
18 the UCD.

19 BY MR. KRONENTHAL:

20 Q. In turning to paragraph 110 of your
21 declaration -- I'll just withdraw the question. I
22 lost my -- the wrong page.

23 All right. Let's look at DOCSIS page 185.

24 Are you there?

25 A. Yes.

1 Q. Okay. On page 185, it includes a
2 Figure 8-45, which shows the test request message,
3 correct?

4 A. Yes.

5 Q. It has a -- the test request message has a
6 MAC management message header, correct?

7 A. Correct.

8 Q. The test request message also has a
9 payload portion, correct?

10 MR. BLAIR: Object to form.

11 THE WITNESS: It has a portion for
12 TLV-encoded information, yes. It's a standard
13 MAC message.

14 BY MR. KRONENTHAL:

15 Q. The TLV-encoded information would be the
16 payload --

17 A. Payload --

18 Q. -- portion of the test request?

19 A. Yes. In MAC parlance, yes.

20 Q. Just a reminder to let me finish the
21 question before you -- I know you --

22 A. Yes. Thank you.

23 Q. Thanks.

24 Okay. The payload portion, which is the
25 TLV information, includes the information for the

1 test request message, correct?

2 A. Yes.

3 Q. The information in the test request
4 message includes the mode and channel parameters,
5 correct?

6 MR. BLAIR: Objection to form.

7 THE WITNESS: It includes the mode and a
8 modulation rate.

9 Sorry, are there any other channel
10 parameters? Yeah. And channel parameters, yes.

11 BY MR. KRONENTHAL:

12 Q. All right. So let's take it one at a
13 time.

14 The mode is in the information of the test
15 request message, correct?

16 MR. BLAIR: Objection to form.

17 THE WITNESS: Yes.

18 BY MR. KRONENTHAL:

19 Q. And the information for the test request
20 message also includes the channel parameters that are
21 listed in Table 8-22, correct?

22 A. Correct.

23 Q. The test request must include the mode,
24 correct?

25 A. Yes.

1 Q. And the test request must include the
2 channel TLV parameters in Table 8-22, correct?

3 A. Yes.

4 Q. Okay. I have another exhibit for you.

5 MR. KRONENTHAL: This is Exhibit 1011.

6 (Exhibit 1011 was marked for identification.)

7 BY MR. KRONENTHAL:

8 Q. Do you recognize it?

9 A. Yes.

10 Q. And what is it?

11 A. 8802-2. Logical Link Control, IEEE.

12 Q. Great. And could we refer to it
13 as ISO 8802-2?

14 A. Yes.

15 Q. Can we go to page 53?

16 A. Yes.

17 Q. All right. And do you see that
18 Section 5.4.1.2.2, "Test Response," there?

19 A. Yes.

20 Q. Okay. And the second sentence says "An
21 information field, if present in the test command
22 PDU, shall be returned in the corresponding test
23 response PDU." Correct?

24 A. Correct.

25 Q. That means --

1 A. Go ahead.

2 Q. That means that the test response is sent,
3 if there's a test command, correct?

4 MR. BLAIR: Objection to form.

5 THE WITNESS: At the logical link layer,
6 which is independent of the communications
7 channel and the physical layer, yes.

8 BY MR. KRONENTHAL:

9 Q. So if the test command includes an
10 information field, the test response is going to
11 include the same information field, correct?

12 A. Correct.

13 Q. Can we go to page 63.

14 A. But let's -- let's speak on that for a
15 second.

16 Q. Sure.

17 A. So if this comes up and it says that it's
18 bad, it has nothing to do with the transmission
19 layer, because the logical link layer can be not --
20 can be work -- can have problems associated with it,
21 while the physical layer is completely running fine.

22 Q. Understood.

23 A. Okay.

24 Q. So I asked to go to page 63.

25 A. Sure.

1 And which paragraph, please, on 63?

2 Q. One second.

3 A. Sure.

4 Q. So I'm looking at Section 6.7. It's
5 entitled "Uses of the Test Command PDU and Response
6 PDU"?

7 A. Uh-huh. Yes.

8 Q. And there you say, in -- maybe it's the
9 third sentence; it starts with "Successful
10 completion"?

11 A. Yes.

12 Q. This is also describing that the
13 information in the test request is identical to the
14 information that's in the test response, correct?

15 A. Correct.

16 MR. BLAIR: Objection to form.

17 THE WITNESS: So this is a classic message
18 request acknowledgement.

19 MR. KRONENTHAL: Okay. Let's take a
20 five-minute break.

21 Go off the record.

22 (A recess transpired from 3:31 p.m. until
23 3:42 p.m.)

24 MR. KRONENTHAL: We can go back on the
25 record.

1 BY MR. KRONENTHAL:

2 Q. One last question for you, Mr. Holobinko:
3 Did you discuss this case with your attorneys during
4 any of the breaks today?

5 A. No.

6 Q. Okay. Well, no, further questions. And
7 thank you for your time today.

8 A. Thank you.

9 MR. BLAIR: Could we go on break before
10 redirect? Or -- yeah, I guess that's the right
11 word.

12 MR. KRONENTHAL: Yeah.

13 (A recess transpired from 3:43 p.m.
14 until 4:00 p.m.)

15 MR. KRONENTHAL: And I just -- for -- on
16 the record, I just want to object to the
17 consultation with the witness in between -- or I
18 should say after the cross-examination but
19 before the redirect.

20 So you may begin, though.

21 MR. BLAIR: Thank you.

22 EXAMINATION

23 BY MR. BLAIR:

24 Q. Mr. Holobinko, do you recall that you were
25 asked questions about known problems in the art?

1 A. Yes.

2 Q. And do you recall you listed some
3 examples; I believe two of them were power and
4 timing. Do you recall that?

5 A. Yes.

6 Q. Could you clarify what you meant when you
7 talked about power and timing being known problems in
8 the art?

9 A. Yes. Transmission paths are perfect. And
10 so there can be change of attenuation with frequency.
11 There can be change of propagation with frequency.
12 That's distinctively different than power going in
13 and power going out, or timing associated with
14 devices on the ends of the network for things like
15 packet alignment and things like that.

16 Q. Is power level a characteristic of the
17 channel?

18 A. No.

19 Q. Is timing a characteristic of the channel?

20 A. No.

21 Q. Could I have you refer to your declaration
22 at paragraph 38.

23 A. Yes.

24 Q. The last sentence, where it references
25 December 15, 2008.

1 A. Yes.

2 Q. Is that the date that you applied as the
3 priority date for your analysis of the '690 patent?

4 A. Yes.

5 Q. And is it your understanding that that is
6 the same date used in Mr. Bertonis's analysis,
7 according to his declaration?

8 A. Yes.

9 Q. Are you aware of the District Court
10 construction for the term "probe"?

11 A. Yes.

12 Q. Is it your understanding that the District
13 Court construction includes a reference to a
14 reference signal?

15 A. Yes.

16 Q. Did you apply the District Court's
17 construction in your analysis?

18 A. As I -- as I said in my declaration, I
19 used the plain and ordinary meaning of "probe,"
20 without -- without what the Court had put in from the
21 first case.

22 Q. In your analysis of the term "probe," did
23 you require there to be a reference signal?

24 A. No.

25 Q. In your declaration, did you offer any

1 opinions regarding modulation profiles, or whether a
2 modulation profile relates to the form of a probe?

3 A. No, I did not.

4 Q. Did you offer definitions for both the
5 term "probe" and "physical layer probe" in your
6 declaration?

7 A. I did.

8 Q. Is it your understanding that the
9 '690 patent has claims directed to both probes and
10 physical layer probes?

11 A. Yes.

12 Q. And so is it your understanding that the
13 '690 patent is -- let me rephrase that.

14 Is it your understanding that Claim 1 and
15 Claim 17 of the patent, which refer to probes, are in
16 any way limited to physical layer probes?

17 A. No.

18 Q. Do you recall being asked about --
19 actually, let me rephrase that.

20 Could I have you go to your definition of
21 "physical layer probe." I believe it is paragraph --

22 A. 58.

23 Q. -- fifty- -- yes, 58.

24 Could you give me examples of attributes
25 that might be characterized by a physical layer

1 probe?

2 A. It could be a frequency response. As I
3 said in my paragraph 57, signal delay, attenuation,
4 and noise, all -- and all those things can affect
5 signal quality. That's in paragraph 57.

6 Q. So I believe earlier, opposing counsel
7 asked you a question about examples of attributes,
8 and you gave a scenario involving a dent in the
9 cable. Do you recall talking about that example?

10 A. Yes. And a dent in the cable would cause
11 a change in the frequency response of the cable.

12 Q. Can you clarify: Would a dent in the
13 channel be a physical attribute that would be
14 directly measured in a physical layer probe?

15 A. It would -- the change in frequency
16 response would be able to be measured in a physical
17 layer probe, and it could be used -- and is used
18 today -- to understand where the dent takes place, or
19 the dent has taken place.

20 Q. But is the dent itself something that --

21 A. Oh --

22 Q. -- appears as a parameter or an attribute?

23 A. No, no. The dent itself doesn't appear as
24 a parameter. I'm sorry.

25 Q. Do you have the Waxman exhibit,

1 Exhibit 1007?

2 A. It's right here.

3 Q. Could I have you go to paragraph 37.

4 A. Okay.

5 Q. And you see the sentence that says "The
6 probe response may, for example, include an
7 indication acknowledging or approving the request
8 embedded in the probe request"?

9 A. Yes.

10 Q. And do you recall opposing counsel asking
11 you questions about what else might be in the probe,
12 aside from this indication or acknowledgement?

13 A. Yes.

14 Q. Does Waxman include any teaching or say
15 anything about what other contents might be included
16 in the probe?

17 A. No.

18 Q. And to clarify -- actually, strike that.
19 Do you recall testifying about the ranging
20 required parameter in the UCD message?

21 A. Yes.

22 Q. And do you recall testifying that when
23 that parameter changes to a 1 or a 2, the cable modem
24 responds by sending a ranging request to the CMTS?

25 A. When it changes to a 1 or a 2, the first

1 time it changes, yes.

2 Q. Is that the only way that a ranging -- is
3 that the only thing that can cause a ranging request
4 to be sent from the cable modem to the CMTS?

5 A. No, in fact that's the exemption. Ranging
6 requests are sent periodically during the entire
7 operation of the modem, every day, continuously.

8 Q. Do you recall, in talking about the test
9 signal in DOCSIS, you testified about square waves?

10 A. Yes.

11 Q. Could you explain why a square wave is
12 insufficient to characterize the channel?

13 A. Because a square wave only has a finite
14 bandwidth compared to the channel. And so if I'm
15 sending information across the -- a channel, a square
16 wave can't even see that information; and so it --
17 it's not a good means to characterize the channel at
18 all.

19 In DOCSIS 2.0, that's a 6-megahertz-wide
20 channel; but as we go even further, channels go
21 to 100, 200 megahertz wide, and it's completely
22 impractical. It's also impractical at 2.0.

23 Q. Do you recall testifying about -- I
24 believe this was in the context of Waxman. You were
25 asked questions about a scenario where multiple

1 access points are transmitting to a single base
2 station -- or -- I'm sorry, not "base station." Let
3 me start over with this question.

4 Do you recall being asked questions, in
5 the context of Waxman, about multiple access points
6 transmitting to a single station?

7 A. Yes.

8 Q. And so would those be transmissions on
9 uplink or downlink?

10 A. That would be transmissions on uplink.

11 Q. Is the access point --

12 A. I'm sorry. Let me -- the subscriber side
13 stations transmit upstream, towards the access point.

14 Q. Okay. And then does the access point
15 transmit downstream --

16 A. Downstream, to the subscriber stations.

17 Q. Okay.

18 A. I'm not sure if I said it correctly the
19 first time, but that's correct, what I just said.

20 Q. I think the record got a little garbled
21 there, because we talked over each other. So is it
22 okay if I just ask that question again? Okay.

23 So in Waxman, is it your understanding
24 that the communication from the access point to the
25 subscriber station is -- is a downstream

1 communication?

2 A. Yes.

3 Q. And you were asked questions about
4 multiple access points transmitting to a single
5 station?

6 A. Yes.

7 Q. Does OFDMA provide a means for multiple
8 access points or base stations to transmit to a
9 single subscriber station?

10 A. At the time of the invention, and for many
11 years afterwards, to my knowledge, there's not a
12 single case of OFDM being employed in the downstream
13 in this scenario. Rather, it's been used in the
14 upstream.

15 And there's a good reason for that. The
16 downstream is broadcast, and so if you need to
17 simultaneously transmit to multiple stations, you do
18 it in broadcast mode. In the upstream, you use OFDMA
19 so that you can use the same bandwidth simultaneously
20 by individual subscriber stations, each transmitting
21 unique information upstream.

22 MR. BLAIR: All right. I have nothing
23 further.

24 MR. KRONENTHAL: Just one question -- or
25 maybe a few; sorry.

FURTHER EXAMINATION

BY MR. KRONENTHAL:

Q. Where does Waxman describe the transmissions from the AP to the stations being downstream transmissions?

A. My short answer is I'm not sure he does. But a POSITA would understand, in wireless systems, cable systems, any type of systems that have a central control point and a number of variable subscriber -- be they stations, terminals, cable models -- that towards the subscribers, always referred to as the downstream; and back from the subscribers, always referred to as the upstream.

And I can't think of a single exception to that. There may be one, but I can't think of one.

Q. Can you point me to something in Waxman where he draws a distinction between upstream signals and downstream signals?

A. Only from the standpoint that he talks about what initiates the -- his -- his probe and his probe response. And it is not -- the initiation isn't bidirectional; one side always initiates.

MR. KRONENTHAL: Okay. I have no further questions. I think we're done for today.

MR. BLAIR: I have nothing further,

1 either.

2 MR. KRONENTHAL: Off the record?

3 COURT REPORTER: Yes.

4 (Proceedings ended.)

5 COURT REPORTER: You would like a rough
6 draft and the transcript by Monday?

7 MR. KRONENTHAL: Yes, please. I am sorry.
8 And I hate doing it --

9 MR. BLAIR: I think we can settle for just
10 the transcript, although I'm not sure how -- how
11 it works if we need to do --

12 COURT REPORTER: Do you want a regular
13 delivery to your final?

14 MR. BLAIR: Assume regular delivery unless
15 we instruct you otherwise. We will read and
16 sign.

17 (Time Noted: 4:18 p.m.)

18 - - -

19 (Signature reserved.)

20

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Karen K. Kidwell, RMR, CRR
Notary Public #19971050142

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1 1 Matthew Blair, Esquire
2 2 matthew.blair@klgates.com

3 3 February 24, 2025

4 4 RE: Comcast Cable Communications, LLC v. Entropic
Communucations LLC

5 5 2/14/2025, John Holobinko (#7140283)

6 6 The above-referenced transcript is available for
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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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