

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

3 AMPHENOL CORP.,)
4 Petitioner,) Case No. IPR2023-01363
5 vs.) Patent No. 9,008,483
6 PPC BROADBAND, INC.,)
7 Patent Owner.)

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10 VIDEOCONFERENCE DEPOSITION OF DR. CHARLES A. ELDERING

11 TAKEN ON BEHALF OF THE PETITIONER

12
13 August 20, 2024
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I N D E X

WITNESS:

PAGE

DR. CHARLES A. ELDERING

EXAMINATION BY MR. HART

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EXAMINATION BY MR. SULLIVAN

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E X H I B I T S

NO.

DESCRIPTION

PAGE

Exhibit 2001 Initial Declaration

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Exhibit 2007 Second Declaration

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(Original Exhibits retained by Mr. Hart.)

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2 BEFORE THE PATENT TRIAL AND APPEAL BOARD

3 AMPHENOL CORP.,)
4 Petitioner,)
5 vs.) Case No. IPR2023-01363
6 PPC BROADBAND, INC.,) Patent No. 9,008,483
7 Patent Owner.)

8
9 VIDEOCONFERENCE DEPOSITION OF DR. CHARLES A. ELDERING,
10 produced, sworn, and examined remotely on August 20,
11 2024, before Emily S. Bergren, RPR, CRR, MO CCR #1353,
12 KS CCR #1686, in a certain cause now pending in the
13 United States Patent and Trademark Office before the
14 Patent Trial and Appeal Board between AMPHENOL CORP.,
15 Petitioner, vs. PPC BROADBAND, INC., Patent Owner; on
16 behalf of the Petitioner.

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1 IT IS HEREBY STIPULATED AND AGREED by and between
2 counsel for all parties that this deposition may be
3 taken in shorthand by Emily S. Bergren, a Certified
4 Stenographic Court Reporter within and for the States
5 of Missouri and Kansas, and afterwards transcribed
6 into typewriting; and the signature of the witness is
7 expressly waived.

8 * * * * *

9 (Deposition commenced at 9:02 a.m. Central
10 Standard Time.)

11 MR. HART: Paul Hart with Erise IP on
12 behalf of Petitioner, Amphenol. With me also from
13 Erise IP is Kevin Rongish.

14 MR. SULLIVAN: Denis Sullivan from
15 Barclay Damon in Syracuse. With me on the line is
16 Alice Merville who is a summer associate this year at
17 Barclay Damon.

18 DR. CHARLES A. ELDERING,
19 of lawful age, produced, sworn, and examined remotely
20 on behalf of the Petitioner, deposes and says:

21 EXAMINATION

22 BY MR. HART:

23 Q. Good morning, Dr. Eldering. Just to get us
24 started, can you state your full name for the record?

25 A. It's Charles A. Eldering, E-l-d-e-r-i-n-g.

1 Q. Have you been deposed before, Dr. Eldering?

2 A. Yes, I have.

3 Q. Approximately, how many times?

4 A. At least 30 times.

5 Q. Okay. The court reporter went through some
6 ground rules; most importantly that we need to speak
7 one at a time. To that end, I will do my best not to
8 speak over you, and I would just ask that you do your
9 best not to speak over me. If I begin asking a
10 question before you have finished your prior answer,
11 will you please let me know so I can stop speaking,
12 and you can finish your answer?

13 A. Yes, I will.

14 Q. Okay. Very good.

15 It's my job to ask clear questions today.
16 If you don't understand any of my questions in the
17 aspect of a question I pose, please let me know so I
18 can rephrase or clarify. Is that fair?

19 A. Yes.

20 Q. Okay. Is there any reason, medical or
21 otherwise, that you would be unable to answer my
22 questions fully and truthfully today?

23 A. There is no reason.

24 Q. All right. Very good.

25 You've submitted two declarations in this

1 proceeding; correct?

2 **A. That is correct.**

3 Q. Okay. I'd like to start with your initial
4 declaration, which has been marked Exhibit 2001 in
5 this proceeding. I understand you have clean copies,
6 and I see that you're pulling that out. Can I refer
7 to printed page 3, paragraph 11 in Exhibit 2001?

8 **A. Yes. I'm there.**

9 Q. Okay. Very good.

10 Starting in this paragraph, you provide an
11 overview of certain relevant professional experience
12 that you've gained over the years pertinent to this
13 proceeding; is that right?

14 **A. That is correct.**

15 Q. Okay. In paragraph 11, you note that you
16 worked for Alcatel from 1990 to 1993, including work
17 on passive optical and network technology and DSL
18 technology. Do you see that?

19 **A. Yes, I do.**

20 Q. Did you work with any drop interface boxes
21 at this job?

22 **A. We worked with a box that was termed an**
23 **optical network termination unit, which served as a**
24 **drop interface box -- well, it was at the end of the**
25 **network in the building, so it received a fiber that,**

1 in the terminology in this case is typically referred
2 to as a distribution fiber.

3 Q. Okay. So the input to that box was a
4 distribution fiber from the service provider?

5 A. That is correct.

6 Q. What was the output of that box?

7 A. The output of that box would have been
8 twisted wire pair for the part that I worked on.
9 There was also sometimes an overlay that provided
10 television services over coaxial cables.

11 Q. Okay. Both twisted pair and coaxial cables
12 are non-optical fiber communication technologies;
13 correct?

14 A. That is correct, yes.

15 Q. Did you, personally, have experience
16 installing the input fiberoptic cable into those boxes
17 at Alcatel?

18 A. I did not.

19 Q. Did you work with any mid-span access boxes
20 at Alcatel?

21 A. I did not personally work with those
22 particular units in that position.

23 Q. Did you have any personal exposure to field
24 splicing fiberoptic cables at Alcatel?

25 A. We were -- I was necessarily aware of the

1 state of the technology, and I had to incorporate the
2 typical loss parameters from splices into the system
3 design, but I was not responsible for any splicing or
4 was not directly responsible for the splicing
5 technology.

6 Q. Okay. And were those splices that you were
7 necessarily aware of at Alcatel have been optical
8 fiber to optical fiber splices or optical fiber to
9 twisted pair or coaxial?

10 A. Well, just to clarify, you can't splice
11 optical fiber to twisted wire pair, so to answer your
12 question more directly, the splices we were concerned
13 with were all fiber to fiber splices, as well as being
14 concerned with a connectorization to make sure the
15 fibers were connectorized. If once connectorized,
16 they were received at a unit, there may have been
17 conversion from optical to electrical. But again, the
18 splices were all optical fiber to optical fiber.

19 Q. Okay. Are you familiar with the term
20 "pigtail"?

21 A. I am, yes.

22 Q. Is a pigtail a type of product that allows
23 you to splice an optical fiber to a pre-connectorized
24 piece of fiber that can then be plugged into something
25 that converts from optical to a different technology?

1 **A. That is accurate. And to further clarify,**
2 **the pigtail then avoids the field connectorization and**
3 **allows the operations to be limited to splicing**
4 **operations.**

5 Q. I see. And the splicing that you were
6 aware of as part of your work at Alcatel, was that a
7 splice from the distribution fiber to a pigtail?

8 **A. Could you repeat the question, please?**

9 Q. Sure. You said you were necessarily aware
10 of certain splicing during your time at Alcatel. Was
11 that splicing that you were aware of splicing between
12 the fiberoptic distribution cable and pigtails?

13 **A. Yes. It would have encompassed that**
14 **splicing, but also would have involved splicing into**
15 **passive optical splitters, and I believe some of those**
16 **splitters came with fibers already attached, so there**
17 **may have been splices directly into a splitter, like,**
18 **a 1 to 16 splitter, as well as splicing into pigtails.**

19 Q. Understood.

20 Let's turn to paragraph 12 on that same
21 page of Exhibit 2001, your initial declaration. You
22 note in this paragraph that you worked at General
23 Instrument Corporation from 1993 to 1995, and you note
24 that you worked on hybrid fiber coaxial networks; is
25 that right?

1 A. That is correct, yes.

2 Q. Did you work with any drop interface boxes
3 at this job?

4 A. There were aspects of some of the -- some
5 of the system designs also involved optical network
6 termination units of some sort, so those were -- they
7 were a type of distribution interface box. But in
8 some circumstances, the coaxial cable went right into
9 the home without the use of a box. It's typical in
10 the cable industry -- or the cable industry didn't
11 always use interfaces, interface boxes and doesn't
12 always use them.

13 I'm sorry if that answer was unclear.

14 Q. With the assistance of realtime, I'm
15 re-reading it to see what I might want to ask you to
16 clarify.

17 So can you provide a broader description of
18 the service that was provided and the technologies
19 used to provide the service that you worked on at
20 General Instrument Corporation?

21 A. Yes. Well, I was retained in particular to
22 work on a product that was to bring telephone service,
23 what was called POTS, plain old telephone service,
24 over the hybrid fiber coaxial network. So the way
25 that that worked was we were designing systems, and

1 there was a -- the design systems in which there was a
2 unit typically in the home, not necessarily at the
3 demarcation point, and that system would provide -- it
4 had an interface for a telephone line, and it would
5 provide telephone service back over the cable network.
6 The cable network, the hybrid fiber coax network being
7 comprised of a coax cable to and from the home or a
8 coax cable to the home that carried signals in both
9 directions to a point in the network where it was
10 converted to optical and then went back to the --
11 what's called the head end, and so I was in charge of
12 the system design. There were some challenges with
13 respect to noise in the cable system and then the
14 actual design of how the signals would be transported.
15 But my initial focus was on phone service over those
16 networks and later evolved into other similar types of
17 network that carried all of the signals in an
18 integrated digital whole.

19 Q. Did any of your work at General Instrument
20 Corporation focus on the installation, the field
21 installation aspects of the optical fiber portions of
22 that network?

23 A. Could you repeat the question, please?

24 Q. Did any of your work at General Instrument
25 Corporation focus on the field installation aspects of

1 the optical fiber portions of that network?

2 **A. Well, similar to my position at Alcatel, we**
3 **had to be aware of any types of problems, losses that**
4 **could occur in the fiber network, but we were**
5 **generally -- our assumption was that the fibers were**
6 **properly installed and carried the signals with**
7 **acceptable loss.**

8 Q. Okay. So is it correct to say that you did
9 not have any involvement or oversight of optical fiber
10 splicing in your role at General Instrument
11 Corporation?

12 **A. I would say that that is accurate, yes.**

13 Q. Going to the next paragraph, paragraph 13
14 in your initial declaration, Exhibit 2001, you note
15 that you have experience working for your own company,
16 Technology, Patents & Licensing, Inc., analyzing
17 patents and investigating products to assess
18 infringement. Is that a correct interpretation of
19 that paragraph?

20 **A. It is. I would note that the company is**
21 **now called CAsE Analysis. I think this was written in**
22 **kind of a chronological order and perspective, but I**
23 **still have the same corporate entity. It's called**
24 **CAsE Analysis, and it does similar work. It looks at**
25 **patents and patent portfolios and products.**

1 Q. Have you assessed any drop interface boxes
2 in your role at the entity that was called Technology,
3 Patents & Licensing, Inc.?

4 A. Could you repeat the question, please?

5 Q. Sure. Have you assessed any drop boxes in
6 your role at this entity?

7 A. I have been active in the analysis of
8 optical networks including, sometimes the terminology
9 sometimes uses optical line termination, optical
10 network termination. Those are standard terms in the
11 world of passive optical networks. But as such, it
12 has included analysis of many types of boxes including
13 network interface device boxes or DIBs.

14 Q. I'm going to get to terminology eventually.
15 You know, we're not going to focus on your background
16 all day. What is your preferred term for the type of
17 terminated box, drop interface box, network interface
18 box? What is the catch-all term that you'd prefer to
19 use today for that box, if there is one?

20 A. Well, drop interface box is accurate, and I
21 can live with that. I think the bigger area of
22 confusion is the naming of the cables, so as long as
23 we can keep -- DIB is fine for me --

24 Q. Okay.

25 A. -- if you want to refer to it as that.

1 Q. DIB. Okay.

2 In your role at Technology, Patents &
3 Licensing, Inc., or the subsequent entity, did you
4 have any professional exposure to installing
5 fiberoptics in a DIB?

6 A. Could you repeat the question, please?

7 Q. Sure. What's the -- let me ask a
8 clarifying question. What is the easiest name to use
9 that captures this entity, this patent analysis entity
10 that you own?

11 A. Just call -- I mean, you can call it
12 CAsE Analysis. That's what I go by now, so --

13 Q. Okay. And if I say, "CAsE Analysis," that
14 will capture the full time span?

15 A. Yes.

16 Q. Okay. In your role at CAsE Analysis, have
17 you had any professional exposure to installing
18 fiberoptics in drop interface boxes?

19 A. The professional exposure has been in the
20 form of analyzing systems, usually those described in
21 patents, and analyzing the types of connections and
22 functionality in the DIBs, themselves. It has not
23 involved extensive field work; although, I have been
24 exposed to some particular products, more in the
25 passive optical network area.

1 Q. Okay. Can you recall any specific products
2 in the passive optical network area that you have been
3 exposed to in your role at CAsE Analysis?

4 A. Yes. The Verizon Fios system, which is
5 probably one of the leading passive optical --
6 certainly, to my knowledge, the leading passive
7 optical network technology used in the US anyway, and
8 I've had specific exposure to that product line and
9 the devices used there.

10 Q. Okay. Have you had exposure to splicing
11 optical fibers within the Verizon Fios system?

12 A. Not extensively. The systems there in my
13 experience tended to use pre-connectorized fibers.
14 Actually ordered the fibers to be a specific length.
15 When they brought the fiber to the home, they actually
16 calculated from the database the lengths to kind of
17 avoid any field splicing, so that was my experience in
18 the times that I looked at the product and spoke to
19 the crews.

20 Q. All right. Let's transition to the
21 substance of your opinions.

22 Your second declaration was submitted in
23 support of the Patent Owner Response; correct?

24 A. That is correct, yes.

25 Q. Okay. And I've had that marked

1 Exhibit 2007. Do you have access to that in front of
2 you?

3 A. Yes. I have it in front of me.

4 Q. Okay. Very good.

5 So just as a starter question to set the
6 table a bit, in your opinions set forth in
7 Exhibit 2007, did you apply any expressed claim
8 constructions for any claim terms?

9 MR. SULLIVAN: Objection to form.

10 A. I used the plain and ordinary meaning of
11 the terms as I viewed a POSITA would have understood
12 them at the time of the invention.

13 Q. (By Mr. Hart) Can I have you turn to the
14 table of contents on pages i and ii in Exhibit 2007?

15 A. I'm there.

16 Q. Okay. Just as a lead-in to these
17 questions, I want to understand, you know, what you
18 have opined on, the kind of scope of your opinions
19 here. I think the table of contents is a good jumping
20 off place for me to ask those questions.

21 So as we see in the table of contents
22 starting at Section 7, that introduces your opinions
23 specific to the challenged claims in this proceeding.
24 And in Section 7, subsections A, B, and C, you raise a
25 number of issues with the petition's challenge of

1 independent Claim 1 and dependent Claims 2 and 10; is
2 that correct?

3 **A. That is correct, yes.**

4 Q. Am I correct that in each of these
5 sections, you disagree with Petitioner's expert,
6 Dr. Kiaei, that a POSITA would have been motivated to
7 combine the prior art references as proposed in the
8 petition?

9 **A. That is correct, yes.**

10 Q. Okay. If we set aside motivation to
11 combine and we assume that the references have been
12 combined as proposed in the petition, have you opined
13 that the proposed combinations fail to satisfy the
14 challenged claims for any specific reason?

15 MR. SULLIVAN: Objection to form.

16 **A. Could you repeat that question, please?**

17 Q. (By Mr. Hart) I can. If we set aside
18 motivation to combine, and we assume that the
19 references have been combined as proposed in the
20 petition, have you opined that the proposed
21 combinations fail to satisfy the challenged claims for
22 any specific reason?

23 MR. SULLIVAN: Objection to form.

24 **A. Well, as I've stated in my report, it's my**
25 **opinion that the challenged claims are not obvious,**

1 and I believe that the non-obviousness of the claims
2 is based on a number of factors, but not limited to
3 the motivation to combine.

4 Q. (By Mr. Hart) Okay. Let's take it in
5 pieces then so we can get a little more specific and
6 delve into that response.

7 For independent Claim 1, if we assume
8 Holmberg and Battey have been combined as proposed in
9 the petition, have you opined that such a combination
10 fails to satisfy any specific claim element in
11 Claim 1?

12 MR. SULLIVAN: Objection to form.

13 A. As I have stated in, I think it's -- I'll
14 refer to your expert's, Dr. Kiaei's report, it's a
15 fairly detailed review of the legal standard for
16 obviousness, so he lays out those criteria well.

17 And to answer your question, it is my
18 opinion that the challenged claims are not obvious.
19 My analysis encompasses motivation to combine as well
20 as issues of inoperability, and those are just some of
21 the reasons that I believe the claims are not obvious
22 over the art; although, there may be others. And that
23 I have focused my analysis on those reasons as you've
24 identified in the index.

25 Q. (By Mr. Hart) Have you discussed any

1 specific claim element in Claim 1 that you believe the
2 proposed combination of Holmberg and Battey fails to
3 satisfy?

4 MR. SULLIVAN: Objection to form.

5 A. With respect to Claim 1, I have focused my
6 analysis on claim elements 1D and 1C.

7 Q. (By Mr. Hart) And is it your opinion that
8 the proposed combination of Holmberg and Battey fail
9 to satisfy claim elements 1D and 1C for any particular
10 reason?

11 MR. SULLIVAN: Objection to form.

12 A. Could you repeat the question, please?

13 Q. (By Mr. Hart) Is it your opinion that the
14 proposed combination of Holmberg and Battey fail to
15 satisfy claim elements 1D and 1C?

16 MR. SULLIVAN: Objection to form.

17 A. Yes. The proposed grounds including the
18 combination of Holmberg and Battey, and ground 3,
19 combination of Holmberg, Battey, and Blankenship, do
20 not render obvious at least claim elements 1D and 1C
21 of Claim 1.

22 Q. (By Mr. Hart) And what claim elements
23 within those limitations 1D and 1C do the combinations
24 fail to satisfy? I'm asking you what's missing. If
25 we assume the references are combined as proposed in

1 the petition, what's missing from them, if anything?

2 MR. SULLIVAN: Objection to form.

3 A. The cited combinations fail to render
4 Claim 1 obvious, in particular addressing claim
5 elements 1C and D because the POSITA would not be
6 motivated to replace an unhinged and stationarily
7 fastened splice tray which is designed to protect
8 fibers and splices with a hinged and rotatably coupled
9 splice tray that would no longer protect such fibers
10 and splices as I've described in paragraphs 151
11 through 193 of my declaration, as well as for the
12 reasons that replacing Holmberg's unhinged and
13 stationarily fastened splice tray with a hinged and
14 rotationally coupled splice tray would change the
15 splice tray's basic principle of operation and render
16 it inoperable for its intended purposes as I describe
17 in paragraphs 194 through 233 of my second
18 declaration.

19 Q. (By Mr. Hart) If Holmberg's splice tray
20 were modified with a hinge pursuant to Battey's
21 teachings as proposed in the petition, would that
22 combination fail to satisfy any specific claim element
23 in Claim 1?

24 MR. SULLIVAN: Objection to form.

25 A. Could you repeat the question, please?

1 Q. (By Mr. Hart) Yes. If Holmberg's splice
2 tray were modified with a hinge pursuant to Battey's
3 teachings as proposed in the petition, would that
4 combination fail to satisfy any specific claim element
5 in Claim 1?

6 MR. SULLIVAN: Objection to form.

7 A. Well, I don't believe that Holmberg's
8 unhinged and stationarily fastened splice tray would
9 be combined by a POSITA to create the hinge structure
10 and fiber storage panel as described in claim elements
11 1D and 1C, so I don't think that the combination
12 works, nor would a POSITA combine the references in
13 that way to meet the limitations of claim elements 1D
14 and 1C.

15 Q. (By Mr. Hart) Understood.

16 Dr. Eldering, do you understand what I'm
17 asking? Let me say it another way. Do you understand
18 the distinction between, on the one hand, a motivation
19 to combine prior art references; and on the other
20 hand, once references have been combined, whether that
21 combination satisfies the claim limitations? Does
22 that distinction make sense?

23 MR. SULLIVAN: Objection to form.

24 A. Some further clarification might be
25 helpful.

1 Q. (By Mr. Hart) Okay. What were you
2 confused about? What might I clarify in attempting to
3 distinguish between motivation to combine references
4 and then separately proving that the combination of
5 references satisfy the claim?

6 MR. SULLIVAN: Objection to form.

7 A. Well, I -- I don't want to argue with you,
8 but I'm a little -- I'm not sure the references can be
9 effectively combined to achieve the goal of the
10 claims; and hence my answer, which goes beyond
11 motivation in the sense that a POSITA wouldn't make
12 such combination for a variety of reasons; not only
13 motivation, but also because of inoperability. So I
14 can't agree with the statement that the references can
15 be combined to achieve the goals of claim elements 1C
16 and 1D.

17 Q. (By Mr. Hart) I see.

18 Have you performed an analysis that assumes
19 the references have been combined as the petition
20 proposes in order to assess whether that proposed
21 combination satisfies the challenged claims?

22 MR. SULLIVAN: Objection to form.

23 A. To answer your question, yes. Because --
24 in fact, because the PTAB has instituted this
25 proceeding, I have had to perform my analysis based on

1 the assumption that someone, in particular, the PTAB
2 believes that the references may be combinable in some
3 way, and as such, I have performed my analysis based
4 on the assumption that the references are combinable
5 and have provided my analysis that the combinations of
6 either Holmberg or Battey and the combination of
7 Holmberg, Battey, and Blankenship do not render --
8 with respect to the claim we're speaking about,
9 Claim 1, do not render Claim 1 obvious.

10 Q. (By Mr. Hart) What specific claim elements
11 are missing in the presumed combination of Holmberg
12 and Battey or Holmberg, Battey, and Blankenship?

13 MR. SULLIVAN: Objection to form.

14 A. Could you repeat the question, please?

15 Q. (By Mr. Hart) What specific claim elements
16 are missing in the presumed combinations of Holmberg
17 and Battey or Holmberg, Battey, and Blankenship?

18 MR. SULLIVAN: Same objection.

19 A. Well, it is my opinion that at least claim
20 elements 1D and 1C are not rendered obviousness in the
21 combinations that we are discussing.

22 Q. (By Mr. Hart) What is missing in
23 limitation 1C in the proposed combination of Holmberg
24 and Battey?

25 MR. SULLIVAN: Same objection.

1 A. Could you repeat the question once more?

2 And I'll answer it right straight away.

3 Q. (By Mr. Hart) What is missing from
4 limitation 1C in the proposed combination of Holmberg
5 and Battey?

6 MR. SULLIVAN: Objection to form.

7 A. With respect to claim element 1C, Holmberg
8 is missing a fiber storage panel having a hinged
9 connection to the base unit on the side opposite the
10 hinged connection of the cover to the base unit such
11 that the fiber storage panel is movable relative to
12 the base unit and configured to be stored between the
13 base unit and the cover.

14 And Battey is missing a fiber storage panel
15 having a hinged connection to the base unit on the
16 side opposite the hinged connection of the cover to
17 the base unit such that the fiber storage panel is
18 movable relative to the base unit and configured to be
19 stored between the base unit of the cover because
20 Battey's structure that is being attempted to combine
21 is a splice tray.

22 I've completed my answer. Sorry.

23 MR. HART: Okay. I'm going to need a quick
24 break. I know we haven't been going quite an hour.
25 What makes sense? Five minutes? Ten minutes?

1 **THE WITNESS: I only need five minutes.**

2 MR. HART: Let's do five then.

3 (Recess.)

4 Q. (By Mr. Hart) Welcome back, Dr. Eldering.
5 In the proposed combination of Holmberg and Battey
6 that you analyzed, what is your understanding of the
7 physical features from Battey that have been
8 incorporated into Holmberg's enclosure?

9 MR. SULLIVAN: Objection to form.

10 A. Well, you may want to help refresh my
11 memory by looking at other materials including
12 Dr. Kiaei's declaration or the petition. But to my
13 understanding, there is an attempt to use Battey's
14 hinged shelf as an element to combine with Holmberg's
15 fixed splice tray, and that's -- that's paraphrasing
16 many paragraphs of the petition, I think.

17 Q. (By Mr. Hart) Sure. I'm really trying to
18 follow up on your last answer before the break. You
19 said, "Battey is missing a fiber storage panel having
20 a hinged connection to the base unit on a side
21 opposite the hinged connection of the cover to the
22 base unit such that the fiber storage panel is movable
23 relative to the base unit and configured to be stored
24 between the base unit of the cover because Battey's
25 structure that is being attempted to combine is a

1 splice tray." If, rather than Battey's entire tray,
2 only the hinge from Battey is incorporated into
3 Holmberg's enclosure, is any specific element within
4 limitation 1C missing from that combination?

5 MR. SULLIVAN: Objection to form.

6 A. Well, I don't know that that makes any
7 sense. The -- Battey's structure -- Battey
8 distinguishes the splice tray from storage structures,
9 and Battey's structure that is then incorporated into
10 the combination is a hinged splice shelf. If it were
11 the case that any hinge -- if the hinge was the only
12 relevant structure, then it would have seemed to me
13 the petitioner could have combined Holmberg with a
14 door. They could have cited a door and used a hinge.
15 But by citing Battey, they're referring to the splice
16 tray in particular.

17 Q. (By Mr. Hart) Have you analyzed a
18 combination of Holmberg and Battey that retains
19 splice tray 230 in Holmberg's enclosure and adds only
20 a hinge pursuant to Battey's teaching to that
21 splice tray 230?

22 MR. SULLIVAN: Objection to form.

23 A. Yes. I have performed such an analysis and
24 have concluded that, for many reasons, including the
25 following, a POSITA would not have replaced Holmberg's

1 fastener mounted splice tray with a hinged splice tray
2 because such a modification would change the basic
3 principle of operation of Holmberg's splice tray and
4 render it inoperable for its intended purpose. I need
5 to store cables and splices without detrimentally
6 straining terminated fibers of the drop cable and
7 without severing any splices.

8 Q. (By Mr. Hart) If Holmberg's enclosure were
9 to be modified as proposed, adding a hinge to splice
10 tray 230, would that modified Holmberg enclosure fail
11 to satisfy any specific element in Claim 1?

12 MR. SULLIVAN: Objection to form.

13 A. Could you repeat the question, please?

14 Q. (By Mr. Hart) If Holmberg's enclosure were
15 modified as proposed, adding a hinge to the splice
16 tray 230, would that modified Holmberg enclosure fail
17 to satisfy any specific element in Claim 1?

18 MR. SULLIVAN: Objection to form.

19 A. Yes. In addition to the reasons regarding
20 why the POSITA would not combine them, the
21 combinations would not meet the claim elements 1D and
22 1C for a number of reasons, including the fact that
23 Holmberg does not disclose storage of any feed
24 break-out cables, and Holmberg's splice tray 230 does
25 not and cannot disclose or suggest any spools

1 positioned to store plurality of the feed break-out
2 cables being coupleable to either the drop cable or
3 the distribution cable because Holmberg's splice
4 tray 230 stores the terminated fibers of the drop
5 cable which are spliced to the distribution cables
6 without the use or storage of any feed break-out
7 cables.

8 Q. (By Mr. Hart) Was that opinion advanced in
9 your original declaration, 2001, or in your second
10 declaration, Exhibit 2007?

11 A. Well, as I mentioned, there are numerous
12 reasons, but the example I gave you was from the
13 2001 -- or Exhibit 2001 declaration.

14 Q. Turning to your opinions regarding
15 dependent Claim 2, if we assume that Holmberg, Battey,
16 and Blankenship have been combined as proposed in the
17 petition, have you opined that such a combination
18 fails to satisfy any specific part of Claim 2?

19 MR. SULLIVAN: Objection to form.

20 A. Yes. It is my opinion that the proposed
21 combination fails to meet the limitation of the
22 placement of the adapter bracket on the fiber storage
23 panel, and, as such, the adapter bracket would not be
24 located in a place that met the claim -- the
25 limitations of dependent Claim 2.

1 Q. (By Mr. Hart) Do you dispute that the
2 structure from Blankenship relied upon in the proposed
3 combination in the petition teaches an adapter bracket
4 consistent with Claim 2?

5 MR. SULLIVAN: Objection to form.

6 Q. (By Mr. Hart) I can ask it a different
7 way.

8 Is your opinion limited to the location of
9 any adapter bracket, or do you dispute that the
10 combination includes an adapter bracket at all?

11 MR. SULLIVAN: Objection to form.

12 **A. My opinion is based on the adapter bracket**
13 **not being in the specified location of Claim 2. But**
14 **to answer your question, the Blankenship adapter**
15 **bracket is a type of adapter bracket described in**
16 **Claim 2.**

17 Q. (By Mr. Hart) Turning to Claim 10,
18 dependent Claim 10, if we assume that Holmberg,
19 Battey, and Cowen have been combined as proposed in
20 the petition, have you opined that such a combination
21 fails to satisfy any specific claim element in
22 Claim 10?

23 MR. SULLIVAN: Objection to form.

24 **A. Would you repeat the question, please?**

25 Q. (By Mr. Hart) If we assume that Holmberg,

1 Battey, and Cowen have been combined as proposed in
2 the petition, have you opined that such a combination
3 fails to satisfy any specific claim element in
4 Claim 10?

5 MR. SULLIVAN: Objection to form.

6 A. It is my opinion that the storage clips or
7 drop cable retaining mechanisms of Cowen would not be
8 combined in the way that Dr. Kiaei and the petitioner
9 propose to meet the limitations of Claim 10.

10 Q. (By Mr. Hart) Let's switch gears a bit and
11 talk terminology.

12 Can I have you turn to paragraph 120 in
13 your second declaration, Exhibit 2007?

14 A. Did you say paragraph 120?

15 Q. I did.

16 A. I'm there.

17 Q. All right. Starting at this paragraph and
18 continuing through paragraph 128, you introduce the
19 concept of a mid-span access location enclosure. Do
20 you see that?

21 A. I do.

22 Q. And ultimately, I'm going to try and suss
23 out the distinction between a mid-span access location
24 enclosure and a network interface device or NID.

25 So starting with the mid-span access

1 location enclosure, relevant to this proceeding, what
2 are the key characteristics of a mid-span access
3 location enclosure?

4 MR. SULLIVAN: Objection to form.

5 A. The key characteristics can be summarized
6 as mid-span access location enclosures are used to
7 separate branch or drop cables from the main fiber;
8 and that to do so, a high fiber count main cable will
9 enter the mid-span access unit, some number of fibers
10 will be routed, if you will, for connection to a
11 particular part of the network while the remaining
12 fibers, typically the majority of fibers will pass on
13 through the mid-span access location to continue on to
14 other locations, serve other locations in the network.

15 Q. (By Mr. Hart) And scrolling down to
16 paragraph 129, you discuss a different type of box
17 referred to as a network interface device or NID. Do
18 you see that?

19 A. Yes, I do.

20 Q. What are the key characteristics of an NID
21 relevant to this case?

22 MR. SULLIVAN: Objection to form.

23 A. I will answer that -- if you don't object,
24 I want to add a characteristic to the mid-span access
25 device. Would that be objectionable to you?

1 Q. (By Mr. Hart) No objections. Please feel
2 free to supplement.

3 A. All right. So supplementing my answer to
4 the mid-span access unit I described, its
5 functionality in terms of cable routing, it also has
6 the characteristics that it will be addressed by
7 technicians that, at least while servicing that unit,
8 are focused on maintaining service in the entire
9 network and ensuring that the fibers that are routed
10 to that particular location that the mid access device
11 is serving are carrying the appropriate optical
12 signals.

13 To answer your pending question, then the
14 network interface device is used to connect one or
15 more fibers to a plurality of subscriber locations,
16 meaning that the NID or the -- if that's the
17 terminology we're going to use, the network interface
18 device is providing, is ensuring that the feeder cable
19 is then connected to fibers that provide individual
20 locations, whether they be homes or buildings, with
21 telecommunication services, and that the NID will be
22 addressed by technicians, at least which -- at least
23 at the time that they're working with the NID are
24 focused on ensuring that the subscriber units,
25 themselves, whether they be homes or buildings, are

1 receiving the correct signals to provide the
2 telecommunication services for which they have
3 contracted.

4 Q. Are mid-span enclosures used to provide
5 service to end subscribers?

6 MR. SULLIVAN: Objection to form.

7 A. Could you repeat the question, please?

8 Q. (By Mr. Hart) Are mid-span enclosures used
9 to provide service to end subscribers?

10 MR. SULLIVAN: Objection to form.

11 A. Well, in the context of the fiberoptic
12 network, all of the components are used to help
13 provide services, but the mid-span access device is
14 intended to route signals and is not the final
15 interface to the subscriber location so that the
16 mid-span access device, in contrast to the NID, does
17 help provide services, but it is not the unit which is
18 facilitating the -- if you will, the final connection
19 to the fiber network.

20 Q. (By Mr. Hart) All right. Let me follow up
21 on a couple points that I picked up on in your
22 responses there.

23 Am I correct that one distinction according
24 to your declaration between mid-span boxes and NIDs is
25 that mid-span boxes pass through some number of

1 fibers, and technicians working on mid-span boxes must
2 be cognizant of downstream service interruptions while
3 working on those boxes? Is that right?

4 A. That's an accurate statement, yes. That's
5 an accurate statement.

6 Q. And that concern does not exist with NIDs
7 because no fibers pass through NIDs according to you;
8 correct?

9 A. I wouldn't -- I will answer that. I don't
10 completely agree with the way you characterized it.
11 My statement is not to suggest that a person,
12 technician operating on a NID can operate on that unit
13 willy-nilly and without regard to impacting the entire
14 network. However, a person operating in a NID
15 rearranging connections is unlikely to disturb the
16 traffic continuing on the network, such as traffic
17 carried by fibers that pass through the mid-span
18 device. So if the technician comes to a location and
19 is rearranging connections within the NID, they may
20 very well disrupt service to -- let's say they're
21 working -- they're trying to address service to unit
22 apartment A in a building, just as an example. They
23 may disrupt service to apartment B or C in the
24 building, but they're unlikely to disturb the ongoing
25 traffic that was carried by the fiberoptic network to

1 the bank and the next development down the street.

2 Q. Turning to your answer regarding the
3 service terminated from these types of boxes, am I
4 correct that your answer was that NIDs are terminating
5 optical fiber service to end customers and that
6 mid-span boxes terminate optical fiber service to
7 other boxes between the mid-span box and the end
8 subscriber?

9 MR. SULLIVAN: Objection to form.

10 A. I'm not sure -- I think -- I think your
11 characterization is generally accurate. I think we
12 would need to be careful with the term "terminate"
13 because the NID -- the NID is still routing signals
14 down an optical fiber to a piece of equipment in the
15 home, so it's not terminated at the end. It's still
16 passing the fiberoptic signals through a fiber to a
17 device which will necessarily convert the signals from
18 optical format to electrical format.

19 The point of the discussion, just to
20 clarify, was that typically in a NID, the fiber is
21 serving an individual unit, whether that be a building
22 or a residence or a home, as opposed to the mid-span
23 device where the fiber signals, either those being
24 dropped out or passed through are likely to go to
25 serve multiple higher -- higher traffic counts, a

1 **significant number of buildings, residences,**
2 **businesses, and units.**

3 Q. (By Mr. Hart) I'll have you turn to
4 paragraph 128 in your declaration, Exhibit 2007.

5 A. Yes. I'm there.

6 Q. You state, "As I explain in more detail
7 later in this declaration, given the purpose and
8 function of these break-out or mid-span access
9 location enclosures including those disclosed in
10 Holmberg and Battey in which the large majority of
11 fibers of the main fiber cable pass through to further
12 downstream break-out or mid-span access locations,"
13 and then you continue on.

14 I want to hone in on where these boxes,
15 these mid-span access location enclosures such as
16 those described by Holmberg and Battey sit in the
17 overall topology of the network. Do the boxes of
18 Holmberg and Battey serve directly end customers? Do
19 they connect fiber between Holmberg's box or Battey's
20 box and the device in a subscriber's home, or is there
21 necessarily some intermediate device when you are
22 using a mid-span access enclosure?

23 MR. SULLIVAN: Objection to form.

24 A. Let me answer your question by addressing
25 each of those references individually if that's okay.

1 Q. (By Mr. Hart) Uh-huh. Sure.

2 A. The Battey reference, we can dive into
3 this, but if you look at it, it's intended to hang on
4 a telephone line or probably, more appropriately, need
5 to look at element 25 -- let me check that, but
6 it's -- a distribution cable. So I mean, distribution
7 cable 25 can contain fibers, but it typically will
8 also contain a strength member that allows the Battey
9 unit to be hung. So the Battey unit, you can envision
10 it hanging between telephone poles on a line. Then it
11 is, as described by Battey, itself, it's suspended
12 from an aerial strand or from the distribution cable,
13 itself.

14 It goes on to say, "Substantial expertise
15 and experience are required to configure the optical
16 connections within the closure in the field," and
17 Battey then goes on to describe how the mid-span
18 access point is used to connect to fibers that are
19 being routed out or from the network.

20 We'd have to look at -- I'm not sure if
21 Battey discusses the next stage in the network, but a
22 POSITA would understand that the structure of Battey
23 out on the telephone line is intended to allow fibers
24 to be routed to another device, such as a NID or
25 subsequent termination. If we used the word

1 "termination," understanding that it may still be
2 connected to a fiber, but that that fiber is now going
3 to an individual unit, building, residence.

4 We can have the same discussion with
5 Holmberg, which, if you'd like an answer with respect
6 to Holmberg, I can provide that.

7 Q. Yes. I think Holmberg was more important
8 answer was looking for.

9 A. So with respect to Holmberg, the
10 situation -- although Holmberg's device is of a
11 different configuration, it's intended or at least
12 there is a presumption that it's wall-mounted. I
13 think it's described as that. But its similar
14 functionality is that it describes its use in
15 break-out locations, and then that the branch cables,
16 drop cables, drop lines, break-out cables, or sub
17 cables are connected to drop terminals that include
18 connector interfaces for facilitating coupling the
19 fibers of the branch cables to a plurality of
20 different subscriber locations. So it's -- although
21 its placement is different than that of Battey in that
22 it's more intended as a wall-mounted device, its
23 functionality is the same.

24 Q. Where were you reading in the Holmberg
25 reference just then?

1 **A. That was paragraph 6.**

2 Q. In the background section of Holmberg?

3 **A. That is correct.**

4 Q. If we scroll down to the first paragraph of
5 the detailed description in Holmberg, paragraph 34.
6 Let me know when you're there.

7 **A. I'm there.**

8 Q. Paragraph 34 states, "The present
9 disclosure relates generally to wall boxes configured
10 to be easily mounted at mid-span locations along the
11 length of a fiberoptic telecommunications cable. It
12 is preferred for wall boxes in accordance with the
13 principles of the present disclosure to be used for
14 indoor applications such as multidwelling units or
15 commercial buildings where a plurality of subscribers
16 is located." Do you see that?

17 **A. I do.**

18 Q. In Holmberg's mid-span enclosure, are the
19 fiber -- the output fibers that leave that enclosure
20 routed directly to end subscribers' premises?

21 MR. SULLIVAN: Objection to form.

22 Q. (By Mr. Hart) For example, an end
23 subscriber's apartment or condo or home?

24 MR. SULLIVAN: Objection to form.

25 **A. So the Holmberg device performs the**

1 function of routing cables to a form of a drop
2 terminal that provide the final interface to the
3 subscriber location. Those drop terminals may contain
4 splitters or other elements to provide the final
5 routing to the subscriber.

6 Q. (By Mr. Hart) Where is that described in
7 Holmberg?

8 A. Again, paragraph 6 gives Holmberg's general
9 description of the network in conjunction with
10 paragraph 34, which you pointed out, in which Holmberg
11 describes, "The present disclosure relates generally
12 to wall boxes configured to be easily mounted at
13 mid-span locations."

14 Q. Paragraph 34 says that Holmberg's wall box
15 serves multidwelling units. What is it about the
16 description in paragraph 34 that leads you to conclude
17 there is necessarily an intermediate device between
18 Holmberg's wall box and the end subscriber?

19 A. The configuration of most networks
20 including the networks that Holmberg refers to fiber
21 distribution hubs and splitters are networks in which
22 you would not route a plurality of fibers out of the
23 mid-span location directly to the home, but would use
24 a splitter to provide -- in a device that houses
25 splitters and connections to provide service to the

1 individual units in a multidwelling unit. In other
2 words, it's my opinion that it's Holmberg's intent to
3 provide a wall box that can bring out fibers, in
4 particular, in a multidwelling unit, and that those
5 fibers would be connected to an additional unit which
6 may provide splitting and connection functions to
7 bring the signal finally to each individual unit in
8 the home. And that's consistent with my experience at
9 Alcatel where the products we developed had, in fact,
10 that functionality.

11 Q. Can I have you turn to paragraph 139 of
12 your declaration, Exhibit 2007?

13 A. I'm there.

14 Q. Here, you note that the drop interface
15 boxes described by the '483 Patent are intended to
16 distribute fiber service to multidwelling units. Do
17 you see that?

18 A. Yes.

19 Q. And we just saw in Holmberg, at least at
20 paragraph 34, that Holmberg's wall boxes also serve
21 multidwelling units; correct?

22 A. Yes.

23 Q. Am I understanding your opinion correctly
24 that the relevant distinction between these two types
25 of boxes is that you believe there is an intermediate

1 device between Holmberg's wall box and the end
2 subscriber, and there is no intermediate device
3 between the '483 DIB and an end subscriber?

4 MR. SULLIVAN: Objection to form.

5 A. That is correct. It is -- the '483 is
6 intended to be the unit that is the final fiber
7 network interface, if you will, to the residence;
8 whereas the Holmberg device is intended as a mid-span
9 device that can route signals through fibers to a
10 building, but with the intention of there being
11 another interface unit to bring the signals to the
12 ultimate user location, apartment, actual apartment
13 unit or other -- other location.

14 Q. (By Mr. Hart) I'm going to have you scroll
15 on just a couple paragraphs to 137 in your second
16 declaration, Exhibit 2007.

17 A. Yes.

18 Q. All right. So it's a long paragraph, and I
19 want to focus on one particular aspect of this
20 paragraph. But let me read it into the record, and
21 then I'll follow up with a specific question.

22 So paragraph 137, you state, "Unlike
23 break-out or mid-span access location enclosures
24 including those disclosed in Holmberg and Battey in
25 which the enclosures were designed to limit access to

1 passthrough fibers that were not being cut and spliced
2 or dropped at a particular location, a POSITA would
3 understand that NIDs are where drop cable fibers are
4 terminated, i.e. there are no passthrough fibers or
5 cables, and are connected to distribution fibers at
6 subscriber locations and were designed to allow easy
7 access and connection to the terminated fibers to be
8 able to connect and disconnect new subscribers as
9 needed."

10 Is it your opinion that the mid-span
11 enclosure described by Holmberg does not need to
12 provide easy access and connection to be able to
13 connect and disconnect new subscribers as needed?

14 MR. SULLIVAN: Objection to form.

15 **A. Could you repeat the question, please?**

16 Q. (By Mr. Hart) Is it your opinion that the
17 mid-span enclosure described by Holmberg does not need
18 to provide easy access and connection to be able to
19 connect and disconnect new subscribers as needed?

20 MR. SULLIVAN: Same objection.

21 **A. Holmberg teaches the use of a wall box**
22 **adapted to be mounted at a mid-span access location in**
23 **which connections can be addressed to route optical**
24 **signals; but Holmberg does not teach, nor does -- do**
25 **they imply -- what Holmberg does imply is the use of a**

1 subsequent device for the management and the routing
2 of the final optical signal to the subscriber, which
3 Holmberg refers to as the drop terminal 104.

4 Q. (By Mr. Hart) And is it because you
5 believe there's an intermediate device between
6 Holmberg's wall box and the end subscriber that
7 Holmberg's wall box does not need to provide easy
8 access to connect and disconnect new subscribers in
9 the way that the '483 DIB does?

10 MR. SULLIVAN: Objection to form.

11 A. Regardless of my opinion and regardless of
12 whatever device fibers exiting Holmberg are connected
13 to, Holmberg was designed to provide controlled
14 access; specifically designed to block, restrict, or
15 limit access to the input main fiber cable by
16 requiring intentional removal of fasteners, and as
17 such, Holmberg does not contemplate easy access to the
18 box for subscriber management.

19 Q. (By Mr. Hart) The multi -- you know, given
20 that we've already established both Holmberg and the
21 '483 Patent are designed to accommodate multidwelling
22 units, and at least with respect to the '483 Patent,
23 you've opined that the multidwelling units impose a
24 requirement that subscribers must be easily connected
25 and disconnected with the '483 DIB, is it also true

1 that the subscribers in the multiunit dwellings served
2 by Holmberg would also need to be easily connected and
3 disconnected?

4 MR. SULLIVAN: Objection to form.

5 A. Could you repeat the question, please.

6 Q. (By Mr. Hart) Is it true that the
7 subscribers in the multiunit dwellings served by
8 Holmberg's enclosure would need to be easily connected
9 and disconnected?

10 MR. SULLIVAN: Objection to form.

11 A. Well, in the Holmberg invention, Holmberg
12 being a mid-span access unit, it's contemplated that
13 there's an additional unit such as the drop terminal
14 which provides for the final connection and
15 interconnection of subscribers. So as such,
16 Holmberg's emphasis is on the mid-span access
17 requirements as opposed to the rearrangement, if you
18 will, of subscriber connections at the DIB or drop
19 terminal.

20 Q. (By Mr. Hart) And it's for this reason
21 that you believe there's an intermediate device
22 between Holmberg's wall box enclosure and the end
23 subscribers, that Holmberg's wall box enclosure does
24 not need to provide the same easy access for
25 connecting and disconnecting subscribers that the

1 '483's DIB does; is that right?

2 MR. SULLIVAN: Objection to form.

3 A. Well, again, as I've stated, regardless --
4 regardless of the use of an additional unit or not in
5 Holmberg's mid-span access box, Holmberg takes a
6 different approach to access as that presented in the
7 '483 with the '483 providing carefully contemplated
8 access or addressing the connections including the use
9 of the break-out fibers and configuration of both the
10 hinge and the storage such that access by the
11 technician in the '483 does not result in undue strain
12 on the fibers and the fiber connections.

13 Q. (By Mr. Hart) In that last answer, you
14 suggested that there may not need to be an
15 intermediate device between Holmberg's wall box and
16 the end subscribers. Did I interpret that correctly?

17 A. I believe what I said was regardless of
18 what follows Holmberg, although Holmberg is very
19 clearly a mid-span access device, the access provided
20 in Holmberg and the configuration of Holmberg is
21 different than that of the configuration of the '483;
22 which, with the '483, providing a configuration that
23 provides for convenient access while maintaining the
24 minimum bend radius of the fiber and without
25 detrimentally straining the fibers that are spooled

1 and stored in the '483 unit.

2 Q. So to be clear, it's your interpretation of
3 Holmberg that Holmberg does require an intermediate
4 device between its wall box enclosure and the end
5 subscribers?

6 A. Could you repeat the question, please?

7 Q. Is it your interpretation of Holmberg that
8 Holmberg's wall box enclosure requires an intermediate
9 device between the wall box and the end subscribers?

10 A. No. I think you misconstrued what I
11 already stated. I'll state it again.

12 Holmberg contemplates the use of a
13 subsequent device, which he terms a drop terminal,
14 which could also be termed -- could also be called a
15 drop interface box. But what I said was,
16 regardless -- regardless of whatever unit or lack
17 thereof in the subsequent part of the -- in the fiber
18 that comes out of the Holmberg device, regardless of
19 the use or lack of an additional unit, that the design
20 of Holmberg contemplates different access to the box
21 than that of the '483, which is intended to provide
22 easy access without undue strain on the fibers and
23 disruption of service.

24 Q. It's true that the multiunit dwellings
25 served by Holmberg would require an ability to connect

1 and disconnect new subscribers as needed, isn't it?

2 MR. SULLIVAN: Objection to form.

3 A. Could you repeat the question, please?

4 Q. (By Mr. Hart) It's true that the multiunit
5 dwellings served by Holmberg would require an ability
6 to connect and disconnect new subscribers as needed,
7 isn't it?

8 MR. SULLIVAN: Objection to form.

9 A. Yes. And that ability is typically
10 provided by the drop terminal that Holmberg describes
11 or a drop interface box such as the '483.

12 MR. HART: This is a good stopping point.
13 Why don't we break here?

14 MR. SULLIVAN: We're off the record.

15 (Recess.)

16 Q. (By Mr. Hart) Welcome back, Dr. Eldering.
17 Before we get into the substance, during the break,
18 did you discuss the substance of the case or your
19 testimony with anyone?

20 A. I did not.

21 Q. Okay. I want to walk through your
22 description of how fibers are routed through the
23 Holmberg box and ultimately converted into output
24 fibers.

25 You have a pretty lengthy description of

1 this starting at paragraph 167 in your declaration,
2 Exhibit 2007. Can I have you turn to paragraph 167 so
3 we can walk through that process?

4 **A. I'm there.**

5 Q. All right. Very good. So paragraph 167,
6 you state, "Holmberg also discloses the technique of
7 accessing and passing through the fibers of the main
8 fiber cable by stripping away about four feet of the
9 outer jacket of the cable and spooling those exposed
10 fibers around the bend radius limiters 264 provided
11 within the main body 216 as shown in the annotated
12 Figure 6 below to add the stripped main fiber cable."
13 Do you see that?

14 **A. Yes, I do.**

15 Q. Okay. And then just below that on the next
16 page, you have an annotated version of Holmberg's
17 Figure 6; is that right?

18 **A. Yes. That's correct.**

19 Q. And to Figure 6, you have added a depiction
20 of the main cable that passes through the enclosure in
21 orange; is that right?

22 **A. That is correct.**

23 Q. Okay. And you've also depicted the portion
24 of that main cable with its jacket removed wrapped
25 around bend radius limiters 264; right?

1 **A. That is correct.**

2 Q. Okay. On the next page, paragraph 169, you
3 state, "After the main fiber cable has been spooled
4 around the bend radius limiters 264, selected fibers
5 from the cable can be terminated, i.e. cut adjacent
6 one of the clamping portions 310 so as to provide a
7 length of terminated fiber within the enclosure 202."
8 Do you see that?

9 **A. Yes, I do.**

10 Q. Okay. So some fiber from the main cable is
11 cut, and some remains uncut passing through the
12 enclosure; is that right?

13 **A. That's my understanding of Holmberg,**
14 **correct.**

15 Q. Okay. You then continue, "The length of
16 terminated fiber can be spooled around the spool
17 structure 298 of the splice tray 230 for storage
18 purposes."

19 Am I correct that the cut fibers are the
20 fibers that are wrapped around spool 298 in Holmberg's
21 enclosure?

22 **A. Let me confirm that.**

23 **Yes. That is an accurate description.**

24 Q. Okay. On page 38, if you scroll down just
25 a bit in your second declaration, 2007.

1 **A. You said page 38?**

2 Q. To page 38, you have some additional
3 annotations of Figure 6 that depict, as I understand
4 things, the passthrough fibers wrapped around bend
5 limiters 264 and the cut terminated fibers wrapped
6 around spool 298; is that accurate?

7 **A. That is accurate, yes.**

8 Q. Okay. And spool 298, you have it depicted
9 between limiters 264, but it is actually part of
10 splice tray 230; correct?

11 **A. That is accurate, yes.**

12 Q. Okay. So you've kind of moved that
13 spool 298 away from the splice tray to illustrate how
14 it works in the overall operation of Holmberg's box;
15 is that fair?

16 **A. That is an accurate characterization of the**
17 **drawing.**

18 Q. Okay. In the next paragraph,
19 paragraph 171, you state, "In order to spool the high
20 fiber count main fiber cable around the bend radius
21 limiters and then terminate select fibers for
22 splicing, as shown in Figure 6, the splice panel 230
23 is advantageously not yet fastened to the enclosure
24 202 of the wall box 200 providing the technician with
25 unobstructed access to the main body 216 of the

1 interior of enclosure 202 to perform the spooling and
2 terminating." Do you see that?

3 A. Yes, I do.

4 Q. At this point in Holmberg's process, is the
5 splice tray 230 held in place by any structures, or is
6 it completely detached from the main Holmberg
7 enclosure?

8 A. Well, it is -- as described in the
9 paragraph, it's not yet fastened to the enclosure 202
10 of the wall box, so that -- I mean, typically what you
11 would envision a technician doing is -- I mean, the
12 wall box is mounted to the wall, so the technician
13 doesn't need to hold the wall box and can use one hand
14 to hold the splice tray with the spool attached to the
15 back of it and is arranging -- kind of the passthrough
16 fibers have been arranged. The -- as discussed in the
17 paragraph 169, the main fibers have been spooled
18 around the bend radius limiters 264, and the
19 technician would be presumably holding the splice tray
20 and arranging the fibers that are going to --
21 terminated select fibers are being arranged around the
22 spool, and, you know, the technician is getting ready
23 to perform -- route the fiber and perform the splicing
24 at that point.

25 Q. Okay. So tray 230 in one hand. Other hand

1 is free to spool the fibers around and do the
2 subsequent steps that we're going to discuss?

3 **A. Yeah. I mean, at some point, it may be**
4 **possible to allow the tray to be suspended by the**
5 **fibers, I mean, respecting the strength of the fiber,**
6 **and, you know, it should be possible to arrange**
7 **everything so that the fibers are spooled**
8 **appropriately and the terminated fibers are then**
9 **routed appropriately for subsequent splicing.**

10 **Q. I see.**

11 In paragraph 173, scrolling down to the
12 next page, page 39, you quote Holmberg. "When it is
13 desired to splice one of the terminated fibers of the
14 main cable to a drop or output cable, the terminated
15 fiber can be accessed from the spool structure 298 and
16 routed through one of the openings 296 in the splice
17 tray 230 to the front side of the splice tray 230."
18 Do you see that?

19 **A. Yes, I do.**

20 **Q. So the technician takes one of the cut**
21 **fibers that has been spooled around spool 298 and**
22 **routes it through the opening in splice tray 230 so**
23 **that it can -- it is now terminated, and the cut end**
24 **of that fiber is on the front side of tray 230; is**
25 **that right?**

1 **A. I believe so, yes.**

2 Q. Okay. In terms of when it says -- when
3 Holmberg says, "When it is desired to splice one of
4 the terminated fibers," does that mean this is done
5 one fiber at a time by the technician?

6 MR. SULLIVAN: Objection to form.

7 **A. Could you repeat the question, please?**

8 Q. (By Mr. Hart) Sure. In Holmberg's
9 process, are cut fibers routed from spool structure 298
10 through opening 296 to the front side of tray 230 one
11 at a time?

12 **A. Well, referring to paragraph 53 in**
13 **Holmberg, it says, "To access fibers within a wall**
14 **box 200, selected fibers from the cable can be**
15 **terminated." I think the typical application is a**
16 **number of fibers are terminated, and then they are**
17 **routed through the front. The description --**
18 **subsequent description you're seeming to focus on is a**
19 **desire to displace one of the terminated fibers. I**
20 **think there a number of fibers; and remember, the**
21 **splice tray accommodates multiple splices. So there**
22 **probably -- a POSITA would understand that the fibers**
23 **are routed to the front, but the technician -- the**
24 **technician is likely to be splicing them, and a POSITA**
25 **at the time would have understood that the splices**

1 occurred one at a time.

2 Q. Okay.

3 A. Although, for the record, there's
4 subsequent technology that can perform multiple
5 splices. But at the time of Holmberg, those probably
6 were not commonplace if they existed commercially at
7 all, so it was a one at a time kind of operation to
8 splice.

9 Q. I see.

10 In paragraphs 174 and 175, you explain that
11 the fiber is routed through to the front side of
12 splice tray 230 and then actually be spliced to other
13 optical fiber cables; correct?

14 A. That is correct.

15 Q. Okay. And on page 40, you depict splice
16 sleeve holders that reside on the front side of splice
17 tray 230; is that right?

18 A. That's accurate, yes.

19 Q. And those splice sleeve holders are where
20 the actual splicing occurs; correct?

21 A. Well, the splicing doesn't occur in there.
22 You would place the -- excuse me. You'd place the
23 terminated fibers in a device. That device contains a
24 sleeve. Then that performs a splice; presumably, it's
25 like a fusion splice. And then you remove that

1 **assembly to place it into the splice sleeve holder.**

2 Q. So the splicing occurs, and then once
3 spliced, the holder holds that spliced fiber in place?

4 **A. I think that's accurate, yes.**

5 Q. If we scroll down to page 41 of
6 Exhibit 2007, you have an annotated Figure 4 that
7 depicts what I believe is the end result of the full
8 installation process we've been talking about.

9 And on page 41, you provide annotations
10 that depict four terminated fibers in orange that have
11 been routed from the back of splice tray 230 to the
12 front side of splice tray 230 where they were spliced
13 into other fibers that you colored blue; is that
14 accurate?

15 **A. Yes.**

16 Q. And those blue fibers coming out of the --
17 I apologize for that.

18 Those blue fibers as they exit the splice
19 holders on the front side of splice tray 230 are then
20 routed around fiber storage walls 290, and eventually
21 exit the full enclosure through unused opening 232 at
22 the top of the enclosure; is that right?

23 **A. I just want to confirm 290 because it's not**
24 **illustrated here. Give me one second.**

25 **Yes. 290 being the perimeter wall. The**

1 curved start -- the curved fiber storage walls are the
2 partial spools, I think. But yes, that's accurate.

3 Q. For the record, I do think Holmberg does
4 have some duplicate part designations in the numbers,
5 so we can get to that later.

6 But I think the important part here is just
7 to understand what's being depicted, and there is some
8 fiber-retaining mechanisms that the blue fibers wrap
9 around before exiting the box; is that correct?

10 A. That's accurate, yes.

11 Q. Okay. In paragraph 178 on the next page,
12 you note that once all these steps have occurred, the
13 fibers are routed, and the splices are made, the
14 output fibers exit the box; only then is splice
15 tray 230 secured to the base using four fasteners 276;
16 is that right?

17 A. Could you repeat the question, please?

18 Q. Yes. In paragraph 178, you note that once
19 all these steps have occurred, including routing the
20 fibers, making the splices, and the output fibers
21 exiting the box; only then is splice tray 230 secured
22 to the base using four fasteners 276; is that right?

23 A. Yes. That is correct, yes.

24 Q. So up to that point in the process prior to
25 securing tray 230 with fasteners 276, is technician is

1 still holding splice tray 230 in one hand while
2 performing all those steps; is that correct?

3 **A. I'm sorry. Could you repeat the question,**
4 **please?**

5 Q. Yes. Is the technician holding splice
6 tray 230 in one hand while performing all the steps
7 leading up to the point at which tray 230 is secured
8 to the base using fasteners 276?

9 MR. SULLIVAN: Objection to form.

10 **A. Could you clarify what you mean by "all the**
11 **steps"?**

12 Q. (By Mr. Hart) Yes. The -- I'll try to be
13 specific. All the steps that we've talked about up to
14 now, including wrapping the passthrough fibers around
15 the routing mechanisms on the base, wrapping the cut
16 fibers around spool 298, routing cut fibers through
17 passthrough 296, splicing those cut fibers into output
18 fibers, routing the output fibers around those
19 retention spools, and then routing the output fibers
20 out of the box through unused port 232, those are the
21 steps I'm referencing.

22 Are all those steps performed while the
23 technician is holding splice tray 230 in one hand?

24 **A. What a POSITA -- what would typically occur**
25 **and what a POSITA would understand is that the task is**

1 to separate the fibers that are going to be
2 terminated, wrap the excess fiber around the back
3 spool, feed the front parts through, and then also
4 begin to arrange the distribution fibers, and one
5 could start the coiling. And there's going to be a
6 point at which the technician would want to then
7 address the splicing, and to complete the splicing and
8 then insert the splices into the splice tray, whether
9 the technician chooses to screw the splice tray in or
10 leave it hanging while preparing the splices, it's not
11 described by Holmberg. I think either technique could
12 work. And once the splices are complete, the
13 technician would then place them into the splice tray,
14 make the final arrangements of the fibers exiting the
15 box; but that's not to preclude the possibility of, at
16 some point, once the fibers are kind of prearranged,
17 to attach the splice box and potentially terminate the
18 splicing then, and insert the splices into the splice
19 tray even if the splice tray has been attached.

20 Q. In your last answer, you mentioned that the
21 technician could let the tray hang while splicing the
22 fibers. Does splicing these fibers require two hands?

23 A. Well, there's a splicing device. It would
24 be presumably much easier to operate that with two
25 hands. So I think just looking at this practically as

1 a technician, first of all, you've got a -- you've got
2 multiple fibers. The splice tray, I don't think
3 there's a description in Holmberg, but a POSITA at the
4 time would understand that that's likely not to be
5 particularly heavy so that it would probably be fine
6 to allow the splice tray to hang while the fusion
7 splices -- or excuse me. While the splicing is
8 performed with the piece of equipment.

9 Or again, in the alternative, once the
10 fibers are prearranged, the technician might -- I
11 mean, might envision putting one or two of the screws
12 in presumably to hold the splice tray in place while
13 everything was completed, acknowledging that if there
14 was a change in the plan, the splice tray might be
15 removed to finalize everything.

16 So I think it's immaterial to the operation
17 of Holmberg exactly how the splice tray is maintained
18 while the fusion or the splicing takes place.

19 Q. Okay. But a POSITA would understand it
20 might be helpful to have two screws in place, some
21 mechanism to hold that splice tray in place while the
22 splicing occurs because the splicing is easier using
23 two hands?

24 MR. SULLIVAN: Objection to form.

25 A. I think a POSITA would recognize that, in

1 that configuration -- in the configuration of
2 Holmberg, you've got many fibers, and that you could
3 easily leave the splice tray hanging while you
4 finalize the splicing, and then place the splices into
5 the -- into the holders, and then make the final
6 arrangement of the cables tightening them around the
7 cable retaining mechanisms, and then screwing the
8 splice tray in.

9 Q. (By Mr. Hart) When the fibers are being
10 routed around the various spools and spliced together
11 and the splices placed into the splice holders, is the
12 splice tray 230 some distance away from the base of
13 the enclosure?

14 A. Could you repeat the question, please?

15 Q. When the fibers are being routed around the
16 various spools and spliced together and those splices
17 placed in the splice holders, is the splice tray 230
18 some distance away from the base of the enclosure?

19 A. Well, the -- the fibers, the terminated
20 fibers are spooled around spool structure 298, and as
21 such, they're going to be -- the excess fiber is
22 actually going to be spooled around 298, and in a
23 manner such that it's not a substantial distance away
24 from the back. So it would -- a POSITA would perform
25 this spooling with the result being that the splice

1 tray is held close to where it's going to be in its
2 final position, but not attached yet.

3 Q. Okay. So there's a working location of the
4 splice tray 230, but it doesn't need to be a
5 significant distance away from the ultimate secured
6 location against the base; is that accurate?

7 A. I believe that a POSITA would arrange the
8 terminated fibers on 298 so that there was, let's say
9 a modest amount of fiber that was not spooled, but
10 that the -- that it would be spooled enough so that
11 you wouldn't have excess fiber rattling around in the
12 back.

13 Q. Can you scroll down to paragraph 213 in
14 Exhibit 2007?

15 A. Yes.

16 Q. In 213, you quote Holmberg. "The spool
17 structure 298 also includes an annular flange 302
18 located at the rear end of the spool structure 298.
19 The annular flange 302 assists in retaining fibers
20 spooled about the spool 300 from sliding off the end
21 of the spool and is sized to nest inside the bend
22 radius limiters 264 of the main body 216 of the
23 enclosure 202 when the splice tray 230 is mounted
24 within enclosure 202." Do you see that?

25 A. Yes, I do.

1 Q. In your prior answer, you described a
2 modest amount of fiber that was not spooled connecting
3 spool 298 to the base. When tray 230 is moved from
4 its working location that modest distance away from
5 the base to its final resting location where it is
6 secured by fasteners 276, will that create looseness,
7 slack in those terminated fibers around spool 298?

8 A. Could you repeat your question, please?

9 Q. I knew you were going to make me do that.
10 In your prior answer, you described a
11 modest amount of fiber not spooled around spool 298
12 and allowing that splice tray 230 to be held some
13 modest distance away from the base.

14 My question is: When tray 230 is moved
15 against the base to its final secured location and is
16 secured by fasteners 276, would that movement in
17 tray 230 create slack around spool 298?

18 MR. SULLIVAN: Objection to form.

19 A. I understand your question. No. The
20 nature of fiberoptic cable is that it's not -- because
21 it's glass with surrounding jacket and -- it's not --
22 it's not metallic wire, so it's going to lay, let's
23 say cooperatively around the spool, and a POSITA would
24 understand that the technician would hold the splice
25 tray and arrange the cable such that, when it was put

1 into its final location, it would not result in an
2 unravelling of the previously spooled fiber around
3 298.

4 Q. (By Mr. Hart) Right. And I'm not asking
5 about it unravelling. But I am asking about if the
6 tightness of that fiber around spool 298 slackens some
7 amount when the tray is moved from its working
8 location to its final secured location.

9 A. Well, I don't think -- we're speaking
10 somewhat in the abstract. We don't have a particular
11 piece of fiber in hand. But based on my experience
12 and what I've -- my opinion of what a POSITA would
13 experience, you could easily wrap, spool the fiber
14 around 298, and you might have as little as a few
15 inches; maybe two or three inches.

16 And to answer your question, no. When you
17 move that splice tray, that presence of that two or
18 three inches is not going to cause the spooled fiber
19 to do anything because the spooled fiber, again, it
20 has no metallic property generically speaking about
21 fiber, so it's fairly limp and pliable, and it's going
22 to stay in a spooled position, and you're still going
23 to have that small tail, if you will, but that's not
24 going to cause it to unspool.

25 Q. And the reason I pointed you to

1 paragraph 213 is in your -- the material you quoted
2 from Holmberg discusses this annular flange that
3 assists in retaining fibers spooled about that spool
4 prevents them from sliding off the end.

5 Is it true that the if the fibers wrapped
6 around spool 298 were to slacken as tray 230 were
7 moved against the base into its final secured spot,
8 that that flange would prevent those fibers from
9 falling off the end of the spool?

10 MR. SULLIVAN: Objection to form.

11 A. Well, I mean, the flange does what Holmberg
12 says. It assists in retaining fibers spooled --
13 around the spool from sliding off the end of the
14 spool. But it does that -- it performs that for
15 several reasons. It's not because the fiber is going
16 to try to jump off the spool. But if you're spooling
17 three or four layers of fiber, it's building up in
18 height, so it's convenient, if not necessary to have a
19 wall because you've got -- you could have a volume of
20 fiber there, and it's creating that -- you know, if
21 you will, it's a groove -- it's not a groove, but it's
22 an edge to the spool, and you've got the splice tray
23 on the other side so that the spooled fiber in essence
24 can't go anywhere. It's not going to fall off the
25 spool because it's trapped on both sides.

1 Q. (By Mr. Hart) All right. I'd like to
2 transition to how Holmberg's splice tray 230 is
3 secured to the base of Holmberg's wall box.

4 Can I have you turn to paragraph 151 in
5 Exhibit 2007?

6 A. I'm at paragraph 151.

7 Q. All right. In paragraph 151, you're
8 discussing Petitioner's expert, Dr. Kiaei's opinion
9 that a POSITA would have been motivated to provide
10 easy access to the back of Holmberg's splice tray 230,
11 and you state that a, quote, "POSITA would not be
12 motivated to provide such convenient access since the
13 splice tray 230 disclosed in Holmberg was
14 intentionally designed to block or restrict such
15 access to the rear side of the splice tray 230." Do
16 you see that?

17 A. Yes, I do.

18 Q. Okay. And there's a similar statement in
19 paragraph 155 that I'd like to read into the record
20 before I ask a follow-up question.

21 In paragraph 155, you're discussing the
22 petitions for proposal that Holmberg's fasteners 276
23 would be replaced with a hinge for convenience. And
24 you state that, quote, "Holmberg's mid-span access
25 location enclosure was specifically designed to block,

1 restrict, or limit access to the input main fiber
2 cable by requiring intentional removal of those
3 fasteners." Do you see that?

4 **A. Yes, I do.**

5 Q. What specific mechanisms does Holmberg
6 teach for limiting access to the backside of splice
7 tray 230?

8 **A. The splice tray is retained using**
9 **fasteners 276 inserted through fastener openings 272**
10 **into the bosses 274 which have an internally threaded**
11 **opening, which, not stated by Holmberg, it could be**
12 **plastic. It's typically a metal inserted into the**
13 **boss that is a threaded receiving piece for the**
14 **fasteners 276.**

15 Q. Does Holmberg state that the fasteners are
16 intended to block or restrict access to the backside
17 of the splice tray?

18 **A. Could you repeat the question, please?**

19 Q. (By Mr. Hart) Does Holmberg state that the
20 fasteners are intended to block or restrict access to
21 the backside of the splice tray?

22 **A. Holmberg teaches the use of fasteners**
23 **that would need to be unscrewed to remove the splice**
24 **tray 230 which would prevent inadvertent or easy**
25 **access to the rear side of splice tray 230 in a stored**

1 fiber cable; and uses four fasteners, in fact, rather
2 than one or two. And Holmberg could have put one
3 fastener in the center or in a portion of the splice
4 tray, but instead, designed four. And consistent with
5 what a POSITA would understand is that Holmberg's
6 mid-span access location enclosure was configured with
7 the drop cable fiber spliced to the terminated fibers
8 from the main cable and the remaining passthrough
9 fibers from the main cable continuing to downstream
10 locations, POSITA would understand it would not be
11 advantageous to allow easy and convenient access to
12 the main fiber cable at the rear side of the splice
13 tray 230.

14 And as Dr. Kiaei admitted in his
15 deposition, the terminated fibers from the main fiber
16 cable that are spooled on the backside of the splice
17 tray can be accessed by a technician through opening
18 296 in the splice tray 230 without having to remove
19 the splice tray 230. And as such, I believe that the
20 teachings of Holmberg as a whole indicate that the
21 splice tray was not intended to be readily removed.

22 Q. Where were you reading from in your
23 declaration?

24 A. A combination of paragraphs 180 and 179.

25 Q. It's true that Holmberg's splice tray can

1 be removed by unscrewing fasteners 276, isn't it?

2 **A. By unscrewing all four fasteners 276,**
3 **that's correct. That's accurate.**

4 Q. Does Holmberg teach or suggest -- excuse
5 me -- security screws or other mechanisms that would
6 actually prevent a technician from removing splice
7 tray 230?

8 MR. SULLIVAN: Objection to form.

9 **A. Could you repeat the question, please?**

10 Q. (By Mr. Hart) Yes. Does Holmberg teach or
11 suggest security screws or other mechanisms that would
12 prevent a technician from removing splice tray 230?

13 **A. Well, as a whole and as a POSITA would**
14 **understand, Holmberg is quite concerned with access to**
15 **the box. And a POSITA would understand that the**
16 **splice tray has been placed in securely with the four**
17 **screws such that a technician under normal**
18 **circumstances would not need to remove it; and in**
19 **fact, Holmberg presents embodiments in which access to**
20 **different parts of the box is restricted,**
21 **demonstrating, and as a POSITA would understand, that**
22 **it is not Holmberg's intent to allow free access to**
23 **all sections of the box, and in particular, the area**
24 **behind the splice tray that is screwed in securely**
25 **with four fasteners.**

1 Q. (By Mr. Hart) In the embodiment relied
2 upon by Petitioner as illustrated in Figures 4, 6, and
3 others, the only mechanism that restricts access to
4 the back of splice tray 230 is fasteners 276; correct?

5 **A. Could you repeat the question, please?**

6 Q. (By Mr. Hart) In the embodiment relied
7 upon by Petitioner as illustrated in Figures 4, 6, and
8 others, the only mechanism that restricts access to
9 the back of splice tray 230 is fasteners 276; correct?

10 **A. That embodiment uses -- it has the**
11 **fasteners retaining the splice tray, which a POSITA**
12 **would understand is intended to remain in place once**
13 **affixed. But the patent needs to be read as a whole,**
14 **and there are other embodiments, and Holmberg makes it**
15 **abundantly clear that it is not his intention to have**
16 **anyone and everyone accessing all parts of the mid**
17 **access span box.**

18 Q. Let's change gears a bit and talk about the
19 output fiber retaining spools on the front side of
20 Holmberg's splice tray 230.

21 I think page 40 in your second declaration,
22 Exhibit 2007, with its depiction of Holmberg Figure 12
23 might be the clearest depiction of the retaining
24 spools that we have. You let me know when --

25 **A. You said page 40?**

1 Q. Page 40, yes. And do you see Figure 12
2 there from Holmberg?

3 A. I do.

4 Q. Okay. And this depicts the front side of
5 splice tray 230; correct?

6 A. Yes, it does.

7 Q. Okay. And in this figure, we can see the
8 retaining spools and their retaining fingers around
9 which the output fibers are wrapped before exiting
10 Holmberg's enclosure; correct?

11 A. That figure and the figure on the following
12 page.

13 Q. Yes. And the figure on the following page,
14 for the record, is Figure 4, to which you have added
15 those output fibers in blue; correct?

16 A. It's Figure 6 annotated.

17 Q. I think it says Figure 6 in the heading,
18 but it is Figure 4. As we can see on page 41, it
19 says, Figure 4 right there?

20 A. That looks correct.

21 Q. Wouldn't be a patent dispute if something
22 wasn't mislabeled somewhere.

23 All right. On page 41, the annotated
24 figure that you reference, it looks like you have
25 annotated the outwardly projected fingers in dark

1 blue; is that right?

2 **A. Yes. That's one section of the retaining**
3 **mechanism, yes.**

4 Q. And there are also separate inwardly facing
5 fingers from the outer bend of splice tray 230 that
6 are also depicted here in this figure; is that right?

7 **A. That is accurate, yes.**

8 Q. Okay. In order to spool the output fibers
9 around this retaining mechanism on the front face of
10 splice tray 230, a technician effectively weaves the
11 output fibers between those outwardly facing fingers
12 and the inwardly facing fingers; correct?

13 **A. That is accurate, yes.**

14 Q. Okay. What is the benefit of including the
15 inwardly facing fingers in addition to the outwardly
16 facing fingers?

17 MR. SULLIVAN: Objection to form.

18 **A. Can I just clarify? By, "the inwardly**
19 **facing fingers," you mean the uncolored ones?**

20 Q. (By Mr. Hart) Yes.

21 **A. The reason -- the advantage of those**
22 **fingers would be that if the volume of fiber being**
23 **spooled or the way in which it's being spooled, I've**
24 **illustrated this in a very neat and ideal**
25 **configuration. That might not be the case, so the**

1 cable could be spooled in a manner such that, again,
2 either the volume is such that the cable could have a
3 tendency to go past the -- I guess what we're calling
4 the outwardly facing fingers. And then the inner --
5 the inwardly facing fingers are going to help retain
6 the cable in that condition.

7 Or if it wasn't spooled very tightly, and
8 let's say at the bottom, might have a tendency to
9 spill out, so it's just kind of common sense that you
10 want to have both of those there to ensure that the
11 fiber stays within the confines of the splice tray,
12 doesn't bleed out.

13 Worst case would be that if you didn't have
14 those, and the fiber was kind of came out above the
15 splice tray and hung below, you can imagine a
16 situation where you go to close the box, and a piece
17 of fiber has now come out, and you could actually
18 sever the fiber. So those extra fingers or other
19 fingers just give you a better chance of making sure
20 the fiber stays in that splice tray.

21 Q. I see. Okay.

22 Is it more difficult to route the output
23 fibers around this depicted retaining mechanism with
24 the addition of the inward facing fingers than it
25 would be if only the outwardly facing fingers existed?

1 MR. SULLIVAN: Objection to form.

2 A. Well, it's certainly going to take a tad
3 more dexterity on the part of the technician, but
4 you're dealing with fiberoptic cable. It's pretty
5 pliable. Again, it's not a piece of wire. It's
6 fiberoptic, so it's very flexible. A technician
7 wouldn't have any trouble kind of weaving that fiber
8 between the two, so I don't think it's -- I would -- a
9 POSITA would understand that it's not particularly
10 tricky to get the fiber in the appropriate location.

11 Q. (By Mr. Hart) I want to switch gears one
12 last time here and turn to your discussion of
13 Holmberg's alternative embodiments that use adapters
14 in the front enclosure cover.

15 Can I have you turn to page 69 in your
16 declaration, Exhibit 2007?

17 A. Page 69?

18 Q. Yes. In this section, you're discussing an
19 alternative wall box embodiment in Holmberg depicted
20 in Figures 16 through 18; correct?

21 A. Yes.

22 Q. And this alternative wall box embodiment
23 uses adapters that are built into the front cover of
24 the wall box enclosure; correct?

25 A. Yes.

1 Q. And am I right that those adapters enable
2 connecting fibers to the outside of the box using
3 pre-connectorized cables?

4 A. That is accurate, yes.

5 Q. If we focus on the inside of the box, what
6 cables -- what types of cables interface these
7 adapters on the inside of the adapters? I'm sorry.
8 On the inside the box? Let me just start that over to
9 make a cleaner record.

10 What types of cables interface these
11 adapters on the inside of the box?

12 A. Well, they're fiberoptic cables by
13 definition.

14 Q. And in what form do those fiberoptic -- do
15 those optical fibers take when they interface the
16 inside of those adapters?

17 A. They are connectorized fibers.

18 Q. And what form are the fibers in on the
19 opposing end from the connectorized end?

20 A. You're losing me a little, but it's a
21 connectorized fiber on one end. It's presumably -- so
22 it's connectorized. It's a fiber with the connector.
23 It's probably a pigtail to avoid field
24 connectorization, so the other end at some point is a
25 fiber, and it's possible in the Holmberg embodiment, I

1 believe it's contemplated that that's spliced into
2 another fiber.

3 Q. So looking inward to the box from the
4 adapter, we have a connectorized end on a pigtail that
5 flows through to a raw end that is spliced within
6 Holmberg's box; is that right?

7 A. I believe that's what's being contemplated,
8 yes.

9 Q. And is that spliced end spliced on the
10 front face of Holmberg's splice tray 230?

11 A. Well, just to be exact, let me refer to
12 Holmberg, which we've cited on page 70.

13 Holmberg teaches that, "In use of the wall
14 box 500, fibers from a mid-span access location of a
15 cable passed through the wall box 500 are spliced to a
16 plurality of fiberoptic pigtails having connectorized
17 ends. The connectorized ends of the pigtails are
18 preferably inserted into the inner ports 518 of the
19 fiberoptic adapters 514. By plugging a connectorized
20 end of a drop cable into an outer port 516 of one of
21 the fiberoptic adapters 514, the drop cable can be
22 optically connected to one of the fibers of the cable
23 passed through the wall box 500."

24 Q. So these adapters in the outer cover of
25 wall box 500 are in addition to the splicing that is

1 secured by splice tray 230. They don't replace the
2 splicing that is secured on splice tray 230; correct?

3 MR. SULLIVAN: Objection to form.

4 A. Well, I'm not understanding the question.
5 You're mixing apples and oranges. The adapters are
6 for connectors, and splices are splices. So you can't
7 put a splice into a connector, but you can splice a
8 pigtail with a connector onto a fiber, and then you
9 plug it into the adapter.

10 Q. (By Mr. Hart) Got it.

11 So in this embodiment, the cut fibers from
12 the main cable will be routed to the front side of
13 splice tray 230; spliced into pigtails. Those
14 pigtails will be routed to the inner side of the
15 adapters providing a port to plug in a
16 pre-connectorized cable to the outside of the adapter;
17 is that accurate?

18 A. Let me just confirm by reading Holmberg
19 again.

20 It's unclear that Holmberg is requiring
21 that splicing to take place and be residing in the
22 splice tray. It certainly could. But I think the
23 point or a feature of those adapters is that they're
24 being used -- they can be used for the passthrough
25 fibers, and they could be pigtailed and spliced

1 **separate from the splice tray.**

2 Q. But Holmberg doesn't describe where they
3 would be pigtailed and spliced separate from the
4 splice tray 230, does it?

5 **A. Does not.**

6 MR. HART: That's all I have, Dr. Eldering.
7 Thank you very much for your time today.

8 **THE WITNESS: Thank you.**

9 MR. SULLIVAN: Can we take a short break to
10 figure out if I have a short redirect?

11 MR. HART: Sure.

12 (Recess.)

13 EXAMINATION

14 BY MR. SULLIVAN:

15 Q. Dr. Eldering, part of your testimony after
16 lunch, there was a discussion of the routing of the
17 cables, the fiberoptic cables in the Holmberg box. Do
18 you recall that testimony?

19 **A. Yes, I do.**

20 Q. If you could turn in your second
21 declaration, which is Exhibit 2007, and go to page 38
22 of that declaration. There's an annotated diagram of
23 Holmberg Figure 6 that shows the terminated fiber
24 spooled around the spool structure 298. Do you see
25 that?

1 **A. Yes.**

2 Q. And then on the following page, on page --
3 a few pages ahead on page 41, there's annotated
4 Figure 4 that shows the splices and the spooling of
5 the output or what's colored in blue fibers. Do you
6 see that?

7 **A. Yes, I do.**

8 Q. Now, in your testimony earlier, you
9 testified that, in one example, a technician could
10 first spool the terminated orange fiber on spool
11 structure 298 as shown on page 38, he could first do
12 the spooling prior to the splice operation. That's
13 what you testified earlier; correct?

14 **A. That's accurate, yes.**

15 Q. Is there another option where the
16 technician, where he or she could do the splicing
17 before the terminated fiber was spooled around spool
18 structure 298?

19 MR. HART: Object to form. Leading.

20 **A. Yes.**

21 (Simultaneous speech.)

22 Q. (By Mr. Sullivan) How would that operation
23 work where the splicing was done before the terminated
24 fiber was spooled around spool structure 298?

25 **A. In that operation, the technician would be**

1 operating with the splice tray probably substantially
2 removed from the box working on the splices, and once
3 that was completed, would then presumably put the
4 splice into the splice tray with the sleeve, and then
5 would then coil the terminated fiber around spool 298
6 to prepare the splice tray and spool to be mounted.

7 MR. SULLIVAN: I have no further questions.

8 MR. HART: Nothing from me.

9 COURT REPORTER: Read and sign?

10 MR. SULLIVAN: We haven't been doing that,
11 so no.

12 COURT REPORTER: Mr. Hart, I have a
13 standing order including rough draft and 3-day
14 expedite; is that correct?

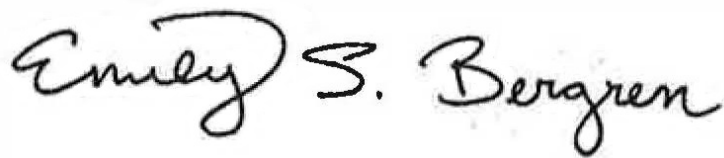
15 MR. HART: Yes, it is.

16 MR. SULLIVAN: I don't need a rough, and I
17 do not need a rush. Just electronic or PDF. No hard
18 copy.

19 (Deposition concluded at 1:19 p.m. Central
20 Standard Time.)
21
22
23
24
25

CERTIFICATE OF REPORTER

I, Emily S. Bergren, a Certified Court Reporter within and for the State of Missouri and the State of Kansas, do hereby certify that the witness whose testimony appears in the foregoing deposition was duly sworn remotely by me; that the testimony of said witness was taken remotely by me to the best of my ability and thereafter reduced to typewriting under my direction; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this deposition was taken, and further that I am not a relative or employee of any attorney or counsel employed by the parties thereto, nor financially or otherwise interested in the outcome of the action.



Emily S. Bergren
RPR, CRR, MO CCR #1353, KS CCR #1686

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