UNITED STATES INTERNATIONAL TRADE COMMISSION

In the Matter of:)	Investigation No.:
CERTAIN MOBILE ELECTRONIC DEVICES)	337-TA-1093
AND RADIO FREQUENCY AND PROCESSING)	
COMPONENTS THEREOF (II)	j	

OPEN SESSIONS

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1	UNITED STATES OF AMERICA							
2	BEFORE THE							
3	INTERNATIONAL TRADE COMMISSION							
4	x							
5	IN THE MATTER OF: :							
6	CERTAIN MOBILE ELECTRONIC DEVICES : Investigation No.							
7	AND RADIO FREQUENCY AND PROCESSING : 337-TA-1093							
8	COMPONENTS THEREOF (II) :							
9	x							
10								
11	HEARING							
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14	Tuesday, September 25, 2018							
15	Courtroom C							
16	U.S. International Trade							
17	Commission							
18	500 E Street SW							
19	Washington, DC							
20	The Hearing commenced, pursuant to notice of the Judge							
21	at 9:31 a.m., before the Honorable MaryJoan McNamara,							
22	Administrative Law Judge for the United States							
23	International Trade Commission.							
24								
25								

- 1 signals down the line, as is shown here. And they are
- 2 depicted as being separate signals in this figure.
- Now, if we could go to CDX-3C.109. So even if
- 4 Lee had a single RF input signal, and you have just
- 5 explained to us why you don't think that's the case, would
- 6 the Lee reference satisfy the limitation that we're looking
- 7 at here, "the input RF signal employing carrier
- 8 aggregation"?
- No, it would not, because as I said a moment
- ago, Lee is separate radios in a multiradio device, for
- Bluetooth and Wi-Fi. These signals are received, but they
- are unrelated, and there's nothing taught in Lee about
- creating a wider pipeline, send a signal data stream and
- 14 aggregate it to increase the data rate.
- Okay. So then why is receiving a Bluetooth
- signal and a Wi-Fi signal at the same time not carrier
- 17 aggregation?
- A Because nothing is combined together to increase
- 19 the data rate.
- 20 Q So does Lee refer to Bluetooth and Wi-Fi
- 21 anywhere as carrier aggregation?
- 22 A No, he does not.
- 23 Q And does it use the phrase "carrier aggregation"
- 24 at all?
- 25 A That phrase does not appear in Lee.

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1 combining signals together to increase the aggregated data
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- 2 rate. That is not in Hirose.
- 3 Q Okay. Now, what did the PTO include about -- or
- 4 conclude about the amendment to add carrier aggregation
- 5 over the Hirose reference rejection?
- 6 A In -- in the file history, when that language
- 7 was added, Hirose was overcome. That was the conclusion of
- 8 the patent examiner.
- Okay. So now, we just talked about the
- 10 limitation that read in claim 1, "the input RF signal
- employing carrier aggregation."
- 12 Okay?
- A Okay.
- So is that same limitation in claim 17?
- Yes, it is. It's claim 17 is the method claim
- of claim 1.
- 17 Q Okay.
- The apparatus of claim 1.
- Okay. I understand. So then the analysis that
- 20 you just walked through regarding the limitation the input
- 21 RF signal employing carrier aggregation, would that apply
- to claim 17 as well?
- 23 Yes, it would be the same analysis with the same
- conclusion.
- Q Okay. Now I'd like to move to the second basis

- 1 JUDGE MC NAMARA: Please be seated.
- 2 Any time you are ready, Ms. Tallon.
- 3 MS. TALLON: Thank you, your Honor.
- And we should be able to be on the public record
- 5 for the duration, which is about 2-1/2 hours -- no, I'm
- 6 kidding.
- 7 Don't worry, Dr. Foty. Hope you're feeling
- 8 better, sir.
- 9 THE WITNESS: I said that's the wrong question.
- 10 $\,$ I am feeling better, but it will be a long time before I
- 11 get better.
- 12 CROSS-EXAMINATION
- 13 BY MS. TALLON:
- 14 Q I hope you get there soon.
- Dr. Foty, I'm going to start with your opinion
- on the '356 patent and Dr. Fay's opinion that the claims
- 17 are anticipated. Do you have that in mind?
- 18 A That's a good starting point.
- 19 Q Now, you testified on your direct with
- 20 Mr. Nelson that the Lee reference was before the Patent
- 21 Office during prosecution of the '356 patent; right?
- 22 A Lee appears on the face of the '356 patent, yes.
- 23 Q Correct. And I think I got this quote from you
- 24 right. I heard you say apparently the Patent Office
- 25 reached the conclusion that Lee and Winiecki taught away

- 1 from the '356 claims. Do I have that right?
- 2 A I had the quote right. I may have misspoken
- 3 something there. All I meant to say was they did have the
- 4 patent in front of them.
- 5 Q Lee and Winiecki were cited to the Patent Office
- 6 but never discussed by the examiner; right?
- 7 A As far as I know, that is correct.
- Now, your dispute with Dr. Fay on the issue of
- 9 the '356 patent anticipation concerns a single limitation
- of claims 1 and 17; correct?
- I believe that to be the case, yes.
- And you do not otherwise dispute Dr. Fay's
- conclusion that Lee satisfies the elements of claims 1 and
- 14 17; right?
- Other than what I've cited, I do not contest
- 16 that.
- And specifically, you dispute that Lee discloses
- 18 the input signal employing carrier aggregation; right?
- I believe the full phrase is "the input RF"
- 20 signal." Whatever the phrase I quoted in my testimony a
- few moments ago was the one I am referring to, yes.
- 22 Right. I may have misspoke, so let me make sure
- 23 I get the record right. You dispute that Lee discloses the
- input RF signal employing carrier aggregation; right?
- 25 A I dispute that, yes.

1 Q Now, in coming to that conclusion, you relied on

- 2 the agreed-upon construction of carrier aggregation;
- 3 correct?
- A Are you referring to the time in my reports?
- 5 Q I am.
- 6 A At the time in my reports, the only construction
- 7 we had available was the proposed constructions. The
- 8 Markman order had not been issued yet.
- 9 Q And the agreed-upon construction that you relied
- 10 on in forming your opinions included the requirement
- "increases bandwidth for a wireless device." Correct?
- 12 A That's my recollection of what the agreed
- 13 construction was prior to the issuance of the Markman
- 14 order, yes.
- 15 Q So when you formed the conclusion in your mind
- 16 that Lee does not disclose carrier aggregation, the
- 17 construction that you applied was "simultaneous operation
- 18 on multiple carriers that increases bandwidth for a
- 19 wireless device." Right?
- 20 A At the time, as I said at some point earlier,
- 21 the definition of bandwidth being higher data rate, with
- 22 that reservation I stated earlier, yes, that was the
- 23 construction. Only one any of us had at the time.
- 24 Q Right. Now, you testified last week that the
- 25 claims governed your analysis in this case; right?

- 1 A That's my understanding, yes.
- 2 Q And you would agree that her Honor's claim
- 3 constructions also govern the analysis here; correct?
- 4 A The Markman order governs that, yes.
- 5 Q Now, you didn't mention the claim construction
- 6 order in this case on your direct testimony with
- 7 Mr. Nelson; right?
- 8 A I don't recall reviewing it specifically, no.
- 9 But I did consider it in my opinions.
- 10 Q If we could turn, please, to -- this is going to
- 11 be at volume 2, tab 5 of your binder. And it's RDX-19.33C,
- 12 please. We'll pull it up on the screen as well.
- And you may recall, this is a demonstrative from
- 14 Dr. Fay's testimony yesterday; right?
- 15 A I beg your pardon, which page are you referring
- 16 to in that tab?
- 17 Q Tab 5, and it's slide 33, 19.33.
- 18 A I have that. I'm at that page, thank you.
- 19 Q Okay. And this slide shows her Honor's
- 20 construction of the claim term "carrier aggregation";
- 21 correct?
- 22 A This is part of the Markman order, yes.
- 23 Q Right. And it shows the construction of the
- 24 claim term "carrier aggregation"; right?
- 25 A It shows the construction of the phrase, but not

- 1 the supporting discussion of it in the Markman order.
- 2 Q And the construction of the phrase "carrier
- 3 aggregation" is "simultaneous operation on multiple
- 4 carriers"; correct?
- 5 A That is the phrase we see, yes.
- 6 Q Now, the construction says nothing about
- 7 increasing bandwidth; right? We don't see that in the
- 8 language?
- 9 A The rest of the Markman order discusses that.
- 10 Q I'm asking you about the claim construction.
- 11 Can we focus on that, please. The claim construction --
- 12 and my microphone is cutting off, Carmen.
- 13 A That's me, I'm sorry.
- JUDGE MC NAMARA: It's Mr. Nelson's as well --
- 15 THE WITNESS: Mr. Nelson is right, I should lean
- 16 back from the microphone and your microphone will work.
- 17 Don't ask me, I don't know.
- 18 MS. TALLON: If I can't be heard, please let me
- 19 know, I'm happy to repeat.
- BY MS. TALLON:
- 21 Q Now, I want to make sure we're focusing on the
- 22 claim construction, because that's what you had to apply in
- 23 your analysis; right?
- 24 A I had to apply the entire Markman order, yes.
- 25 Q And you had to apply the construction of carrier

- 1 aggregation that we see here on slide 33C?
- 2 A That was part of it.
- 3 Q Well, when you applied the claims, claim 1 and
- 4 claim 17 of the '356 patent, you had to substitute
- 5 simultaneous operation on multiple carriers for the phrase
- 6 "carrier aggregation"; true?
- 7 A Again, the entire Markman order must be
- 8 considered.
- 9 Q So are you saying that you did not apply
- 10 simultaneous operation on multiple carriers in and of
- 11 itself as the claim construction for carrier aggregation?
- 12 A I applied it as construed in the Markman order,
- 13 yes.
- 14 Q And that construction is simultaneous operation
- on multiple carriers; correct?
- 16 A Simultaneous operation on multiple carriers.
- 17 Q Okay. And the construction, just focusing on
- 18 the claim construction that her Honor provided for carrier
- 19 aggregation, that does not have a reference to increased
- 20 bandwidth or data rate; correct?
- 21 A The rest of the Markman order does.
- 22 Q Sir, I really would like you to focus on my
- 23 question, okay? Simultaneous operation on multiple
- 24 carriers, that's the claim construction for carrier
- 25 aggregation; right?

- 1 A That's what's written in front, yes.
- 2 Q That is the claim construction; correct?
- 3 A That's from the Markman order.
- 4 Q And it's the claim construction? Yes?
- 5 A This is the phrase used, yes, we see here.
- 6 Q And it does not include any reference to
- 7 increased bandwidth or data rate. We can agree on that.
- 8 It's not there; right?
- 9 A It's not here. It's in the rest of the Markman
- 10 order.
- 11 Q Okay. Now, in your view, bandwidth tends to be
- 12 equivalent to data rate; right?
- 13 A One of the definitions of bandwidth, which is
- 14 probably the most common one used today, is increased
- 15 bandwidth refers to higher data rate, yes.
- 16 Q Now, you had offered the opinion that Lee does
- 17 not disclose carrier aggregation because the signals in Lee
- 18 each originate from a different source; right?
- 19 A That was part of my opinion, yes.
- 20 Q And the construction of carrier aggregation that
- 21 her Honor has provided does not include the words
- 22 "originating from a single source," does it?
- 23 A Not on its face.
- Q Okay. Now I'd like to turn to your opinions on
- 25 carrier aggregation and dig into those a little bit more,

- 1 if we could.
- Now, you testified last week about multicarrier
- 3 operations.
- 4 Do you recall that?
- 5 A Yes, I do.
- 6 Q Now, you'd agree that Bluetooth is one wireless
- 7 technology that transmits information; right?
- 8 A Bluetooth is such a technology on its own, yes.
- 9 Q And Wi-Fi is another wireless technology that
- 10 transmits information; correct?
- 11 A It's another technology, yes.
- 12 Q Okay. Do you need a moment to get a mint or --
- 13 A If I don't do that, I'll cough and we're done.
- 14 So please, let me load mints as best I can.
- Oh, please, if you need a break.
- 16 A I don't need a break, I just need to load a
- 17 mint. Thank you.
- Bluetooth is one radio frequency technology;
- 19 correct?
- Bluetooth is a radio technology, yes.
- 21 Q And Wi-Fi is another radio technology; right?
- That's a fair assessment, yes.
- 23 So we can agree that Bluetooth signals are sent
- on carriers; correct?
- Bluetooth communicates on channels, which I

- 1 guess you could call carriers.
- The same for Wi-Fi. Wi-Fi communicates on
- 3 carriers; correct?
- A It communicates on carriers, yes.
- 5 Q Now, you have distinguished carrier aggregation
- 6 from multicarrier operations; right?
- 7 A I believe I have, yes.
- 8 Q And I want to explore that a little bit, if I
- 9 could. And specifically, you testified that multicarrier
- 10 operation does not increase the aggregate data rate of a
- 11 device.
- 12 Do you recall that?
- 13 A I'll take your word for it at this point.
- 14 Q This was in your testimony last week. Does that
- 15 sound right to you?
- 16 A It sounds right to me, yes.
- 17 Q And I'd like to pull up, if we could, one of
- 18 your demonstratives, and this is CDX-3C.6, and this would
- 19 be in volume 2, tab 7 of your binders. We also have it on
- 20 the screen.
- 21 Do you recognize this slide from your
- 22 presentation?
- 23 A Are you referring to figure 6 here?
- 24 Q Yes, this is page 6 of CX-3C, and this is from
- 25 your presentation.

- 1 Do you recall this?
- 2 A Yes, I do.
- 3 Q Okay. And you used this demonstrative to
- 4 compare the aggregate data rates of single carrier
- 5 operation and carrier aggregation; is that right?
- 6 A That is correct.
- 7 Q And if we look at CDX-3C.6, the green bars that
- 8 we see on the right, those represent the total data that is
- 9 transmitted; is that right?
- 10 A I believe the animation filled those up, so
- 11 it's --
- 12 Q Excuse me, go ahead.
- 13 A I believe the way the animation ran is it filled
- 14 those up and showed the carrier aggregation situation in
- 15 the lower part filling up faster than the single carrier in
- 16 the top.
- 17 Q And when they're filled, that represents the
- 18 total data that has been transmitted; right?
- 19 A It represents the -- in this animation,
- 20 represents the complete arrival of the data that's been
- 21 sent from the base station to the wireless device, yes.
- Q Okay, fair enough. If we go to the next slide,
- 23 3C.7, this was a demonstrate that you used to compare the
- 24 aggregate data rates of multicarrier operation with carrier
- 25 aggregation; right?

1 A Again, that's my recollection and again, this

- 2 was an animation.
- 3 Q If we stay on this slide, again the bars we see
- 4 on the right, the vertical stacks of bars, those represent
- 5 the data that's transmitted once you fill it up in your
- 6 animation; correct?
- 7 A In the animation, as in the previous one, those
- 8 are filled up vertically to indicate the arrival of the
- 9 data and the complete arrival of a file or so forth that's
- 10 being sent.
- 11 Q Okay. And you used your animations on this
- 12 slide 3C.7 and the prior slide 3C.6 to show data being
- 13 transmitted over some given period of time; is that right?
- 14 A I believe that's correct, yes.
- 15 Q And on both of them, more data, both of them,
- 16 meaning both slides, to be clear, more data was transmitted
- 17 in the given amount of time using carrier aggregation as
- 18 opposed to the other method that you were showing; is that
- 19 right?
- 20 A Actually, what it showed is the -- in this
- 21 particular slide, it showed that the file being sent was
- 22 coming twice as fast because it was being split up. That's
- 23 what the animation showed.
- Q Okay. Now, if we look at both of them together,
- 25 I'm not sure if we're able to put them up together, this is

- 1 CDX-3C.6 and 7 together. There we go. Are we able to run
- 2 them together too well? I'm asking too much. I might have
- 3 gone a bridge too far.
- 4 Well, your demonstrative showed that more data
- 5 was transmitted in a period of time using multicarrier
- 6 operation than using single carrier operation. Would you
- 7 agree with that?
- 8 A What's shown here is that one file is coming
- 9 over in a time T, and in the carrier aggregation situation
- 10 and in the multicarrier situation two files are being
- 11 transmitted and the two files are arriving in twice the
- 12 time as the video in the carrier aggregation situation.
- 13 Q And if you consider the multicarrier example
- 14 that you have here and the single carrier example that you
- 15 had on slide 6, the multicarrier example is transmitting
- 16 more data more quickly. Would you agree?
- 17 A I would not agree with that, no.
- 18 Q Would you agree it's transmitting more data in
- 19 the same period of time?
- 20 A I would agree that it's transmitting two
- 21 different files in two different pipes. So two different
- 22 files are being transmitted at the same rate as the single
- 23 carrier case. There happens to be two of them.
- 24 Q And in the single carrier case, you would only
- 25 have one piece of data or one file; correct?

- 1 A That's what the single carrier case does, yes.
- 2 Q I want to look at the patent now, if we could,
- 3 the '356 patent. This is JX-1, and you will find it at tab
- 4 8 in your binder, volume 2. And in particular, I'd like to
- 5 turn to column 2, lines 26 to 52.
- 6 A What lines are we referring to?
- 7 Q 26 to 52 in column 2. And we have blown this
- 8 portion up on the screen as well.
- 9 A Thank you. I think I blanked your microphone on
- 10 you there, I apologize.
- 11 Q Not a problem. Okay. So we're in column 2,
- 12 lines 26 to 52. And this portion of the patent discusses a
- wireless device 110; right?
- 14 A That's what it states, yes. 110 is a wireless
- 15 device.
- 16 Q And wireless device 110 is a device that
- 17 practices the claim of the '356 patent. You'd agree with
- 18 that?
- 19 A I don't know if it specifically says that here,
- 20 but it refers to this background regarding a wireless
- 21 device.
- 22 Q And you know wireless device 110 is discussed
- 23 extensively in the specification of the '356 patent; right?
- 24 A I believe that it is, yes.
- 25 Q If we can keep this portion of column 2 on the

- 1 screen but expand it a little bit to include lines 53 to
- 2 55, please. We'll look at a little bit more of the
- 3 specification.
- At lines 53 to 55, the patent tells us "wireless
- 5 device 110 may support carrier aggregation, which is
- 6 operation on multiple carriers."
- 7 Right?
- 8 A That's what is stated.
- 9 Q And the next sentence, the patent tells us that
- 10 carrier aggregation "may also be referred to as
- 11 multicarrier operation."
- 12 Correct?
- 13 A That is what is stated there.
- 14 Q And you understand that the '356 patent also
- 15 discloses that when performing carrier aggregation, the
- 16 wireless device can receive transmissions from more than
- 17 one cell or base station; right? It's not in this excerpt,
- 18 and I'm happy to show you a different excerpt. I'm just
- 19 asking the question, if you understand that.
- 20 A If you can show me the excerpt, that would be
- 21 helpful.
- 22 Q Certainly. Why don't we go to column 4,
- 23 beginning at line 46 to around line 52, please. Okay.
- 24 There we see at beginning around line 46, "the
- 25 wireless device 110 can receive transmissions from more

- 1 than one cell or base station."
- 2 Right? One or more is the language of the
- 3 patent.
- 4 A That's what is stated here, yes.
- 5 Q Okay. And if we go back to that excerpt, and I
- 6 apologize for going back and forth, but if we can go back
- 7 to that excerpt of column 2, please, I want to focus around
- 8 lines 38 to 52. And you agree the patent tells us that the
- 9 wireless device it describes can be a Bluetooth device;
- 10 right? We see that around line 44, 45?
- 11 A It lists that on this laundry list of possible
- 12 radio technologies, yes.
- 13 Q Right. The wireless device can be a lot of
- 14 different kinds of wireless devices. We can agree on that;
- 15 right?
- 16 A In theory, you could practice carrier
- 17 aggregation over a very wide range of technologies, yes.
- 18 Q One of them is a Bluetooth device; right?
- 19 A One could be a Bluetooth device, yes.
- 20 Q The patent tells us a Bluetooth device; right?
- 21 A Yes.
- Q Okay. And another one could be a device that
- 23 employs 802.11, that standard; right?
- 24 A That's what it says, yes.
- 25 Q And 802.11 is another name for Wi-Fi. You'd

- 1 agree with that; right?
- 2 A It's something of a catchall with letters after
- 3 it, but that's become a catchall phrase with what we call
- 4 colloquially Wi-Fi.
- 5 Q By that you mean 802.11(a), (b), (c), (d);
- 6 correct?
- 7 A And every other letter and combination possible,
- 8 yes.
- 9 Q Understood. Now, Dr. Foty you agree that "EG"
- 10 means for example; right?
- 11 A I believe that's a contraction of a Latin phrase
- 12 which means for example, yes.
- 13 Q I would like to turn now to the Lee reference,
- 14 and this is tab 1 of your binder, RX-1129. And why don't
- 15 we pull up figure 2 of Lee, please. Now, you discussed at
- 16 least a portion of this with Mr. Nelson on direct.
- 17 Do you recall that?
- 18 A Yes, I do.
- 19 Q Now, in Lee, there is one amplifier stage and
- 20 it's labeled 202 1. There we go, that will output to a
- 21 Wi-Fi receiver; right?
- 22 A I believe that's what Lee says is the left side
- 23 is the Wi-Fi side.
- 24 Q Right. If we turn to the right side, the other
- 25 amplifier stage, and that's labeled 202 N, that will output

- 1 to a Bluetooth receiver; correct?
- 2 A I believe that's what Lee states, yes.
- 3 Q And Lee explains that Bluetooth and Wi-Fi are
- 4 just examples of the radio signals that its signal
- 5 amplification circuit can process; correct?
- 6 A Lee calls them examples and cites no other
- 7 examples, that is correct.
- 8 Q Okay. Now, it's your position that Lee does not
- 9 disclose an input signal employing simultaneous operation
- 10 on multiple carriers; right?
- 11 A That is correct.
- 12 Q But you agree that Lee discloses signals its
- amplifier circuit are designed to receive simultaneously.
- You'd agree with that; right?
- 15 A Lee does not require that both signals are
- received at the same time, but Lee is capable of receiving
- both a Wi-Fi signal and a Bluetooth signal at the same
- 18 time.
- Now, according to you the Bluetooth and Wi-Fi
- 20 signals described in Lee are multiple signals rather than a
- 21 single RF signal; right?
- They are separate signals, yes.
- 23 Q I want to ground us in the claim. If we could
- 24 pull up claims 1 and 17, please. And if we could highlight
- 25 the claim language, "the input RF signal employing carrier

- 1 aggregation" in each claim. It's sort of in the middle of
- 2 the first limitation of each claim. There we go. You can
- 3 stop there after carrier aggregation, please. Thank you.
- 4 Perfect, thanks so much.
- 5 And there's a similar limitation in 17. But
- 6 this is the limitation you dispute in Lee, right, "the
- 7 input RF signal employing carrier aggregation"; right,
- 8 Dr. Foty?
- 9 A That is correct.
- 10 Q Now, I want to put up figure 4A of the '356
- 11 patent and I want to see what the patent tells us about
- 12 what the input RF signal is. So if we could pull up figure
- 13 4A, please.
- Okay. In figure 4A, the input RF signal is
- 15 labeled RFin; correct?
- 16 A I believe that to be correct, yes.
- 17 Q And RFin is the signal that is fed into the
- 18 first and second stage amplifiers, or the LNAs; correct?
- 19 A It's fed into what is called the carrier
- 20 aggregation CA LNA, correct.
- 21 Q That is labeled 440 in figure 4A; right?
- 22 A That is correct.
- 23 Q And RFin is output by the input matching circuit
- 24 432; right?
- 25 A 432 is identified as a matching circuit, yes.

- 1 Q And the RFin signal is different from the
- 2 receiver input signal that's labeled RXin; correct?
- 3 A Actually, if the matching circuit does its job
- 4 correctly, that won't be true, they will be the same.
- 5 Q Can we pull up the patent at column 4, lines 56
- 6 to 60, please. So in column 4, the patent talks about the
- 7 received RF signal; correct?
- 8 A Yes, it does.
- 9 Q And then the patent labels that -- or strike
- 10 that.
- 11 The patent describes that, and then it
- 12 separately describes the RF input signal, RFin; right? And
- 13 we can expand this a little bit more if you'd like, but --
- 14 if we go down to around line 65, it will be there.
- Okay. So the patent tells us there is a
- 16 received RF signal and then it separately describes an
- 17 input RF signal; right?
- 18 A Are you referring to the bottom of the
- 19 highlighting here?
- 20 Q That's a reference to the input RF signal and
- 21 that's at around line 64 and 65, yes.
- 22 A Yes, it refers to an input RF signal, RFin to
- 23 carrier aggregation LNA 440, yes.
- 24 Q If we go back to figure 4A, the RF input signal
- 25 and the -- excuse me, and the received RF signal, those are

- labeled differently in figure 4; correct?
- 2 A They are labeled differently, and I understand
- 3 why they are labeled differently.
- 4 Q Now, I want to look at Lee again, and this is
- 5 RX-1129, back to tab 1 of your binder. And we can pull up
- 6 figure 2 again, please. Okay.
- Now, in Lee, VIN, in figure 2 on the lower left,
- 8 that's the input signal in Lee; correct?
- 9 A He calls it VIN.
- 10 Q And in the patent, in the text of Lee, it's
- 11 called input signal Vin; right?
- 12 A I believe that to be correct, yes.
- 13 Q And VIN is a single input signal; is that right?
- 14 A VIN could be one signal or it could be two
- 15 separate signals received from Bluetooth and Wi-Fi.
- 16 Q And Lee describes it as an input signal Vin;
- 17 right?
- 18 A Can you point me to the specification where he
- 19 says that?
- 20 Q Happy to. Why don't we pull up paragraph 17 of
- 21 Lee, RX-1129.
- 22 A What paragraph, I beg your pardon?
- 23 Q 17. Okay. We have paragraph 17 and it's
- 24 actually in, I believe, the second sentence.
- Do you see the reference to "an input signal

- 1 VIN" in Lee?
- 2 A Yes, and I also see below he refers to "include
- 3 a plurality of radio frequency signals."
- 4 Q Yes. The VIN signal in Lee includes a plurality
- 5 of radio signals; right?
- 6 A That's what he states, yes.
- 7 Q Okay. And Lee tells us that the radio frequency
- 8 signals included in VIN can be both Bluetooth and Wi-Fi
- 9 signals; right?
- 10 A He refers to a plurality of radio frequency
- 11 signals, for example, a Bluetooth signal and a Wi-Fi
- 12 signal, that's what he states, yes. Received by a single
- 13 antenna.
- Q Okay. All right. We can take Lee down, please.
- 15 Now, you discussed another reference with Mr. Nelson called
- 16 Winiecki.
- 17 Do you recall that?
- 18 A Yes, I do.
- 19 Q And you agree that Winiecki discloses carrier
- 20 aggregation; right?
- 21 A He discusses carrier aggregation as part and
- 22 parcel of his patent. I don't know if that -- I'm not an
- 23 attorney, I don't know if that qualifies as a disclosure.
- Q I'll take it, thank you. Okay.
- Now -- but you disagree that a person of

1 ordinary skill would have been motivated to combine Lee and

- Winiecki; right?
- 3 A That is my contention, yes.
- 4 Q Okay. In your view, the concurrent utilization
- 5 of radio resources across multiple carriers is not unique
- 6 to the amplifier circuit of Lee. Do I have that right?
- 7 A Could you please repeat that? It was a bit
- 8 convoluted.
- 9 Q Sure. It's actually I'm reading from your
- 10 report.
- 11 A Then I know it's convoluted.
- 12 (Laughter.)
- 13 Q Now, concurrent utilization of radio resources
- 14 across multiple carriers is not unique to the amplifier
- 15 circuit of Lee. That's your view; right?
- 16 A If that's from my report, that's my view.
- 17 Q And therefore, according to you, implementing
- 18 such a feature does not provide any particular motivation
- 19 to combine these two references, Lee and Winiecki; right?
- 20 A There is no particular motivation to combine.
- 21 They teach away from each other and are attacking very
- 22 different problems.
- 23 Q And according to you, one of ordinary skill in
- 24 the art would not have been motivated to combine "these two
- 25 references specifically." Do I have that right?

- 1 A If you're quoting from something I wrote, then I
- 2 will agree with that.
- 3 Q So your understanding was that the motivation to
- 4 combine requires that one reference direct the reader with
- 5 particularity to another reference. Do I have that right?
- 6 A I don't know if I said it in that way.
- 7 Q Well, your analysis of motivation to combine
- 8 focused on whether the motivation was found in the two
- 9 references Lee and Winiecki.
- 10 Do I have that right?
- 11 A Yes, I believe there's no motivation to combine
- 12 them, as they are too disparate and teach away from each
- 13 other.
- 14 Q Now, you didn't identify, either in your expert
- 15 reports or in your testimony today, any modifications that
- 16 would need to be made to Lee in order to make it work with
- 17 carrier aggregation; right?
- 18 A I offered no such opinion. Dr. Fay offered an
- 19 opinion that it would work, but he provided no support for
- 20 that opinion.
- 21 Q Okay. But you haven't offered an opinion on
- 22 that, so I don't want to cover that with you, and we'll
- 23 move on.
- 24 Okay. You talked about the prosecution history
- 25 on your direct.

- 1 Do you recall that?
- 2 A Yes, I do.
- 3 Q And I believe you talked about the Hirose
- 4 reference that was considered during prosecution; right?
- 5 A I discussed that, yes.
- 6 Q And I quoted you, or I wrote down what you said,
- 7 because I found it interesting. You said that Hirose
- 8 described a use of multiple unrelated signals.
- 9 Do you recall saying that?
- 10 A I recall saying that, yes.
- 11 Q Okay. Now, you also know that the -- her
- 12 Honor's Markman order discussed hirose in the prosecution
- 13 history; correct?
- 14 A Yes.
- 15 Q And instead of pulling up the whole prosecution
- 16 history, I'm going to pull up Order Number 38 and an
- 17 excerpt of that, if we could. And this would be Order 38
- 18 at page 25.
- 19 A Tab?
- 20 Q I'm looking for it, give me one moment. I have
- 21 a lot of help from the back. It's tab 6.
- 22 A Thank you.
- 23 Q Okay. And we have it on the screen as well,
- 24 sir. And I want to focus on the second paragraph, if we
- 25 could blow that up.

1 This is a discussion of what happened during

- 2 prosecution with the Hirose prior art reference; right?
- 3 A You'll have to give me a minute to catch up.
- 4 What page are you on?
- 5 Q 25.
- 6 A 25. But there's a weirdly numbered document.
- 7 Is it the part that says "page 25" -- okay. Thank you,
- 8 that helps.
- 9 Q Are you there, sir?
- 10 A Yes, thank you for your patience.
- 11 Q And toward the bottom of this second paragraph
- 12 we've highlighted, do you see the sentence "In contrast,
- 13 Hirose transmits the same signals over different paths
- 14 which results in redundant data at a common data rate"?
- 15 Correct?
- 16 A Yes, Hirose is transmitting redundant signals,
- 17 as it says here.
- 18 Q And this excerpt is from the prosecution
- 19 history. This is what Qualcomm represented to the Patent
- 20 Office during prosecution; correct?
- 21 A During the process, yes, that's what they did.
- 22 Q Now, you would agree that the Lee reference does
- 23 not disclose transmitting redundant data; correct?
- 24 A Lee discloses two separate radio streams. So
- 25 maybe those could be used for redundant data. Typically

- 1 they're not.
- 2 Q Okay. We are running short on time. I'd like
- 3 to turn briefly to your opinions regarding the '336 patent.
- 4 When Mr. Nelson was asking you questions earlier
- 5 this afternoon and put up some of your slides, I believe he
- 6 put up two different slides showing your reasons why you
- 7 disagree with Dr. Fay that the Rousu reference anticipates
- 8 claim 4; is that right?
- 9 A I recall that, yes.
- 10 Q And one of those slides and one of your reasons
- 11 relates to the second stage amplifiers limitation of claim
- 12 4; correct?
- 13 A That is correct.
- 14 Q And in particular -- do you need a moment, sir?
- 15 A I'll leave.
- Okay. Now, in particular, it's your opinion
- 17 that amplifiers 70 and 72 in Rousu are disabled in certain
- 18 situations; right?
- 19 A I did not offer -- discuss that today, but I
- 20 discussed that at some point in a report, yes.
- 21 Q That was the basis for your opinion that the
- 22 second stage amplifiers weren't disclosed; correct?
- A No, it was not.
- Q Okay. Well, let me ask this. You agree that
- 25 Rousu discloses in some situations -- let me strike that

- 1 and start over.
- 2 You agree that Rousu discloses some situations
- 3 in which amplifiers 70 and 72 will be enabled?
- 4 A Rousu has a somewhat convoluted explanation in
- 5 which he basically explains that there is a need to amplify
- 6 the signals, and he basically says it could be done with
- 7 the 200 amplifiers, the four of them, or the 7072 set.
- 8 And he says -- he uses the word "typically."
- 9 But of course, that's not exclusive to those not being
- 10 there.
- 11 Q If we could pull up, please, your slide
- 12 CDX-3C.123. I'm a little confused, sir, because a moment
- ago you just told me you weren't relying on amplifiers 70
- 14 and 72, but I would like to blow up what you highlighted or
- 15 what you presented in your slide and actually I think was
- 16 highlighted by Dr. Fay.
- 17 Can we look at the yellow highlighting? Okay.
- 18 Dr. Fay relies on LNAs 70 and 72 for this limitation;
- 19 right?
- 20 A Yes, and I did not reference this in my validity
- 21 argument with respect to Rousu.
- 22 Q And you agree that Rousu does disclose
- 23 situations in which amplifiers 70 and 72 will be enabled;
- 24 right?
- 25 A He discloses -- he does not preclude it. He

1 indicates it may not be the best -- the best way to do it,

- 2 but he indicates that 70 and 72 could also be enabled at
- 3 the same time that what I call the 200 amplifier set on the
- 4 left would be enabled.
- 5 MS. TALLON: Thank you, sir.
- 6 Thank you, your Honor.
- 7 JUDGE MC NAMARA: Thank you very much.
- 8 All right.
- 9 Mr. Gennari?
- MR. GENNARI: Yes.
- 11 CROSS-EXAMINATION
- BY MR. GENNARI:
- 13 Q I just want to focus on the last discussion
- 14 about Rousu. If you could pull up RX-1134, which is Rousu,
- 15 at figure 2.
- Dr. Foty, your opinion is that Rousu does not
- 17 disclose the claimed second stage amplifiers; correct?
- 18 A That is correct, yes.
- 19 Q And it's because -- and could you tell us why?
- 20 A Rousu discloses an amplifier that can only
- 21 output a single signal, not a carrier group.
- Q Okay. You testified to that earlier. I just
- 23 don't under -- I just want you to explain it so that the
- 24 Court understands your position on that and why Rousu
- 25 operates the way you think it does.

1		C O N	TEN	T S		
2						
3						VOIR
4	WITNESSES:	DIRECT	CROSS	REDIRECT	RECROSS	DIRE
5	CARLA S. MULHERN					
6	by Mr. Lasher	1961		1978		
7	by Mr. Mueller		1968			
8	JEFFREY A. EISENACH	I				
9	by Mr. Mueller	1981		2042		
10	by Mr. Marriott		2008			
11	JAMES THOMPSON					
12	by Mr. Marriott	2051		2079		
13	by Mr. Lee		2065			
14	JUDITH CHEVALIER					
15	by Mr. Ryan	2082				
16	by Mr. Mueller		2098			
17	MASSOUD PEDRAM					
18	by Mr. Pak	2110				
19	by Mr. Cordell		2135			
20	DANIEL PATRICK FOTY	7				
21	by Mr. Nelson	2162		2222		
22	by Ms. Tallon		2189			
23	by Mr. Gennari		2216			
24						
25					contin	ued

CERTIFICATE OF REPORTER

TITLE: In The Matter Of: Certain Mobile Electronic Devices and Radio Frequency and Processing Components Thereof (II)

INVESTIGATION NO: 337-TA-1093

HEARING DATE: 9-25-18
LOCATION: Washington, DC
NATURE OF HEARING: Hearing

I hereby certify that the foregoing/attached transcript is a true, correct and complete record of the above-referenced proceeding(s) of the U.S. International Trade Commission.

DATE: 9-25-18

SIGNED: Mark A. Jagan
Signature of the Contractor or the
Authorized Contractor's Representative

I hereby certify that I am not the Court Reporter and that I have proofread the above-referenced transcript of the proceedings of the U.S. International Trade Commission, against the aforementioned Court Reporter's notes and recordings, for accuracy in transcription in the spelling, hyphenation, punctuation and speaker identification and did not make any changes of a substantive nature. The foregoing/attached transcript is a true, correct and complete transcription of the proceedings.

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SIGNED: Carmen Smith
Signature of Court Reporter