

1 UNITED STATES PATENT AND TRADEMARK OFFICE

2
3 BEFORE THE PATENT TRIAL AND APPEAL BOARD

4
5 VOLKSWAGEN GROUP OF AMERICA, INC.

6 Petitioner

7 V.

8 CARUCEL INVESTMENTS, L.P.

9 Patent Owner

10
11 Case No. IPR2019-01102

12 U.S. Patent No. 7,848,701

13 and

14 Case No. IPR2019-01103

15 U.S. Patent No. 7,979,023

16
17 VIRTUAL DEPOSITION OF MARK R. LANNING VOLUME 1

18 Tuesday, June 2, 2020

19
20 Job No.: 300805

21 Pages: 1 - 277

22 Reported by: Judith E. Bellinger, RPR, CRR

1 Deposition of MARK R. LANNING, conducted
2 virtually.

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11 Pursuant to notice, before Judith E.
12 Bellinger, Registered Professional Reporter,
13 Certified Realtime Reporter, and Notary Public in
14 and for the State of Maryland.

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C O N T E N T S

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By Mr. Richardson	6

E X H I B I T S

(Attached to the transcript)

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

2 MARK R. LANNING,

3 having been duly sworn, testified as follows:

4 EXAMINATION BY COUNSEL FOR THE PETITIONER

5 BY MR. RICHARDSON:

6 Q Good morning. Mr. Lanning, how are
7 you?

8 A Like to start off, I'm fine. But your
9 audio is coming through kind of broke and I don't
10 know if you need to get a little closer to the
11 microphone but it's breaking up so I'm having a
12 hard time hearing you already.

13 MR. RICHARDSON: Judy, are you hearing
14 me fine? Is it an issue on my end?

15 A As soon as you moved a little closer
16 I'm fine. So I think it's just the distance.

17 Q Okay.

18 A Okay.

19 Q All right. I'll do my best to stay as
20 close and we'll work through these issues and I'll
21 repeat anything that you need that may not have
22 been clear.

1 A Okay.

2 Q It's good to you see you again,
3 Mr. Lanning. I think we had a chance to briefly
4 meet a couple months ago during the previous
5 depositions.

6 A Yes.

7 Q So, you know, you were present for both
8 the earlier depositions, Petitioner's experts
9 Mr. Damien -- Dr. Damien and Mr. Denning so I
10 assume you're generally aware how these
11 depositions go. But, you know, before we do,
12 we'll work through some of the guidelines and some
13 of the intro general questions before we dive into
14 the meat of the deposition if that's okay?

15 A Okay.

16 Q Before we get started, can you just
17 please state your full name for the record.

18 A Mark Reed Lanning.

19 Q And have you ever been deposed before?

20 A Yes.

21 Q About how many times?

22 A I don't know. I haven't counted. I

1 think it would be safe to say over 30 times.

2 Q Okay. And do you have a rough estimate
3 on how many of those would have been in the last
4 four years?

5 A I don't know. I guess I could go
6 through my cases and count. But, again, I don't
7 keep track of my cases or the number of times I've
8 been deposed.

9 Q Sure. Is it fair to say that every
10 case that you were deposed in in the last four
11 years would have been reflected on the CV
12 submitted in this proceeding?

13 A You're going to have to repeat. I was
14 trying to see if I could parse your question. It
15 broke up again on me, so let's try it again.

16 Q Not a problem.

17 Is it fair to say that each of the
18 cases that you were deposed in in the last four
19 years is reflected on the CV submitted in this
20 proceeding?

21 A That's what I've attempted to do. I
22 haven't seen any errors. So at least the cases

1 that I've been deposed in or testified at trial
2 should be in my CV.

3 Q Fair enough.

4 MR. SMITH: Ryan, just one
5 clarification, he was deposed in a related
6 proceeding about a month ago that probably
7 wouldn't yet be reflected on that.

8 BY MR. RICHARDSON:

9 Q Okay. Mr. Lanning, what was that
10 proceeding that occurred about a month ago where
11 you were deposed?

12 A It was for the unified patent IPRs.

13 Q And what were the -- it's the same
14 patents that are at issue in these proceedings?

15 A Yes.

16 Q Have you ever had your deposition taken
17 remotely before?

18 A Yes.

19 Q And I assume it was a similar setup to
20 what we're using today.

21 A That's correct.

22 Q So given that you know the number of

1 cases that you've been deposed in before and your
2 experience with remote depositions as well, you
3 know, like we said you're pretty familiar with
4 this process. But again, before we dive in just
5 so the record's clear, we'll get all the general
6 guidelines out of the way before we dive into some
7 of the substance of the questions.

8 So as you know, there is a court
9 reporter that is making an electronic transcript
10 of our deposition here today. And so we ask that
11 any -- excuse me, any answer that you provide is
12 done so verbally so that it's reflected in the
13 transcript, any type of visual indications won't
14 be able to be picked up by the transcript.

15 Is that okay?

16 A Yes.

17 Q And we'll try to take a break about
18 every hour or so. But obviously if you need a
19 break at any time before that, please let me know
20 and we can easily accommodate that. The only
21 thing that I would ask is that if there is a
22 pending question, you provide an answer to that

1 question before we do go on break.

2 Is that all right with you?

3 A Yes.

4 Q Okay. And given that this is a remote
5 deposition, it's obviously a little bit different
6 than having a typical in-person deposition. So
7 I'm not there physically in the room with you.
8 So, you know, just so that I can get a little bit
9 of a sense of the room your surroundings and the
10 environment that you're in now, can you just
11 please clarify where you are sitting for this
12 deposition currently?

13 A I'm sitting in a conference room in the
14 Warren Rhoades offices.

15 Q Okay. And is there anybody in the room
16 with you?

17 A Yes. Elvin Smith.

18 Q Anybody else?

19 A No one else.

20 Q And did you bring any documents or
21 notes with you today?

22 A I only brought two clean declarations,

1 sir, or printed out copies of my declarations for
2 the '023 and the '701 patents.

3 Q Okay.

4 A And there's no other notes in front of
5 me but I see a bunch of patents and prior art and
6 different documents printed out. I also have a
7 stack of manila folders which I understand that
8 you have sent for my deposition. I have no idea
9 what's in them.

10 MR. SMITH: And Ryan, the copies he's
11 referring to just for the record are clean copies
12 of the exhibits you've identified.

13 MR. RICHARDSON: Okay. Thank you.

14 BY MR. RICHARDSON:

15 Q And just so we're clear, Mr. Lanning,
16 again, given that we're remote, we're still
17 supposed to be treating this deposition as though
18 I was in the room with you and physically present,
19 and all other restrictions and requirements that
20 would go along with that would also apply here.
21 And so, in that sense, you understand that you are
22 not allowed to pass notes or any other

1 documentation with counsel during the deposition;
2 is that correct?

3 A Yes.

4 Q Okay. And those notes would cover
5 physical written notes or any notes that may be
6 passed through electronic means, such as through
7 your phone or on a laptop, correct?

8 A Yes.

9 Q And you don't have any electronic
10 devices that you are using to communicate with
11 anybody during this deposition, correct?

12 A That's correct.

13 Q So I know you noted that there was a
14 number of physical documents there, clean copies
15 of certain documents and a couple manila folders
16 that us counsel for Petitioner provided you. As
17 we go through today's deposition, you'll have the
18 opportunity to review any documents that we are
19 addressing in either the physical form, also, the
20 electronic form will be presented on the screen in
21 front of you so that you can review that way and
22 also see hopefully pretty quickly as to the

1 portions and the particular sentences that I may
2 be referring to from those documents.

3 Does that make sense?

4 A Yes.

5 Q Okay. There may be instances during
6 the depositions today and in the following days
7 where there may need to be reference made to a
8 document that may not be in front of you in
9 physical form. We tried our best to give you
10 everything in physical form, but to the extent
11 that we have to refer to documents that you might
12 not have in physical form, we believe that those
13 would be very minimal and only referring to a
14 single page. But if you need physical copies, we
15 can make efforts to give you -- to get a physical
16 copy of the pertinent pages for you as well.

17 Is that acceptable?

18 A Yes.

19 Q Okay. So before we begin, Mr. Lanning,
20 is there any reason that you wouldn't be able to
21 provide full, complete, and accurate testimony
22 today?

1 A No.

2 Q Okay. And you understand that you're
3 here today to testify regarding two of the
4 declarations, two declarations that you submitted
5 in two different IPR proceedings, the first
6 captioned IPR 2019-01102 and the second captioned
7 IPR 2019-01103; is that accurate?

8 A Yes.

9 Q And those two proceedings involve U.S.
10 patent numbers 7,979,023 and 7,848,701, correct?

11 A Yes.

12 Q And I'm going to do my best during the
13 depositions today and if it bleeds over into the
14 following day, to make it very clear if I'm
15 referring to the '023 patent or the '701 patent.
16 But if there's ever a question, please ask me and
17 I will definitely clarify it for you.

18 A Okay.

19 Q And just so the record is clear, I'm
20 going to refer to those two patent numbers that I
21 just listed as the '023 and '701 patents
22 respectively, is that okay? Can we be clear on

1 what I'm referring to if I use that terminology?

2 A Yes.

3 Q Okay. Mr. Lanning, what did you do to
4 prepare for your depositions this week?

5 A I read through the two declarations
6 that you just mentioned for the '023 and the '701
7 patents. I read through the prior art that they
8 reference. And I had a short call with Counsel.

9 Q And about how long do you estimate that
10 you spent in total preparing for these
11 depositions?

12 A Oh, somewhere in the area of six to
13 eight hours.

14 Q Okay. Do you recall when you were
15 first approached by Carucel or counsel for Carucel
16 to provide declaratory evidence in these
17 proceedings?

18 A I don't recall. I was trying to think
19 if it was kind of what time of year or what the
20 season was. I don't recall. It's been quite some
21 time ago.

22 Q Do you recall whether you became

1 involved with these proceedings before the
2 proceedings were instituted by the Patent -- or by
3 the PTAB?

4 A I know I was involved before some of
5 the proceedings were instituted by the PTAB
6 because Counsel told me certain ones that had been
7 instituted. So I know I was engaged before that
8 time.

9 Q Okay. And so in preparing for your
10 depositions this week, you mentioned that you had
11 a short call with Counsel; is that correct?

12 A Yes.

13 Q And did you speak to anyone besides
14 your attorneys about your depositions this week?

15 A No.

16 Q Mr. Lanning, I'm going to start by
17 having you reference your declaration for the '023
18 patent. So if you want to pull that one out if
19 you have a physical copy in front of you, and,
20 also, if we can bring up Mr. Lanning's declaration
21 from IPR 2019-01103 on the screen, that'd be
22 great.

1 AV TECHNICIAN: Stand by.

2 MR. RICHARDSON: Thank you.

3 AV TECHNICIAN: Sorry. Would you like
4 me to mark this?

5 MR. RICHARDSON: Can we please mark
6 this document as Deposition Exhibit 1.

7 (Lanning Exhibit 1 marked for
8 identification and attached to the transcript.)

9 MR. RICHARDSON: Great.

10 BY MR. RICHARDSON:

11 Q So Mr. Lanning, the document I believe
12 should be in front of you in physical form and it
13 should match the document that is currently being
14 displayed on the screen and it's titled
15 "Declaration of Mark R. Lanning in Support of
16 Patent Owner's Response to Petition Pursuant to
17 37CFR42.120."

18 Do you see that?

19 A Yes.

20 Q And that is also the document that you
21 have in front of you, correct?

22 A I guess. And they appear, at least

1 based on the front page, they appear to be the
2 same.

3 Q Okay. Great. And I'll ask you to
4 scroll, or flip to the final page of that
5 document. And if you can confirm that that is
6 your signature on that final page for me.

7 A Yes, it is.

8 Q And I don't want to make you flip
9 through every page or anything, but if you could
10 do a quick flip through the document that you have
11 in front of you just to confirm again that there
12 are no inadvertent markings, highlightings or
13 notes in there.

14 A No, it's a clean copy. The only
15 highlightings I noticed are highlightings that
16 I've actually included in the report itself. So
17 it appears to be a clean copy.

18 Q Okay. And we'll go through the
19 document in more detail, obviously. So if
20 anything appears out of place, as far as a note, a
21 document highlighting a marking that should not be
22 there, please let me know so that we can correct

1 that and have that on record.

2 A Yes.

3 Q Okay. This declaration, Mr. Lanning,
4 that you have in front of you and that's also on
5 the screen, this document contains your true and
6 correct opinions as far as it pertains to the '023
7 patent, correct?

8 A Yes.

9 Q And sitting here today are you aware of
10 any errors or corrections that need to be made to
11 this document?

12 A No, I'm not.

13 Q Okay. I want to first draw your
14 attention -- actually, before we refer to any
15 specific pages, is it easier for you, Mr. Lanning,
16 to refer to the copy that's on the screen or to
17 the copy that's in front of you?

18 A It's definitely easier for me to refer
19 to the paper copy in front of me, especially if I
20 need to find something, it's easier for me to scan
21 back and forth.

22 Q Okay. Great. Then I'll ask if we can

1 pull down the document from the screen, that way
2 the video will show a little bit bigger and then
3 we each have our own copy and we can go from
4 there, if that works for you.

5 A Sounds good.

6 Q Okay. I want to first direct your
7 attention to Paragraph 2 of your declaration.

8 A Okay, I'm there.

9 Q And the first sentence of that
10 paragraph reads, "I am being compensated for my
11 time at my ordinary and customary consulting rate
12 of 550 per hour for my work," correct?

13 A Yes.

14 Q And have you ever taken a case at a
15 different billing rate than \$550 per hour?

16 A I believe I have, but it's been many
17 years ago. I've been charging the \$550 an hour
18 for at least the last five years that I can think
19 of.

20 Q Okay. So you can't recall any
21 instances in the last five years where you would
22 have taken a lower billing rate?

1 A As I just said, I believe, and I'm just
2 estimating, sitting here today, I don't know the
3 exact date, but approximately five years ago I
4 increased to \$550 an hour from a lower rate that I
5 was charging for cases before I raised the rate.
6 But the \$550 an hour has been my rate for
7 approximately the last five years.

8 Q Okay. So if we can flip forward to
9 Paragraph 5.

10 A Okay.

11 Q And in this paragraph you include a
12 table and in that table you're identifying certain
13 exhibits that have been submitted by either
14 Petitioner or Patent Owner in the 01103
15 proceeding, correct?

16 A I was just, and if I could clarify, I
17 think, yes, everything that you mentioned as well
18 as exhibits that I've included as part of my
19 declaration.

20 Q It's going to be a similar question,
21 are there exhibits that you reference or rely on
22 to formulate your opinion that are not reflected

1 in this table?

2 A I don't believe so. It's my practice
3 to try to include everything that I cite as an
4 exhibit and hopefully I haven't omitted anything
5 but I would include a caveat if I cited a specific
6 document that is not in the exhibit table then I
7 would say I still have chosen to use that
8 document. I just don't want to exclude a document
9 because I may have omitted it from the exhibit
10 table.

11 As I said, I'm not aware of any, but
12 that doesn't mean I could have not made an error
13 and not included a document that I cited and not
14 included it in the exhibit table.

15 Q That's fair enough. I just wanted to
16 make sure that you weren't aware of anything that
17 was purposely or inadvertently left off this list
18 but it sounds like you're not aware of any such
19 document right now?

20 A I'm not aware of any document that I
21 used or cited that is left off the exhibit table.

22 Q Okay.

1 A I guess I'll identify any of those if I
2 read -- or may come across a citation I used that
3 doesn't have an exhibit number. Again, I'm not
4 aware of any but it could happen.

5 Q Okay. So I want to direct your
6 attention in that table there are three particular
7 exhibits labeled Exhibit 2002, 2003, and 2004.

8 Do you see those?

9 A Yes.

10 Q And do you understand that these three
11 particular documents were not actually submitted
12 in this proceeding?

13 A To answer your question, I'm not aware
14 of what -- when you say "submitted" I need to
15 probably clarify. Are you saying submitted to you
16 as the -- or the firm as the Petitioner or in
17 general? I don't understand what you mean by
18 "submitted."

19 Q I'm asking you if you are aware that
20 these three particular documents are not included
21 in the record for this proceeding? They have not
22 been submitted to the PTAB in any form?

1 A I wasn't aware of that. I'm not aware
2 of that. I'm not aware of what got submitted or
3 not. I was not part of that process. So I just
4 don't have any visibility into what exhibits were
5 submitted and which ones weren't.

6 Q So have you relied on any of these
7 three exhibits to formulate the opinions in your
8 declaration here?

9 A I believe my declaration speaks for
10 itself. But sitting here now and based on memory,
11 I don't recall citing to Exhibits 2001 through
12 2004. I guess if my report does cite to it, we
13 can identify that as we go through. I just don't
14 recall citing to those exhibits.

15 Q Do you recall ever seeing these
16 exhibits?

17 A I don't recall seeing the exhibits, but
18 I recall going to the URL state, Internet web page
19 reference indicator that's with each 2002, 2003,
20 2004. It's been quite some time ago since I
21 looked at those but I remember going on to the
22 URLs. I don't ever recall having the physical

1 document in my hands.

2 Q Okay. And you don't recall if the
3 information that you saw at those physical URLs
4 informed the opinions in this declaration or not?

5 A If I used these articles as support, I
6 would have done as I have done throughout the
7 declaration, I would have provided cites to these.

8 Again, I don't recall providing any
9 citations to these exhibits, but if we see that I
10 have, then, again, the declaration speaks for
11 itself.

12 Q Okay. Let's flip forward to Paragraph
13 19.

14 A Okay.

15 Q On this particular paragraph you
16 indicate that, "since 1991 I've been responsible
17 for the design implementation of multiple packets
18 which networks and that required interfaces to
19 different circuit switch networks. Examples of
20 these networks are British Telecom, Nextel, and
21 Sprint. These networks include much of the
22 functionality and is used today in packet switch

1 networks and similar to the purported inventions
2 and technology of the evaluated patents."

3 Do you see that?

4 A Yes.

5 Q And by "evaluated patents" are you
6 including the '023 patent in that designation?

7 A It would be what I'm referring to as
8 all the patents that I've evaluated, including the
9 '023 patent and the prior art patents.

10 Q So can you explain how these networks
11 were similar to the purported inventions and
12 technology of the '023 patent?

13 A Well, for one, the networks that I'm
14 referring to in British Telecom, Nextel, and
15 Sprint were cellular networks. And they were
16 cellular networks that had similar technology as
17 far as base stations and mobile stations for the
18 '023 patent. And so you have mobile phones that
19 are cellular mobile phones, you have the fixed
20 base stations that are equivalent to the fixed
21 ports, however, there was no moving base station
22 in any of these networks or any of the devices

1 that I worked on for these networks.

2 Q Is that the only difference that you
3 can think of here today was that there wasn't
4 moving base stations in those other networks?

5 A Well, as I think about the '023 patent
6 I think of three key cellular network elements or
7 components. One is the fixed ports or the fixed
8 base stations, British Telecom, Nextel and Sprint
9 networks had the fixed base stations and then I
10 think about the mobile device, the mobile -- the
11 cellular phone. And so British Telecom, Nextel
12 and Sprint had cellular phones even though they
13 might have -- even though the cellular phones of
14 the '023 patent may have some additional or
15 different functionality, those networks had
16 cellular phones.

17 So as I stated before, those two
18 components were available in cellular networks.
19 But there was no moving base station. They
20 communicated with the fixed ports or the moving
21 base station that communicated with the mobile
22 phones.

1 Q So what -- so when you're referring to
2 the cellular phones of the '023 patent, you
3 indicated that they may have some additional or
4 different functionality. What additional or
5 different functionality did the cell phones in the
6 '023 patent have compared to the ones used in
7 these prior networks that you referred to?

8 A Well, the cellular phones as I've gone
9 through the functionality in the '023 patent, the
10 cellular phones need to have the capability of,
11 one, of communicating directly with the fixed base
12 station or a fixed port that it's often referred
13 to in the '023 patent, the cellular phones need to
14 have the capability of being able to register with
15 the cellular network. And the cellular phones
16 also need to have the capability of communicating
17 directly with the moving base station.

18 So at times the mobile phones, the '023
19 patent as it's clear, and I've included multiple
20 paragraphs on this subject, the cellular phones in
21 the '023 patent can either communicate directly
22 with the fixed base station or they can

1 communicate with the moving base station, which
2 indirectly provides a communication link to the
3 fixed port or the fixed base stations.

4 So there may be additional wireless
5 interfaces in the cellular phone when it's
6 communicating with the wire -- with the moving
7 base station, but there doesn't need to be either.
8 That's what I was referring to in the '023, the
9 cellular phone may have an additional wireless
10 interface to communicate with the moving base
11 station.

12 Q Okay. Just so that I'm clear, the
13 cellular devices that worked with these British
14 Telecom, Nextel, and Sprint networks that you
15 refer to here, is it your opinion that those
16 cellular devices could not register with the
17 cellular network?

18 A No. If I implied that or it was
19 interpreted in any way, I need to clarify.

20 The cellular devices that -- or the
21 mobile phones that operated for the British
22 Telecom, Sprint, or Nextel networks all were

1 capable of performing the standard cellular
2 functionality of registering with the cellular
3 network and performing handoffs between the fixed
4 base stations in the cellular network.

5 Q And that would include the ability to
6 directly communicate between the cellular devices
7 and the fixed base stations, right?

8 A You'll have to try that over. We had
9 an interruption in the connection. I only heard
10 about every third word.

11 Q Sure.

12 That would also mean that these
13 cellular devices in these networks that you refer
14 to here also have the ability to directly
15 communicate with the cellular network, right?

16 A So to be clear with your question, the
17 networks here, for, and we're referring to
18 Paragraph 19, for the British Telecom, Nextel and
19 Sprint networks, the cellular phones had the
20 capability of communicating directly with the
21 fixed ports or the fixed base stations of those
22 cellular networks.

1 Q Okay. So you mentioned here in this
2 current paragraph here, Paragraph 19, that you
3 were designing and implementing these types of
4 networks in 1991.

5 What type of market demands or market
6 pressures were existing at that time?

7 A In terms of what? For -- in terms of
8 what?

9 Q So you were obviously involved in the
10 design of certain packet switch, multiple packet
11 switch networks in the 1991 time frame. What type
12 of characteristics were you trying to create with
13 those networks? You were obviously trying to
14 achieve some sort of goal. What were the goals
15 that you were trying to achieve?

16 A Well, in the 1991 time frame, the first
17 generation analog cellular networks were in
18 operation, both in the United States and in
19 Europe.

20 With the operation of the analog
21 cellular phones some deficiencies were identified
22 with security, with eavesdropping of phone

1 conversations, and the capability of providing any
2 type of data type interfaces.

3 So in the early '90s, there were two
4 different networks were being worked on. One, was
5 referred to as the IS95 standard; another one was
6 referred to as the GSM standard, and these network
7 standards identified or these network standards
8 were addressed to fix some of these problems that
9 the first generation analog cellular networks had.

10 So there was a lot of push and a lot of
11 funding behind rolling out the equipment and the
12 networks for the second generation networks.

13 Originally it started more in Europe
14 and then the push. Then as it got close to 1994,
15 '95, increased in the U.S.

16 Q So in your previous answer you
17 mentioned that these two particular standards that
18 you were working on were trying to address or fix
19 some of the problems with the first generation
20 technology.

21 What were some of those problems that
22 you were attempting to fix?

1 A Well, first would be eavesdropping of
2 conversations. It was quite easy for people to
3 eavesdrop on cellular conversations for that first
4 generation networks.

5 The other thing that was easy for
6 people to do was to clone a phone's -- steal a
7 phone, clone it, and then many people could use
8 the same cloned phone on someone else's account to
9 make calls. And so that was a big issue.

10 And then the just overall capacity of
11 the network was also another key factor that was
12 being addressed in the second generation cellular
13 networks.

14 Q Was reliability of the network also a
15 concern, as far as dropped calls?

16 A There's big differences between the
17 first generation analog networks and the second
18 generation digital networks. There were issues
19 with just the quality of the voice channel in the
20 analog networks. There was issues with
21 interference. There were issues with handoffs
22 being supported quick enough that the calls

1 weren't being dropped.

2 So the first generation cellular
3 networks were working great when I think about the
4 technology and that they were the first
5 generation. And so they supplied a lot of calls.
6 There was a lot of interest in cellular phones and
7 so that led to the second generation of cellular
8 networks that was being required to address some
9 of these issues that were found to -- or in that
10 first generation analog networks.

11 Q Okay. So in the next paragraph on the
12 next page, Paragraph 20, and in the first sentence
13 of that paragraph you indicate, "Since 1995, I
14 have also provided second generation 2G and
15 third-generation 3G codivision multiple access
16 CDMA network architecture and equipment design
17 implementation consulting services to companies
18 such as Sprint, Nextel, Nokia, and Ericsson."

19 Do you see that?

20 A Without making you re-read, again,
21 there's technical difficulties. You were breaking
22 up as you were reading Paragraph 20. But I see

1 Paragraph 20, so you don't need to re-read
2 Paragraph 20. If you have a question then
3 maybe -- for Paragraph 20 we can start there.

4 Q Sure. I'm just in particular focusing
5 on the first sentence of that paragraph. So I
6 won't read it again but if you want to read it to
7 yourself and let me know when you have and then
8 I'll go ahead and follow-up with a question?

9 A Okay. I've read it.

10 Q You referred to 2G and 3G network
11 architecture here. Did either of those types of
12 network architecture allow for diversity schemes?

13 A And when you say "diversity schemes,"
14 are you specifically referring to antenna
15 diversity, meaning spatially separated antennas or
16 what were you referring to specifically?

17 Q So that was going to be a follow-up
18 question. Just as a general question it seems to
19 me that at least some types of diversity schemes
20 or diversity techniques were used in these
21 particular network architectures; is that correct?

22 A Sorry. You'll have to ask again. Your

1 questions are just breaking up. I'm trying to
2 fill in the blanks whenever I can but I couldn't
3 do it on the last one.

4 Q Fair.

5 So is it accurate to say that 2G
6 network architecture allowed for path diversity?

7 A Your video's now frozen. So maybe.

8 MR. RICHARDSON: Judy, are you still
9 getting me clear? You are.

10 So Elvin, it appears it might be a
11 connection on your guys' end. I don't know if we
12 want to maybe go off and try to re-log-in and
13 reboot or something.

14 THE WITNESS: I'm seeing yours move.
15 Okay, now you're back. That's strange. I'm
16 looking at -- Elvin turned his computer so I can
17 see it. I'm now seeing me in his computer and I
18 see you moving. But, okay. Let's try it again
19 and see. We can go offline if you want. I can
20 reboot. But I just booted all up. I can reboot
21 if we think that might be possible, if it'll help.
22 I'm happy to do that.

1 BY MR. RICHARDSON:

2 Q All right. Let's give it one more shot
3 and if it's still an issue we'll try and reboot.

4 A Okay.

5 Q So the question that I had previously
6 asked was: Is it accurate that these 2G network
7 architectures that you talk about here in
8 Paragraph 20 allowed for path diversity?

9 A I recall you asking about diversity
10 then I needed a clarification of what you meant by
11 that. There's different types of diversity so I
12 want to make sure I'm answering the question that
13 you're asking.

14 Again, I kind of gave you a couple of
15 different types of diversity. What diversity are
16 you referring to?

17 Q So is it accurate to say that 2G
18 network architecture allowed for path diversity?

19 A So, again, I'm having a little
20 difficulty with your terminology.

21 Are you referring to being able to
22 receive a multipath signal?

1 Q Have you ever heard of the term path
2 diversity before?

3 A Frankly, not with the terminology
4 you're asking me. I'm having trouble matching the
5 terminology with terminology I've known for over
6 30 years. So I'm trying to make sure I understand
7 what you're asking me.

8 Q So outside of the terminology or the
9 way that I'm using it, what is your understanding
10 of path diversity in the context that you've heard
11 it?

12 A Well, as I just asked for the
13 clarification, if you're referring to path
14 diversity, meaning the capability of being able to
15 receive a multipath signal, meaning the signal
16 takes multipaths, then that's what I was referring
17 for. That's what I thought you were asking about.
18 But, again, I wanted to make sure I was answering
19 the question that you're asking me.

20 Q Okay. So if we take path diversity to
21 mean multipath, is it an accurate statement that
22 2G network architecture, as you refer to in

1 Paragraph 20, allowed for multipath?

2 A The CDMA IS95 networks just the fact
3 they were CDMA typically would implement rake
4 receivers on the receiver to process reflections
5 of the signal or multiple paths the signal would
6 take which are referred to as multipath.

7 Q So at least in the CDMA 3G network
8 architectures, multipath, it allowed for
9 multipath, correct?

10 A I wouldn't phrase it that way. For the
11 CDMA error interface, multipath is a natural
12 phenomenon than occurs. As I referred to earlier,
13 it occurs because the signal takes a bit different
14 paths from the transmitter to the receiver, so
15 especially in CDMA networks they actually had
16 designed receivers that were used in some cases to
17 process multiple paths of the signal. In other
18 cases the receivers only processed a single path
19 or the strongest path that was received.

20 Q Okay. So maybe it's more accurate for
21 me to phrase it this way: The 3GCDMA network
22 architecture that you refer to here had the

1 ability to interact or mitigate multipath fading;
2 is that correct?

3 A Again, I'm pausing because I'm really
4 trying to just deal a little bit with the
5 technical difficulties here. But let me rephrase
6 what I think your question was. Is that for CDMA
7 networks, a CDMA receiver had the option of
8 implementing what is known as a rake receiver,
9 where the receiver could receive, if it had the
10 rake receiver capability installed, would receive
11 multiple paths of received signal, combine those
12 together to make a single stronger receive signal.

13 As I stated earlier, there wasn't a
14 requirement. Some of the receivers in a CDMA
15 environment could have had just a receiver that
16 would receive the strongest signal and take it as
17 the incoming signal.

18 I should also clarify that this could
19 all be done through a single antenna, multiple
20 antennas weren't required for a CDMA rake
21 receiver.

22 Q You say multiple antennas were not

1 required.

2 Are you aware of instances in these
3 3GCDMA networks where multiple antennas were used?

4 A Well, again, now, are you referring --
5 we need to be specific because a base station
6 typically would have multiple sectors and it would
7 have a separate antenna for each sector. Are you
8 referring to multiple antennas that are used for a
9 specific purpose?

10 Q So let's go back to the example that
11 you gave in your previous answer of a rate
12 receiver. And you indicated that a rate receiver
13 had the capability to receive multiple paths of a
14 received signal.

15 Are you aware of any instances in where
16 these multiple paths of a received signal could be
17 received across multiple antennas?

18 A I am not aware of any cellular devices
19 that use multiple antennas. I want to say -- I
20 should say -- be specific. I'm not aware of any
21 mobile devices. Why I'm having a little
22 difficulty with mobile devices is because for

1 these standards they're typically referred to as a
2 generic term user equipment because I think as we
3 all realize there's more than cellular phones in a
4 cellular network. You have computers with modems
5 and those are not cellular phones but they still
6 have capability of communicating.

7 So if I happen to pause around cellular
8 phone, I'm trying to change terminology that I've
9 used for years referring to user equipment.

10 But to answer your question, for the
11 rate receiver functionality in this 1995 time
12 frame, I'm not aware of any mobile phones that
13 used multiple antennas to support the rate
14 receiver.

15 I believe that in the fixed base
16 station, the fixed base stations in some cases
17 would use multiple antennas for spatial diversity.
18 But, again, that was for the fixed base stations
19 for their receivers.

20 Q And is it accurate to say that the
21 fixed base station that you're referring to came
22 in multiple -- came in different form factors?

1 For example, you could have a picocell or a
2 microcell; is that accurate?

3 A Well, for both the 2G and the 3G
4 cellular networks, you could have different sized
5 cells. The cell was typically measured either in
6 miles or kilometers for its radius. And they were
7 given names to refer to the relative size of the
8 cells.

9 And so each cellular network would have
10 different sized cells based on the radius of the
11 cell.

12 Q And are you aware of whether picocells
13 existed or were used in these 3GCDMA networks
14 systems?

15 A The question sounds simple, but the
16 problem that I'm having is is that, two things,
17 first of all, between the 2G network standards,
18 between GSM and IS95, the two use different
19 terminology for the sizes of the cells.

20 Also, as the generations of networks
21 have changed and technology has changed between 2G
22 and 3G, the terminology for these cells has

1 changed as well. And so I would agree with you
2 that at one point in time there were cells
3 referred to as picocells. There were cells
4 referred to as microcells, and there were cells
5 referred to as macrocells but that is not
6 consistent across the standards nor between each
7 generation of the standard.

8 Q And your understanding of these various
9 form factor fixed base stations at the time -- let
10 me ask it a different way.

11 What was the smallest coverage area of
12 a fixed base station that you're aware of in this
13 1995 time frame?

14 A I'm just -- I understand your question.
15 I'm just thinking back. I have to go back a few
16 years to just to try to get my mind around what
17 the smallest base stations were in the 1995 time
18 frame.

19 And just kind of thinking out loud, the
20 base stations covered rural areas, which are large
21 radiuses, and then I recall that much smaller
22 cells covered the densely populated urban areas.

1 I would say that what I recall from the
2 1995 time frame is that there would be on the area
3 of a kilometer, could have been even a half of
4 kilometer radius for the cells. But that's what I
5 recall installing in a lot of the dense cities.

6 Q So we've been, you know, discussing
7 specifically the fixed base station side of the
8 communication and you made a point to separate
9 that from the mobile unit or user equipment as you
10 called it in some circumstances.

11 Are you aware of any instances, again
12 in the 1995 time frame, where the mobile unit
13 would have used multiple antennas?

14 A I don't recall any mobile units using
15 multiple antennas.

16 Now, I guess I should clarify your
17 question when I try to finish your question I
18 thought -- are you saying multiple antennas for
19 any reason or are we still on the subject of the
20 rake receiver that we were discussing earlier?

21 Q I think you had answered before that
22 you weren't aware of the rake receiver

1 multi-antenna configuration being used for user
2 equipment. So outside of the rake receiver
3 scenario, are you aware of any scenario where
4 multiple antennas were implemented at the user
5 equipment?

6 A No.

7 Q All right. If we move to the next
8 paragraph, Paragraph 21.

9 A Okay. I'm there.

10 Q And I'll give it a shot as far as
11 reading it into the record, again, hopefully the
12 connection will hold up.

13 In Paragraph 21 you state, "I have
14 consulted for cellular phone suppliers, e.g.,
15 Nokia and Ericsson, to verify that the phone's
16 functionality operated correctly and to ensure
17 device compatibility and connectivity between many
18 different models of cellular phones and 2G and 3G
19 cellular networks."

20 Do you see that?

21 A Yes.

22 Q So how did you perform this

1 verification?

2 A Well, the standards typically provide
3 test scenarios where the equipment for the base
4 station and mobile phone equipment is tested to
5 verify that it operates according to the
6 standards. And so in some cases the network
7 provider, like in British Telecom, had their own
8 labs where they had all of the equipment and the
9 mobile phones and the labs and we tested for
10 compatibility for every new phone that came in at
11 the time.

12 Again, the cellular networks are 2G
13 networks were new, all of the different models
14 were new, so there was extensive testing to ensure
15 inner operability for new cell phones and for all
16 of the initial cell phones that we provided and
17 also for the base stations. And so we'd test the
18 base stations with the different phones to make
19 sure they inner operated correctly. Then as each
20 new software release was -- before we rolled it
21 out to the network, we tested the base station for
22 compatibility or inner operability as well.

1 Q Was there any specific functionality or
2 specific requirements that you were testing?

3 A The tests we went through the whole,
4 I'll say the whole gamut or the whole set of
5 functionality from when the mobile phone was
6 turned on, making sure it registered correctly,
7 providing communications correctly, performing
8 handoffs and so it would be the full set of
9 functionality.

10 Again, it wouldn't do us any good as a
11 network operator to release a new model cell phone
12 that wouldn't work properly in the network. So
13 the test sweep was for the full set of
14 functionality.

15 Q I think we touched on this in a couple
16 paragraphs earlier. But it was your previous
17 testimony that cellular phones that were used with
18 these 2G and 3G cellular networks had the ability
19 to communicate directly with the cellular network;
20 is that correct?

21 A That's correct. That was the main
22 function that they would perform. Because in the

1 1995 time frame the cell phones were meant to
2 communicate directly with the fixed base stations.

3 Q In previous answers, too, you had
4 introduced the term user equipment or UE and I
5 think that you indicated that that was sometimes
6 used interchangeably or similarly to the term
7 cellular phone; is that correct?

8 A Well, I should be clear. The mobile
9 phone has always been a mobile phone or cellular
10 phone. The network standards, when they're
11 written, changed starting in the 2G network
12 standards to say instead of mobile phone to say
13 cellular equipment.

14 I think for the '023 patent and the
15 prior art that we've discussed, a cellular phone
16 or mobile phone is still the same thing. I was
17 just simply identifying if I slip into the
18 vernacular of saying user equipment, it's because
19 I've referred to all that mobile equipment in the
20 past as user equipment for years.

21 But, again, for the '023 and further
22 prior art using it as a mobile phone or cellular

1 phone is fine.

2 Q And so if somebody was using the term
3 cellular equipment or user equipment as you
4 indicated here, would they have the understanding
5 that those pieces of equipment could also connect
6 directly to a cellular network in these types of
7 2G and 3G networks?

8 A For the 1995 time frame, the pieces of
9 user equipment that were not a phone were
10 typically a laptop computer or portable computer
11 that would have a, what we refer to as a cellular
12 modem and if it had a cellular modem then it would
13 communicate directly with the fixed base station.

14 Q And in your experience in that 1995
15 time frame, do you recall any other terms that may
16 have been used to refer to equipment that could
17 connect directly to these cellular networks?

18 A I may have used a different term, but
19 sitting here right now, for the mobile phones I
20 think there's three terms that seem to be
21 interchangeably used by people, one is a mobile
22 phone, one is a cellular phone, and some people

1 refer -- maybe it's a mobile or a cell, or a cell
2 phone.

3 Q And have you ever heard the term radio
4 telephone used?

5 A I've heard the term radio telephone
6 used, but not in respect to cellular. Radio
7 telephone had a different meaning in the 1995 time
8 frame and a radio telephone would have been more
9 of a two-way telephone type system or a two-way
10 radio system where a telephone call could have
11 been placed. But, again, that terminology, to me,
12 is separate and to my knowledge has never been
13 used when referring to cellular networks or the
14 mobile phones or the cellular phones used in
15 cellular networks.

16 Q So you're not aware of a radio
17 telephone being able to be used in a cellular
18 network in the 1995 time frame?

19 A To be clear, I'm not saying someone
20 didn't call a cellular phone or a mobile phone a
21 radio telephone. I'm just saying that for the
22 past over 30 years I have never heard them

1 referred to as that.

2 There's always someone that's going to
3 refer to it differently. So that, to me, in my
4 mind, would be silly to exclude that no one ever
5 refers to a cellular phone as a radio telephone.

6 But in the 1995 time frame we
7 distinguished between a radio telephone and a
8 cellular phone as a type of wireless device that
9 was -- that operated in two very different types
10 of networks. The radio telephone was part of the
11 two-way radio system. And I can go into detail of
12 what those radio telephones were. A cellular
13 phone had a specific function with a cellular
14 network and had the capability of handing over
15 between one cell and another cell.

16 Q Is it accurate to say, though, that a
17 cell phone is a particular type of radio
18 telephone?

19 A See, I wouldn't -- I would never put
20 those two together because to me they are
21 different from, again, over 30 years' experience
22 of dealing with cellular networks and mobile

1 phones. A radio telephone, if someone said that,
2 I think all the engineers in the room, the people
3 of ordinary skill, would all stop and say what do
4 you mean by that? Because if a person used the
5 term radio telephone, the people of ordinary skill
6 would understand that is a different device that
7 operates on a different type of two-way radio
8 network. It's radio and it makes telephones calls
9 but it operates in a very different way than a
10 cellular phone.

11 Q And what's that very different way?

12 A Well, the radio telephones, and I
13 remember even this goes way back, but I remember
14 the telephones when I was a teenager, my dad
15 worked for a company and he had one in his truck
16 and it was a two-way radio system and he could
17 either use it in a walkie-talkie mode or he could
18 actually dial an operator and get connection to a
19 telephone network.

20 And so those were the radio telephone
21 type systems that were used prior to cellular
22 networks.

1 Q So I mean I think you were explaining
2 the difference between cellular phone/radio phone.
3 You would agree, though, that both cellular phones
4 and radio phones can communicate using radio
5 frequency, right?

6 A There is a commonality. But as I said,
7 they've also use radio or they also use wireless
8 or radio frequency. But how they operate after
9 that is significantly different.

10 Q So if I got more specific with the
11 terminology instead of just saying radio
12 telephone, if I specifically indicated that it was
13 a, because I think you called these 3G cellular
14 networks, CDMA networks, so if I call it a CDMA
15 type radio telephone, will you have an
16 understanding that that radio telephone operated
17 or could connect with the cellular network?

18 A No, not at all. As a matter of fact,
19 all you've told me is I have a radio telephone,
20 which is different than cellular and the choice of
21 the radio frequency or the method of communicating
22 is CDMA. It doesn't say that that radio telephone

1 is a cellular phone because that radio telephone
2 is missing multiple key features that a cellular
3 phone would need to have in order to be considered
4 a cellular phone.

5 Q Well, CDMA is a cellular communication
6 technique, correct?

7 A I would say it differently. CDMA is an
8 air interface technique that uses code division as
9 the radio and the MA is multiple access, meaning
10 multiple users can use the frequency at the same
11 time.

12 Some cellular networks choose to use
13 CDMA as the air interface, other cellular networks
14 choose to use a different air interface other than
15 CDMA.

16 Q All right. So if you had a radio
17 telephone that was CDMA compliant and it would be
18 compliant with at least one cellular air interface
19 standard, correct?

20 A Well, CDMA probably has just to say
21 that the air interface is CDMA, there's multiple
22 levels of compatibility you have to have. The one

1 layer of compatibility is just that the signals
2 are transmitted using code division method of
3 modulation. Then in order to say that the CDMA is
4 part of cellular, there's a major leak that has to
5 occur in all the different signaling protocols
6 that are supported and all of the ways that the
7 voice is encoded to be transmitted over the
8 channels and all of the channels have to be
9 defined.

10 A CDMA cellular network has many
11 different channels. You better use for the base
12 station to communicate with the mobile phones and
13 for the mobile phones to communicate with the base
14 stations. So just saying a radio telephone uses
15 CDMA doesn't even get it close to a cellular
16 network without going into all of these different
17 aspects. For instance, how many channels? What
18 are carried on the channels? What is the
19 signaling protocols used? That's all in a
20 cellular standard and it would be very different
21 in a radio telephone standard.

22 Q Okay. So if somebody identified a

1 device as a CDMA device or a CDMA-compliant
2 device, would you have an understanding that that
3 device could connect to something, some type of
4 access point or repeater or base station using the
5 CDMA air interface?

6 Is that fair to say?

7 A Well, to give you an idea, again, just
8 by saying a device is CDMA doesn't even make it
9 even remotely close to cellular.

10 Q Let's put aside cellular and let's just
11 CDMA, just that particular air interface. If
12 somebody told you they had a CDMA compliant
13 device, would it be understood that that device
14 could connect to some other equipment using the
15 CDMA air interface technique?

16 A Again, what is the CDMA device
17 compliant to? Your question isn't complete
18 because whenever there's a compliance statement,
19 it has to be compliant with something specific.

20 Q And so your opinion is that indicating
21 any device as CDMA compliant does not indicate
22 that it's compliant with anything, with anything

1 in particular?

2 A Well, I think --

3 MR. SMITH: Objection.

4 Mischaracterizes.

5 A I think your question is incomplete is
6 what I have explained.

7 If I say that I'm compliant to
8 something, I have to have both parts of the --
9 both parts of the statement.

10 You're asking me if CDMA compliant
11 without saying compliant with what standard or
12 specific standard, tells me nothing. It just
13 tells me that the device uses code division
14 modulation. That's all it tells me.

15 Q Okay. Well, I think we've been -- move
16 on from that. I think we've beat that issue
17 pretty substantially here.

18 A And it's now -- can we take a break
19 now? Is now a good time and I'll actually even
20 reboot my computer while we're at break.

21 MR. RICHARDSON: Sure. We can take a
22 quick break. How long do you need? Would you

1 like five or ten minutes?

2 THE WITNESS: Well, I'm going to
3 reboot. Let's do ten minutes. I'm seeing 11:20
4 central time, how about if we get back at 11:30
5 central time?

6 MR. RICHARDSON: Sounds good.

7 (Recess taken from 12:20 p.m. to
8 12:32 p.m.)

9 BY MR. RICHARDSON:

10 Q So welcome back, Mr. Lanning.

11 Before we took our break we were
12 talking about some of your prior experience with
13 some of the companies that you work for like
14 British Telecom, Nextel, Sprint, and Ericsson,
15 correct?

16 A Yes.

17 Q So in any of this prior work that you
18 did, did any of those responsibilities relate to
19 designing or implementing moving base stations?

20 A No, none of these networks had a
21 component that I would refer to as a moving base
22 station, which is the base station defined -- a

1 moving base station defined by the '023 patent.
2 None of those networks had that type of component
3 in them.

4 Q So outside of how the moving base
5 station may or may not be defined in the '023
6 patent, have you worked on, in any capacity, a
7 base station that you would independently qualify
8 as a moving base station in any form or another?

9 A All of the base stations in these
10 networks were fixed in place and all of our radio
11 plans were based on base stations that were fixed
12 in place. So none of the base stations in any
13 form or fashion in any of these networks moved.

14 Maybe, I guess, if I were to joke,
15 maybe the ones out in California moved but it was
16 during an earthquake, but that was the only time
17 they moved at all.

18 Q But since 1995, some of the experience
19 that you list in these couple paragraphs here,
20 have you been involved in the design or
21 implementation of moving base stations?

22 A No.

1 Q Don't you believe that having direct
2 experience with the crux of the invention in the
3 '023 patent is relevant to providing opinions on
4 this patent?

5 A Well, the invention of the '023 patent
6 is a novel invention. It was a new invention,
7 specifically the part of '023 for the moving base
8 station. So it was a novel component and I
9 understand what's required for it to operate. I
10 understand how it operates within a cellular
11 network and how it communicates or can communicate
12 with a mobile phone.

13 So I think I have more than necessary
14 experience and knowledge in order to assess the
15 '023 patent invention and how it would operate
16 with a network.

17 Q So you indicated that you know how it
18 works. You know how its communications would be
19 carried out.

20 What is your basis for saying that you
21 know how these particular components work?

22 A My basis is the specification of the

1 '023. Just like one of ordinary skill would read
2 it, read the '023 patent specification, it clearly
3 defines what the moving base station is, how it
4 can work, what the mobile phone is, how it can
5 operate, either directly with the fixed base
6 stations or with the moving base station. And so
7 the details are there and I've included those in
8 my declaration.

9 Q Is there anything that your only
10 experience with the -- with an understanding of
11 how these moveable base stations work comes from
12 the text of the '023 patent?

13 A No, that's not what I said. That
14 mischaracterizes what I've said.

15 The moving base station is a novel
16 invention that works in concert with the cellular
17 network. And a mobile phone on one side of this,
18 the moving base station and fixed base stations on
19 the other side.

20 So I take all of my knowledge that I
21 have over many years of how the cellular networks
22 operate, how fixed base stations operate, how

1 mobile phones operate, and then I've inserted with
2 that knowledge the novel invention of the moving
3 base station of the '023 patent.

4 Q So then it's accurate to say that
5 knowledge of these other network elements, the
6 ones you've just listed here, is applicable to the
7 moving base stations disclosed in the '023 patent,
8 correct?

9 A Knowledge -- the '023 patent is in
10 regard to a moving base station operating with the
11 cellular network. Why it's applicable is because
12 for at least the fact that the moving base station
13 communicates with one or more fixed ports, meaning
14 the fixed base stations, and it's also capable of
15 communicating with the mobile station, that is a
16 cellular phone. And the cellular phone can either
17 directly communicate with the cellular network.
18 So that is all the cellular network functionality
19 that would be standard or the mobile phone can
20 communicate with the moving base station.

21 So all of those pieces need to be
22 brought together for a person to understand the

1 '023 patent.

2 Q Okay. So for a person of ordinary
3 skill in the art attempting to understand the
4 moving base station disclosed in the '023 patent,
5 it would be appropriate for them to draw on their
6 experiences with fixed base stations and moving
7 devices to understand how those moving base
8 stations work, correct?

9 A I've included my definition of the
10 level of ordinary skill in the part -- for the
11 person of ordinary skill in the art in
12 Paragraph 49 of my declaration. As I say in
13 Paragraph 49 of this person of ordinary skill in
14 the art would have had a Bachelor of Science
15 degree in electrical engineering or computer
16 engineering or related field of study, two, at
17 least two years experience with wireless
18 communication systems and, three, would also be
19 familiar with cellular communication technology.

20 And so as I thought through the
21 requirements for a person of ordinary skill, in
22 order to understand the specification and the

1 claims of the '023 patent, they would need to
2 understand wireless systems and be familiar with
3 cellular technology and the functionality that's
4 provided by the different cellular components that
5 the moving base station communicates with.

6 Q Okay. So I want to direct your
7 attention to another document, I believe you have
8 a physical copy in front of you, your CV. And if
9 we can pull up a copy?

10 A Yeah, and I do have a copy of it right
11 here.

12 Q Okay. Great.

13 MR. RICHARDSON: And if we can pull up
14 on the screen a copy of Mr. Lanning's CV to be
15 marked as Exhibit 2101 in the bottom right-hand
16 corner.

17 (Lanning Exhibit 2 marked for
18 identification and attached to the transcript.)

19 MR. RICHARDSON: Okay. Great. If we
20 could mark that as Deposition Exhibit 2.

21 BY MR. RICHARDSON:

22 Q And Mr. Lanning, I assume that you're

1 familiar with this document as well, correct?

2 A Yes.

3 Q And what is this document?

4 A This is the -- a copy of my CV that I
5 submitted along with the declaration.

6 Q Okay. And the physical copy that you
7 have in front of you, does that appear to be the
8 same, at least from the cover page, the same
9 document that's displayed on the screen?

10 A It appears to be the same.

11 Q Okay.

12 MR. RICHARDSON: We can pull down this
13 document from the screen.

14 BY MR. RICHARDSON:

15 Q And as we did before, Mr. Lanning, if
16 you want to just quickly kind of thumb through the
17 pages and make sure that there's no inadvertent
18 notes or highlights in there as well.

19 A It's a clean document.

20 Q Okay. So in the first sentence on the
21 first page of your CV, you identify a particular
22 company as IN Solutions, Inc.

1 Do you see that?

2 A Yes.

3 Q And then in a footnote there you
4 indicate that it's no longer active, correct?

5 A That's correct.

6 Q And I'm just curious on why that is.
7 Why is that entity no longer active?

8 A Sorry. If that was a question for me,
9 I missed it.

10 Q Can you just explain why it is that
11 that entity is no longer active?

12 A IN Solutions stands for Intelligent
13 Networking Solutions. At the time I started that
14 company, we specialized in signaling systems and
15 specialized network components that were actually
16 referred to as the intelligent network. When IN
17 Solutions was started, I was one of the lead
18 consultants for these type of systems. This is
19 where you get all of your caller ID information
20 from, a lot of different services and features for
21 800 number dialing, and when that -- for a period
22 of four or five years after a lot of the

1 intelligent network was defined, I decided to just
2 phase that company out and start a new company,
3 Telecom Architects, that was more general and it
4 would apply for specifically to much of the work I
5 was doing.

6 Q If we can move forward to Page 4.
7 Maybe about three quarters of the way down you
8 have a sentence that reads, "In 1977 and 1978,
9 Mark obtained a private pilot commercial
10 instrument and flight instructor rating."

11 Do you see that?

12 A Yes.

13 Q What is a rating in this context here?

14 A Well, once you get your private pilot
15 license, then you have different ratings. For
16 instance, you have a commercial rating with
17 abilities, you have an instrument rating. You
18 also have a single-engine rating or a multi-engine
19 rating. So a rating is that you've been tested
20 and showed competence in either the functionality
21 or the type of airplanes that you can fly.

22 Q So the rating purely refers to flying

1 capability not necessarily designing anything for
2 the aircraft?

3 A I would say that's true. There's many
4 people that have these ratings that haven't done
5 any design. However, that doesn't apply to me.
6 One of the -- the university that I went to was
7 Embry-Riddle Aeronautical University in Florida
8 where there was a lot of different design
9 functionality that we participated in as part of
10 my undergraduate degree.

11 Q And when was that that you attended
12 that university?

13 A It started in 1977 and 1978.

14 Q And what was -- what were some of the
15 responsibilities that you had when you were
16 working on designing systems for aircraft?

17 A So to be clear, these were -- these
18 were college classes. I didn't design any
19 aircraft band but they were college classes in
20 airfoil design and engine and power plant design.
21 Overall just the basics about how an airplane
22 flies and what makes it fly better than others.

1 Q Okay. So then outside of these college
2 courses that you've taken, do you have any
3 experience designing or implementing wireless
4 communication systems for aircraft?

5 A Yes. When I was in the Army, and I
6 think I've even alluded to that in my declaration,
7 when I was in the Army I actually maintained radio
8 systems for aircraft, for Army aircraft and for
9 the aircraft tower in Augusta, Georgia.

10 Q So what was involved in maintaining
11 those aircraft?

12 A Well, the military helicopters, at the
13 time, this was during the Vietnam period had a lot
14 of different electronic systems and components for
15 both navigation and for communications and also
16 for their weapons systems and I was part of a
17 group that maintained each helicopter's -- all of
18 their radio type of systems. And it involved
19 isolating problems when a helicopter would come in
20 with a type of problem, isolating where the
21 problem was at and repairing the problem. And
22 then certifying that everything worked like it

1 should in the overall helicopter.

2 Q Anything that's specifically directed
3 to the initial design of those systems?

4 A It wasn't -- the systems were designed
5 and they were operational. My job was to keep
6 them working and keep them operational and make
7 sure that they were working the best they could.

8 Q Okay. If we flip forward to Page 5,
9 you have a section at the bottom that lists
10 publications and there's a single publication
11 listed in that section, correct?

12 A You broke up but I'm assuming you're
13 looking at the single publication I have at the
14 bottom of Page 5 and I see that.

15 Q Okay. Are there any other publications
16 that you have besides the one listed here?

17 A No, I don't believe so. There may have
18 been one other publication that I vaguely recall
19 working on, but it's been 20 years ago. So I
20 would say this one is the one that I know for a
21 fact was published and that's all.

22 Q Okay. Are you listed as an inventor on

1 any patents?

2 A No, I'm not.

3 Q Any applications for a patent?

4 A No.

5 Q So then it's accurate to say that your
6 experience with patents is completely related to
7 your role as a consultant, correct?

8 A Well, I have experience in patents.
9 Members of my team have actually -- that I had
10 managed had filed as the inventors for many
11 different patents, the people that work for me
12 going back to 1983. So I was familiar with the
13 whole patent process, what went into patents, how
14 much was involved with the technical people
15 meeting with the attorneys to get all of the
16 initial application done and go through the whole
17 process of tweaking and making changes, whatever
18 needed to be done for the patent to finally get
19 issued. So I would say I've been associated with
20 the whole process since 1983.

21 Since 1983, I have reviewed thousands
22 of patents in my role as a consultant. And at

1 least over a thousand patents for just cellular
2 telephone technology.

3 Q So when you were, you said associated
4 with patents when your team members were working
5 on procuring those patents, you were never
6 directly involved in any of the drafting of those
7 patents, correct?

8 A I remember reviewing, but I never was
9 involved in the drafting. I remember reviewing to
10 make sure they were accurate for a lot of the
11 descriptions for the various patents.

12 Again, I was at a manager and director
13 level where we had many engineers working at the
14 company and they were provided incentives for each
15 patent that they would be able to file and when it
16 was issued.

17 Q Currently is a hundred percent of your
18 income derived from your consulting services?

19 A No. Approximately half my income is
20 from my expert consulting services. The other
21 half of my income is from my ranch. I have a
22 cattle and horse ranch here in Texas.

1 Q If we look at the last three pages or
2 so of your CV, you list the cases that you were
3 involved in, it says since 2014, correct?

4 A Yes. I list the cases that were filed
5 since 2014 for the different venues or for the
6 different courts. Sometimes the rules are a
7 little different, so I wanted to make sure that I
8 covered at least the last five years for any cases
9 that I've testified at deposition or trial. But
10 even more than that, I've tried to include every
11 case that I was engaged on, whether I did any work
12 or not. If I was -- if I had an engagement for a
13 case, I included it on my CV.

14 Q And do you recall if any, and if so
15 which ones of these cases dealt directly with
16 moving base stations?

17 A Well, as I said earlier, the invention
18 of the '023 patent is novel and it's a moving base
19 station.

20 I could go through and list the cases
21 that have been involved with cellular and cellular
22 base stations and cellular phones. But none of

1 these cases claimed the functionality of a moving
2 base station.

3 Q On Page 9, the last page of your CV,
4 second from the bottom there you identify a
5 District Court case involving Carucel and General
6 Motors Company, et al.

7 Do you see that?

8 A Yes.

9 Q And was that the first time that you
10 were retained on behalf of Carucel Investments?

11 A Yes. That -- and to be clear, the
12 listing of that case is what I'm doing today and
13 what I've done for the IPR declarations. I had
14 not had any involvement with Carucel before this
15 case. When I say, again, to be clear "this case,"
16 meaning all of these IPR declarations for the
17 different defendants.

18 Q Okay. But it says here in that
19 particular entry that the case was filed on
20 December 2018.

21 Do you see that?

22 A Yes.

1 Q Do you recall if you were retained by
2 Carucel before or after that December 2018 date?

3 A We started out the day asking when I've
4 been retained by Carucel and I can't recall. I
5 can't even recall the time of year. But I believe
6 from what I recall, sitting here today, the case
7 had already been filed before I was asked if I
8 would be interested in working on the case.

9 Q And is it accurate to say that your
10 involvement with Carucel has been for at least
11 about a year, it's the middle of 2020 now?

12 A My best estimate, frankly I'll
13 characterize it as a guess, I think probably it
14 seems like it's been a year. But I'll put a
15 caveat in. Sometime time flies a lot faster
16 anymore than I think. But I think it's probably
17 been about a year. And, again, that's my best
18 guess.

19 Q So assuming it's about a year. So do
20 you have an estimate as to what percentage of your
21 consulting work has been done for Carucel over the
22 past year?

1 A I don't measure or even think about in
2 terms of a percentage of cases that a specific
3 case takes for my mix but I would say that in the
4 past year a safe estimate would be that the
5 Carucel case has taken less than 25 percent of my
6 time, and that's conservative, and it could be
7 considerably less than that. But I would say not
8 more than 25 percent. And, again, and could be
9 considerably less than 25 percent of my time this
10 last year.

11 Q Let's turn back to your declaration,
12 and that's Exhibit 1.

13 A Okay.

14 Q So I want to direct your attention to
15 Paragraph 29 of your declaration.

16 A Okay.

17 Q And the first sentence of that
18 paragraph reads, "That I understand in this
19 proceeding the claims must be given their plain
20 and ordinary meaning consistent with the
21 specification."

22 Do you see that?

1 A Yes.

2 Q And do you have an understanding that
3 this analysis also requires taking into account
4 the prosecution history of the '023 patent?

5 A Yes. That would be part of the
6 information that would be considered.

7 Q And --

8 A Or I should say that that's part of the
9 information that may be considered because it
10 depends on what the Petitioner raises and
11 specifically what the expert for the Petitioner
12 raises because I'm responding to the expert report
13 that's been provided.

14 Q Sure. So in a number of the paragraphs
15 in the preceding pages of your declaration, you
16 discuss a proposed construction for a mobile
17 device.

18 Do you recall that?

19 A Just to make sure I heard your word,
20 did you say I do or do not discuss the?

21 Q You do. And I'm asking more as a
22 general matter. There is a number of paragraphs

1 in your declaration in the following pages that
2 discuss the proper construction for a mobile
3 device, correct?

4 A Well, you, and I hesitate because you
5 use the word "construction." I'm not providing
6 any constructions other than what constructions
7 have been provided by the court. I'm simply
8 saying what one of ordinary skill in the art would
9 understand or interpret the claims. And so I
10 guess I know a construction is something specific
11 and I am not providing any constructions other
12 than repeating the constructions that were
13 provided by the courts and then I just provided
14 what I believe the meaning to be of the claims and
15 the claim terms as understood by one of ordinary
16 skill in the art at the time of patent.

17 Q Okay. Well, let's take a step back
18 here. Maybe for our reference it might be easier
19 to look at Paragraph 48 of your declaration?

20 A Can you say the paragraph number again?

21 Q Paragraph 48.

22 A Okay. I'm there.

1 Q And in this paragraph you include a
2 table of terms and different constructions,
3 correct?

4 A Yes. And, again, it's a table of
5 what's been provided by the Patent Owner and the
6 Petitioner. Specifically, if I recall, there's
7 only really been one construction provided in
8 either column, and that's for the configurative as
9 construed by the District Court of Southern
10 District of California. All of the other entries
11 on both the Patent Owner and Petitioner's
12 construction either say no construction is
13 necessary or plain and ordinary meaning.

14 Q Okay. So we'll turn back to these
15 particular terms that you've identified here and
16 we'll kind of dive a little bit deeper into what
17 is actually being proposed here. But I want to
18 return to our earlier discussion. I want to
19 direct your attention to Paragraph 35.

20 A Okay. I'm there.

21 Q And in Paragraph 35 it begins with, "I
22 understand that the obviousness question requires

1 consideration of four factors although not
2 necessarily in the following order," and then you
3 include a bullet point list of four different
4 factors, correct?

5 A Yes.

6 Q And the final factor in that list is,
7 "Whatever objective factors indicating obviousness
8 or nonobviousness may be present in a particular
9 case."

10 Correct?

11 A Yes.

12 Q And you did not identify any factors of
13 nonobviousness in this particular case, correct?

14 A I believe my declaration speaks for
15 itself, so I don't want to contradict my
16 declaration's content sitting here. But sitting
17 here today, I do not recall providing any
18 objective factors of or for nonobviousness.

19 Q Okay. I want to direct your attention
20 to another document, I believe you should have a
21 physical copy there for you to review, it's going
22 to be the '023 patent.

1 A I have it.

2 MR. RICHARDSON: Okay. And if we can,
3 again, pull up the '023 patent on the screen for a
4 minute.

5 AV TECHNICIAN: I'm sorry, I'm looking
6 for it right now.

7 MR. RICHARDSON: Okay.

8 AV TECHNICIAN: What folder would it be
9 in?

10 MR. RICHARDSON: Should be in the day
11 one folder. It should be identified as U.S.
12 patent 7,979,023.

13 AV TECHNICIAN: Hang on one second.
14 Exhibit 1001?

15 MR. RICHARDSON: Yes.

16 AV TECHNICIAN: Okay.

17 MR. RICHARDSON: And if we can mark
18 this document as Deposition Exhibit 3.

19 (Lanning Exhibit 3 marked for
20 identification and attached to the transcript.)

21 BY MR. RICHARDSON:

22 Q And Mr. Lanning, do you recognize the

1 document that you have in front of you and that's
2 also presented on the screen as the '023 patent
3 which is the subject of your declaration?

4 A Yes.

5 Q And, again, if you don't mind, if you
6 haven't already done so, if you want to just
7 briefly flip through and make sure there's no
8 highlighting or notes in that particular copy as
9 well?

10 A Looks clean.

11 MR. RICHARDSON: We can pull this
12 document off the screen for now.

13 BY MR. RICHARDSON:

14 Q So, Mr. Lanning, we talked kind of
15 indirectly about the '023 patent for a little
16 while this morning.

17 But do you have an understanding of
18 what is alleged to be the invention of the '023
19 patent?

20 A I heard the word alleged and nothing
21 after that.

22 Q Do you have an understanding of what is

1 alleged to be the invention of the '023 patent?

2 A Yes, in short I'd say what's being
3 claimed by the claims of the '023 patent.

4 Q And so you don't -- I mean, we talked
5 about the -- I think at one point earlier today
6 you characterized the '023 patent as having three
7 different general features, one being a fixed base
8 station, another being the mobile devices, and the
9 third being the moving base stations; is that
10 correct?

11 A I don't think that's quite accurate.

12 What I described at a high level for
13 the '023 patent, there's three different
14 components that are involved for communicating,
15 and then each of those components has specific
16 requirements that are listed in the claims.

17 Again, the invention is the claims and
18 what's being claimed. Specification, then,
19 describes the detail around those.

20 Q So maybe let me phrase it differently.

21 When we were discussing these different
22 components of the '023 patent earlier, I believe

1 you had mentioned that the fixed base stations and
2 the moving devices on a mobile unit were elements
3 that also were found in 2G and 3G cellular
4 networks at the time, correct?

5 A And if I look at Claim 11 of the '023
6 patent, I look at one of the limitations of the
7 '023 patent and it's a receiver configured to
8 receive fixed port signals from a fixed port
9 through a plurality of specially separated
10 antennas. So, as I mentioned earlier, the fixed
11 port signals are the signals from a fixed base
12 station. So the fixed base station is one of the
13 components that's involved in the claims.

14 The apparatus that's configured
15 relative to move relative to the earth, that's the
16 moving base station.

17 And then there's a -- in the last
18 limitation of Claim 11, it states a transmitter
19 configured to transmit radio frequency signals to
20 a mobile device corresponding to the received
21 fixed port signals.

22 So the other component that I

1 mentioned -- that I stated was part of the claims,
2 is the mobile device.

3 And so the mobile device for this claim
4 and the fixed port are as described in the
5 specification. And they are typically parts or
6 components of a cellular telephone network.

7 Q Okay. So if we look at Claim 11 which
8 we were just focusing on, the preamble that's the
9 first line for that particular claim reads, "an
10 apparatus configured to move relative to the
11 earth," correct?

12 A Yes.

13 Q So that claim, Claim 11, is directed to
14 that particular apparatus configured to move
15 relative to the earth, correct?

16 A And it says for that apparatus, that
17 apparatus comprised, so the limitations or the
18 steps in that claim are referring to the moving
19 base station.

20 Q Correct. So in other words, Claim 11
21 does not recite a system comprising the three
22 different elements that you listed, right? It is

1 an apparatus directed just towards the components
2 of the moving base station, correct?

3 A I wouldn't agree with that. First
4 thing I would say 11 says what it says. And 11 is
5 for an apparatus configured to move relative to
6 the earth. However, when you look at the
7 requirements for the apparatus, it needs to be
8 capable of receiving fixed port signals from a
9 fixed port not just from anywhere but very
10 specifically receiving fixed port signals from a
11 fixed port and through the plurality of specially
12 separated antennas. While that's a characteristic
13 of the moving base station, the moving base
14 station clearly has to receive fixed port signals,
15 meaning it has to receive signals from a base
16 station.

17 And so a base station that's
18 transmitting signals has to be part of this
19 because the base station has to transmit the
20 signals in order for the receiver to receive
21 those.

22 Q Sure.

1 A And then I have a transmitter
2 configured to transmit radio frequency signals to
3 a mobile device corresponding to the received
4 fixed port signals. So that moving base station
5 has to have a transmitter and that transmitter is
6 to transmit to a mobile device.

7 And so while I agree that they're all
8 limitations for the moving base station, as I just
9 read, the moving base station has to be capable of
10 receiving fixed port signals from the fixed base
11 stations and has to be capable of transmitting
12 signals to a mobile device.

13 Q Okay. Let's focus on that first
14 limitation that you focused on in your answer.

15 So a receiver configured to receive
16 fixed port signals from a fixed port.

17 Now correct me if I'm wrong, or,
18 actually, let me rephrase that.

19 Is there anything in Claim 11 that
20 identifies how that fixed port must be configured?

21 A It identifies that it's a fixed port.
22 And so in order for one of ordinary skill in the

1 art to understand what a fixed port signal is then
2 that person would need to go to the specification,
3 as I have done in the -- in my declaration to
4 describe what constitutes receiving or being
5 configured to receive a fixed port signal.

6 Q Sure. But there's no, in the claims,
7 there is no limitation on how that fixed port must
8 be configured in order to operate with the moving
9 base station, correct?

10 A I don't think I agree with that. I
11 think I -- it says clearly here what a receiver's
12 configured to receive. It just doesn't say a
13 receiver configured to receive any type of signal,
14 it is saying a receiver configured to receive a
15 fixed port and really two received fixed port
16 signals, plural, from a fixed port, and then not
17 only receive them, but receive them through the
18 plurality of specially separated antennas. So to
19 understand what is required to configure a
20 receiver to receive fixed port signals, these need
21 to be very specific types of signals that are
22 being transmitted by a fixed port.

1 So to answer your question, these are
2 specifically standard cellular signals. I think
3 I've included in my declaration, if you want to go
4 into the detail where the '023 patent says the
5 fixed port is a typical cellular base station.

6 Q That was --

7 A So that tells me --

8 Q Sorry. Go ahead if you weren't
9 finished.

10 A So that tells me, again, what type of
11 signals the receiver needs to be configured to
12 receive.

13 Q Okay. So you actually jumped forward a
14 couple steps and that was my final question here.

15 It's accurate to say that the fixed
16 port that you see in Claim 11 is a conventional
17 fixed port that would be known in the art,
18 correct? If you want to look at Paragraph 52 of
19 your declaration that might have been what you're
20 referring to.

21 A That's one of those. I was thinking of
22 a different -- I was thinking of a different quote

1 if I can find it. Where it said something to the
2 effect that the fixed port is a traditional
3 cellular base station.

4 Q Looking in Paragraph 52, correct me if
5 I'm wrong, it reads, "Cellular fixed base stations
6 (fixed ports) that operate the same as
7 conventional cellular base stations."

8 A Okay. Let's see. Yeah, 52 obviously
9 is a long paragraph. So are you on the middle of
10 Page 24? Is that -- I'm trying to find where you
11 are.

12 Q No, I'm still at the bottom of Page 23,
13 it's the beginning of the second sentence.

14 A Right. Okay. Yes, and I have that and
15 what I was actually looking for was 4.1 that is on
16 Page 23, the quote for that, and I believe there
17 is the quote -- I just -- but I guess if I'm --
18 I'm happy that it does the fixed port as I've
19 stated in my declaration, is the same as a
20 conventional cellular base station and I recall
21 even reading and having the quote. If you need
22 that. But if you don't feel that's necessary,

1 then we can move on.

2 Q No, that's okay. I think we're on the
3 same page now.

4 So then if we look back at Claim 11,
5 the fixed port that shows up in Claim 11 is a
6 conventional cellular base station, correct?

7 A We're looking at each other to try to
8 see if we can get the help of what you said. But
9 the last part of your question just dropped off.

10 Q No, that's fine. I understand we're
11 having issues. So don't worry, you don't need to
12 explain when you can't hear me just say repeat.

13 A We're trying. We're trying.

14 Q So if we look back at Claim 11, so the
15 term "fixed port," that shows up in Claim 11 can
16 be a conventional cellular base station, correct?

17 A So in Claim 11 the receiver configured
18 to receive fixed port signals, I believe one of
19 ordinary skill would interpret that phrase as a
20 receiver that's configured to receive conventional
21 base station signals from a base station which it
22 refers to as a fixed port.

1 Q So I think, again, we're on the same
2 page but you're not taking the position that the
3 inventor of the '023 patent improved this fixed
4 base station in any way over the conventional base
5 station that already existed, correct?

6 A I believe the receiver configured to
7 receive, as we just discussed, it's receiving
8 signals from conventional base station. And when
9 I say "conventional base station," I would say a
10 standard cellular base station.

11 Q Okay. So the other portion of this
12 claim that you had referenced was the limitation
13 of the claim that included the transmitter. And
14 that transmitter is configured to transmit radio
15 frequency signals to a mobile device, correct?

16 A That's correct.

17 Q And that's --

18 A And --

19 Q Sorry, go ahead.

20 A I was going to say that's what it says.
21 I believe you read it correctly is all I was
22 saying.

1 Q So if I'm looking at the figures of the
2 '023 patent and I'm particularly looking at
3 Figures 2, 3, 4, and 5, which appear to show the
4 inner workings of the various different components
5 in the communication system, Figures 2, 3, 4, and
6 5 are block diagrams for the fixed base station,
7 mobile base station and gateway telephone office,
8 correct? And if you need to check I would point
9 you to Column 3, Line 47.

10 A Well, I'm thinking the easiest way to
11 answer your question is I agree for Figures 2
12 through 5. The description provided by the
13 patent, the '023 patent, in Column 3, lines, say,
14 around 48 through 53, 54.

15 Q Okay.

16 MR. SMITH: Ryan?

17 MR. RICHARDSON: Yes.

18 MR. SMITH: When you get to a
19 convenient point, to expedite things today, we had
20 lunch brought in and it's ready here. I'm not
21 telling you when to have to stop but when you get
22 to a convenient stop we'd like a short break for

1 that, at your convenience.

2 MR. RICHARDSON: Sure. We can do that.
3 We can hopefully come to a decent point here after
4 not too long. Our team will need to take a break
5 to do the same thing.

6 MR. SMITH: No problem. I didn't mean
7 now I just wanted to make you aware of that so
8 when you got to there we can go ahead and break.

9 MR. RICHARDSON: Sure.

10 BY MR. RICHARDSON:

11 Q Mr. Lanning, we were just looking at
12 Figures 2, 3, 4, and 5, which relate to the fixed
13 base station, moving base station, and gateway
14 telephone office. There does not appear to be a
15 figure showing the inner workings of the mobile
16 device, correct?

17 A I'm looking at the patent.

18 Q Sure.

19 A I believe Figure 4, and I'm trying to
20 remember the details in question, but Figure 4
21 shows the moving base station and it shows the
22 capability of the two antennas that the moving

1 base station has.

2 Q Let me repeat my question for you,
3 Mr. Lanning, because I think we're on the same
4 page.

5 A I think that would be best for the
6 record, please.

7 Q I think we're on the same page about
8 Figure 4.

9 My question was the '023 patent does
10 not include a figure showing the inner workings of
11 the mobile device, correct?

12 A Okay. I guess that's where I was a
13 little bit -- what do you mean by "inner workings
14 with the mobile device"?

15 Q So what would you call the elements
16 that are represented inside the boxes of Figures,
17 2, 3, 4, and 5?

18 A Well, I would call at a high level the
19 boxes in Figure 2, I would call those the
20 components that are the rectangles --

21 Q Okay.

22 A -- inside of box 2, Figure 3, and

1 Figure 4.

2 Q Okay. So then my question is: The
3 '023 patent does not include a figure showing the
4 internal component of the mobile device, correct?

5 A I would agree. I don't think there's a
6 figure similar to Figures 2, 3, and 4, for the
7 mobile device. But frankly, I don't think there
8 needs to be either because the specification is
9 clear on the functionality provided by the mobile
10 device.

11 Q So based on my review, and correct me
12 if I'm wrong, I didn't see any portion of the
13 specification of the '023 which specifically
14 talked about the internal component of the mobile
15 device.

16 Do you recall such a teaching anywhere
17 in the specification? And I don't want you to
18 have to go through every column or every line.

19 A Yeah, I'm not.

20 Q Do you recall --

21 A I'm not looking at that. I was looking
22 through my declaration to find my discussion of

1 the mobile device for the disclosures. And I
2 start with, to answer your question, I've
3 described starting on at least Page 26, at the
4 bottom of Page 26, the functionality provided by
5 the mobile telephone units. I'm just looking to
6 make sure of what I had before that.

7 Okay. So I start with, "the mobile
8 telephone units must be directly" -- must be --
9 sorry, let me start over.

10 "The mobile telephone units must be
11 capable of directly communicating with either a
12 fixed cellular base station or a moving base
13 station."

14 To specifically answer your question,
15 from the citations I used, I don't see any
16 internal components described; however, I see the
17 functionality that the mobile telephone unit needs
18 to provide.

19 And then just to finish -- then I go
20 through multiple pages, and then I get to a
21 section 4, subsection 4 on Page 31, that describes
22 that the mobile telephone units are capability of

1 registering with the cellular network.

2 Again, as I read the citation, it is
3 describing what the mobile telephone unit is
4 required to do or be able to do.

5 I don't see any internal components
6 described.

7 Then I have other discussions, I
8 believe, in the specific detailed analysis. But
9 if I stop there, that would give you the
10 opportunity to ask me any other questions you have
11 on that.

12 Q So isn't that an issue, then, if the
13 mobile device needs to have this functionality
14 that you outline in this portion of your
15 declaration, but the '023 patent does not discuss
16 or identify any internal components that would be
17 needed to perform those functions, isn't that an
18 issue?

19 A An issue for what?

20 Q For a person of ordinary skill in the
21 art at the time of the invention to be able to
22 implement the invention of the '023 patent?

1 A No, I don't think so. Because, again,
2 as I've stated what the knowledge and education of
3 a person of ordinary skill would have reading the
4 specification of '023, that the particular
5 functionality that a cellular phone or a mobile
6 telephone would have is clear.

7 The patent doesn't get into what the --
8 and for instance, if we look back at Claim 11, it
9 doesn't say what components the mobile telephone
10 has, it is claiming that the transmitter be
11 configured to transmit radio frequency signals to
12 a mobile device corresponding to the 3C fixed port
13 signals. So I don't need to know the circuitry of
14 a mobile device or a person of ordinary skill in
15 the art would not need to know the circuitry of a
16 mobile device to know that it was a mobile device
17 used in a cellular network that was capable of
18 performing registration and other cellular type
19 functions and that's the type of signal that the
20 transmitter is sending to that mobile device.

21 Q So if I understand you correctly, then,
22 it would have been within the knowledge of a

1 person of ordinary skill in the art -- let me
2 rephrase that.

3 At the time, a person of ordinary skill
4 in the art would have understood how to design the
5 mobile device without an expressed teaching of
6 what internal components are needed, right? That
7 would be within their realm of knowledge?

8 A I don't see that requirement anywhere
9 in the claim. The claim is a person of ordinary
10 skill in the art, I would agree, would definitely
11 need to understand the requirements for the radio
12 frequency signal that the moving base station
13 would transmit to the mobile device. The person
14 of ordinary skill doesn't need to know all the
15 circuitry in the mobile device to understand what
16 information and the format of the information
17 that's going to be transmitted over the air
18 interface, or in another word people use for their
19 interface is for the radio frequency interface,
20 and it's required in this limitation to transmit
21 radio frequency signals.

22 And so, again, the requirement here is

1 for one of ordinary skill in the art to understand
2 that these radio frequency signals have to be
3 standard type cellular signals for a mobile
4 device.

5 Q And so as long as it has -- excuse me.
6 As long as a mobile device has the functionality
7 that you described, it doesn't matter what the
8 internal components are for the purpose of
9 Claim 11, correct?

10 A The purpose of Claim 11 is
11 transmitting -- the moving base station transmits
12 the radio frequency signals to a mobile device and
13 the other requirement is it has to correspond to
14 the received fixed port signals.

15 So effectively, the moving base station
16 is transmitting the received fixed port signals to
17 the mobile device. And so now we have standard
18 cellular or conventional cellular coming from a
19 fixed base station and then that standard
20 cellular-type radio frequency signal is being
21 transmitted to a mobile device.

22 Q Okay. So Mr. Lanning, I'll actually

1 give this option to you. I have about probably 10
2 to 15 minutes left in this section of my outline.
3 We can continue going down on this for 10 or 15
4 minutes or if you would like to break for lunch we
5 can pick it up afterwards.

6 A I'm okay either way. We're both okay
7 with going. Can we just kind of put a hard stop
8 on it, though, for 15 minutes?

9 Q Okay.

10 A So if we put a hard stop on it by 1:00
11 our time that would be fine with me.

12 Q Okay. So then let me direct you back
13 to the '023 patent, and I want to specifically
14 direct your attention to Column 1, Line 27.

15 A Let me get there.

16 Q Sure.

17 A Column 1? I'm at Column 1.

18 Q Okay. And Line 27 it's the first
19 sentence of the background section.

20 A Okay.

21 Q So in this portion of the background it
22 says, "In a typical cellular telephone system, an

1 area is divided into a plurality of cells with
2 each cell having a centrally located cell site."

3 And the next sentence reads, "a mobile
4 unit moving in such a cellular network
5 communicates by radio with the nearest cell site."

6 Do you see that?

7 A Yes.

8 Q Are the mobile units being referred to
9 here in the background section the same mobile
10 units that show up throughout the rest of the
11 specification of the '023 patent?

12 A With the exception that the mobile
13 units, as described by the specification, are
14 capable of communicating with a moving base
15 station and with a fixed base station, and being
16 able to hand off back and forth, or at least
17 communicate at one moment in time with a fixed
18 base station and another moment in time
19 communicate with a moving base station.

20 I think I've included multiple pages
21 where the '023 specification is describing the
22 speed, the possible speed of a mobile phone and

1 how it may at one moment be communicating directly
2 with a conventional base station and at another
3 moment be communicating with a moving base
4 station.

5 Q So is it your opinion, then, that a
6 mobile unit described here in the background do
7 not have that capability to connect directly to
8 the fixed base station and register with the base
9 station and switch between that and the mobile
10 base station?

11 A Well, and, yes, that's what I'm
12 describing. And I'm being careful here because
13 the background, as we know, is describing --
14 typically describing prior art systems and then
15 there may be changes to those prior art systems
16 that are required.

17 For instance, if I look down at
18 Column 1, down further from where you are reading
19 at Line 56, it states, "A problem with existing
20 mobile telephone systems is the considerable time
21 required in handoffs. This becomes a particular
22 problem in urban areas which are highly congested.

1 A basic principal of cellular telephone systems is
2 the concept of frequency reuse."

3 And then it goes on to state that
4 issues and the number of handoffs are required.

5 So I want to be careful that the
6 background doesn't necessarily describe the mobile
7 station that's required by the '023 patent because
8 the mobile station in '023 patent, as I've just
9 described, is capable of communicating with a
10 standard base station at one moment in time, but
11 also is capable of communicating with a moving
12 base station at another point in time.

13 MR. SMITH: Ryan, can I ask a question
14 real quick?

15 MR. RICHARDSON: Sure.

16 MR. SMITH: Were you asking about the
17 capability of the mobile station or the mobile
18 phone?

19 MR. RICHARDSON: I was asking about the
20 capability of the mobile unit.

21 A We've got to be careful. And so I
22 think the point is, is the mobile unit in the

1 background the only mobile unit in the background
2 section is the mobile phone, is the portable
3 device. Because there's no moving base station in
4 the background.

5 So hopefully we were both communicating
6 about the same device. It was the cellular
7 telephone or the mobile telephone. And at least
8 that's what I was referring to and hopefully I was
9 answering the question you were asking.

10 If not, we probably need to do a reset.
11 Again, terminology for the background section, a
12 mobile unit, we've got to be careful that the
13 mobile unit in the background is the mobile
14 telephone not the mobile base station as I've
15 answered.

16 Q Yeah. I think we're on the same page.
17 I'm asking all these particular questions about
18 what the '023 patent calls the mobile unit or the
19 mobile device, not the mobile base station. Just
20 the cell phone, user device?

21 A Okay. So maybe the best way to resolve
22 this, I'm thinking, is going back to the claims.

1 And if we look at Claim 11, the mobile device
2 that's the last limitation of Claim 11, that
3 mobile device may be the same as the mobile unit
4 described in the background or it may not. And so
5 the caveat that I'm saying is that the mobile
6 device, as required by Claim 11 and the other
7 asserted claims, or the other challenged claims, I
8 guess I'll get the right terminology, is a mobile
9 device that can communicate directly with a
10 conventional base station at one moment in time
11 and a mobile device that can communicate with the
12 moving base station at another moment in time.

13 Q Okay. So you began that answer by
14 stating that the mobile unit in the background may
15 be the same as the mobile device in Claim 11.

16 So if I understand that correctly, at
17 least in some situations these background mobile
18 units can have the functionality of that mobile
19 device in Claim 11, correct?

20 A If the "mobile unit" in the background
21 section has the capability of meeting the claims
22 of at one moment in time communicating with

1 conventional base station and another moment in
2 time communicating directly with the moving base
3 station, then that mobile device would then meet
4 the claim language, again, with the other
5 interpretations of what a mobile device is capable
6 of doing.

7 And I've listed that, for instance, the
8 registration and the handoff functionality.

9 Q All right.

10 A So I would say I would be very careful
11 to just be able to generalize a mobile device in
12 the background without -- because the background
13 is referring to multiple type cellular systems at
14 a high level. It describes -- it comes from a
15 Bell System technical journal and frankly looks
16 like it has terminology for generation 1 analog
17 systems. I would be very careful to say any
18 mobile unit in the background would meet the
19 mobile device as required by the claims because
20 I've laid out what the specification says the
21 mobile unit needs to be able to do.

22 Q So maybe we can clear this up a bit.

1 If you take a look back at your
2 declaration and if you look at Paragraph 55.

3 A Okay. I'm at 55.

4 Q And in 55 you make the assertion that
5 the '023 patent further discloses that the moving
6 mobile telephone unit can be switched back and
7 forth between having a direct connection with the
8 fixed base station or have a connection with a
9 moving base station.

10 And in support of that assertion, you
11 point to portions of Column 2 of the '023 patent,
12 correct?

13 A That's one of the cites that I use.
14 22, Lines 27 through 30.

15 Q Sure.

16 A Oh, wait a minute. Sorry. Let me
17 correct that. I noticed that I have two or three
18 Column 2. So I think you said it the best way.

19 The first paragraph of my support is
20 from Column 2.

21 Q Right. And if we look at Column 2 in
22 the '023 patent, we see that Column 2 is in the

1 background section, correct?

2 A Yes.

3 Q So at least this support that you're
4 citing to in the first block quote here as to why
5 the moving mobile telephone units can communicate
6 directly with the fixed base station and switch
7 between the fixed base station and the moving base
8 station comes from functionality of these
9 background mobile units, correct?

10 A The first part comes from the
11 background, as I've included.

12 Q Okay. So in at least some situations,
13 then, these background mobile units can have the
14 ability to communicate directly with the fixed
15 base station and switch between the fixed and
16 mobile base stations, correct?

17 A Well, this -- I should state the first
18 paragraph doesn't have anything to do with
19 communicating with a moving base station. This is
20 in the background and it's providing some context
21 to what size of cells are used. And so you can
22 have the small size cells or the larger macro size

1 cells and then slow-moving users are allocated to
2 microcells. So this again is more background
3 because it is from the background section for how
4 a cell phone will be allocated to different cell
5 sizes. And so it's not making any specific
6 requirements of the cell phone in this first
7 paragraph or in Column 2 other than the cell phone
8 can be allocated to a microcell or to a macrocell.

9 Q And when it's allocated to a macrocell
10 that would be an example of a direct connection
11 with a fixed base station, correct?

12 A Yeah. So would a microcell be the same
13 thing.

14 Q All right.

15 A It's just a smaller -- it's directly
16 communicating with a base station in a macrocell
17 or a microcell. It's just the diameters of the
18 cells is different. And as the patent says, the
19 small cells can even be a hundred feet in diameter
20 so that's very small.

21 Q Sure. So what it's telling us is that
22 these background fast moving mobile units can

1 communicate directly with a macrocell base station
2 and then can switch to a different type of base
3 station, a microcell base station, correct?

4 A Right. And this is in support that
5 these units can communicate directly with the base
6 station regardless of the size, whether they're
7 small or whether they're large, relatively
8 speaking.

9 Q And you mentioned in your previous
10 answer, and I just want to take a look to make
11 sure I've got it right, you mentioned that the
12 '023 patent is that these microcells can be very
13 small and even be a hundred feet in diameter or
14 so, correct?

15 A And that's what it says in the
16 background is small cells, e.g. on the order of a
17 hundred feet in diameter.

18 Q Do you have any understanding of what
19 the form factor of that microcell might be if it
20 had a diameter of only a hundred feet?

21 A You used the word "form factor." I
22 guess form factor means a lot of different things

1 to me. It's typically used in processor cards.

2 Do you have a different term you could ask me?

3 I'm not sure I understand what you're asking.

4 Specifically, are you asking about the
5 base station for a hundred-foot in diameter cell?

6 Q Exactly. What -- you have an
7 understanding of what the microcell, what the
8 physical size of that microcell would be if it
9 only had a radius or diameter of a hundred feet?

10 A Well, for a base station that has a
11 hundred-foot diameter, it would typically have all
12 of the functionality of a large base station. But
13 the ones I remember seeing that would service
14 these kind of areas would be more of a
15 wall-mounted unit. It wouldn't be a -- a wall
16 mounted unit and then there would be different
17 antenna designs that it could use. But typically
18 in an area on an outside wall or even an inside
19 wall into a large conference room or something
20 like that.

21 Q We're talking on the order of maybe the
22 dimensions would maybe be a couple feet?

1 A You broke up. I heard a couple feet
2 but I didn't hear before it.

3 Q So are we talking about the physical
4 dimension for that microcell might be on the order
5 of a couple feet?

6 A I've seen the smaller base stations
7 that look like a refrigerator that you would see
8 in a hotel room, probably, the little convenience
9 refrigerator, say, two feet wide by three feet
10 tall, give or take. Then I've seen even smaller
11 base stations that are mounted on a wall that
12 would look, probably, about the shape of a typical
13 wall speaker for a stereo system, say, they could
14 be as big as maybe a foot tall by two feet wide.
15 But most of those ones I remember seeing would be
16 a little smaller than even that. Could even be
17 small, maybe the best description as I think about
18 it, for the smallest ones I remember seeing about
19 the size of a shoe box.

20 Q Okay.

21 MR. RICHARDSON: All right. We're at
22 2, so I'm going to let you go, let you grab some

1 food. Elvin, Mr. Lanning, how long do you guys
2 need? Would you like a half hour, 45 minutes,
3 longer?

4 THE WITNESS: We think we're okay with
5 a half hour, so we'll come back in 30 minutes past
6 the hour.

7 MR. RICHARDSON: Okay.

8 MR. SMITH: Does that work for you
9 guys?

10 MR. RICHARDSON: That'll work for us.

11 MR. SMITH: Okay.

12 MR. RICHARDSON: All right. Thank you.

13 (Recess taken from 2:21 p.m. to
14 2:36 p.m.)

15 BY MR. RICHARDSON:

16 Q Mr. Lanning, we'll switch gears a
17 little bit from the topics that we were addressing
18 before we took our lunch break.

19 And I want to direct your attention
20 back to your expert declaration, which is
21 Exhibit 1, and specifically to Paragraph 47.

22 A Okay. I'm there.

1 Q In the first sentence of that paragraph
2 it reads, "It is also my understanding that the
3 Patent Owner and Petitioner have requested
4 construction of several claim terms in the '023
5 patent."

6 Do you see that?

7 A Yes.

8 Q And where did you get that
9 understanding from?

10 A My understanding it continues on into
11 Paragraph 48, where I've included the chart. And
12 this is what I've understood has occurred in the
13 past in the chart.

14 Q I'm more specifically focused on the
15 portion of that sentence that reads, "the
16 Petitioner was involved in requesting construction
17 of terms of the '023 patent."

18 Are you aware of any particular terms
19 that Petitioner was alleged needed to be
20 construed?

21 A No, as a matter of fact in the column I
22 was provided with the detail, I don't see any

1 proposed constructions by the Petitioner.

2 Q Okay. So then just for clarification
3 again if we look at Paragraph 48, which
4 immediately precedes that chart, there's a
5 sentence that reads, "Petitioner also identified
6 an additional term to be construed in this
7 action."

8 That's not correct, right?

9 A I'm not seeing any so -- and I was just
10 trying to understand from the prior civil action.

11 Q And I understand we've got a lot of
12 proceedings and a lot different related patents,
13 so things obviously can get mixed up.

14 But I can show you the portion of the
15 petition if you would like, but I can represent to
16 you that Petitioner has not proposed that any
17 terms need to be explicitly construed for the
18 purposes of this proceeding.

19 Do you have any independent basis to
20 believe that that representation that I'm making
21 to you is incorrect?

22 A No. And I'm not seeing any here in 48.

1 So, frankly, I can't answer one way or the other
2 whether the Petitioner has. But I understand what
3 you're representing and if that's indeed what
4 you're representing, I do not have any other
5 evidence that the Petitioner for this proceeding
6 has provided any additional constructions.

7 Q Okay. So looking back at Paragraph 47,
8 then, the third sentence of that paragraph reads,
9 "I have reviewed the proposed constructions as set
10 forth by the Patent Owner in the Patent Owner
11 Response, and based upon my understanding of the
12 '023 Patent, the '023 Patent file history, the
13 file histories of the related patents, and my own
14 experience as a person of ordinary skill in the
15 art at or near the filing date of the earliest
16 priority application of the '023 Patent, agree
17 with the construction as set forth by Patent
18 Owner."

19 Do you see that?

20 A Yes.

21 Q So just so I'm clear, it's counsel for
22 Carucel who proposed the constructions that are

1 illustrated in the chart in Paragraph 48, correct?

2 A I don't know if I can answer it for
3 sure one way again or another who proposed it.
4 But if I look in Paragraph 48, the table that I'm
5 referring to is one construction for the term
6 configured to. It was construed in the District
7 Court, but I don't have any recollection of who
8 proposed that construction initially.

9 Q Okay. Let me ask it a slightly
10 different way then.

11 Did you independently come up with any
12 of the constructions listed in the chart in
13 Paragraph 48?

14 A Well, I mean, the only other ones that
15 are left would be mobile device and I remember
16 having a discussion regarding the mobile device
17 and how one of ordinary skill would interpret
18 that. Again, I'm careful to not say I proposed
19 the construction because I understand that's a
20 separate and distinct legal-type process. But I
21 had a discussion regarding what a mobile device
22 should be.

1 As far as an automotive vehicle, I
2 think that I agree with that plain and ordinary
3 meaning. Again, that's how it would be
4 interpreted by one of ordinary skill in the art.

5 Q I understand you want to be careful and
6 cognitive of how you use the term proposed
7 construction. I'm merely using it in the same
8 context that you used it in Paragraph 47 where you
9 say I have reviewed the proposed constructions as
10 set forth by the Patent Owner.

11 So in the same context that you're
12 using proposed constructions in that sentence, are
13 these proposed constructions that are listed in
14 the chart in Paragraph 48?

15 A As I -- these are the Patent Owner's
16 constructions.

17 Q Okay.

18 A So that is based on the Patent Owner's
19 construction and I've stated that here's the
20 proposed constructions and for one that it's
21 already been construed by the District Court
22 Southern District of California, and I agree with

1 those proposed constructions that have been made
2 by the Patent Owner.

3 Q If we look at one of them in
4 particular, and you made mentioned to the
5 construction for mobile device just a second ago,
6 so if we look at that particular row of the chart,
7 excuse me, in Paragraph 48.

8 Do you see that row for mobile device?

9 A Yes.

10 Q And I believe it was your testimony
11 that you had discussions with Counsel related to
12 this term, but you don't recall if it was you or
13 Counsel who developed the language recited in the
14 second column here; is that correct?

15 A Well, I've had discussions, and as it
16 says, I guess, again, I need to be careful here
17 because of the language in each square here. For
18 instance, why I'm saying I'm being careful is the
19 second row says configured to and that was a true
20 construction determined by the court. When I read
21 for mobile device, it's just providing a plain and
22 ordinary meaning, such as a device must register.

1 And so I remember having that discussion of what
2 the plain and ordinary meaning would be. So,
3 again, I don't believe I'm saying this should be
4 construed as, which, to me, is a legal process.
5 I'm stating that this is what I determined and
6 agree with that the plain and ordinary meaning
7 should be for a mobile device, which is a lot
8 different than a statement, in my mind, that
9 starts with the term should be construed as.
10 Instead, this says the plain and ordinary meaning,
11 such as a device, but so-and-so.

12 Q Okay. So that's the point that I was
13 hoping to clarify by focusing on this term.

14 Is it your understanding that mobile
15 device, as recited in this particular row, could
16 be given its plain and ordinary meaning by the
17 board in this proceeding or is it your opinion
18 that mobile device should be construed as a device
19 that must register with and be able to directly
20 communicate with the cellular network?

21 A Well, it's been my experience the board
22 is going to interpret or construe the claim terms

1 as they see fit. Again, I'm not providing a
2 construction, I'm merely providing assistance, in
3 my mind, to the board as one that's been of
4 ordinary skill in the art and really above one of
5 ordinary skill in the art, but this is what a
6 mobile device should be interpreted as, meaning
7 the plain and ordinary meaning.

8 Q Okay. So if you were advising the
9 board, giving -- and telling the board how you
10 believed mobile device should be construed, would
11 you tell them that mobile device should be
12 construed in accordance with the plain and
13 ordinary meaning, period?

14 A Again, you keep using the word
15 "construed" which always forces me to go back to
16 this is what -- if I were giving, which I have in
17 my declaration in my mind, this is me saying in my
18 declaration the plain and ordinary meaning for
19 mobile device is what I have in quotes. And the
20 board can consider that and either agree with it
21 or disagree with it. But this is what I believe
22 it should be.

1 Q Okay. So --

2 A And then I was going to finish with and
3 then you go to the claims and read that
4 interpretation with the claims.

5 Q Okay. So maybe part of the confusion
6 here is how it's phrased or how it's written here
7 in this second column of this row.

8 So in this second column for mobile
9 device under the heading "Patent Owner's
10 construction," it says, "Plain and ordinary
11 meaning such as," and then you provide a long
12 quotation.

13 So is it your opinion that this long
14 quotation included in this particular cell is an
15 example of the plain and ordinary meaning or is it
16 the only potential way the plain and ordinary
17 meaning of this term to be interpreted?

18 A I think this is the way I've
19 interpreted mobile device. And this is what I've
20 used to interpret the term mobile device.

21 Again, like I said, the board can
22 consider that and agree with it or they can come

1 up with their own interpretation or the word you
2 use, construction. This is the way I've
3 interpreted mobile device as I've explained
4 further in other paragraphs for the support of
5 this interpretation.

6 Q Sure. So let me focus on it a little
7 bit more. I'm particularly concerned and I want
8 to address the portion of this text here that says
9 "such as." As plain and ordinary meaning such as
10 and then it provides a quotation.

11 Is such as intended to mean that this
12 is an example of the plain and ordinary meaning or
13 that this is the only construction, this is the
14 only thing that the plain and ordinary meaning can
15 mean?

16 A I'm sure, again, based on my
17 experience, the board can change some words
18 around, add a word or come up with a different
19 definition, again. So it doesn't have to be
20 exactly word for word. I am not proposing a
21 construction, I'm simply providing what I believe
22 is the plain and ordinary meaning and is the plain

1 and ordinary meaning I use for my analysis.

2 Q That's fair. But for the purposes of
3 this discussion let's put aside the board and what
4 the board may or may not do in the future. You've
5 been involved in these cases before, I'm sure you
6 know each side will present its side of the case,
7 they'll present arguments and the board may agree
8 with them or the board may go off and do its own
9 thing.

10 So let's put the board aside for a
11 second.

12 In this particular column of this
13 particular chart it says plain and ordinary
14 meaning such as.

15 Did you intend that to be plain and
16 ordinary meaning is or plain and ordinary meaning
17 an example of? Is that an example or is that the
18 plain and ordinary meaning as used, not as the
19 board sees it but as you see it?

20 A I think the best way, and I just looked
21 at the claims to try to refresh my memory if I
22 used anything different. I did not. This is the

1 interpretation I used. That's as -- I don't know
2 how else to say it other than this is the
3 interpretation I used for mobile device.

4 Q I understand it's the interpretation
5 that you used. I'm asking a slightly different
6 question.

7 In your professional opinion is the
8 plain and ordinary meaning of the term mobile
9 device a device that must register with and be
10 able to directly communicate with the cellular
11 network or is that merely an example of one
12 potential way to construe that term?

13 A I keep feeling that we're chasing
14 around in a circle here. I think I've tried to
15 answer it every way I can.

16 It almost sounds like you're asking me
17 to give advice of whether the board should
18 consider something different. The best thing,
19 again, that I can tell you is this is the plain
20 and ordinary meaning that I applied to the
21 challenged claims. I did not apply anything
22 different than that.

1 So if you're asking me what the board
2 or what someone else might do, they might change
3 it.

4 Q Okay.

5 A But I want to just be clear for the
6 record. This is the interpretation I used for
7 mobile device for the challenged claims.

8 Q Understand. And I'm expressly not
9 asking you to guess or assume what the board might
10 do or what a different party might do with this
11 term. I'm just purely asking about you. And I
12 think if I hear you correctly, your opinion is
13 that the one and only plain and ordinary meaning
14 of the term mobile device is a device that must
15 register with and be able to directly communicate
16 with the cellular network.

17 Is that an accurate characterization of
18 your opinion?

19 A Again, I don't think we need to
20 characterize it. I have provided in all my
21 analysis on that plain and ordinary meaning. I'm
22 not going to tell you what someone else or what

1 else it could be. As I thought about it, this is
2 what I used and that's all I can say.

3 I didn't sit down and think of ten
4 different constructions or interpretations. As I
5 sat down and thought about it and discussed it,
6 this is what I determined would be the best
7 interpretation. Again, others could interpret it
8 differently. But this is the interpretation I
9 used for mobile device for the challenged claims.

10 Q So when you say "others could interpret
11 it differently," do you mean that other people of
12 ordinary skill in the art could interpret it
13 differently?

14 A No. As I stated before, the board or
15 other people if they choose to interpret it
16 differently, that's their decision. I'm stating
17 what I chose to use for the interpretation. For
18 the board's consideration and anyone else's,
19 that's what I've used for the interpretation.

20 Q So sitting here today you are unaware
21 of any other constructions that would fall under
22 the umbrella of plain and ordinary meaning?

1 A I haven't used them and so sitting here
2 today this is the interpretation I used.

3 Q Okay. And, again, just so we're clear,
4 is this particular interpretation here an
5 interpretation that was provided to you by Counsel
6 or did you devise it or come up with it on your
7 own?

8 A Best I can recall, it was a discussion
9 to make sure everything was included and
10 considered. At the end of the day before I wrote
11 my declaration, this is the interpretation that I
12 used and came up with and I didn't consider other
13 interpretations after this point.

14 Q Okay. So sitting here today looking at
15 the term mobile device and looking at the
16 interpretation that's included in the second
17 column of your chart here, is this exactly how you
18 would phrase the interpretation for this term if
19 you had the opportunity to do it again? Is this a
20 hundred percent accurate or do you make any
21 adjustments to the wording?

22 A Again, when I performed all of my

1 analysis, this is the interpretation that I used.
2 I think that it's still a good interpretation and
3 accurate, and sitting here today I don't see any
4 reason to make any changes to it.

5 Q Okay. You keep mentioning that "this
6 is the interpretation" that you used. You've also
7 indicated a couple times I think during our
8 deposition that you are a person of more than
9 ordinary skill in the art, you're extraordinary
10 skill in the art. Do you believe that this is
11 also the interpretation that a person who meets
12 the definition that you've proposed for person of
13 ordinary skill in the art would also interpret
14 this term?

15 A Which is, to me, why the interpretation
16 starts with the plain and ordinary meaning. To
17 me, and I've included that definition, the plain
18 and ordinary meaning is the meaning that would be
19 understood by a person of ordinary skill in the
20 art at the time of the patent.

21 Q Okay. So you believe that the quote
22 that you have here in this particular cell is how

1 a person of ordinary skill in the art would also
2 interpret mobile device in 1995?

3 A As I've stated, I believe this is the
4 plain and ordinary meaning, which, again, that I
5 said, and I've defined the plain and ordinary
6 meaning to be what would be understood by a person
7 of ordinary skill reading the patent and the
8 specification and the file history and the claims
9 in the time of the frame of the patent which is
10 the middle of 1995.

11 Q So I want to bring up another document.

12 MR. RICHARDSON: If we can bring up the
13 Patent Owner's response.

14 BY MR. RICHARDSON:

15 Q And Mr. Lanning, I think that you
16 actually do not have a physical copy of this one
17 unless it was printed out separately for you by
18 Counsel?

19 A Let's see, I've got a Patent Owner's
20 preliminary response. Is that what you're --

21 Q It might not have been a document that
22 we identified for your counsel. I'm only going to

1 refer to one particular page of it. And so I'm
2 going to have it brought up on the screen for you
3 and then we can view this document.

4 MR. RICHARDSON: If we can mark this
5 document as Exhibit 4.

6 (Lanning Exhibit 4 marked for
7 identification and attached to the transcript.)

8 BY MR. RICHARDSON:

9 Q And we can leave this up on the screen
10 and I'm going to ask you a question about your
11 declaration again. I'm in the same paragraph that
12 we were in, Paragraph 48, which I believe you
13 should still have in front of you.

14 A Okay.

15 Q So the first row of that chart there
16 that we were looking at before includes the term
17 "fixed port."

18 Do you see that?

19 A Yes.

20 Q And then in the second column it says,
21 "Patent Owner does not dispute the board's
22 determination that no construction is necessary

1 for this term."

2 Do you see that?

3 A Yes.

4 Q Now I'll direct your attention to the
5 Patent Owner Response that's on the screen.

6 MR. RICHARDSON: If we can go to Page
7 10 of that document, please.

8 If we can enlarge it just a little bit
9 for the paragraph under heading A. Great.

10 Q So this is the Patent Owner Response
11 that was submitted at the same time as your expert
12 declaration. And in this particular portion of
13 the Patent Owner Response it's talking about the
14 same fixed port term that we just looked at in
15 your chart. And here it says a civil court
16 construed the term "fixed port" as a stationary
17 device at which signals can enter and exit a
18 communication network. Patent Owner submits this
19 construction is the plain and ordinary meaning of
20 the term and is the proper construction for fixed
21 term.

22 Do you see that?

1 A I see it.

2 Q So that appears to be slightly
3 different than what you have indicated in your
4 chart in Paragraph 48 of your declaration which
5 says that Patent Owner does not dispute that no
6 construction is necessary for this term. So I'm
7 trying to get clarification on how you interpreted
8 the term "fixed port" for the purposes of your
9 declaration, that no construction was needed or
10 that the construction advocated for in the Patent
11 Owner Response.

12 A Let me start with some context here. I
13 didn't write or participate in this part of the
14 response. So I can't speak to that. I -- for my
15 report I do depend on the legal group for what the
16 history was for the different court cases because
17 I wasn't involved in those court cases. So my
18 response to fixed port is I used the plain and
19 ordinary meaning for the fixed port. So any
20 differences between the petition that was -- or
21 the response by the Patent Owner, you'd have to
22 take that up with the attorneys. I didn't write

1 this document. So all I know is what I did and I
2 just used that plain and ordinary meaning for
3 fixed port.

4 Q Sure. I'm just more focused on your
5 declaration. I understand that there can be
6 differences between your declaration and the
7 Patent Owner Response. But in the last sentence
8 of Paragraph 47 of your declaration you state
9 that, "I have applied these constructions in my
10 analysis unless I specifically state otherwise."

11 So is it accurate to say, then, that
12 you did not apply the specific construction from
13 the POR, Patent Owner Response, for fixed port in
14 your analysis in your declaration because it's not
15 shown in your chart?

16 A Again, what I used for my analysis that
17 interpretations are provided in Paragraph 48 for
18 fixed port, as it says there, there's no
19 construction necessary. So I used the plain and
20 ordinary meaning.

21 If I were to be candid, this is the
22 first time I've seen the Patent Owner's Response

1 that you put in front of me. So, again, I can't
2 answer to what's in the Patent Owner's Response.
3 I can only respond to what I've used for my
4 analysis.

5 Q Okay. So looking back at the chart in
6 Paragraph 48 again of your declaration, I want to
7 look at the -- or direct your attention to the
8 fourth row where the term says "wherein the
9 receiver is further configured to receive fixed
10 port signals from a plurality of fixed ports."

11 Do you see that?

12 A Yes.

13 Q And if we go back to the POR, and I'm
14 actually going to, if we can, flip through
15 starting at Page 8, please. I'm going to -- I'm
16 going to have the document scrolled through
17 somewhat slowly between Page 8 and the following
18 five or six pages or so. And so at the bottom of
19 Page 8 we see that there's a heading called "claim
20 construction," correct?

21 A Yes.

22 Q And then if we can go to Page 9. And

1 we can keep going on through, actually, to Page
2 10, we see that we have our first subheading which
3 is the fixed port term. And we just talked about
4 that term, correct?

5 A We talked about fixed port term in my
6 declaration.

7 Q Right.

8 A And you showed me this. Again, I have
9 no knowledge of this Patent Owner's Response and
10 frankly I won't have any knowledge whatever
11 questions you ask me but you can continue asking.
12 I have no knowledge of this document. I have not
13 reviewed it.

14 Q I understand and I appreciate the
15 clarification. I just want to make sure that the
16 record is also clear.

17 So right below the fixed port term that
18 we were discussing using configured to, a heading
19 called "configured to," correct?

20 A I see the heading.

21 Q And that matches up with row 2 in your
22 chart in Paragraph 48 which also says configured

1 to, correct?

2 A I haven't done the word for word
3 comparison, but, again, I've used what I have in
4 my chart in Paragraph 48.

5 Q Yeah, I'm just focused on the heading,
6 just the term configured to is also in your list
7 of terms in your chart not necessarily
8 construction?

9 A I will say that B in the Patent Owner's
10 Response says the words configured to and the
11 second row of my chart says the words configured
12 to.

13 Q And if we can continue scrolling
14 through passed Page 11 and we'll go to Page 12 and
15 we'll see our third subheading, which is "transmit
16 radio frequency signals to a mobile device
17 corresponding to the received fixed port signals."
18 We see that matches up with the term in row 3 of
19 your chart, correct?

20 A It appears to be the same, yes.

21 Q Okay. And then if we can scroll
22 through one more time to the next page to Page 13,

1 we see mobile device. And if we look back at your
2 chart, we see that mobile device is not the next
3 row but the row after that in your chart, correct?

4 A Mobile device is the second-to-the-last
5 row in my chart.

6 Q Okay. So understanding that you have
7 represented that you haven't seen the Patent
8 Owner's Response before, I will represent to you
9 that there is no subheading that corresponds to
10 this term wherein the receiver's further
11 configured to receive fixed port signals from a
12 plurality of fixed ports.

13 I will make that representation to you.

14 Given that that term is not found in
15 the Patent Owner's Response, do you have an
16 understanding of why you list it here and identify
17 something under Patent Owner's construction?

18 A So it has the term, it says there's no
19 interpretation or construction, which means plain
20 and ordinary meaning. Again, I can't tell you
21 anything about comparing the Patent Owner's
22 Response document with my chart. I don't know

1 anything about the Patent Owner's Response
2 document.

3 Q Okay. So we can pull down this Patent
4 Owner's Response document. And if we look back in
5 your declaration, Paragraph 47, in the third
6 sentence of that paragraph, it reads, "I have
7 reviewed the proposed constructions as set forth
8 by the Patent Owner in the Patent Owner's
9 Response."

10 Is that an accurate statement given the
11 discussions that we just had?

12 A As far as reviewed the proposed
13 constructions as set forth in the Patent Owner's
14 Response? This is the table that I was provided
15 in response to asking the legal team what are the
16 claim terms that have been construed in past
17 litigation or in past correspondence. Again, not
18 having any visibility with the past correspondence
19 or past litigation, these are what the table that
20 I was provided with on the left-hand side. And
21 most of these are just plain and ordinary meaning.
22 They use different words but it's plain and

1 ordinary meaning the way I interpret it, other
2 than configured to which has a specific
3 construction and then for mobile device and
4 automotive vehicle. All I know is these were the
5 terms that were provided and then I looked through
6 which terms I should use and so I used the
7 configured to term, that seemed appropriate to me.
8 It seemed like a fair construction of the term.
9 So I used configured to and then I provided the
10 interpretation for mobile device and automotive
11 vehicle.

12 Q So you reviewed the chart that was
13 provided to you. You agreed with what was in this
14 chart irrespective of what actually showed up in
15 the Patent Owner's Response, right? Because you
16 did not see that document?

17 A I think that mischaracterizes what I
18 said. I was asked to be provided with the chart
19 of past constructions for any terms that I needed
20 to understand were at issue or been construed or
21 were decided to not be construed and what any of
22 the responses were for the Petitioner. And with

1 that, then there were two open items for mobile
2 device and automotive vehicle. And that's where
3 I've had the conversations with the legal team and
4 then I decided on what would be the proper
5 interpretation for both of those terms. And then
6 I've listed those.

7 The rest of this chart was provided for
8 me almost as a historical record. So I didn't
9 need to go and try to find out lawsuits or
10 different correspondence that occurred for the
11 past lawsuits and anything else.

12 So I haven't seen the Patent Owner's
13 Response as a document, but what I'm referring to
14 in 47 is this table.

15 Q So in this table were all but the --
16 let me rephrase that.

17 In the table here for a number of the
18 terms you indicate that Patent Owner does not
19 dispute the board's determination that no
20 construction is necessary, correct?

21 A That's what it says in some of the
22 terms, yes.

1 Q So if we look back at mobile device,
2 which we were referring to before, why did you
3 feel that a construction was specifically
4 necessary for this term? In other words, why
5 didn't you simply feel that you do not dispute the
6 board's determination that no construction is
7 necessary for this term?

8 A Again, I didn't provide constructions
9 for any of the terms. I provided a plain and
10 ordinary meaning for the interpretation of mobile
11 device. And I provided that because I could see
12 that it was important, based on the challenged
13 claims, to understand what the words mobile device
14 meant and how they're being interpreted by one of
15 ordinary skill in the art. Mobile device, even as
16 we discussed earlier, can be used and mean
17 different things. It's even used a little
18 differently in the background section of the
19 patent. So the mobile device, as used in the
20 challenged claims, I wanted to be clear what my
21 interpretation would be when I read the words
22 mobile device in the challenged claims and it's

1 here.

2 The same answer for automotive vehicle.

3 And so I want to make sure that those terms were
4 clear.

5 Q Well, the term configured to in the
6 Patent Owner's construction you provide a
7 construction you say as previously construed by
8 the District Court for the Southern District of
9 California.

10 Do you see that?

11 A Yes.

12 Q And so you're aware that there was a
13 previous District Court case in the Southern
14 District of California that involved the '023
15 patent, correct?

16 A When I received this table, then I
17 asked the question obviously there was another
18 court case and I was told yes, there was another
19 court case in which this term was construed and so
20 that was put in there, into this table.

21 Q Okay. And are you aware that the term
22 mobile device was not construed in that previous

1 District Court case?

2 A All I know is that I wasn't provided
3 with that term being construed by another court
4 case. I felt that two terms needed to be provided
5 and that were mobile device and automotive
6 vehicle. I didn't have any information that any
7 of those two terms had been even considered in a
8 previous court case. So that's the best I can
9 answer.

10 Q Did you read the claim construction
11 order from the previous District Court case?

12 A I don't recall. I could have just read
13 the page that was cited or used. The most
14 accurate answer I can give you sitting here now is
15 I've read thousands of pages of different
16 documents and patents. I don't recall whether I
17 did or not.

18 Q Okay. So the first sentence of
19 Paragraph 48 which says, "It is my understanding
20 that certain claim terms were construed during a
21 prior civil action involving the '023 patent
22 (Exhibit 2105)."

1 You don't recall if you reviewed
2 Exhibit 2105?

3 A Sitting here today, I can't say one way
4 or the other. I could have read the whole
5 document. I could have read the page -- or pages
6 where the construction was relevant. I'm just
7 trying to be as forthcoming as I can be sitting
8 here today. I've read so many different documents
9 and pages. I don't recall. Sometimes I can
10 recall looking at a page. I don't recall looking
11 at that exhibit. But, again, I may have and may
12 have read it all the way through, I just don't
13 recall.

14 Q Are you aware that in that previous
15 District Court case the reference identified as
16 Ito in this proceeding was also applied in that
17 earlier District Court case?

18 Are you aware of that?

19 A Sitting here today, I have no
20 recollection of any of the prior references that
21 were used for the previous court case.

22 Q Okay.

1 A I haven't studied the details from the
2 previous court case nor have I been asked to. So
3 it's outside the scope of my report.

4 Q So given the fact, and I'll represent
5 to you that Ito was the claim in that previous
6 District Court case. And as we mentioned or as
7 you mentioned here in Paragraph 48, the previous
8 District Court in the Southern District of
9 California issued a claim construction order. You
10 attached that order as 2105 to your declaration.
11 I'll represent to you that that previous District
12 Court case resulted in a final decision. It went
13 all the way through trial, dealt with the '023
14 patent, dealt with the Ito reference, and, yet, no
15 construction was deemed to be necessary for mobile
16 device in that proceeding.

17 Does that change your opinion as to
18 whether an expressed construction for mobile
19 device is necessary to resolve the issues in this
20 case?

21 A Absolutely not. And it doesn't change
22 my opinion at all. I have no idea of all the

1 details involved with the previous court case. I
2 don't even know which were the challenged claims.
3 There's a lot of different variables that could
4 have been applied in the previous court case that
5 don't apply here or vice versa. There could be
6 challenged claims applied here that weren't
7 applied in the previous court case.

8 So I have been asked to analyze the
9 '023 patent and the prior art references. These
10 are the terms that the table includes some of the
11 terms that were used in a previous court case and
12 then other ones that I felt the interpretations
13 were required. And it's a situation I'm -- as an
14 expert, I'm between a rock and a hard place. I
15 can either provide what I think the plain and
16 ordinary meanings are and then be criticized for
17 those or questioned on those or I can leave them
18 out and then people ask me or the legal team will
19 ask me why did you leave them out? So it's kind
20 of damned if I do, damned if I don't. But I
21 wanted to be clear what my analysis was based on.
22 So here they are, these terms mobile device and

1 automotive vehicle, I've included in the chart for
2 thoroughness. That's the interpretation I've
3 used, which I believe to be the plain and ordinary
4 meaning of these terms, and that's all I can say
5 to that.

6 Q So you looked at this particular chart
7 that was provided to you by counsel and you came
8 to the conclusion that you agreed that certain
9 terms should be construed consistent with how they
10 were treated by the previous District Court, but
11 yet also came to the conclusion that other terms
12 in the same claim should not be construed
13 consistent with how they were treated in the prior
14 District Court case; is that correct?

15 A I believe I've answered so now I'm to
16 the point of saying I've already answered that
17 question. I don't have another way to answer your
18 question. You've answered it -- or asked me that
19 question at least ten different ways and repeated
20 it. So I'm just going to start saying I've
21 already answered that question so it would be the
22 same answer.

1 Q I appreciate that you feel that you may
2 have answered a previous question directed to this
3 chart. However, I'm asking a different question.
4 Specifically asking a question about the
5 configured to term which you adopted the position
6 taken by the previous District Court case and then
7 mobile device you rejected the position taken by
8 the previous District Court. And I'm asking you
9 to help resolve that ambiguity for the record in
10 this proceeding so that the board can make a fully
11 informed decision on how these claims should be
12 construed. If you're unwilling to do that we'll
13 note that for the record and we can move on. But
14 if you are willing to that would be appreciated
15 I'm sure for the board and for the purposes of our
16 discussion today.

17 MR. SMITH: Objection. Misstates his
18 prior testimony.

19 A Yeah, that grossly misstated what I
20 said. You've mischaracterized it.

21 I did not reject anything about mobile
22 device or automotive vehicle. I provided what I

1 believed would be applying an ordinary meaning.
2 And I would agree with you that I have accepted
3 the configured to construction that was provided
4 by the District Court of Southern District of
5 California because it seemed like a good
6 interpretation that I could use myself.

7 So I don't have any disagreement with
8 it. I didn't provide disagreements with any other
9 constructions that are provided.

10 Again, I provided this table to show
11 what terms and what interpretations I used for
12 those terms in my analysis.

13 So, again, as I've stated, it's a
14 difficult position for an expert whether you don't
15 describe them or do describe them, there's always
16 questions, there's also scrutiny. But I've
17 decided to go out and put it in printing here in
18 black and white what I have used for the plain and
19 ordinary meaning for a mobile device and what I've
20 used for the plain and ordinary meaning of an
21 automobile vehicle.

22 I don't know how else to explain it.

1 Q Well, hopefully we can move on from
2 this in a second. At the beginning of your
3 previous answer you began, I did not reject
4 anything about mobile device and automotive
5 vehicle.

6 I appreciate that sentiment. However,
7 as I represented to you, and as is shown in
8 Exhibit 2105 to your declaration, the Southern
9 District of California, the District Court there,
10 indicated that no construction was needed for
11 mobile device and automotive vehicle.

12 By providing explicit constructions
13 here, you are rejecting their position that no
14 construction is needed, are you not?

15 MR. SMITH: Objection. Misstates his
16 testimony.

17 A That misstates my testimony totally.

18 Again, they -- the court, you just used
19 the words the court determined no construction was
20 necessary.

21 I have not provided -- which means to
22 me if no construction is necessary, then the plain

1 and ordinary meaning is used.

2 I am simply saying I used the plain and
3 ordinary meaning. So I have not disagreed with
4 the court at all. I am simply saying okay, I'm
5 going to use the plain and ordinary meaning and
6 this is the plain and ordinary meaning that I've
7 used.

8 I didn't use the words construed as or
9 anything else, I used these words to say what one
10 of ordinary skill in the art would interpret the
11 claims based on the patent and its file history.

12 Q So we were looking at Claim 11 of the
13 '023 patent before our break. And if you want to
14 reference that again, go to Exhibit 3. Your one
15 and only place in Claim 11 where the term mobile
16 device is recited is in the final limitation of
17 that claim that reads, "A transmitter configured
18 to transmit radio frequency signals to a mobile
19 device corresponding to the fixed port signals."

20 Do you see that?

21 A Sorry. Was there a question at the
22 end? The claim says what it says. I don't know

1 if that's what your question was. Again, you
2 broke up so I don't know what you're asking.

3 Q Sure. Sorry. I was just reading in
4 that final limitation of Claim 11 into the record
5 and asking if that was an accurate reading of the
6 portion of the claim.

7 But I won't read it again, but I'll
8 just direct you to that portion of the claim.

9 Do you see that?

10 A Yes.

11 Q Okay. Now, is it your opinion that the
12 way that mobile device is used in this portion of
13 the claim is unclear on its face?

14 A I'm saying I believe the words "mobile
15 device" would be interpreted by one of ordinary
16 skill to be what I've listed. And so that's what
17 I've used for the interpretation of mobile device
18 for my analysis.

19 Q If I was having a conversation with a
20 person of ordinary skill in the art in 1995 and I
21 told them that I have a transmitter that is
22 configured to transmit radio frequency signals to

1 a mobile device corresponding to received fixed
2 port signals, do you think that that person of
3 ordinary skill in the art would have a clear
4 understanding of what I meant?

5 A No. I wanted to be clear that one of
6 ordinary skill would understand. That's why I've
7 included it in my declaration. And so, again, to
8 be clear of what I've used for my analysis, it's
9 now up for scrutiny by anyone who wants to
10 scrutinize it, including the board, this is what
11 I've used for my plain and ordinary meaning for
12 what I believe one of ordinary skill in the art
13 would understand that mobile device to be in
14 Claim 11 and the other challenged claims.

15 Q Okay. So my previous question was do
16 you think a person of ordinary skill in the art
17 would have a clear understanding of what that
18 limitation meant and you answered by saying no.

19 And then you gave an explanation. So
20 is it accurate, is it your testimony here today
21 that a person of ordinary skill in the art would
22 find this final limitation of Claim 11 to be

1 unclear?

2 A A person of ordinary skill in the art,
3 in my opinion, when reading the last limitation of
4 Claim 11 and other challenged claims that has the
5 words "mobile device" in it, would interpret the
6 words mobile device to be as I've stated, a device
7 that must register with and be able to directly
8 communicate with the cellular network. That's
9 what I believe one of ordinary skill would
10 understand when they read the words mobile device.

11 Q And so without adding that quoted
12 language that you have in Paragraph 48 in place of
13 mobile device in this portion of Claim 11, a
14 person of ordinary skill in the art would not
15 understand what that limitation meant?

16 MR. SMITH: Objection. Misstates the
17 testimony.

18 A Again, that's totally misstated.
19 You've actually turned it upside down from what I
20 just said.

21 I'm saying that one of ordinary skill
22 in the art would interpret the words mobile device

1 in Claim 11 to be a device that must register with
2 and be able to directly communicate with the
3 cellular network.

4 Q Okay. So then I think we might be on
5 the same page then. So then a person of ordinary
6 skill in the art at the time of the invention
7 would have an understanding of what that final
8 limitation meant, correct?

9 A A person of ordinary skill in the art,
10 when reading the last limitation of Claim 11,
11 would understand the words a mobile device to mean
12 a device that must register with and be able to
13 directly communicate with the cellular network.

14 Q Okay. So if we go back to the chart in
15 48 of your declaration.

16 MR. SMITH: Ryan, I'm not saying right
17 now but when you get to a good spot on when you
18 can take a break, I need to get rid of a little of
19 my lunch.

20 MR. RICHARDSON: Understood. I think
21 we'll get to a spot here pretty quickly.

22 MR. SMITH: All right. No problem.

1 BY MR. RICHARDSON:

2 Q So Mr. Lanning, the other term for
3 which you provide a particular understanding for
4 is automotive vehicle in the final row of that
5 chart, correct?

6 A Yes.

7 Q So similar question and clarification
8 from what we had for mobile device because here
9 again you've used the term such as. You say plain
10 and ordinary meaning of automotive vehicle such as
11 automobile.

12 Is it your interpretation that the
13 plain and ordinary meaning of automotive vehicle
14 is automobile?

15 A I believe that one of ordinary skill in
16 the art would interpret the words automotive
17 vehicle to be an automobile, yes.

18 Q And I noticed if I just compare the
19 language that you include for automotive vehicle
20 to the language above it that you include for
21 mobile device, the language for automotive vehicle
22 is missing the portion that says as set forth in

1 the specification of the '023 patent.

2 Do you have an understanding of why
3 that's not also included in the automotive vehicle
4 row?

5 A The best answer I can give you sitting
6 here today is I don't know if the word automobile
7 is in the '023 patent and I believe that's why the
8 last part of the sentence is not there. I've just
9 simply said an automotive vehicle, one of ordinary
10 skill in the art would understand that to be an
11 automobile.

12 MR. RICHARDSON: I think we can take a
13 short break.

14 So we'll go off the record for ten
15 minutes again?

16 MR. SMITH: So let's say ten minutes
17 till the hour we'll go back on.

18 (Recess taken from 3:40 p.m. to
19 3:55 p.m.)

20 BY MR. RICHARDSON:

21 Q Mr. Lanning, welcome back.

22 A Thank you.

1 Q I just want to -- we can stay where
2 we're at in your declaration for a little bit
3 longer.

4 So the plain and ordinary meaning for
5 mobile device that you list in your chart in
6 Paragraph 48, does that language that you recite
7 in the chart for mobile device require the mobile
8 device to be capable of registering with and
9 communicating directly with both a fixed base
10 station and a moving base station?

11 A Well, this is the mobile device and it
12 does what I've -- the interpretation's there. And
13 then to understand what else it does then I look
14 at the claim and the mobile device is going to be
15 configured so that it can receive radio frequency
16 signals from the transmitter of the moving base
17 station as the last limitation of Claim 11.

18 Q Does the claim anywhere require that
19 the mobile device be able to transmit signals to
20 the moving base station?

21 A Are you asking about the '023 patent in
22 general or just the challenged claims?

1 Q I'm asking about the challenged claims.

2 A The challenged claims are all in regard
3 to the moving base station or specifically an
4 apparatus configured to move relative to the earth
5 and what it's required to do.

6 None of the claims are in regard to the
7 mobile device.

8 Q Okay. And you would agree, and this
9 question is directed to the '023 patent in
10 general, you would agree that not every embodiment
11 disclosed in the '023 patent requires the mobile
12 device to be capable of directly communicating
13 with the cellular network, correct?

14 A You'd need to point me to an example of
15 that. I'm not aware of an embodiment where the
16 mobile device doesn't communicate directly to the
17 fixed port for the base station.

18 Q Let's take a look at Column 4. And
19 particularly Line 51. And in that portion of the
20 '023 patent it reads, "That it will be readily
21 apparent that instead of having fixed and moving
22 base stations as depicted in Figure 1, slowly

1 moving and rapidly moving units may be used as
2 well."

3 Do you see that?

4 A Yes.

5 Q So given that, at least in that
6 particular embodiment, the mobile device would not
7 need to communicate directly with a fixed base
8 station, correct?

9 A No, I disagree. It says just the
10 opposite.

11 Q Why do you believe it says just the
12 opposite?

13 A It will be readily apparent that
14 instead of having fixed and moving base stations,
15 as depicted in Figure 1, slowly moving and rapidly
16 moving units may be used as well. A particular
17 moving base station is effective when the mobile
18 units are moving in the same direction as the base
19 station.

20 I don't know where you get the meaning
21 that there's no direct communication with a base
22 station.

1 Q Well, so the plain language of the
2 sentence that we were just focusing on says,
3 "Instead of having fixed and moving base stations,
4 those can be replaced with fast and slow-moving
5 base stations."

6 So if there are no fixed base stations
7 left in this alternative embodiment here, then
8 it's necessarily the case that the moving --
9 mobile device doesn't communicate directly with
10 the fixed base stations because they're
11 nonexistent, correct?

12 A No, I don't agree. Again, it says that
13 there could be -- having slowly moving and rapidly
14 moving, but they still -- it starts out this whole
15 paragraph and starts in Line 39 of Column 4 that
16 the, "Mobile units have to move within the same
17 rate of speed and not more than 30 miles an hour
18 faster or slower, even if you were to do this
19 preferred embodiment with fast and slow moving,
20 any of the mobiles that fell outside of that
21 30 miles an hour faster or slower would then need
22 to directly communicate with the fixed base

1 stations."

2 I don't see this description at all
3 excluding the fixed base stations. The fixed base
4 stations are always in the picture with the
5 communication and the mobiles, likewise, are
6 required to be cellular mobile phones that have
7 the capability that I've interpreted for the
8 mobile term.

9 Q Just so I'm clear, you're interpreting
10 the language in this specification of the '023
11 patent where it says that, "Instead of having
12 fixed and moving base stations as depicted in
13 Figure 1," you're interpreting that portion to
14 mean well, you can still have some fixed base
15 stations in there somewhere?

16 A I'm not interpreting. I'm reading the
17 patent the way the specification. And I'm reading
18 in the same paragraph. I'm not going to a
19 different part of the specification. It's where
20 the specification in this paragraph you're reading
21 from when you read it in context of the paragraph
22 starting in Line 39 is not excluding direct

1 communication between the mobile terminal and the
2 base station at all. It's saying instead of using
3 the direct communication for slow movers and using
4 the moving base station for fast movers, you can
5 use two different types of moveable base stations,
6 one for slow movers, one for fast movers. But you
7 still have the description where it says for any
8 of the mobile units which travel at a rate of not
9 more than 30 miles an hour faster or slower, those
10 are still going to need to communicate directly
11 with the fixed base station. There's no exclusion
12 of direct communication. It's simply saying you
13 could add more moveable base stations, but it's
14 not excluding direct communication to a fixed base
15 station.

16 Q Okay. So it's your opinion that it's
17 not excluding that. But you would agree that in
18 this particular instance where we instead have
19 slowly moving and rapidly moving unit, that as
20 long as the traffic was traveling within 30 miles
21 an hour of those slowly and rapidly moving units,
22 that those units would not be required to go

1 directly to a fixed base station, correct?

2 A In this example you have three
3 different instances, and what I mean by "this
4 example" the paragraph that starts at Column 4,
5 Line 39, you have three different examples that
6 are provided focusing in on your fast and moving
7 both being -- fast and slow moving both being
8 supported by a moving base station, and the three
9 different scenarios are you have mobiles that are
10 moving faster or slower than 30 miles an hour from
11 the moving base station regardless of whether it's
12 considered a fast one or a slow one, they
13 communicate directly with a base station.

14 Then you have the second category,
15 which would be the fast-moving mobiles that are at
16 the rate of 60 miles per hour. And it gives you
17 the range even specifically, it's a may be
18 traveling at the rate of 60 miles per hour to
19 accommodate traffic moving in the range of 30 to
20 90.

21 So, again, it's reinforcing any of the
22 mobiles that are outside of that range will

1 communicate directly with the fixed base station.

2 Q But, again, back to my question. If we
3 have a moving device that is always traveling
4 within 30 miles an hour of the moving base
5 stations, it would never be required to connect
6 directly to the fixed base station, correct?

7 A The embodiment supports it doesn't list
8 what would happen if these only, it is being more
9 practical of a description. To use your
10 hypothetical, that situation is not covered by the
11 patent because the patent, I believe, understands
12 that the traffic will move at different rates of
13 speed. And so it's taking care of the three
14 different rates of speed, slow, fast, and outside
15 of the brackets of slow and fast.

16 So there's -- the patent is silent
17 regarding only the period of time. But, again --

18 Q So, and just so I'm clear, if I have a
19 moving device, mobile device, and this is a
20 hypothetical, if I have a moving device that
21 always travels within 30 miles an hour of one of
22 these moving base stations, is it your opinion

1 that that would not fall within the scope of the
2 '023 patent?

3 A I don't even think that's a practical
4 example because the patent would -- the patent is
5 describing a situation where this speed is
6 variable. The patent is also describing this idea
7 that as speed is not constant for the traffic. I
8 think we all know that traffic can't be a constant
9 60 miles an hour, it's going to vary, and it's
10 going to eventually come to a stop sooner or
11 later.

12 So, to me, I don't even think that's a
13 reasonable example for the invention of the '023
14 patent.

15 Q So your proposed construction for
16 mobile device, or your proposed plain and ordinary
17 meaning which is a device that must register with
18 and be able to directly communicate with the
19 cellular network, is it now also your opinion that
20 that mobile device must, at certain times, travel
21 within 30 miles an hour of the moving base station
22 and also travel outside of 30 miles an hour of a

1 moving base station? Is that an additional
2 requirement of the moving device?

3 A No. Not at all. You gave me a
4 hypothetical that was flawed. I'm just simply
5 saying it wasn't even a practical hypothetical.

6 My interpretation, as I've said at
7 least ten times if not 20 times, I have listed
8 clearly in my declaration for mobile terminal.
9 And that's the interpretation I used.

10 I'm not adding or subtracting anything
11 from that. I was answering your hypothetical
12 question that was an unreasonable hypothetical
13 because that's not a reasonable assumption for
14 traffic to always keep moving at a specific rate,
15 unless you want to run into other traffic that
16 stops. Sooner or later, that traffic -- or that
17 vehicle is going to stop.

18 And so the patent clearly covers that
19 situation for when a vehicle is moving and for
20 when the vehicle is stopped and then when it goes
21 the different rates of speed.

22 Q So I think we differ opinions on that.

1 But let's go back to the sentence that
2 we were looking at in the specifications where it
3 says that, "It will be readily apparent that
4 instead of having fixed and mobile base stations
5 as depicted in Figure 1, slowly moving and rapidly
6 moving units may be used as well."

7 Is it your interpretation that the way
8 that that sentence is currently written would be
9 the same -- it would be interpreted the same way
10 if the sentence was changed to read, "It will be a
11 readily apparent that in addition to having fixed
12 and moving base stations as depicted in Figure 1
13 slowly moving and rapidly moving devices may be
14 used as well."

15 Is it your opinion that those two
16 wordings would be the same?

17 A No, I haven't considered that nor have
18 I said that. The patent says what it says. And
19 that's simply that all three conditions exist.
20 I'm reading and interpreting the patent. You're
21 giving me hypotheticals that are not based on what
22 the patent is saying. I'm saying they're just not

1 reasonable hypotheticals. I'm not changing
2 anything, I'm just interpreting what the patent
3 says.

4 Q So your understanding of the term
5 "instead of," is that synonymous with your
6 understanding of the term "in addition to"?

7 A So they're just simply saying there's
8 another option instead of using the direct
9 connection for slow moving you can make it even
10 better by putting a moving base station in for the
11 slow movers as well. But that still isn't for the
12 stationary movers or the ones in the different
13 ranges of speeds.

14 Q Well, I think we have fundamentally
15 different interpretations of what the term
16 "instead of" means but for the sake of time we can
17 move on.

18 A I don't think I argued "instead of." I
19 think you've mischaracterized our whole
20 conversation and you want to position it on two
21 words "instead of." I'm giving it the whole
22 context. So I disagree with your statement before

1 we move on. And I want to make sure that's clear
2 on the record.

3 Q I think that you've made the
4 disagreement pretty clear.

5 Okay. So before we went down this
6 rabbit hole of what "instead of" means, we were
7 discussing independent Claim 11 of the '023,
8 correct?

9 A Well, we've discussed Claim 11 at one
10 point in time. We've discussed it multiple times,
11 yes.

12 Q And if we look back at independent
13 Claim 11, again, the first line of that claim
14 recites, "An apparatus configured to move relative
15 to the earth."

16 That apparatus is the moving base
17 station, correct?

18 A I've characterized it as a moving base
19 station.

20 Q Okay.

21 A Or a moveable base station.

22 Q And your interpretation of the term

1 "mobile device," as it shows up in independent
2 Claim 11, is that it must be able to communicate
3 directly with the mobile base station and the
4 fixed base station, correct?

5 A It must be a device that must register
6 and be able to directly communicate with the
7 cellular network as set forth in the
8 specifications of the '023 patent.

9 But in this case, for Claim 11, the
10 last limitation is is that the transmitter is
11 configured to send radio frequency signals to a
12 mobile device. However, as we discussed earlier,
13 the claim is not in regard of what the mobile
14 device needs to do; however, the transmitter needs
15 to be configured to transmit radio frequency
16 signals to a mobile device that has the
17 characteristics as I've discussed. So that
18 clearly says to me that the transmitter needs to
19 transmit a cellular radio frequency signal to the
20 mobile device.

21 Q Okay. So in a scenario where the
22 mobile device could only communicate with the

1 mobile base station, and I understand that's not
2 your proposed construction or plain and ordinary
3 meaning as you see it for mobile device, but in a
4 situation if we had a mobile device that could
5 only communicate with a cellular network by going
6 through the mobile base station, would any
7 reconfiguration of the mobile base station be
8 needed?

9 A Well, I've clearly provided opinions
10 that if the mobile device is not the mobile device
11 as I've interpreted, it -- the transmitter is not
12 transmitting radio frequency signals to that
13 mobile device. And so I've provided many opinions
14 regarding wireless phones or cordless phones that
15 don't meet this requirement or a transmitter that
16 doesn't transmit radio frequency signals that are
17 compatible to a mobile device or a cellular
18 device.

19 Q I think my question was slightly
20 different.

21 If the mobile base station, which is
22 the subject of Claim 11 here, if that was

1 transmitting radio frequency signals to a mobile
2 device that could not communicate directly with a
3 fixed base station, would any reconfiguration of
4 the mobile device be needed -- excuse me, the
5 mobile base station be needed or would it work all
6 the same regardless of the capabilities of the
7 mobile device?

8 A I don't understand your question. I
9 read the claim and I've analyzed the claim and
10 I've analyzed the claim according to the different
11 mobile device terms that I've used and I've
12 provided my opinions.

13 If you're asking me does the claim read
14 different or would it -- to me, the claim reads
15 the way the claim reads and this is the way I've
16 interpreted the claim.

17 Q All right. I understand. So we have
18 three claimed components of the mobile base
19 station in Claim 11, correct? We have a plurality
20 of spatial antennas, a receiver configured to do
21 some stuff and a transmitter configured to do some
22 stuff, correct?

1 A That's what it says, Claim 11 says what
2 it says, that there are three limitations the way
3 I see it, yes.

4 Q Okay. So if the mobile device which is
5 stated in Claim 11 did not have the capability to
6 communicate directly with the fixed base station,
7 would you need to change anything about the
8 antennas, change anything about the receiver, or
9 change anything about the transmitter recited
10 here?

11 A And I've responded that if the mobile
12 device is not capable of registering and directly
13 communicating with the base station, it is not the
14 mobile device by the claim.

15 Q I understand that. And we're not
16 disagreeing with that.

17 I'm asking you in a case where you did
18 not have a mobile device that could communicate
19 directly with the fixed base station, if it could
20 only communicate through the mobile base station,
21 assuming that scenario, would these claimed
22 antennas, receiver or transmitter need to be

1 reconfigured in any way in order to facilitate
2 communication with that particular mobile device?

3 A So you're asking me, the way I
4 interpret your question, if Claim 11 was rewritten
5 not to be Claim 11, would it be different? And I
6 keep telling you I've interpreted Claim 11 very
7 clearly to be a mobile device specifically
8 required to do certain things, as we've discussed
9 at least 20 times by now.

10 So, no, 11 is Claim 11, the mobile
11 device is the mobile device, and it requires a
12 specific interface and signal and a specific type
13 of mobile device. Specifically, the transmitter
14 is configured to transmit a radio frequency signal
15 to the mobile device.

16 Q Okay. So let's put aside Claim 11
17 because I think that's tripping you up. So this
18 time I'm not talking about Claim 11, and I'm not
19 talking about any aspect of Claim 11.

20 You are aware that in certain
21 circumstances you can have a device, let's say a
22 repeater, that is configured to communicate with a

1 mobile device that cannot communicate directly
2 with a fixed base station, right? That
3 configuration exists in the world, correct?

4 A I don't know. I haven't provided any
5 analysis. If I have, if you can point me to that
6 analysis in my declaration, I'd be happy to answer
7 it.

8 But are you asking me a hypothetical
9 now that I haven't considered?

10 Q I'm asking you if you were aware,
11 sitting here today, whether there was in existence
12 in the 1995 time frame a repeater that could
13 communicate with a mobile device that did not have
14 the ability to communicate directly with a fixed
15 base station?

16 A Again, I'm not aware of covering any of
17 those. If I included those in my declaration, if
18 you could point me to any of those examples, I
19 would be happy to discuss them. If I haven't
20 included them, you must be asking me a
21 hypothetical.

22 Q Well, I'm not asking you specific

1 questions. You have, as far as I can tell, a
2 number of mentions of mobile repeater in your
3 declaration. I'm not going to go and list all of
4 them for you. But is it accurate to say that you
5 were aware of mobile repeaters in the 1995 time
6 frame?

7 A And, again, you've used the word
8 "mobile repeaters"?

9 Q Repeater?

10 A You need to show me where I used the
11 word mobile repeater in my declaration if you're
12 going to ask me a question. I don't recall using
13 those two words together.

14 Q Okay. Let me rephrase. You're aware
15 of repeaters in existence in the 1995 time frame,
16 correct?

17 A I'm aware of repeaters and I have a
18 whole section in my report how I describe that the
19 invention of the '023 patent is definitely not a
20 repeater.

21 Q Understood. I've read that section
22 multiple times. And those repeaters that you're

1 aware of from the 1995 time frame they can
2 communicate with user equipment, correct?

3 A Again, are you asking me -- I'm lost.
4 Are you asking me some comments I made in my
5 declaration or are you asking me hypotheticals or
6 just questions in general? Give me some context
7 so I know what you're asking me about, please.

8 Q I'm asking you as an expert in the
9 field with, I think you had mentioned 30-plus
10 years of experience, if at any point in your
11 career you became aware of a repeater that was
12 able to communicate with user equipment?

13 A Well, I've given examples of repeaters.
14 I'm well aware of repeaters. And repeaters
15 communicated with the various devices that they
16 were repeating the signals for. And so to answer
17 your question, yeah, I knew about repeaters and I
18 knew about repeater equipment and I've given
19 examples and the functionality that's provided and
20 I stated very clearly that the '023 patent is
21 definitely not a repeater system.

22 Q Perfect. So I think we're getting

1 there now. So you are aware of repeaters. You're
2 aware that repeaters can communicate with user
3 equipment.

4 And are you aware that in some
5 instances the user equipment did not communicate
6 directly with the fixed base station? And I'm not
7 asking anything about the '023 patent or anything
8 specific that's in your declaration. I'm asking
9 you as a 30-plus year expert in the field if you
10 were aware of user equipment that was incapable of
11 communicate directly with a fixed base station in
12 the 1995 time frame?

13 A I'm aware of repeater systems that
14 perform specific repeater function and I'm aware
15 of cellular systems that had a specific set of
16 functions. I'm not aware of a mixture of both.
17 While I've read some prior art references that
18 have been asserted against the challenged claims,
19 I've done a detailed analysis of those. But in
20 general you either have a repeater system or you
21 have a cellular system.

22 Q Okay. So let's put aside the cellular

1 system. Just look at the repeater systems that
2 you are admittedly aware of. In those repeater
3 systems could the user equipment communicate
4 directly with a fixed base station?

5 A I said in Paragraph 72, and I used
6 Newton's Telecom Dictionary as support, a repeater
7 is needed because quality and strength of a signal
8 decays over distance. You'll find repeaters in
9 cables and in microwave systems. Repeaters may
10 also regenerate a digital signal, squaring it and
11 cleaning it up but not changing it. Regenerating
12 a signal removes noise and thus reduces likelihood
13 of errors." I go on to say a repeater's not a
14 router. A repeater doesn't do a lot of the
15 functionalities. I go on to say in Paragraph 73
16 and the following paragraphs.

17 So it's only -- a repeater is used to
18 just boost or clean up the signal between a
19 transmitter and the receiver. You use the word
20 user equipment. User equipment has a very key or
21 definition for, as I've said earlier, for cellular
22 networks, meaning it's a mobile phone or it's a

1 mobile cellular modem. So, again, I don't think
2 of the two systems as being similar at all.
3 They're used for very different reasons.

4 Q Okay. So where you directed us in 73,
5 in Paragraph 73, might actually help us reach some
6 common ground here. So I see you've included a
7 figure on Page 40, correct?

8 A I have a discussion of what a repeater
9 system is from Pages 38 through 40.

10 Q So my question was, you have a figure
11 shown on Page 40 of your declaration, correct?

12 A Yes.

13 Q Okay. And at the very top of that
14 figure you label the middle portion of that figure
15 as the repeater, correct?

16 A I don't believe I labeled that. I
17 think that was actually labeled in the figure.
18 Matter of fact, I know it's labeled in the figure.
19 I did not change it, not that I recall.

20 Q Fair enough.

21 So the figure has a label in it that
22 says "repeater," correct?

1 A That's what it says, yes.

2 Q And below the word repeater it shows a
3 little antenna tower that has the words "antenna
4 system, receiver, controller, transmitter,"
5 correct?

6 A Yes.

7 Q And are these the types of components
8 that you would expect to see in a repeater in the
9 1995 time frame?

10 A Typically. And underneath it I found
11 it is appropriate for it to say tall thing because
12 repeaters are typically on top of a hill or very
13 large tower because they're a line of sight
14 between two-way radio system.

15 Q Okay. And on the left side outside of
16 this figure I see something that's labeled two-way
17 radio set to repeater mode, correct?

18 A Yes.

19 Q And that two-way radio is communicating
20 with the repeater, correct?

21 A As it says underneath the two-way radio
22 receives on frequency A, transmits on frequency B.

1 Q Okay. And that two-way radio is not
2 communicating directly with what looks to be maybe
3 a base station on the right side?

4 A No. It's another radio.

5 Q Okay. So let me ask you a different
6 way. This two-way radio in the environment shown
7 in this figure, does that two-way radio have the
8 ability to communicate directly with a fixed base
9 station?

10 A Now you've mixed terminology and
11 there's no fixed base station anywhere in the
12 repeater diagram.

13 Q Exactly.

14 A There's a repeater. There's not a base
15 station. A base station has a specific
16 connotation, especially for a cellular base
17 station. This repeater doesn't have any of the
18 logic or functionality that a cellular base
19 station would have.

20 Q So then is it your opinion that the
21 repeater shown in this figure here does not
22 communicate with a fixed base station?

1 A Definitely that's my opinion. This
2 repeater is only receiving a signal from one
3 two-way radio. It is then boosting it up or it
4 might clean the signal up as I said if it's a
5 digital system and it's sending that signal to
6 another two-way radio. There's no base station
7 anywhere in the diagram or anywhere in the
8 functionality of a repeater system.

9 Q Okay. So then you would agree that the
10 repeater shown in this figure is different than
11 what you call a repeater in the prior art? And I
12 will give you a particular example. A Gilhausen
13 865 reference includes an airborne repeater and a
14 ground base station. You would agree that that
15 configuration is different than what's depicted in
16 this illustration on Page 40, correct?

17 A That is a variation. It's still a
18 repeater system but that's a variation of the
19 diagram. Again, one of the challenges I have of
20 including a basic diagram is trying to cover as
21 much of the functionality as I can without going
22 into volumes of information for the variation.

1 The key point is, is a repeater
2 receives a signal and then retransmits that same
3 signal, usually for various reasons.

4 Q Okay. So what's shown for example in
5 the repeater system of Gilhausen 865 is a
6 variation of the repeater that you are discussing
7 here?

8 A I'm not going to discuss Gilhausen
9 unless we pull Gilhausen out and have a specific
10 discussion. If you're going to ask me about
11 Gilhausen, let's pull it out and go into the
12 details.

13 Q Okay. I was just repeating the
14 terminology you used in your previous answer for
15 clarification. But we can come back to it because
16 I assure you we will have questions about it.

17 A I'm happy to answer them if you just
18 give me the reference and let me look at it and
19 then we can address all the specifics when I'm
20 looking at the reference.

21 Q Okay. Let's go back earlier in your
22 declaration. Let's go to Paragraph 52.

1 A I'm there.

2 Q Okay. And it's a long paragraph so I
3 want to direct your attention to Page 25.

4 A You say Page 25?

5 Q Correct. Page 25.

6 A Okay.

7 Q And so you have a block quote that you
8 include on this page and that block quote reads,
9 "These and other problems of the prior art are
10 overcome in accordance with this invention by
11 means of a moving base station which is interposed
12 between a moving mobile telephone unit, in a fixed
13 base station. In accordance with this invention,
14 a moveable base station moves with the traffic at
15 a rate of speed which is comparable to the speed
16 of traffic and communicates with a moving mobile
17 telephone unit via standard mobile radio
18 transmission. The mobile base station further
19 communicates by radio signals with a plurality of
20 fixed antennas spaced along the path of travel of
21 the mobile base station."

22 Do you see that.

1 A Yes.

2 Q So the language that you are citing,
3 and this is from the '023 patent, the language
4 that we just read here, indicates that the
5 problems of the prior art were overcome by means
6 of a moving base station, correct?

7 A More than that, as the quote says.
8 That's the first part of the quote, yes.

9 Q Okay. So are the problems of the prior
10 art overcome when the mobile device bypasses the
11 moving base station and communicates directly with
12 the fixed base station?

13 A The problems the prior art is referring
14 to are the -- at least the excessive handoffs.
15 And so in order to address excessive handoffs,
16 then the moving base station can then take part of
17 the traffic as well as the direct traffic.

18 So the quote says what it says, which
19 is pretty clear to me. But I'm trying to figure
20 out how else to even answer your question.

21 Q I'm sorry. I thought you were still
22 waiting to answer. I didn't want to cut you off.

1 A No, I'm done.

2 Q Okay. So let's -- hold on one second.
3 Okay. Look up a couple paragraphs to Paragraph
4 60?

5 A Did you say 6-0?

6 Q 6-0, correct.

7 A Okay. I'm there.

8 Q So Paragraph 60 is the first paragraph
9 underneath the heading that reads, "The mobile --
10 excuse me -- the moving mobile telephone units are
11 capable of registering with a cellular network."

12 Correct?

13 A That's what it says.

14 Q And in Paragraph 60 you quote, block
15 quote two portions from the '023 patent, correct?

16 A Yes.

17 Q Okay. So I'm looking at the first
18 particular quote that you have listed there, and
19 it says, "When a mobile unit set is first powered
20 up or enters a service area, the mobile unit
21 registers in the manner described earlier by
22 transmitting its unique address in the new service

1 area. The address will be received by the closest
2 moving base station and transmitted via a fixed
3 radio port and gateway switch to the telephone
4 network."

5 Do you see that?

6 A Yes.

7 Q So this registration process that's
8 being discussed here does not require a direct
9 communication between the mobile device and the
10 fixed base station, correct?

11 A I believe this paragraph that you read
12 is describing how a mobile telephone unit
13 registers with the cellular network via the moving
14 base station.

15 But as it says here, as when a mobile
16 unit is first powered up or first enters a service
17 area, the mobile unit must register in a -- in the
18 matter described earlier by transmitting its
19 unique address.

20 I can go find that but I believe what
21 was being discussed there is a mobile unit
22 directly registering with the base station. Like

1 I said, I could go find that but before I went
2 looking for that I would just answer -- I decided
3 to just answer your question. And then this one
4 is a registration procedure that instead of being
5 directly between the mobile telephone unit and the
6 base station, the registration, as it states here,
7 goes through the closest moving base station.

8 Q So then is it accurate to say that the
9 '023 patent describes multiple ways to register a
10 mobile device?

11 A I don't know that I would say "multiple
12 ways." I would say there's multiple paths a
13 mobile telephone unit can register with the
14 cellular network. It does so in the same way, it
15 just uses different connections or a different
16 path.

17 One of those paths is a direct
18 connection between the mobile telephone unit and a
19 base station, the other path would be between a
20 mobile telephone unit and a moving base station
21 and then the moving base station would transfer
22 that to the fixed base station.

1 Q Okay. We've been talking about the
2 mobile device for a little while now. I want to
3 move on from this particular portion of your
4 declaration.

5 But before we do one question, it might
6 be easier might not to look back at your chart in
7 Paragraph 48. But if the board ultimately
8 disagrees with you that the mobile device does not
9 need to be construed as a device that must
10 register with and be able to directly communicate
11 with the cellular network, do you have any other
12 analysis in your declaration as to why the prior
13 art references would not disclose the mobile
14 device?

15 A That is a real vague question and you
16 would have to take me to each of the different
17 references. You're trying to cover all of the
18 different prior art references that have been
19 asserted in one question. I can't answer that
20 question, it's too broad for me. But I would say
21 that I would encourage the board to clearly look
22 at what's disclosed by the '023 patent, the

1 environment that the moving base station is
2 working in is a cellular environment with cellular
3 phones that can either directly communicate with a
4 fixed base station or a moving base station.

5 But again, if you want to go into
6 specific examples, then we, again, would need to
7 address each prior art reference and its specific
8 disclosures.

9 Q Okay. I was trying to help you and
10 streamline things a little bit because I thought
11 it was going to be an easier question for you to
12 answer. But we can step through this a little bit
13 more slowly.

14 Let's turn to Paragraph 146 of your
15 declaration.

16 A Okay.

17 Q Okay. And so you have six Paragraphs,
18 146 through 151, that refer to Claim 11 ground 1,
19 correct?

20 A Yes.

21 Q Okay. Every one of the opinions
22 provided in Paragraphs 146 through 151 as to why

1 Ito does not disclose a mobile device is based on
2 the board adopting your proposed construction,
3 correct?

4 A I think I need to say a broad
5 statement. So hopefully I'll try to catch it
6 every time, but if I don't, for many times I have
7 responded I did not provide any constructions. So
8 if I forget to correct you, the interpretation
9 that one of ordinary skill in the art I provided
10 the plain and ordinary meaning for mobile device.
11 I believe the board can accept my interpretation
12 of what a person of ordinary skill in the art
13 would understand a mobile device to be. I believe
14 they could modify it.

15 I don't know how they have or how they
16 would intend on modifying it. I don't know if
17 it'd be a small change or a drastic change. So I
18 cannot answer anything on behalf of the board or
19 on behalf of what the board might do. I provided
20 my opinion here that Ito is clearly not the mobile
21 device required by Claim 11 and I provided that
22 information.

1 Again, I'm not in any position to even
2 try to guess what the board may do and what the
3 implications of that are.

4 Q All right. I forgot that including the
5 board in a question was a difficult issue for you.
6 So I'm going to remove "the board" from the
7 question completely and re-ask the question.

8 In Paragraphs 146 through 151 of your
9 declaration every argument that you present here
10 for why Ito does not disclose a mobile device is
11 based on the interpretation of mobile device that
12 you list in the chart in Paragraph 48, correct?

13 A And it at least, and again as I've
14 stated I've used my interpretation for mobile
15 device in interpreting the claims. But I state
16 here other reasons that in addition to that why I
17 believe Ito does not disclose a mobile unit as
18 required. For instance, in Paragraph 148 I list a
19 mobile unit's capability to be handed back and
20 forth between either a direct connection with the
21 fixed base station or connection with a moving
22 base station. And so that's different than just

1 the interpretation.

2 Q So is it --

3 A Let me look. Sorry, I'm not quite
4 finished. I was just looking at the next
5 paragraph.

6 And also, even part of my
7 interpretation in Paragraph 149 is the device
8 being capable of registering what the cellular
9 network part of the interpretation I provide. So
10 if the board were to even take the registering
11 part of my interpretation, this would be another
12 reason why Ito would not disclose the mobile unit
13 as required.

14 I think that's the ones I can see just
15 right off just scanning through those paragraphs.

16 Q The first example that you pointed me
17 to was in Paragraph 48 and you pointed to the
18 mobile unit's capability to be handed back and
19 forth between a direct connection with a fixed
20 base station or a connection with a moving base
21 station.

22 So is this capability to be handed back

1 and forth something that needs to be added to your
2 interpretation in the chart in Paragraph 48?

3 A No, I don't think so. And I -- as I've
4 stated here, it's fine.

5 Q Okay. And just for completeness sake,
6 if you want to turn to Paragraph 165 of your
7 declaration?

8 A Again, 1-5-5 or 1-6-5?

9 Q 1-6-5.

10 A Okay. I'm there.

11 Q Okay. And I'll ask you the same
12 questions that I just asked you for the
13 corresponding paragraphs for Ito.

14 But it is correct to say that all of
15 the arguments that you present in Paragraphs 165,
16 166, and 167 for why Gilhausen 865 does not
17 disclose a mobile device is, again, based on the
18 interpretation that you provide in the chart in
19 Paragraph 48, correct?

20 A Well, partially, as I described in
21 Paragraph 165, I could look at and I could have a
22 different interpretation in Paragraph 165 that

1 only one of registering or directly communicating
2 was required and Gilhausen does not disclose
3 either one of those. And so, again, based on how
4 the board would interpret what a mobile device
5 was, even if it only interpreted half of what I've
6 included, Gilhausen would still -- Gilhausen 865
7 would still not disclose that based on what I'm
8 saying in 165.

9 In Paragraph 166 -- in 166, I'm
10 referring to the capability of directly
11 communicating, but not the registering.

12 So, again, depending upon how the board
13 interprets the mobile terminal, or mobile unit
14 requirement, it would depend on that as well.

15 So all of them, I guess, in summary,
16 these paragraphs for Gilhausen 865 don't hinge on
17 all of the interpretation that I provided for a
18 mobile terminal or a mobile device, sorry, the
19 term is mobile device that I've defined or
20 interpreted. And so the board may only accept
21 half of my interpretation, but that would still
22 make my statements true, many of my statements

1 true for Gilhausen 865.

2 Q So I'm about to switch gears a little
3 bit here, so I'll ask you, Mr. Lanning, if you
4 want another quick break before we do or if you
5 want to keep pushing through?

6 A Yeah, I'd like to break if we could. I
7 was just looking at the time to try to figure out
8 how long it's been. But I'm ready for a break
9 regardless.

10 Q Okay.

11 MR. RICHARDSON: Let's call it ten
12 minutes again, 5:07.

13 MR. SMITH: It's 3:57, 3:58. So why
14 don't we say 4:10 so we're clear. 4:10 our time,
15 5:10 for you.

16 MR. RICHARDSON: Sounds good.

17 (Recess taken from 4:57 p.m. to
18 5:15 p.m.)

19 BY MR. RICHARDSON:

20 Q Welcome back, Mr. Lanning. I think I
21 mentioned before going on break I'm going to shift
22 gears a little bit here and move to a different

1 document.

2 We're going to move to the Ito
3 reference which I believe you should have a copy
4 of in front of you.

5 MR. RICHARDSON: If we can pull up a
6 copy on the screen of the Ito reference as well,
7 if you could.

8 AV TECHNICIAN: I'm sorry, I can't seem
9 to find it. Oh, I see it. Got it. Stand by.

10 BY MR. RICHARDSON:

11 Q Great. So Mr. Lanning, in front of you
12 and presented on the screen here is a patent
13 labeled -- or numbered 5,276,686 and identified as
14 Ito.

15 Do you see that?

16 A Yes.

17 (Lanning Exhibit 5 marked for
18 identification and attached to the transcript.)

19 Q Okay. And I think we're on Deposition
20 Exhibit 5, if I'm not mistaken.

21 Mr. Lanning, again, if you don't mind
22 just kind of quickly flipping through the physical

1 copy that you have in front of you to confirm that
2 there are no notes, highlightings or other
3 marking.

4 A It's a clean document.

5 Q At least from the cover page of the
6 document that you have in front of you, it appears
7 to be the same document that's shown on the screen
8 marked as Exhibit 5?

9 A Yes, it does.

10 Q Okay. Great.

11 MR. RICHARDSON: We can pull down the
12 exhibit from the screen.

13 BY MR. RICHARDSON:

14 Q I wanted you to have Ito handy, but I
15 want to first return to your declaration and
16 Paragraph 76.

17 A Okay. I'm there.

18 Q All right. So that particular
19 paragraph begins by saying, "The invention of Ito
20 is not the prior art mobile radio communications
21 system or its component, i.e., automobile,
22 telephone, maintenance units and base stations.

1 Instead the invention of Ito is only eliminating,
2 one, the core between the automobile telephone
3 unit located in the trunk of a car and the cradle
4 that holds the handset typically located around
5 the dash of the vehicle and two, the curled cord
6 used between the cradle and the handset with Ito's
7 mobile base station in conjunction with Ito's
8 portable device."

9 Do you see that?

10 A Yes.

11 Q So just for the sake of our discussion
12 here, if we assume that your statement was
13 accurate, that the invention of Ito was only
14 directed towards eliminating these two things, are
15 you aware that prior art references don't
16 necessarily need to be directed to solving this
17 same problem as the patent in question for them to
18 be useful?

19 A I'm aware that prior art references
20 should have the disclosure of the invention or
21 parts of the invention if they're used in
22 combination with one another.

1 I'm making a different point here. The
2 Ito reference, the point I'm making, is Ito uses
3 an automobile telephone unit and in Ito's own
4 words a cellular type automobile telephone system
5 has been known as a mobile radio communication
6 system. And I'm merely pointing out for the board
7 and make sure the board understands that the Ito
8 reference is being used in much of the references
9 for it are on this has been known mobile radio
10 communication system.

11 Again, it's up to the board and a
12 matter of law to determine what's proper, but the
13 Ito is not providing a, as I said, it is not the
14 prior art mobile radio communication system, it's
15 the invention of Ito.

16 Q Okay. Fair enough.

17 So then it's not your opinion that
18 Ito -- that Ito's invention is limited to
19 eliminating these two things, these two cords?

20 A My report says what it says and I have
21 points No. 1 and 2. And I've included quotes from
22 the patent. It's not just my opinion. I've

1 actually used very specific quotes in the patent
2 of what it is eliminating, and it gets down to
3 specifying that the curled cord can constitute an
4 annoying obstacle. There's multiple quotes that
5 I've used here that I can go through if we need
6 to. But to me it's very clear what Ito says its
7 own invention is.

8 Q Okay. But you would agree Ito also
9 describes that its invention includes other things
10 and one of those examples is being disclosing a
11 novel channel allocation method.

12 Would you disagree with that statement?

13 A You need to show me what you're
14 referring to.

15 Q Sure. Let's take a look at Ito. And
16 in particular, let's look at Column 2, Line 13.
17 And beginning at Line 13 it reads, "Another object
18 of the present invention is to provide a mobile
19 radio communication system that can appropriately
20 allocate radio channels for a secure communication
21 between base stations and mobile base devices and
22 between mobile base devices and portable devices

1 without causing interference or other troubles
2 among radio channels."

3 Do you see that?

4 A I see that, yes.

5 Q So this would be an example of an
6 additional aspect of Ito's invention beyond just
7 eliminating the two cords that you mentioned here?

8 A It would be another object of the
9 invention. I see it as that. It says it's an
10 object of the invention. I don't believe it is
11 allocating. I think that the function is -- well,
12 it's allocating radio channels for a secure
13 communication between base stations and the mobile
14 base device and between the mobile base device and
15 portable device.

16 Q So if I look back to your declaration
17 and the next paragraph, that would be Paragraph
18 77, and in Paragraph 77 of your declaration, you
19 state that, "As shown in Ito's disclosure above,
20 this automobile telephone main unit is a
21 pre-existing wireless unit that is not part of the
22 invention and it suffers from the issues that are

1 identified and the stated object of the invention
2 that need to be fixed. The automobile main unit
3 and the handset assembly are connected by a signal
4 cord. The cradle and the handset are connected by
5 a curled cord."

6 Do you see that?

7 A Yes.

8 Q But based on the passage that -- at
9 least the passage that we just read from Ito, you
10 would agree that Ito's system would not work for
11 that object of its invention without the
12 automobile telephone main unit, correct?

13 A Well, as I explained in my declaration,
14 the automobile main unit has to be there for a
15 reference point for where the curled cord or the
16 signal cord is at.

17 So if the invention, like Ito, says
18 that it's replacing the curled cord, for example,
19 between the microphone and the unit, you have to
20 have the unit as a reference in invention to show
21 where the curled cord was and what the invention
22 was replacing.

1 Q Okay. So looking back at that same
2 portion of Ito that we were just referring to,
3 where I talked about an object of the present
4 invention being providing a mobile communication
5 system that can appropriately allocate channels,
6 how would that channel allocation method be
7 implemented without an automobile main unit?

8 A Figure 5 of Ito is describing how the
9 time slots are used and how the time slots have to
10 be staggered between when the signal's received
11 from a base station before it can be sent over the
12 replacement for the curled cord because they're
13 wireless interfaces and Ito has TDMA time slots,
14 it's describing that these time slots need to
15 happen after it's received or be staggered. We
16 can go into the detail of Figure 5.

17 So Ito is describing the method that's
18 being used to replace the signal cord and/or the
19 curled cord by providing a time slot interface
20 that cannot conflict with each other. It has to
21 have a specific temporal aspect to it so that the
22 signal is received by the unit -- by the invention

1 of Ito before it can be transmitted to what is
2 referred to as the PSS.

3 Q And the automobile main unit is
4 involved at least in some way in that channel
5 allocation, correct?

6 A Again, it is Ito's invention is not
7 describing what the cellular phone does, it
8 doesn't go into the details of what the prior art
9 cellular phones did at the time. Instead, again,
10 it's providing an endpoint, specifically the MSS,
11 where channels are allocated for the invention so
12 that they can be transmitted to the PSS.

13 It is not going into the detail for the
14 cellular phone. If it were a cellular phone there
15 would be a lot more disclosure regarding the
16 cellular phone capability and there just simply
17 isn't because that's not the focus for the novelty
18 of the Ito invention.

19 Q Okay. So I'm trying to hopefully focus
20 our question so that we're not spinning our
21 wheels. There wasn't any part of my previous
22 question that asked about the cell phones or the

1 mobile devices in Ito. All I was particularly
2 asking about was the MSS and particularly those
3 two sentences in columns 1, 2, Lines 13 through 19
4 of Ito and I was asking the MSS or the automobile
5 main unit is involved at least in some way in
6 performing that channel allocation process.

7 I don't care about the cell phones and
8 mobile devices right now.

9 A I know you may not care about it, but
10 the invention of Ito that's being used as prior
11 art for the invention of the '023 patent. And so
12 it's important for me to identify where in the
13 prior art, if at all, it identifies the three main
14 components and communication with those that are
15 claimed by the challenged claims of Ito. And so
16 while there's an MSS, I don't want the board to
17 misunderstand Ito and think Ito is describing a
18 cellular phone. It is not. It is simply saying
19 the MSS portion of the device then connects to the
20 cellular phone and the MSS then is communicating
21 through time slots through the PSS, which is
22 equivalent to the handset. And so the Ito device,

1 as it says, not my words, but its words, is a
2 replacement for the curled cord.

3 Q And I think that you have made your
4 point that Ito, in your opinion, does not disclose
5 cellular devices. Very clear, I don't think the
6 board will be able to miss it. So I am not going
7 to ask you about your opinions on Ito's cell
8 phones or mobile devices right now because I think
9 you made it perfectly clear. And we can keep
10 doing this, it's fine, I'm just trying to move it
11 along a little bit, where if I ask you about a
12 particular element and a reference or in the
13 patent, if you want to keep giving a full
14 discussion about that element and every other
15 element that it communicates with, that's fine.
16 That is your prerogative. I'm just trying to
17 streamline the process a little bit for you.

18 A And I'm making sure the record is clear
19 for the board about these references. That's the
20 only main objective I have is just to make sure
21 that the disclosure of the reference is clear at
22 least from my point of view, which obviously is

1 different from yours. But we'll continue.

2 Q Okay. I think that somewhere in there
3 we came to a common understanding that Ito's MSS
4 is required to facilitate the communication
5 between the PSS and the BSS, correct?

6 A So the MSSs are connected to the base
7 station -- to a base station. So the way that it
8 is described is an MSS is connected to a BSS.

9 Q Is that the complete answer or were
10 you -- do you have more?

11 A That's -- I thought that was answering
12 your question.

13 Q Now that you've had a chance to review,
14 I'll repeat the question that I asked before which
15 was -- let me wait for the feed to update.

16 Okay. So my previous question was I
17 think that somewhere in there we came to a common
18 understanding that Ito's MSS is required to
19 facilitate the communication between the PSS and
20 the BSS.

21 And your answer was the MSSs are
22 connected through the BSS base station.

1 A And so to finish the answer, in Ito the
2 disclosures are that the PSS is wirelessly
3 connected to an MSS and an MSS is wirelessly
4 connected to a BSS.

5 Q Okay. Then in every potential
6 embodiment in Ito the MSS is a required component
7 of the system, correct?

8 A I can't answer a question that starts
9 with in every potential embodiment. To me, you've
10 opened up a -- I have no idea how to bound a
11 question like that.

12 Q In every embodiment disclosed in Ito,
13 the MSS is a required component of the system,
14 correct?

15 Mr. Lanning, I'll note for the record
16 it's been 14 minutes since I asked the question.
17 Is there something we can do to help you come to
18 an answer to the question that I posed?

19 A Well, maybe for the record I should say
20 you asked me a question for all of the
21 embodiments. So in order for me to answer a
22 question that's so open-ended for all the

1 embodiments, I have to read all the embodiments,
2 not the embodiments that I analyzed for my
3 declaration because many of these embodiments were
4 not listed.

5 So looking at some of these
6 embodiments, I'm now going through in order to
7 answer your question to understand I was to the
8 fourth embodiment. And the embodiments are quite
9 a bit different. There's a lot of detail in here.
10 So if you want to ask me a different question,
11 that's how you could help. If not, I need to go
12 through all of the embodiments because that's what
13 you asked me; did you not?

14 Q Well, again, I thought it was going to
15 be a slightly more straightforward question since
16 I believe your opinion stated several times in
17 your declaration is that a PSS in Ito is incapable
18 of communicating with the cellular network without
19 going through the MSS, correct?

20 A Where do I say that?

21 Q I believe you say that in many places,
22 but let's see if we can find one particular one.

1 How about in Paragraph 79. Ito's
2 portable device is a type of cordless phone
3 because Ito's portable device PSS can only connect
4 to a telephone network through Ito's MSS.

5 A Okay. And that's a different question
6 than what you asked me, right? And so --

7 Q Go ahead.

8 A It seems like you have a pending
9 question regarding all of the embodiments versus
10 what you're asking me about 79. To me, it's a
11 very different question.

12 Q So let me ask you this: Would you have
13 made a statement in Paragraph 79 of your
14 declaration that Ito's PSS can only connect to a
15 telephone network through Ito's MSS if there were
16 embodiments in Ito where that was not true?

17 A That's a different question and I would
18 say based on what I'm saying in 79, I stand by my
19 opinion in 79 that the PSS can only communicate
20 with the cellular network through the MSS.

21 Q I think hopefully we streamlined the
22 review of the rest of Ito for that purpose.

1 A Just I would respond to that with it
2 just depends on what questions you ask me. You
3 know, I'm just trying to answer your questions and
4 when you ask me very specific questions about all
5 the embodiments, maybe next time I'll clarify, are
6 you asking me to review all the embodiments or
7 what is it that you really want. But that's the
8 way I interpreted the question.

9 Q Fair enough. So just to maybe wrap up
10 this issue here.

11 Putting aside whether the MSS is
12 required in every embodiment, whether it's an
13 integral component or not, you have not presented
14 any arguments that Ito's MSS does not disclose the
15 claimed moving base station beyond the arguments
16 that we discussed earlier relating to the mobile
17 device, correct?

18 A Well, I mean, to me a clear answer to
19 that is my declaration speaks for itself. So if I
20 were to look at my analysis of the Ito patent,
21 which begins on Page 40, and continues through
22 Page 49, and all of my opinions there, and then I

1 believe I had some specific analysis in regard to
2 the claims back further, I would say I still stand
3 by all the opinions.

4 So it sounds like -- I don't want to
5 characterize or restrict my opinions that I have
6 provided for Ito, so I would say my declaration
7 speaks for itself. If you have a specific comment
8 or paragraph I would be happy to respond to that
9 but that again is trying to streamline my answer
10 instead of going through every paragraph and
11 listing every paragraph where I have an opinion
12 regarding Ito.

13 Q Okay. So we'll go back to the same
14 paragraphs that we referenced not too long ago,
15 Paragraph 146 in your declaration through 151
16 appears to contain the totality of your opinions
17 relating to Claim 1 -- or excuse me -- Claim 11
18 for ground 1. And as I believe you'll recall we
19 walked through these paragraphs in detail not too
20 long ago. And so all I'm asking you to confirm is
21 in these paragraphs, 146 to 151, you do not
22 present any arguments that Ito's MSS does not

1 disclose the claimed moving base station beyond
2 the arguments directed to the mobile device shown
3 here, correct?

4 A And the argument as you've mentioned we
5 went through before, speak for themselves that are
6 very specific, I would say, as far as ground 1 and
7 also for those paragraphs. But I don't want to
8 exclude the section on Ito that we also refer to
9 because I have a lot of cites from Ito about what
10 Ito is and what Ito is not in that section,
11 specifically starting at Paragraph 74 through
12 Paragraph 84.

13 Q Okay. So let's look at Paragraph 78.

14 In Paragraph 78, you state, "I further
15 note that Ito fails to disclose the design and
16 circuitry details for the pre-existing base
17 stations. It is my opinion that relying on the
18 Ito reference for the functionality performed by
19 the pre-existing base station is improper. A
20 POSITA cannot properly opine on obviousness alone
21 or in combination with another reference without
22 sufficiently more detail regarding the

1 functionality of Ito's pre-existing base station."

2 Do you see that?

3 A Sorry, if you asked a question, I
4 missed right at the end.

5 Q I was just asking if you saw that
6 language from Paragraph 78 that I read.

7 A Yes, I was reading it. And it sounded
8 like you read it accurately.

9 Q Okay. So what is the pre-existing base
10 station in Ito that you are referring to here?

11 A It would be that BSS as Ito's defined
12 it.

13 Q Now going back to Ito and in particular
14 Figure 4, and if you would like another reference
15 you can also take a look at Column 5, Line 12
16 through 13. And in that particular portion, Ito
17 says that Figure 4 is a block diagram showing the
18 configuration of a base station of the embodiment
19 of Figure 1.

20 Is this not the design and circuitry
21 details for what you characterized as the
22 pre-existing base station of Ito?

1 A This is, if I look at Figure 4, and I'm
2 looking at what's covered by Figure 4, Ito has a
3 very specific way that it's defining how it
4 communicates to the base station. And it just
5 shows the antenna and some of the circuitry, but
6 it's not clear what functionality this base
7 station has and how the -- and additionally, how
8 the functionality of a cellular base station would
9 interface with this. Ito just has Figure 4 here
10 and it says here's the circuitry, what I'm reading
11 from Figure 4 in the text, here's the circuitry
12 that interfaces with my invention. But there's
13 nothing in this circuitry that has any interface
14 for how this circuitry would interface within a
15 cellular network. Because Ito's interface is a
16 non-standard interface is the point I guess that
17 I'm trying to make, one of the key points, is
18 Ito's interface is changing the air interface
19 between the base station and all the other mobile
20 units or this may be an additional interface, it's
21 not clear in Ito. In other words, in Ito does the
22 base station have another antenna that has a

1 standard cellular interface or are the base
2 stations of Ito all special and proprietary where
3 they have this antenna 118 and as you see in
4 Figure 4 FR1 and FT1 coming in and out. And those
5 are a non-standard cellular interface.

6 So there's -- the point that I'm making
7 is there's no circuitry for how this base station
8 supports this proprietary type Ito time frequency
9 interface.

10 Q So and you're basing that opinion off
11 of Figure 4 or did you also review the three and a
12 half columns of text in Ito that describe the
13 design functionality and implementation of the
14 base station?

15 A Where are you referring to
16 specifically? Because I don't recall specifically
17 three and a half columns. So if you can point me
18 to that.

19 Q Beginning in Column 8, Line 51 and
20 proceeding through Column 11, Line 10. I'm not
21 going to ask you to read all of this because I
22 don't think we need to wait 15 more minutes again.

1 But did you read this portion of Ito when you were
2 formulating your opinion that we just discussed in
3 Paragraph 78?

4 A Sure. It's been quite some time since
5 I read it in detail to answer the specific
6 questions that you have. That's why I've included
7 the opinions that I have is after I've read
8 through Ito. Now, if you're asking me specific
9 opinions, I stand by my opinion after even reading
10 here, that this is about the proprietary interface
11 for Ito of how a frequency time interface for his
12 invention that's in an MSS would communicate using
13 a proprietary interface into what he calls a BSS.
14 But there's no discussion regarding how this BSS
15 does or would operate in a normal fashion in
16 addition to the communication between the MSS and
17 the BSS.

18 So all that's disclosed here is how, as
19 I just said, the base station, BSS, communicates
20 with an MSS.

21 Q So you're not refuting that there's
22 enough detail in Ito for a person of ordinary

1 skill in the art to implement the base station for
2 the purpose that it is used in Ito, correct, or
3 are you saying that there's not enough disclosure
4 to modify it to do something else, correct?

5 A I would say there's only enough
6 disclosure for the BSS that something specific in
7 Ito, if Ito, what it defines as a BSS, there's
8 only enough disclosure there to show how the Ito
9 invention interfaces with a special interface to a
10 BSS.

11 I don't see, again, scanning through,
12 any conversation for how the functionality, the
13 special functionality in the BSS interworks or
14 operates with the standard cellular system.

15 So it appears to me that what's
16 intended by Ito is the BSSs to be all special BSSs
17 and have a special interface with special
18 signaling to be able to communicate with one or
19 more MSSs.

20 Q So maybe just one more question on
21 that. You say in a number of other places in your
22 declaration that Ito's portable device, the PSS,

1 is a type of cordless phone, correct?

2 A We've been on that. One of the
3 paragraphs we've been discussing is Paragraph 79,
4 and I provide that opinion in at least
5 Paragraph 79.

6 Q And correct me if I'm wrong, but
7 cordless telephones use standardized connection,
8 correct?

9 A A cordless phone uses what?

10 Q There's standardized techniques for how
11 a cordless phone can communicate, correct?

12 A No. Matter of fact, in the cordless
13 phone for the wireless environment, that's where
14 all the different suppliers differentiate from
15 each other. And so between the handset of a
16 cordless phone system and the base set or the base
17 station of a cordless phone system, they're all
18 very different, from the air interface to the type
19 of signaling that's used to the functionality
20 that's provided either at the handset or even at
21 the base station.

22 Q Okay. I think we're on Paragraph 79

1 here.

2 In this particular paragraph we've
3 identified it a couple times but you indicate that
4 unlike the mobile device required by the relevant
5 claims of the '023 patent, Ito's portable device
6 PSS does not have cellular telephone capability,
7 correct?

8 A That's what I say in at least
9 Paragraph 79.

10 Q And do you also mean, intend that to
11 mean that Ito's portable device PSS cannot
12 communicate directly with the BSS?

13 A We need to be careful. As I just
14 explained for the claims, if we go back to
15 Claim 11, Claim 11 is a receiver configured to
16 receive fixed port signals from a fixed port
17 through plurality of specially separated antennas.
18 So I look at that limitation. I'm receiving fixed
19 port signals, meaning fixed port signals are a
20 conventional basis. As I just explained, Ito is
21 not describing a conventional base station. Ito
22 is describing, as you put it, three and a half

1 columns worth of a specialized base station that
2 it refers to specifically as a BSS.

3 So I guess even if the Ito PSS could
4 directly connect to a BSS, which I don't believe
5 it can, that still doesn't get a connection
6 between the mobile or an Ito PSS and a fixed port
7 because this -- these detailed columns in Ito
8 patent describe that BSS is a specialized base
9 station that's not a conventional type base
10 station. Many modifications have to occur to the
11 base station in order for it to become a BSS.

12 Q Okay. So is it my understanding
13 that -- or it's my understanding, correct me if
14 I'm wrong from your previous answer, you indicated
15 that even if Ito's PSS could communicate directly
16 with the BSS, that would not be sufficient to
17 satisfy your interpretation of mobile device which
18 is that a device must be able to directly
19 communicate with the cellular network, right?
20 You're now saying something more is needed?

21 A No. That mischaracterizes what I'm
22 saying. I went to Claim 11, there's multiple

1 steps in Claim 11. Claim 11 the first step -- or
2 the second step is a receiver configured to
3 receive fixed port signals.

4 So the receiver configured to receive
5 fixed port signals is in the moveable base station
6 and we've discussed earlier that received fixed
7 port signals are from a conventional base station.
8 And that conventional base station directly
9 communicates with mobiles as well as it
10 communicates with the moveable base station.

11 So I'm saying this is yet another
12 problem with Ito in that Ito's BSS is not a fixed
13 port because it is not a conventional base
14 station.

15 And so there's two problems with the
16 PSSs, they -- I don't believe Ito discloses a PSS
17 can directly communicate with a BSS and then even
18 if it could, that would be a BSS that is not a
19 fixed port because a BSS is a specialized base
20 station that only operates with Ito devices.

21 Q Okay. So my previous question was
22 asking about the communication between PSS and

1 BSS. You responded by pointing me to Claim 11,
2 which refers to the receiver of the mobile base
3 station communicating with the fixed port. Put
4 that aside. I would like to focus on your
5 interpretation of mobile device, which again is in
6 the chart at 48, if you want to reference it, you
7 indicate that the mobile device must be able to
8 directly communicate with the cellular network.
9 Nothing in that interpretation uses the term fixed
10 port, nothing in that interpretation uses the term
11 fixed port signal. It just says directly
12 communicate with the cellular network, correct?

13 A And with the cellular network, as I've
14 explained, the cellular network is the
15 conventional cellular network. And as I continue
16 to explain, therefore, to be able to connect
17 directly with the cellular network, that means
18 that the mobile device needs to connect directly
19 to a base station which is a standard cellular
20 base station, meaning that base station's part of
21 that cellular telephone network. That's why I'm
22 explaining that the BSS specifically disclosed by

1 Ito is a specialized BSS, a specialized base
2 station with specialized interfaces that only
3 communicates with Ito MSS devices and, therefore,
4 does not meet even on the conventional cellular
5 network or the conventional base station.

6 Q Okay. So now I'm hearing that this
7 portion of your interpretation for mobile device
8 needs to be added to by saying connecting directly
9 with the cellular network by conventional cellular
10 means through a conventional fixed base station
11 using conventional standardized techniques.

12 Is that where we're at now, a direct
13 connection is no longer good enough?

14 A No. And that mischaracterizes my
15 testimony and let me be very clear for the record.

16 As I've said at least 10 times before
17 looking at Paragraph 48, I have used the
18 interpretation that I believe would be understood
19 by one of ordinary skill in the art for mobile
20 device to mean a device that must register with
21 and be able to directly communicate with the
22 cellular network that's set forth in specification

1 of the '023 patent.

2 This clearly says with the cellular
3 network. And as the cellular network is disclosed
4 in the '023 patent, this is a standard cellular
5 network. There are no modifications required by
6 the '023 patent to the fixed ports or the fixed
7 base stations.

8 That is totally different than what Ito
9 is doing. Ito is making massive changes to what
10 it refers to as a base station or specifically a
11 BSS.

12 So Ito no longer, for the base station,
13 is a cellular network as required by the mobile
14 device. It is some type of specialized network
15 that he's provided a specialized TDMA interface
16 for.

17 Q So let's take a look at Ito. Let's go
18 to Figure 2.

19 A What are we looking at? Sorry.

20 Q Ito, Figure 2.

21 A Okay. I'm there.

22 Q Okay. So in Figure 2 of Ito, Figure 2

1 is showing the internal component of the PSS,
2 correct?

3 A Figure 2 is showing the specialized
4 circuitry of Ito's specialized base station it
5 calls a BSS. That is pointed out and clear and
6 would be clear to a person of ordinary skill in
7 the art by looking to the top right-hand side of
8 Figure 2 that has an antenna 18 and it has a
9 signal going out of antenna 18 FRA and a signal
10 coming in to antenna 18 FTA. Now, as Ito
11 describes those two signals, FRA and FTA, are
12 proprietary and specialized signals that have been
13 disclosed by Ito to be part of the invention. And
14 that is a time frequency interface; that is not a
15 standard cellular interface.

16 This functionality that's included in
17 Figure 2 is to support this custom or this
18 specialized base station of Ito and not of a
19 cellular network. Because a cellular phone, if
20 one were to try to communicate with Ito's BSS
21 based on what is shown by Figure 2, a standard
22 cell phone would not be able to communicate

1 because a standard cell phone would not have the
2 FRA or the FTA air interface.

3 Q That was a very thorough answer to my
4 question which was: Does Figure 2 show the
5 internal components of the PSS?

6 A So are you wanting me to answer that
7 same question again?

8 Q You didn't answer it the first time.
9 You started talking about a BSS. So my question
10 is: Does Figure 2 show the internal component of
11 a PSS?

12 A Did you say B as in bravo or P as in
13 poppa?

14 Q P as in portable. And if you would
15 like to read it from the page, we can go to
16 Column 5, Lines 8 and 9.

17 A I stand corrected. Sorry. I
18 apologize. It must be getting late. I thought we
19 were referring to Figure 4 for the base station.
20 So I apologize. That's why it probably sounded
21 like I was off into the weeds because frankly I
22 was there.

1 I was thinking that we were looking at
2 the diagram for the BSS, not the PSS.

3 So let me do a reset, if you will, bear
4 with me and ask me the question again and now that
5 I've got my mind around the correct figure then we
6 can go from there.

7 Q Okay. So the Figure 2 on Ito is
8 showing the internal component of the PSS,
9 correct?

10 A I believe this is a block diagram for
11 the PSS as Ito says.

12 Q Okay. And if we look in Figure 2, and
13 if we look in the bottom right-hand portion or I
14 guess bottom center portion, we see a box that's
15 labeled RSSI33.

16 Do you see that?

17 A Yes.

18 Q Okay. I want to direct your attention
19 to Column 6 of Ito, and Line 65. And in that
20 particular portion of Ito it says that the
21 received electric field strength sensor circuit,
22 33, the block we were just referring to, senses

1 the received field strength of the electric wave
2 transmitted from the base station BSS it belongs
3 and sends signals representing the determined
4 field strength to control circuit 31.

5 Do you see that?

6 A Yes.

7 Q Okay. And so in that particular
8 portion of Ito it's identifying that RSS33 can
9 receive signals from the base station BSS,
10 correct?

11 A I would say it a different way. The
12 overall circuitry has a switch, it has a receiver,
13 and it has a received signal strength indicator
14 which is measuring just the power of the signal
15 not of the quality of the signal, but just of the
16 power of the signal. The RSSI doesn't receive
17 anything. It needs to receive the signal from box
18 21 that's labeled RS. But those signals, I mean,
19 to go further with your question, those signals
20 are received through antenna 18, which as I
21 discussed earlier in regard to the BSS, these are
22 the proprietary or specialized signals from the

1 Ito BSS.

2 Q Okay. I think --

3 A From and to, I should add. And be
4 clear those are from and to the specialized base
5 station Ito referred to as the BSS.

6 Q Okay. I think we've clarified the
7 point there. So since those signals, FRA and FTA,
8 are to and from the specialized BSS, as you just
9 testified, it is still your opinion that direct
10 communication with the BSS is insufficient to
11 disclose the direct communication with the
12 cellular network that you believe is required by
13 the mobile device of the '023 patent, correct?

14 A Oh, wait a minute. So these signals,
15 the FRA and FTA of 18 do not go directly to the
16 base station. I think we should read the text, if
17 you have the text for those. But the text is
18 clear, those signals go to the MSS, and those are
19 a time frequency interface. Then MSS has a time
20 frequency or at least the time slot interface that
21 goes to the PSS. So these signals in 18 are not
22 directly from a base station.

1 And I think we can read that, if you'd
2 like I can find that reference, that the signals
3 coming into antenna 18 and going out of antenna 18
4 in Figure 2 is for the PSS, have to go to the MSS
5 and then be relayed by the MSS to the specialized
6 BSS.

7 Q Well, it's your opinion that even
8 though the portion of Column 6 where it indicates
9 that circuit 33 senses the received field strength
10 of the electronic -- or electric wave transmitted
11 from the BSS, even though there's no mention of
12 the SS -- excuse me, MSS in that portion of the
13 disclosure, you still believe that it needs to be
14 the intermediary in that transmission?

15 A I definitely do not believe that
16 Column 6 disclosed there is a direct communication
17 link between the PSS and the BSS. The
18 communication between the PSS and BSS of Ito must
19 go through the MSS, as I stated multiple times.
20 And even with that disclosure, that disclosure is
21 that there is a received signal strength that's
22 transferred, but that signal strength doesn't need

1 to come from the actual signal itself.

2 In other words, this can be relayed for
3 the PSS to understand what the received signal
4 power that the MSS is receiving from the BSS.

5 MR. SMITH: Ryan, when you get to a
6 good spot we've been going about an hour and 15
7 minutes and I could use a break. Just when you
8 get to a good spot.

9 MR. RICHARDSON: That's fine. We can
10 take a break now. Come back at, what is it, 5:40
11 your time.

12 MR. SMITH: 5:40 our time, 6:40 your
13 time. Let's make it 5:45, if that's all right.

14 MR. RICHARDSON: Not a problem.

15 (Recess taken from 6:29 p.m. to
16 6:48 p.m.)

17 BY MR. RICHARDSON:

18 Q Before we took our break, we were on
19 Figure 2 of the Ito patent and we were
20 particularly talking about the RSSI block 33.

21 Do you recall that?

22 A Yes.

1 Q And in that portion of Column 6 that we
2 also referred to a couple times, it identified
3 that block as the received electric field strength
4 sensor circuit 33, correct?

5 A Yes, I see where you're referring to.

6 Q Okay. Now maybe you can shed some
7 light on this. What would be the purpose of
8 including a received signal strength sensor 33 to
9 sense signals from the base station BSS that are
10 not received directly from the BSS? Wouldn't that
11 defeat the purpose of detecting the received
12 strength?

13 A No. That's -- I'm aware of that type
14 of circuitry being used. But it would transfer
15 the received signal strength from the BSS, meaning
16 the MSS would simply report how high or how low
17 the signal strength was to the PSS.

18 Q Okay. So then in that case, it would
19 be the MSS that's determining the signal strength
20 and then reporting out the signal strength?

21 A No. Maybe I should just -- I think
22 it's best that I just read this and then see for

1 sure. The key is I need to read for Figure 2 the
2 intended signal 18 where they're from.

3 I think, let me start even before we
4 get into Column 6, I think it's important to
5 understand the embodiment that's being described,
6 and these are detailed drawings that support
7 Figure 1 of the first embodiment, so I was just
8 reading Column 5 for the first embodiment. So I
9 think it's important to understand the arrangement
10 for the first embodiment. And I'll start reading
11 on -- I'll start by reading -- starting on
12 Line 39. I'm skipping passed some of the
13 preliminary text in Column 5. But each of the
14 mobile stations MS1 through MSN comprises a mobile
15 base device, MSS, and a portable base -- a
16 portable device, PSS. The mobile base device,
17 MSS, is connected to a base station, BSS, that
18 covers the radio zone E where it's located by the
19 way of the first radio channel. Whereas the
20 portable device, PSS, is connected to the mobile
21 base device, MSS, by way of a second radio
22 channel.

1 So the connections that are described
2 for this embodiment, before we get into all the
3 detail that starts at the bottom of Column 5 and
4 then to Column 6, is referring to this connection
5 where the radio interface between the BSS, there's
6 a radio interface between the BSS and the MSS and
7 there's a second radio interface between the MSS
8 and the PSS, as shown in Figure 1.

9 And I think that's clear that there's
10 two radio interfaces between the BSS and the MSS
11 and the MSS and the PSS, especially shown by the
12 middle circle and the vehicle in the middle circle
13 of Figure 1. And so --

14 Q I think we -- go ahead.

15 A And so starting there, those are the
16 connections. And so as I read through for this
17 embodiment, I'm going to keep those connections in
18 mind and then I can go into more depth as we need
19 to in Column 6 if you wish.

20 Q Okay. So I think we're in agreement
21 that, you know, some of the embodiments in Ito
22 definitely disclose a situation where the PSS

1 communicates with the MSS and then the MSS relays
2 that to the BSS. I think we're on board with
3 that.

4 Maybe it will help if I direct you to a
5 different portion of Column 6. Starting at
6 Line 33. And it says, "Only in this period radio
7 transmission signals coming from said power
8 amplifier 16 are forwarded to antenna 18, which
9 sends them out to a corresponding base station,
10 BSS."

11 So, again, this is identifying another
12 communication between antenna 18, BSS and no
13 mention of MSS, correct?

14 A That passage, the way I'm reading that
15 passage, is they ultimately are transmitted to the
16 BSS. But as I stated earlier, we must look back
17 at what embodiment we're talking about. This
18 embodiment clearly states that there's two
19 different wireless interfaces. One between the
20 BSS and MSS and the MSS and PSS. Now I'm also
21 referring to the bottom of Page 5 that's referring
22 to Figure 2 that you're asking me about, and it

1 says, "Referring to Figure 2 showing a block
2 diagram of a portable device, PSS, to be used for
3 the embodiment."

4 And so this Figure 2 is very clearly
5 saying the embodiment that it's for is for the
6 first embodiment which has two separate wireless
7 interfaces and all communication between the PSS
8 and BSS has to go through the MSS.

9 Q Okay. So your opinion is that the
10 discussion of Figure 2 is limited to the
11 environment shown in Figure 1?

12 A I'm saying what the specification
13 clearly states is for this embodiment there's two
14 wireless interfaces and all of the PSS
15 communication to the BSS goes through the MSS.
16 And it even says that further when it starts
17 discussing Figure 2. To me, it's very clear. We
18 are talking about this type of connection
19 relationship.

20 And so when it makes statements that a
21 signal is from a PSS to a BSS, to me, the way I
22 read those is those are ultimately from the BSS,

1 it is not excluding that those go through the MSS.

2 That's all set up earlier.

3 So until we get to a different
4 embodiment, everything that's described in
5 Column 6 is for the first embodiment.

6 Q Okay. So let's look at a different
7 portion of Ito. If we look back to Column 5 and
8 specifically Line 47, it says, "This embodiment
9 utilizes an FDMA/TDMA technique for connection
10 between a base station and a mobile base device as
11 well as for a connection between a mobile base
12 device MSS and a portable device PSS."

13 Do you see that?

14 A Yes.

15 Q Okay. And it's your opinion that this
16 FDMA/TDMA technique does not offer the opportunity
17 for this to be a cellular network, correct?

18 A Not this technique, not for a cellular
19 network nor for all of the specific functionality
20 that is described that's part of that.

21 Again, an FDMA/TDMA technique may be
22 for a cellular network but you have to have

1 standard type air interfaces and signaling
2 interfaces. Ito has gone through several columns
3 to describe how Ito's base station, that it refers
4 to as a BSS, is different than a standard base
5 station, and it's describing what it believes the
6 advantages are.

7 So this is not a cellular network it's
8 a non-standard base station, meaning it hasn't
9 been standardized.

10 While it might use frequency division
11 multiple access and time division multiple access,
12 that doesn't have any real bearing on whether the
13 system, the BSS, is capable of being a standard or
14 not. You have to look at all of the other
15 disclosure of Ito.

16 Q Okay. So if we move forward in Ito to
17 Column 16.

18 A You said 1-6, Column 16?

19 Q Correct. 1-6.

20 And particularly Line 24. It gives us
21 a little bit more detail. It says, "The scope of
22 the present invention is not limited by the above

1 described embodiments. For instance, while an
2 FDMA/TDMA technique is employed for radio channels
3 connecting the base station and the mobile base
4 devices as well as the mobile base devices and
5 portable devices, an FDMA or TDMA technique may be
6 used in its place."

7 Do you see that?

8 A Yes.

9 Q So in a situation let's say TDMA
10 technique was used for both legs of the
11 communication in Ito, it's still your opinion that
12 this TDMA communication technique is not something
13 that could be used in a cellular network.

14 A That mischaracterizes how I've
15 explained it. I think we have a misunderstanding
16 or a lack of understanding the way you're stating
17 a network works. The modulation method, or --
18 that's used or the multiple access method is only
19 one part of what makes the cellular network. When
20 you look at what makes up a cellular network
21 standard, which means that all of the devices are
22 able to interoperate with one another, you need to

1 look way past the top multiple access technique.
2 And we refer to that and one of ordinary skill
3 would refer to that as just the multiple access
4 technique. That's just how the regulates are
5 transmitted. Beyond that you have to have a way
6 for the components to communicate with each other.
7 And that's what I've referred to as the singling
8 protocols. This also doesn't describe the types
9 of channels or the number of channels. While
10 there could be an FDMA/TDMA, there's different
11 number of channels, different types of channels, a
12 normal cellular phone or a normal base station
13 would not be able to communicate with Ito's
14 specialized BSS because it doesn't have those
15 standard channels. Matter of fact, it's teaching
16 away from using a standard cellular system.

17 Also, the way that a device sends data,
18 either voice or different data, is different for
19 Ito versus how it's done in the cellular network
20 because of the slots and allocations.

21 The same answer would be if the network
22 was just FDMA or TDMA. So if the network was just

1 FDMA that would be just frequency division
2 multiple access. The other one would be just
3 using time slots without frequencies.

4 Again, that's just how you do the air
5 interface, how the RF signal get transmitted and
6 received. Nothing about the inner working of the
7 devices themselves.

8 Q Okay. But you don't refute the fact
9 that TDMA is compatible with 2G cellular systems,
10 correct?

11 A I don't know of a 2G cellular system
12 that I would refer to as being TDMA.

13 Q Okay. Let me throw out the question.
14 Are you aware of any cellular standard that is --
15 or can use TDMA?

16 A Well, there's -- let me answer it this
17 way: There are some cellular standards that have
18 a component of TDMA in the overall cellular
19 standard. But again, that's only one small part
20 of what the cellular standard is. What
21 frequencies are used, how they're slit up, the
22 granularity of the frequencies, all of the

1 signaling protocols, the number of the channels,
2 all of that still needs to be defined before you
3 can have a cellular standard. So TDMA is only
4 saying that it's one small portion.

5 Q That's fine. I think we're in
6 agreement on that. But you would agree that at
7 least for that small portion TDMA can be a small
8 portion using a cellular network, correct?

9 A There is a concept in a cellular
10 network that would be a component that has TDMA.
11 But it would not be compatible with Ito.

12 Q Okay. Let's move forward in your
13 declaration to Paragraph 83.

14 A Okay.

15 Q In Paragraph 83, the first sentence,
16 you state, "I note that FDMA/TDMA systems are not
17 compatible with code division multiple access TDMA
18 systems because their wireless interfaces use
19 different technology," correct?

20 A Yeah.

21 Q So then it's your professional opinion
22 that in no situation can CDMA systems be combined

1 with TDMA/FDMA systems?

2 A The best way that I can answer that is
3 I think for many years there have been a lot of
4 different companies trying to convert or make them
5 compatible. The reality is, in the U.S., you have
6 the IS95 systems which were CDMA based, you have
7 the GSM systems which were loosely you could
8 describe those as FDMA/TDMA, both of those were
9 second generation systems. Those two systems have
10 not been compatible since 1995, are still not
11 compatible, as those systems move forward into
12 their respective 3G systems, they were not
13 compatible. And only until their interface
14 changed so it wasn't FDMA or TDMA or CDMA in LTE,
15 which is fourth generation, had the cellular
16 network operators now combined as one. In short,
17 you can now buy an LTE compatible phone from
18 Verizon and AT&T and until fourth generation you
19 had to have a separate phone that would work on
20 their respective networks. Verizon had CDMA based
21 networks, AT&T had GSM based network. There were
22 billions of dollars spent on investment to move

1 those networks and it's taken 20 years for that to
2 occur.

3 Q Okay. Just so I'm clear, we looked at
4 that portion in Column 16 of Ito that said it
5 doesn't need to be FDMA/TDMA but it can be FDMA or
6 TDMA.

7 Do you recall that?

8 A Yes.

9 Q Okay. Is it also your opinion that
10 CDMA systems cannot be combined with TDMA systems?

11 A There's a CDMA system or a TDMA system.
12 They're not combined. CDMA systems and I know
13 this is just going to add a level of confusion,
14 cannot -- can have time division multiplexing
15 inside of them but that's not TDMA, it's TDM,
16 which is significantly different than the
17 four-letter acronym that adds the A because it's
18 not on their interface, it's elsewhere. So,
19 again, to be clear, and to make sure that my
20 testimony is accurate, a CDMA system can have time
21 division multiplexing, but that is not the same as
22 a CDMA system having TDMA. It's either TDMA or

1 CDMA.

2 Q Okay. And I'll ask the same question
3 as far as is it your opinion that CDMA systems
4 cannot be combined with FDMA systems?

5 A FDMA systems are what first generation
6 analog systems were. First generation analog
7 systems were frequency division multiplexus where
8 the mobiles tuned to different frequencies. CDMA,
9 second generation systems, were designed to
10 replace the antiquated FDMA.

11 So to answer your question in short,
12 no, an FDMA system is not compatible with CDMA.
13 The two are very different and CDMA was designed
14 to replace an obsolete FDMA.

15 Q Okay. So I'm going to have you take a
16 look at the document that is included in folder 1
17 that I believe should be sealed.

18 A Did you hear what he said?

19 MR. SMITH: Yeah, folder 1.

20 A Oh, folder 1, okay.

21 MR. RICHARDSON: And if we can pull up
22 on the screen here the document that should be

1 titled ITU document.

2 A Yeah, I'll give you one. Sorry, I just
3 handed Elvin one of the copies.

4 MR. RICHARDSON: All right.

5 So if we could mark the document that's
6 being shown on the screen now, I believe we're up
7 to Deposition Exhibit No. 6.

8 (Lanning Exhibit 6 marked for
9 identification and attached to the transcript.)

10 BY MR. RICHARDSON:

11 Q And while that document is marked,
12 Mr. Lanning, I'll ask if this is a document that
13 you've ever seen before?

14 MR. SMITH: Before he gets on this, I'm
15 going to object because this is outside the scope
16 of his declaration. But I will allow it.

17 A I'm going to need a minute to look
18 through it. It doesn't appear immediately one
19 that I've looked at. But let me just spend a
20 little time acclimating myself with this document.
21 As the date shows it's back to 1994 through '97,
22 so I've slept a few times since I probably looked

1 at it anyways -- or a few thousand or more times,
2 so let me look at it and see what this pertains
3 to.

4 Q If you'd like to that's totally fine.
5 In the interest of time to hopefully get you out
6 of here sooner rather than later, you can go ahead
7 if you would like and open folder 2 from the box
8 that was provided. And if we can pull up in
9 conjunction with that, the document that is -- it
10 should be titled Lanning declaration, maybe
11 2-Lanning declaration?

12 A Yeah, I see a declaration for Barkan
13 versus Samsung case.

14 Q That would be the one.

15 MR. RICHARDSON: If we can mark this
16 document as Exhibit 7.

17 (Lanning Exhibit 7 marked for
18 identification and attached to the transcript.)

19 BY MR. RICHARDSON:

20 Q And we can start with your declaration
21 here which has been marked as Exhibit 7.

22 Do you recall providing declaratory

1 evidence in providing this declaration in the
2 Barkan Wireless case shown on the front page of
3 this document?

4 MR. SMITH: I'm going to object that it
5 exceeds the scope of the notice but Mr. Lanning
6 can answer.

7 A I remember vaguely. Just look at the
8 date. This is over a year and a half ago, I
9 believe. Yeah.

10 Q Yes, we --

11 A December 21st, 2018. So it's been
12 quite some time ago.

13 Q Sure. And I'm not going to ask you
14 anything specific about this document. Just a
15 couple general questions.

16 You know, if we flip to the last page
17 of this document, that's your signature and dated
18 as you so indicated, correct?

19 A Yes, that's my signature.

20 Q And so if we turn to Paragraph 67 of
21 this document.

22 A Okay. I'm there.

1 Q We see in Paragraph 67 here that you
2 cite to and include a particular table, Table 1,
3 from Exhibit No. 7 that we were just -- excuse me,
4 Exhibit No. 6 that we were just looking at,
5 identified as the IT recommendation ITU-RM.1073.

6 Do you see that?

7 MR. SMITH: Exceeds the scope.

8 A Yes, I do.

9 Q Okay. So this is a document that you
10 relied on at least one prior time to support a
11 declaration that you have submitted, correct?

12 MR. SMITH: Objection. Exceeds the
13 scope.

14 A I relied on this document as one of
15 many documents that I relied on in this case,
16 specifically it's for a totally different subject
17 that has to do with a base station's transmission
18 power. As I recall looking at it, I've included a
19 table on the next page, on Page 22 of this
20 declaration. I've highlighted in red. As you can
21 see, the subject matter was the different base
22 station power that the base stations transmit at

1 based on their size, based on the different
2 cellular standards. So, yes, while I've relied on
3 it it's a totally different subject matter,
4 totally different claims.

5 Q Understood.

6 Just more going to the document itself,
7 given the fact that you did rely on it in this
8 previous declaration, you found this to be a
9 reputable document, correct? You wouldn't have
10 relied on it if it wasn't.

11 MR. SMITH: Objection as to scope.

12 A Again, I used it as support for
13 different parameters that were defined for the
14 different base stations around the world. So this
15 document is an ITU or the International
16 Telecommunication Union, it's an international
17 document because what I was referring to here is
18 all of the international type base stations, the
19 international cellular standards that were out
20 there. For instance, I've included Japan and
21 outside even of Japan and others. And so I've
22 used it for a source for the international

1 versions of the different base stations that were
2 out there.

3 Q You can set aside Exhibit 7, which is
4 your declaration from the Barkan case.

5 A Okay.

6 Q And if we look back at Exhibit 6, which
7 is the ITU-R document, we see up in the top
8 right-hand corner of the first page that it's
9 dated 1994 to 1997, correct?

10 MR. SMITH: Objection as to scope.

11 A I see that.

12 Q And this is in and around the time of
13 the '023 patent, which was 1995, correct?

14 MR. SMITH: Objection. Scope.

15 A 1995 is between 1994 and 1997.

16 Q So if you want to turn to Page 6 of
17 that document, and -- or actually Page 5 of that
18 document, sorry, it's the first page of Table 1.

19 Do you see that?

20 A I see Table 1.

21 Q And this is the table that you had also
22 reproduced in your declaration that we were just

1 looking at in the Barkan case, correct?

2 MR. SMITH: Objection. Scope.

3 A Yes, it's the table I included, and
4 specifically included the last row.

5 Q So if we look at what would be the
6 sixth column in this table, the title of that
7 column reads, "Composite CDMA/TDMA.

8 Do you see that?

9 MR. SMITH: Objection. Scope.

10 A Sorry. You broke up. Did you -- is it
11 the third from the right column that you're
12 reading from?

13 Q Correct.

14 A Yeah, it says that.

15 Q What does composite CDMA/TDMA mean to
16 you?

17 MR. SMITH: Objection. Scope.

18 Q Mr. Lanning, if you don't have an
19 independent recollection of it, I can point you to
20 a particular portion of the document, if that
21 would help?

22 A I need to look through it. I'm sorry,

1 I'm not going to skip a page. You handed me a
2 document that's from 1994 to 1997. Before I
3 answer any questions I've got to look through it.

4 Q By all means.

5 MR. RICHARDSON: We can probably pull
6 down Exhibit 7 and Exhibit 6 from the screen.

7 A Okay. I've scanned through the pages.
8 I certainly haven't analyzed it but I at least
9 have a feel for the content of the document. So
10 go ahead and ask your question now.

11 Q Okay. So I'll direct your attention to
12 Page 33 of the document and the numbers are listed
13 in the top right-hand corner.

14 A I'm at Page 33.

15 Q Okay. So the heading of this
16 particular section is "General description of the
17 composite CDMA/TDMA system."

18 Do you see that?

19 MR. SMITH: Objection. Scope.

20 A I see the title of the page, yes.

21 Q Okay. So then in heading 2 it says:
22 "Technical overview." And underneath that it

1 reads: "The composite CDMA/TDMA (CCT) system
2 provides an architecture that is optimized for PCS
3 utilizing specific benefits of FDMA, TDMA, and,
4 CDMA technologies to provide multiple user access
5 to the PCS network.

6 "The system employs direct sequence
7 spread spectrum (DSSS) with TDMA, FDMA, and CDMA
8 for PCS digital network" -- excuse me -- "digital
9 communications RF links."

10 Do you see that?

11 MR. SMITH: Objection to scope.

12 A Yes.

13 Q So that portion of this document
14 appears to imply that CDMA techniques can also be
15 combined with TDMA and/or FDMA techniques as well,
16 correct?

17 MR. SMITH: Objection to scope.

18 A Wrong. Totally wrong with that
19 statement. I totally disagree. If you want, I
20 can interpret what this is saying. What you've
21 simply done is matched up acronyms to a document
22 that means something totally different.

1 The first thing I should mention is
2 that the composite CDMA/TDMA system never was
3 released, never was operational. This was a test
4 system that was proposed by a company called
5 Omnipoint for a personal communication system for
6 services in the U.S. that never was released, that
7 never was operational. So this is a hypothetical
8 or a theoretical type system.

9 Secondly, the composite architecture,
10 the way that it's stated is not accurate based on
11 what we're speaking of in Ito. And I'll take the
12 second paragraph in No. 2, the technical overview
13 and I'll take it in pieces. "The system employs
14 direct sequence spread spectrum (DSSS)," and then
15 it says with and I'll take that as the second
16 part.

17 That says very clearly that the air
18 interface is a special type of interface that's
19 based on direct sequence spread spectrum. That is
20 typically the other name that CDMA is used for.

21 So this sentence clearly says that the
22 air interface is restricted to CDMA only.

1 The other terms that are used are
2 incorrect that should say TDM, FDM and then it
3 says CDMA for PCS digital communication. And why
4 I say that, and I mentioned earlier a CDMA system
5 can have an aspect to it that's referred to time
6 division multiplexing, meaning some of the links
7 have time division in them that's divided up.

8 If I look at the time division frame,
9 if you look at the next page, 35, under the TDMA
10 frame structure, they're not describing TDMA,
11 they're describing time division multiplexing that
12 is part of a direct sequence spread spectrum
13 system.

14 So this is not as we were discussing in
15 Ito combining TDMA/FDMA as taught by Ito. This is
16 a totally different system and it's like I said,
17 it's a system that didn't fly. It didn't get past
18 its theoretical testing levels. If you look, and
19 you can if you want overnight or whatever, you can
20 Google this system and Google all of the different
21 personal system, the PCS systems and you'll see as
22 I'm saying is true, these systems never flew.

1 They were proposed systems and again, there were
2 many problems and issues with these type of
3 systems.

4 So to me it supports my point is that
5 these systems could not be interfaced and people
6 spent, when I say people a lot of companies have
7 spent a lot of money trying to do this. And at
8 the end of the day, they stayed with the standard
9 CDMA networks, the standard GSM networks until
10 19 -- until 2006, when the LTE 4G network standard
11 and they actually got away from CDMA and TDMA in
12 order to get a fourth generation standard.

13 Q Just so that the record is clear, then,
14 your opinion is that the portions of this
15 particular reference that we read into the record
16 are incorrect? They should be written
17 differently?

18 MR. SMITH: Objection. Scope.

19 A No. That's not right. That
20 mischaracterizes what I've said.

21 Let me try it in pieces.

22 What's taught by Ito is significantly

1 different than what's taught by this ITU document.

2 Q I'm not asking about Ito. I'm just
3 asking whether you think, because I believe your
4 testimony was that the recitation of TDMA, FDMA
5 and CDMA in this portion that we just read into
6 the record should instead read TDM, FDM?

7 A I'm saying --

8 MR. SMITH: Objection.

9 A Sorry.

10 MR. SMITH: Objection. Scope.

11 A I'm saying what this document describes
12 for this section is time division multiplexing as
13 clearly shown and would be clearly understood by
14 one of ordinary skill in the art in Page 35. It
15 shows the time division structure. It shows how
16 the channels are divided into time slots and how
17 they're sent and received. That's what I'm
18 saying, that's what I'm explaining.

19 I'm not arguing that this document
20 doesn't say time division multiple access. I'm
21 describing what the document here describes as it
22 says TDMA versus what Ito is saying for FDMA/TDMA

1 and they're very different concepts. You're
2 matching acronyms between this document and Ito.
3 That's what's being implied here. And I'm
4 rejecting strongly that concept because one of
5 ordinary skill in the art would understand that's
6 not what's being described here for this composite
7 CDMA/TDMA system that never launched.

8 Q We're just going to set aside Ito. I'm
9 not asking you any questions about Ito right now.
10 All I am asking is whether those two sentences
11 from section 2 of this document that we read into
12 the record, whether you agree with the text of
13 those sentences as written?

14 MR. SMITH: Objection. Scope.

15 A I have described what the sentences
16 mean. I have translated what the sentences mean.
17 They're very terse sentences. One of ordinary
18 skill in the art needs to read these to understand
19 what they mean by those, because one of ordinary
20 skill in the art would understand that their
21 interface is direct sequence spread spectrum. And
22 then it says with TDMA, FDMA and CDMA. Well,

1 they've thrown those acronyms out but then one of
2 ordinary skill wouldn't understand that sentence
3 without looking at more detail.

4 For what they're proposing as "the
5 composite CDMA/TDMA system" and I explained what
6 they're proposing here is significantly different
7 than what's disclosed by Ito.

8 I'm not saying they're wrong, I'm
9 saying one of ordinary skill needs to understand
10 and interpret what these sentences are. They're
11 very different concepts.

12 Q Okay. Just for completeness sake, I
13 believe that you will disagree with this portion
14 as well, but the next sentence following the ones
15 we just read into the record, reads, "A use of the
16 combined technologies will help mitigate the PCS
17 link performance degradation caused by multipath
18 propagation conditions experienced in typical
19 mobile PCS environments and help mitigate --"

20 A I'm sorry, I lost you. Sorry to
21 interrupt, but I've totally lost you where you're
22 at.

1 Q Sure. So back in section 2 on Page 33.

2 A Okay.

3 Q So in that second paragraph in
4 Section 2 that we read in, there is a sentence
5 that reads, "The use of the combined technologies
6 willl."

7 Do you see that?

8 A It says that it will help mitigate the
9 PCS link performance. Is that what you're
10 referring to?

11 Q Yes. That's what I was reading. I'll
12 read it again just to be clear. This portion of
13 the document again reads, "The use of the combined
14 technologies will help mitigate the PCS link
15 performance degradation caused by multipath
16 propagation conditions experienced in typical
17 mobile PCS environments and help mitigate problems
18 of interference with OFS users near the PCS
19 operating area."

20 Do you see that?

21 MR. SMITH: Objection. Scope.

22 A I see those sentences.

1 Q So it appears that the drafters of this
2 particular document believed not only were these
3 different communication techniques combinable, but
4 also they helped with these --

5 MR. SMITH: You're completely
6 unintelligible in what you just said.

7 A You've got to start all over with that
8 question.

9 Q How about now? Can you hear me?

10 MR. SMITH: All we heard was computer
11 garble.

12 A He's frozen. We'll just have to wait.
13 He's probably not even hearing us.

14 Q I hear you guys. How about now? Did
15 everything catch up?

16 MR. RICHARDSON: Judy, are you hearing
17 me or is it a problem on their end? It's a
18 problem on their end?

19 AV TECHNICIAN: Yeah, it appears that
20 their Internet connection is failing because I'm
21 seeing you just fine.

22 MR. RICHARDSON: Okay.

1 MR. SMITH: Yeah, we could hear the
2 technical support just fine, but we're not hearing
3 Ryan at all. It's just garble and the screen
4 froze.

5 MR. RICHARDSON: Okay. How about now?
6 Any better?

7 MR. SMITH: Well, at the moment it's
8 better and I will note it's about 6:35 so are we
9 close to a point we can wrap up?

10 MR. RICHARDSON: We are close as soon
11 as we finish this particular page of the document
12 we will be all done. So hopefully the connection
13 issues can hold off for another five minutes.

14 MR. SMITH: All right.

15 BY MR. RICHARDSON:

16 Q Mr. Lanning, I will attempt to ask a
17 question that I had read or asked previously which
18 was, it appears from the portion of the record
19 that we read into -- or excuse me, the portion of
20 this document that we read into the record, the
21 drafters believed that when these particular
22 communication techniques were combined, it helped

1 with at least these two different aspects; is that
2 correct?

3 MR. SMITH: We got nothing.

4 A He's frozen now.

5 AV TECHNICIAN: Yeah, Mr. Lanning's
6 video froze for a bit. I think they might be
7 experiencing Internet connection issues.

8 MR. RICHARDSON: Yeah, it appears that
9 way.

10 Okay. Well, why don't we wrap up the
11 depo for today. If we need to come back on this
12 tomorrow we can.

13 THE WITNESS: We can't hear you.
14 There's nothing. We can't hear. We're dead.

15 MR. RICHARDSON: Okay. Why don't we
16 wrap up the deposition for today and we'll try it
17 again tomorrow. Can you hear me?

18 MR. SMITH: Yeah, actually we could
19 hear that.

20 MR. RICHARDSON: All right.

21 THE WITNESS: Okay.

22 MR. RICHARDSON: All right. So if we

1 need to go through this and clean up anything
2 we'll do that tomorrow.

3 THE WITNESS: Okay. 10:00 central time
4 tomorrow then.

5 MR. RICHARDSON: Okay. We'll see
6 everybody tomorrow. Thank you for your help
7 today.

8 (Off the record at 7:38 p.m. EST)

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ACKNOWLEDGMENT OF DEPONENT

I, MARK R. LANNING, do hereby
acknowledge that I have read and examined the
foregoing testimony, and the same is a true,
correct and complete transcription of the
testimony given by me and any corrections appear
on the attached Errata sheet signed by me.

(DATE)

(SIGNATURE)

1 CERTIFICATE OF SHORTHAND REPORTER - NOTARY PUBLIC

2
3 I, Judith E. Bellinger, Certified
4 Reporter and
5 Notary Public within and for the State of Maryland
6 do hereby certify:

7 That MARK R. LANNING, the witness whose
8 deposition is hereinbefore set forth, was duly
9 sworn by me before the commencement of such
10 deposition and that such deposition was taken
11 before me and is a true record of the testimony
12 given by such
13 witness.

14 I further certify that the adverse
15 party, CARUCEL INVESTMENTS, L.P., was represented
16 by counsel at the deposition.

17 I further certify that the deposition of
18 MARK R. LANNING occurred with the witness being
19 present at the office of Warren | Rhoades LLP,
20 1212 Corporate Drive, Suite 250, Irving, Texas
21 75038, on Tuesday, June 2, 2020, commencing at
22 11:04 a.m. EST to 7:38 p.m. EST.

1 IN WITNESS WHEREOF, I have hereunto set
2 my hand this 13th day of June, 2020.

3 My Commission Expires: November 3, 2020

4 *Judith E. Bellinger*
5 _____

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Transcript of Mark R. Lanning
Conducted on June 2, 2020

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