

# EXHIBIT C

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TYLER DIVISION

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2  
3  
4 WI-LAN, INC. )  
5 DOCKET NO. 6:10cv521  
6 -vs- )  
7 Tyler, Texas  
8 ALCATEL-LUCENT USA, INC., 8:27 a.m.  
9 ET AL ) July 11, 2013

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10 WI-LAN, INC. )  
11 DOCKET NO. 6:13cv252  
12 -vs- )  
13 HTC CORPORATION,  
14 ET AL )

TRANSCRIPT OF TRIAL  
MORNING SESSION

15 BEFORE THE HONORABLE LEONARD DAVIS,  
16 UNITED STATES CHIEF DISTRICT JUDGE, AND A JURY

17  
18  
19  
20 COURT REPORTERS: MS. SHEA SLOAN  
21 MS. JUDY WERLINGER  
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25 Proceedings taken by Machine Stenotype; transcript was  
produced by a Computer.

1 (Jury in.)

2 THE COURT: Please be seated.

3 All right. Counsel, you may continue.

4 MR. APPLEBY: Thank you, Your Honor.

5 STEPHEN WICKER, Ph.D., DEFENDANTS' WITNESS,

6 PREVIOUSLY SWORN

7 DIRECT EXAMINATION (CONTINUED)

8 BY MR. APPLEBY:

9 Q. Welcome back, Dr. Wicker.

10 A. Good morning.

11 Q. I want to pick up where we left off yesterday  
12 afternoon and maybe just take a brief step back so we  
13 can reset where we were.

14 MR. APPLEBY: Could I have Slide --  
15 yeah -- 10-31 brought up?

16 In fact, we were using a board.

17 Your Honor, may Dr. Wicker come back down  
18 to the easel and the boards?

19 THE COURT: Yes, he may.

20 MR. APPLEBY: Thank you.

21 Q. (By Mr. Appleby) And, Dr. Wicker, can you  
22 remind us what we were looking at here with this board  
23 yesterday -- late yesterday afternoon?

24 A. Okay. This is a piece of the W-CDMA standard.  
25 It has to do with what are called channelization codes.

1 We talked a bit about channels last night.

2 The channels are basically individual pathways  
3 through which data can be transmitted, and these codes  
4 establish distinct channels. The OVSF codes are the  
5 specific codes that are used to create these channels.

6 We talked a lot about this term. It's kind of  
7 long, orthogonal variable spreading factor codes. And  
8 they form a tree, a very nice tree. This tree is lying  
9 on its side. But these are the various codes that form  
10 the OVSF codes, which can be used to create channels in  
11 W-CDMA.

12 Q. And how many of those codes would be used to  
13 create a channel?

14 A. Well, in theory, there's an arbitrarily large  
15 number of codes. It could just keep going. But in  
16 reality, and in particular for the application we're  
17 talking about here, there are 15 codes that can be used  
18 to create channels, one code for each channel.

19 Q. So that was -- I just want to emphasize that  
20 one point. So if I want to create a single channel, how  
21 many of those codes would I use?

22 A. Okay. Well, it's one code per channel. So,  
23 for example, you could use this one code. That would  
24 create one channel. That would create one. We could  
25 actually create four orthogonal channels by using those

1 four codes.

2 Q. Okay. Now, I think when we broke yesterday  
3 afternoon, we were talking about whether these  
4 orthogonal variable spreading factor codes were new with  
5 W-CDMA and HSDPA.

6 Were they new in those standards?

7 A. No. In fact, the underlying math is quite  
8 old, but the codes themselves and their arrangement in  
9 this tree goes back to the early '90s at least.

10 Q. Okay. Let me show you --

11 MR. APPLEBY: Let's bring up on the  
12 monitors Defendants' Exhibit 150.

13 Q. (By Mr. Appleby) And, Dr. Wicker, if you could  
14 identify what we're looking at for us.

15 A. Okay. This is an international patent  
16 application -- international application. And it has  
17 been given to the inventor, Klein Gilhousen. There's  
18 his name right there (indicating).

19 Dr. Klein Gilhousen is one of the original  
20 founders of Qualcomm. In fact, there's the applicant's  
21 name, Qualcomm, Incorporated.

22 Q. And when was this international patent  
23 application filed?

24 A. Let's see. There is an effective date here of  
25 20th of July, 1993, right there (indicating).

1           A.     Okay.  This is the portion of the claim --  
2     and, again, it's Claim 5 of the '326 patent.  It's the  
3     portion of the claim that adds the overlay to the  
4     existing orthogonal channels.  So we have an overlay  
5     code generator that's required.  And so I've copied that  
6     over here so you can see it.

7           There's a second encoder for encoding those  
8     overlay codes.  And that's right here.

9           And then storage to store set of orthogonal  
10    codes.  There has to be storage to store the various  
11    overlay -- sorry -- to store the various orthogonal  
12    codes, which are called for up at the top.

13          Q.     Now, did you find these highlighted elements  
14    in HSDPA-compatible base stations?

15          A.     No.

16          Q.     So I'd like to start walking through that  
17    conclusion.

18    Before I get there, I'd like to ask whether the Court  
19    has given us a construction for the term overlay code?

20          A.     Yes, it has.

21          Q.     And can you explain what that construction is?

22          A.     That construction is over -- let me clear  
23    that.  That construction is over here.  You can see it  
24    there (indicating).

25                 An overlay code is an additional code that

1 subdivides an orthogonal channel.

2 Q. Now, in this version of Claim 5 that we now  
3 have on the monitor, I see there's some highlighting in  
4 blue and some highlighting in pink.

5 Could you tell us first what the highlighting  
6 in blue represents?

7 A. The highlighting in blue represents the  
8 original channels, the orthogonal channels that are to  
9 be subdivided. It includes a first encoder, an  
10 orthogonal code set, and orthogonal code generator.

11 So this is the part -- thinking back to the  
12 very beginning when we were talking about the problem  
13 that the patent solved, these are the original channels.

14 For example, the four orthogonal channels that  
15 serve the neighborhood to begin with.

16 Q. So these elements relate to that just classic  
17 CDMA; is that fair?

18 A. Yes, that's fair.

19 Q. Now, moving down the claim, we see elements  
20 highlighted in pink. What does that represent?

21 A. Okay. These elements represent the overlay  
22 codes. This is the solution, what we put on top of the  
23 existing orthogonal codes so we can take care of the new  
24 folks that have moved into the neighborhood who want  
25 service, but we didn't have orthogonal channels for.

1 multiply it by the first encoder. That creates our 4  
2 channels, our original 4 channels, and so we have these  
3 4 packets of data that have now been spread. But we've  
4 got 16 users. So what we're going to do is use a second  
5 encoder to apply the overlay codes and the result will  
6 be 16 packets of data that we can now send at the same  
7 time to our 16 users.

8 And so they will all be getting the service.  
9 They will all be able to watch the movies and et cetera.

10 Q. Okay. Now that we've taken a look at the  
11 patent, I want to step back to the claim, Claim 5 of the  
12 '326 patent; and ask you whether you found the pink  
13 overlay code elements in HSDPA-compatible base stations?

14 A. The pink part? You asked about the pink?

15 Q. The pink part.

16 A. There were no overlay codes in HSDPA.

17 Q. Did you find an overlay code generator in  
18 HSDPA-compatible base stations?

19 A. No. No.

20 Q. And did you find overlay codes?

21 A. No.

22 Q. And did you find a second encoder?

23 A. No.

24 Q. And could you explain your conclusions on  
25 those points?

1           A.    Yes.   What I found was that it was a  
2 straightforward CDMA system.   It had an encoder for  
3 encoding orthogonal codes to create separate channels,  
4 but there was no subdivision of those channels.   There  
5 was no additional code that was used to subdivide any of  
6 the existing channels.   We simply had a fixed channel on  
7 occasion that couldn't change.

8           I showed you the channels on the chart.   There  
9 were some data channels.   This is the chart.   So there  
10 are data channels and control channels.   That doesn't  
11 change.   Nothing here is subdivided by overlay codes.

12          Q.    For the channels that we see on this chart,  
13 these are the channels that are used in HSDPA and  
14 W-CDMA; is that correct?

15          A.    That's correct.

16          Q.    How many codes are used on each one of these  
17 channels?

18          A.    One.   As I showed before, there is, for  
19 example, one code of length 16 for channel 0.   It's hard  
20 to do.   One code of 116 for channel 1 and so forth.  
21 Every one of these channels going down this list is one  
22 code.

23          Q.    Now, we see on this chart that data channels  
24 have a spreading factor of 16.   When was that spreading  
25 factor chosen?

1           A.    That spreading factor was chosen when HSDPA  
2 was first invented, when it was first put together by  
3 the standards group.

4           Q.    Does -- the spreading factor on the data  
5 channels for HSDPA, does that ever change?

6           A.    No.   No.   It's fixed.

7                    If you used HSDPA from day one up until now,  
8 it's going to be spreading factor 16 on the data  
9 channels.

10          Q.    Now, looking at these control channels, for  
11 instance, the AICH, what is the spreading factor on that  
12 channel?

13          A.    The AICH is the one on the bottom, and the  
14 spreading factors, as you can see, is 256.

15          Q.    And when was that spreading factor for that  
16 channel, the AICH channel, chosen?

17          A.    Again, from the very beginning.   It's been  
18 that way and it hasn't changed.

19          Q.    Can the spreading factor on the AICH channel  
20 ever change?

21          A.    No, not in HSDPA.

22          Q.    Now, so after looking at these channels, does  
23 the -- do HSDPA-compatible base stations have an overlay  
24 code generator?

25          A.    No, they don't.

1 Q. And do they have a second encoder to apply an  
2 overlay code generator?

3 A. No.

4 Q. Now, you were in the courtroom when Dr. Wells,  
5 Wi-LAN's expert, testified that HSDPA base stations met  
6 this limitation, were you not?

7 A. Yes, I was.

8 Q. So let me show you a demonstrative that  
9 Dr. Wells used. Do you recall Dr. Wells using this  
10 demonstrative in the course of his testimony?

11 A. Yes, I do.

12 Q. And do you recall Dr. Wells testifying that  
13 this demonstrative, in his view, showed that HSDPA base  
14 stations use overlay codes?

15 A. Yes.

16 Q. And do you agree with that conclusion?

17 A. No.

18 Q. And why not?

19 A. I think he's misreading the chart, because  
20 what we see here is that -- in this particular example,  
21 here we've got 14 high-speed physical downlink shared  
22 channels that are using 14 different codes.

23 I believe he pointed to this code here  
24 (indicating) and said that it had been subdivided to  
25 create these channels. That's simply not right. These

1 channels down at the bottom, these control channels,  
2 have a single sequence. It's got spreading factor 256.

3 This code of spreading factor 16 is never  
4 used. In fact, it can't be used.

5 If you've got this particular set of length  
6 256 sequences, this code is blocked. You can't use it  
7 at all. It's not a matter of taking overlay codes and  
8 subdividing this particular sequence; you can't use that  
9 sequence.

10 We're instead using different sequences down  
11 here of length 256 to create our reliable control  
12 channels. There's still only one code for each channel.

13 Q. Have you seen other documents that confirm  
14 your opinion on this point?

15 A. Yes.

16 MR. APPLEBY: Let's put up Plaintiff's  
17 Exhibit 28. And can you pull up the whole -- yes.

18 Thank you.

19 Q. (By Mr. Appleby) And what are we looking at  
20 here, Dr. Wicker?

21 A. Okay. This is a document from something -- I  
22 think I've got a copy here. Well, maybe not.  
23 It's a document from Qualcomm University. Qualcomm  
24 creates these documents to teach their incoming  
25 engineers and others how the technology works.

1           And this particular one is for HSDPA. It  
2 says: Understand -- actually, it says: Understand  
3 HSPA. There might have been some confusion earlier.

4           HSPA is high-speed packet access. It's  
5 actually two directions. It's uplink and downlink.

6           HSDPA, high-speed downlink packet access is  
7 part of HSPA.

8           Q. Okay. And when did you first see the  
9 document?

10          A. I'm pretty sure it was at least a year ago.

11          Q. This was a document that Wi-LAN was relying on  
12 in its case, was it not?

13          A. Yes. Yes, I did see it here in court.

14          Q. So let's move back to the slides, and I'm  
15 going to show you a diagram that's in this --

16                   MR. APPLEBY: Can you go to the next  
17 slide?

18          Q. (By Mr. Appleby) And what we are looking at  
19 here, this is a diagram that appears in the document we  
20 just looked at.

21          A. Okay. This is another -- yet another OVSF  
22 tree. It's got the sequences, and it's showing how one  
23 code is associated with each channel.

24                   In this case, once again, we have our data  
25 channels. There's 15 of those, so we pick out 15 codes,

1 as it says there, for our 15 channels.

2 Now, we've also got control channels, and the  
3 control channels are down here (indicating).

4 Now, these control channels are using  
5 sequences of length 128 and 256, as I showed you on that  
6 chart earlier. What that says, though, is that we're  
7 not subdividing this channel. Quite the opposite. That  
8 channel is actually blocked.

9 There's some language right here that explains  
10 what that X means. It says: Blocked by lower code --  
11 thank you -- blocked by lower code in tree.

12 So what that means is, not only is this  
13 channel not being subdivided; it can't be used at all.  
14 It's blocked by the use of these sequences down here,  
15 the sequences of length 128 and 216.

16 Q. Now, looking at those control channels that  
17 you were just pointing out, those were established in  
18 the standard in 2002; is that right?

19 A. That's correct.

20 Q. So given that those control channels are  
21 established in the standard, can this code that's  
22 circled in red as spreading factor 16 ever be used in  
23 HSDPA?

24 A. No. No, it can't. It's been blocked by the  
25 use of these sequences down here for the control

1 channels. It specifically says: Blocked by lower code  
2 in tree. If I use this code here, I can't use this one.

3 Q. Can an orthogonal channel spread with that  
4 code circled in red, ever be created in HSDPA at any  
5 time?

6 A. No. If you did, you would interfere with your  
7 control channels.

8 Q. Now, do you recall Dr. Wells testifying that a  
9 256 chip OVSF code includes an orthogonal code and an  
10 overlay code?

11 A. Yes.

12 Q. Do you agree with that conclusion?

13 A. No.

14 Q. And why not?

15 A. I think it goes against the Court's claim  
16 construction, first. The Court's claim construction  
17 said the overlay codes are additional codes. Not  
18 portions of a code or expansions of a code; it's an  
19 additional code.

20 Q. And just so we're clear on what Dr. Wells is  
21 calling the overlay code and the orthogonal code, in his  
22 view, the first 16 bits of the 256 chip code were the  
23 orthogonal code? Is that -- was that what you  
24 understood?

25 A. That's correct.

1 Q. And what did you understand the overlay code  
2 to be?

3 A. The overlay code was the actual code itself;  
4 in other words, the length 256 code.

5 Q. So the overlay code was the entire 256 chips  
6 in Dr. Wells' view. Is that what you understood?

7 A. That was my understanding.

8 Q. He wasn't saying that it was the first 16 bits  
9 for the orthogonal code and the remaining 40 were the  
10 overlay code. That's not what he testified to, was it?

11 A. That's correct. He was actually using the  
12 first 16 bits twice. He said the first 16 bits were  
13 both the orthogonal code and part of the overlay code.

14 Q. And do you think it's proper to use the first  
15 16 bits twice to satisfy the overlay code construction?

16 A. No. I think the Court was clear that it's an  
17 additional sequence. You can't count the same sequence  
18 twice.

19 Q. Now, do you recall Dr. Wells testifying that,  
20 in his opinion, an OVSF code was equivalent to an  
21 orthogonal code and an overlay code?

22 A. Yes.

23 Q. And do you agree with that testimony?

24 A. No.

25 Q. Why not?

1           A.    Well, what the patents call for is this  
2 ability to use overlay codes to subdivide existing  
3 orthogonal channels, so you can serve more users, take  
4 care of more subscribers.

5           The simple use of one code doesn't do that.  
6 It doesn't give you that ability to expand the system to  
7 cover more people.   You've just got one code.

8           And furthermore, using two codes and using one  
9 code, that's substantially different.   One code uses one  
10 encoder; two codes have two encoders that are required.

11          So they seem like very different things to me.

12          Q.    Do you find the differences to be substantial  
13 or insubstantial?

14          A.    I would say they're substantial, because  
15 basically you've got one system that's fixed, it can  
16 serve a certain number of users, and that's it --  
17 namely, the HSDPA; it's got 15 data channels; it's  
18 fixed -- whereas, the other system, the one that's  
19 described in the patent is flexible; you can subdivide  
20 channels by using additional overlay codes to serve more  
21 subscribers.   I think that's a substantial difference.

22          Q.    Now, do you recall Dr. Wells testifying that a  
23 256 chip code could be viewed as a 16 chip code  
24 multiplied by another 16 chip code.

25          Do you recall that?

1 A. Yes.

2 Q. And do you agree with Dr. Wells that that  
3 means that it's equivalent to an overlay code and an  
4 orthogonal code?

5 A. No.

6 Q. Why not?

7 A. Well, first off, he's simply underlying some  
8 underlying mathematics that have been well-known for a  
9 long time.

10 Secondly, he could have done 16-by-16 or he  
11 could have done 4-by-4-by-4-by-4, and then we've got  
12 four codes. You know, we can have codes all over the  
13 place if we're going to count them like that. That  
14 can't be right. That can't be what the claims mean.

15 Q. And is that type of multiplication, a 16-bit  
16 code times another 16-bit code, does that ever happen in  
17 HSDPA?

18 A. No.

19 Q. Now, were OVSF codes known before Airspan  
20 filed for its patents?

21 A. Yes.

22 Q. And did we see that earlier?

23 A. Yes.

24 Q. Can you explain that?

25 A. Basically, OVSF codes, the underlying

1 of the overlay code patents?

2 A. No.

3 Q. Now, I'd like to direct your attention to  
4 another aspect of Claim 5, and I have advanced the  
5 slide.

6 Could you tell us what we're looking at here?

7 A. Okay. This is the portion of the claims that  
8 covers selective operability. I think we talked about  
9 this a little bit yesterday afternoon.

10 But basically what it says is: A second  
11 encoder, selectively operable instead of the TDM  
12 encoder.

13 So you've got this ability to go back and  
14 forth. Remember, there's two solutions. There's the  
15 first solution that uses overlay codes and then the  
16 second solution that uses time division multiplexing.

17 What this language tells me is that you can  
18 choose either one. You can't do both at the same time,  
19 but both are available. You can pick one or the other.

20 Q. And do the patents illustrate how this might  
21 operate?

22 A. Yes.

23 Q. So I have put up the Figure 7B of the patents,  
24 and could you describe what we're looking at here?

25 A. Okay. There's a lot of stuff going on here,

1 have to have buffers. An engineer would expect that.  
2 The buffers are what hold the data while you operate on  
3 it. The people who wrote the patent knew that; the  
4 inventors knew that.

5 So when they contrasted on-the-fly with  
6 storing the entire set, they knew there were going to be  
7 buffers, but they're saying there's a difference between  
8 generating them on-the-fly, like the base stations do,  
9 and storing all of them so you just read them out of  
10 memory.

11 So I think what the claims are calling for is  
12 storing all of the orthogonal codes so when you need  
13 one, you simply read it out of memory. You don't have  
14 to generate it again; you read it out of memory. And  
15 simply latching in one code is not the same as storing  
16 all the codes so you don't have to generate them.

17 Q. And the claim language is storage arranged to  
18 store the set of orthogonal codes; is that right?

19 A. That's right. And, of course, the language,  
20 the set of codes, means all the codes, the codes that we  
21 talked about earlier in the claim.

22 Q. Okay. Sir, I'd like to summarize your  
23 opinions on Claim 5 with respect to Alcatel-Lucent's  
24 base stations.

25 And could you summarize them for us?

1           A.    Okay.   What we see here, once again, are the  
2   last two claim elements.   And the last two claim  
3   elements call for a number of things that are simply not  
4   present.

5                    The accused products do not have an overlay  
6   code generator.   They do not have a second encoder to  
7   apply overlay codes.   And they do not have storage to  
8   store the set of orthogonal codes.   They don't store the  
9   set of codes.   They generate them on-the-fly when they  
10   need them.

11                   Since those three claim requirements are not  
12   present, these last two elements here cannot be  
13   satisfied.   And if all the elements aren't satisfied,  
14   the claim is not infringed.

15           Q.    So now I'd like to turn to the other two  
16   asserted claims in the '326 patent, Claim 2 and Claim 9.

17                   Have you reached a conclusion about whether  
18   Claim 2 would be infringed by HSDPA-compatible base  
19   stations?

20           A.    Yes, I have.

21           Q.    And what is that conclusion?

22           A.    Claim 2 is not infringed either.

23           Q.    And why not?

24           A.    Well, we look at Claim 2, and we can see some  
25   of the same language.   We need an overlay code

1 a dependent claim. It includes everything that's in  
2 Claim 7 as well as the additional stuff in Claim 11.

3 Q. And so what conclusion have you reached as to  
4 whether Claim 11 is infringed by HSDPA-compatible base  
5 stations?

6 A. It's not infringed.

7 Q. And why is that?

8 A. Well, if we look at Claim 7 -- and remember  
9 Claim 7 is included in Claim 11 -- we have a number of  
10 familiar requirements. There's an overlay code  
11 generator, the second encoder, and there's the storage  
12 requirement.

13 Okay. It looks like we've repeated the  
14 same -- overlay code generator, storage arrange,  
15 store -- I think that's actually in the original claim.

16 Anyway, so what we've got are a series of  
17 elements that I've already shown you are not present.  
18 There is no overlay code generator. There's no second  
19 encoder to apply overlay codes. And there's no storage  
20 to store the set of orthogonal codes.

21 Claim 7 requires that, but it's not present.  
22 Claim 11 requires everything in Claim 7, so Claim 11's  
23 not infringed either.

24 Q. And would your conclusion be the same for  
25 Alcatel-Lucent's base stations in particular?

1 A. Yes.

2 Q. Do you agree that that's what this patent  
3 describes?

4 A. No.

5 Q. And why not?

6 A. Well, you can see that from the language of  
7 the patent. What the patent's calling for is taking a  
8 code division multiplexed channel out of commission.

9 You're not taking something out of commission  
10 if I simply take it from one user and give it to  
11 another. That's not what that means.

12 We're locking them out from all users, not  
13 simply reassigning them.

14 Q. So let's turn to the asserted claims of this  
15 patent. I want to look at Claim 11 to start with.

16 And can you tell us what we have highlighted  
17 here?

18 A. Okay. Claim 11 is on the left, and what I've  
19 done is I've highlighted portions of two of the claim  
20 elements, the analyzer portion, which I've blown up  
21 here, and the channel controller portion, which I've  
22 blown up here (indicating).

23 The analyzer is what determines how much  
24 interference from other cells is there. So it says an  
25 analyzer for receiving parameters -- I'll skip some of

1 Q. Now, we've been talking about interference,  
2 this being an example of interference from within the  
3 cell, but are there other factors beyond interference  
4 that could affect the value of a CQI?

5 A. Yes.

6 Q. And so let's talk about what some of those  
7 things might be.

8 And could you explain what we're looking at  
9 here on this Slide 67?

10 A. Okay. This is a variety of things that can  
11 affect CQI. Some of them have already been discussed.

12 But, remember, CQI is an indication by the  
13 phone of what it thinks it can receive successfully.

14 So if there are obstructions, interference  
15 from inside and outside the cell, that's going to affect  
16 what the phone can receive.

17 But one thing to note, the quality of the  
18 phone is actually an issue. There are different CQI  
19 tables for different kinds of phones.

20 If we have a really nice phone, it's what we  
21 call high sensitivity, it's able to pick signals up out  
22 of the noise and do so very well.

23 So its CQI, in a given situation, is going to  
24 be higher than a less expensive phone, may not be as  
25 well designed, not as sensitive. It's not as good at

1 picking signals out of the noise.

2 So we may have two phones that are seeing  
3 exactly the same conditions, but they'll have different  
4 CQIs because one is better at pulling signals out of a  
5 noise than the other.

6 A couple of other things I have listed: Power  
7 control plays a factor.

8 Distance. The further you are from the  
9 antenna, the less the signal quality.

10 Weather. Heavy rain affects signal quality.

11 In fact, it's a serious problem for satellites  
12 as well. But heavy rain does affect cellular  
13 communications. Lightning definitely affects cellular  
14 communications.

15 Q. Now, if I had a smartphone in my hand and I  
16 walked into a building, could that affect my CQI?

17 A. Yes.

18 Q. And is that interference from other cells?

19 A. No.

20 Q. And if I walked into an elevator with my  
21 phone, could that affect my CQI?

22 A. It will definitely affect your CQI.

23 Q. And is that interference from other cells?

24 A. No.

25 Q. If I'm in a rainstorm, could that affect my

1 CQI?

2 A. Yes, it will.

3 Q. Is that interference from other cells?

4 A. No.

5 Q. If I'm moving in my car, could that affect my

6 CQI?

7 A. Yes.

8 Q. Is that interference from other cells?

9 A. No.

10 Q. Now, can a base station ever tell why a mobile  
11 unit, a smartphone, reports a change in its CQI?

12 A. No. A variation in the CQI could be caused by  
13 many factors. Those factors are not reported to the  
14 base station, and the base station won't know where the  
15 CQI changed.

16 Q. Is CQI a parameter indicative of interference  
17 from other cells?

18 A. No.

19 Q. And why do you say that?

20 A. There are many situations in which the  
21 interference from other cells may actually improve, but  
22 the CQI gets worse.

23 So you cannot look at the CQI, and in  
24 particular, you can't look at changes in CQI and make  
25 any determination about what's happening with

1 interference from other cells. You simply don't know.

2 Q. Okay.

3 MR. APPLEBY: So let's turn back to Claim  
4 11.

5 Q. (By Mr. Appleby) And have you formed an  
6 opinion, Dr. Wicker, as to whether HSDPA-compatible base  
7 stations have the analyzer required by Claim 11?

8 A. Yes.

9 Q. And what is that opinion?

10 A. It's not present.

11 Q. And why do you say that?

12 A. There is nothing in the handsets that's able  
13 to tell how much interference is being -- is coming from  
14 adjacent cells. There's simply no way to do it.

15 Q. And, therefore, the base station has no  
16 information regarding whether a handset is experiencing  
17 interference from other cells?

18 A. That's right.

19 The base station will simply know roughly what  
20 the handset thinks it can receive. Many factors come  
21 into that particular number.

22 Q. So let's move to the last element of Claim 11.

23 And could you remind us again what the last  
24 element requires.

25 A. Okay. That's the channel controller. This is

1 the portion of the claim that takes that estimate of how  
2 channels are being affected by other cell interference  
3 and takes some of those cells out of the people, takes  
4 them out of commission, and says: These channels cannot  
5 be used by anybody in the cell, because of this  
6 interference from other cells.

7 Q. And do HSDPA-compatible base stations satisfy  
8 that element of Claim 11?

9 A. No.

10 Q. And why do you say that?

11 A. We talked a lot about HSDPA and the 15 data  
12 channels. They're going to be allocated to someone  
13 within the cell if there's data to send. There is no  
14 situation in which one of those channels is locked out,  
15 taken out of use because of interference from other  
16 cells. It simply doesn't happen.

17 Q. Looking back at this demonstrative that we  
18 used earlier in the day, is there anything on this  
19 figure that -- that relates to that opinion?

20 A. Yes. What this shows, once again, our 15  
21 codes, they create 15 data channels.

22 Okay. Going this way, as we go from TTI to  
23 TTI, transmission time interval to transmission time  
24 interval, all those channels are being used. They're  
25 being assigned to different users at different times;

1 All right. I'd like to walk through those.  
2 So let's talk about the overlay code generator.

3 What you actually, sir, are saying is that the  
4 overlay code generator is not there because it is not  
5 separate from the orthogonal code generator. You want  
6 two code generators, don't you, sir?

7 A. No.

8 Q. I'm sorry?

9 A. No.

10 Q. Well, that's -- that's the position you've  
11 taken in this case, is that you need the overlay code  
12 generator to be separate from the orthogonal code  
13 generator. They can't both operate together.

14 A. I don't agree.

15 Q. Well, sir, what you're trying to do is simply  
16 insert into the claim, additional language that doesn't  
17 appear in the claim. You're trying to insert into the  
18 claim that it is separate from the orthogonal code  
19 generator; that they have to be separate generators.

20 And the reason for that is because HSDPA uses  
21 one code generator, doesn't it? It generates one set of  
22 codes from the same generator, doesn't it, sir?

23 A. That's correct.

24 Q. Well, let's look at overlay code. Again, your  
25 construction of overlay code is that it has to be

1 separate from the orthogonal code. So you'd like to  
2 shoehorn that language into the claim, even though it  
3 doesn't appear.

4 So the overlay code has to be separate from  
5 the orthogonal code. That's your approach?

6 A. I do agree that it has to be separate. Yes.

7 Q. Okay. Let's look at the second encoder. You  
8 want the second encoder to be separate from the first  
9 encoder.

10 Again, you need to see two different encoders  
11 because HSDPA uses one encoder, and the Alcatel-Lucent  
12 base stations products use one encoder. And so, again,  
13 you want to shove into the claim language that it is a  
14 separate -- that the second encoder is separate from the  
15 first encoder, don't you, sir?

16 A. I don't agree.

17 Q. So then -- all right. Let me -- let me go to  
18 the next -- to the next point.

19 All right. Let's look at your -- the  
20 orthogonal code generator is a storage arranged to store  
21 the set of orthogonal codes.

22 And this is DDX 10-53. Do you remember  
23 talking about that with Mr. Appleby?

24 A. Yes, I do.

25 Q. And actually, during your testimony, you said

1 Q. All right. Let's talk about -- let's go back  
2 to the three --

3 MR. WEAVER: Can you pull up Claim --  
4 sorry.

5 Q. (By Mr. Weaver) Let's talk about the '327  
6 patent for a minute, and I want to walk you through what  
7 you discussed with Mr. Appleby.

8 Now, you argue that the Alcatel-Lucent  
9 products don't infringe the '327 patent because the CQI  
10 doesn't measure essentially only intercell interference.

11 Isn't that what you're arguing?

12 A. Yes.

13 Q. And it doesn't just need to be indicative of.  
14 So we can strike that language. It needs to be only  
15 measuring whether the wireless link is subject to  
16 interference solely from signals generated by other  
17 cells.

18 That's really your opinion, isn't it, sir?

19 A. It is my opinion that the analyzer has to  
20 receive parameters indicative of, and I'm simply  
21 interpreting that word indicative.

22 Q. So you interpreted the word "indicative of" to  
23 mean only measuring the interference from other cells?

24 A. That's right. It indicates the interference  
25 from other cells.

1 Q. And you went through testimony where you said  
2 there's interference that's caused by other things,  
3 correct?

4 A. That's correct.

5 Q. There's intercell interference. It might be  
6 in an elevator. You said those things could happen.

7 But, sir, if you hold all of those things  
8 constant and the interference from another cell changes,  
9 you'd agree that the CQI that's measured would change,  
10 don't you?

11 A. If everything was kept constant, including the  
12 type of phone, the sensitivity of the phone --

13 Q. Correct.

14 A. -- the only thing that changed was other cell  
15 interference, then you're correct. Yes, the CQI would  
16 change only because of the other cell interference  
17 change.

18 Q. All right. So let's look at what happens as a  
19 result of that.

20 Now, you've said that the claim requires that  
21 you selectively reduce the number of code division  
22 multiplexed channels in the channel pool from the entire  
23 cell.

24 So no one in the cell can use those channels;  
25 that's your opinion?

1 codes?

2 A. That's correct.

3 MR. WEAVER: Can I have DDX 61, please?

4 Can you pull that up?

5 Q. (By Mr. Weaver) Now, I want to go back to the  
6 '327 for a second, because you were pointing out that --  
7 that in the specification that you remove channels from  
8 the whole pool -- or from the whole cell, rather, when  
9 you have interference.

10 Do you recall that?

11 A. Yes, that's correct.

12 Q. So DDX 61 is the slide you used during your  
13 presentation.

14 A. Yes, it is.

15 Q. And "preferably" is the word that's on that  
16 chart, isn't it? That's language from the  
17 specification, isn't it, sir?

18 A. Yes, that's correct.

19 Q. So that's an embodiment. It's one of the  
20 embodiments disclosed in the patent. You would agree  
21 with me?

22 A. Yes.

23 Q. And trying to limit the claims to the  
24 embodiment shown in the patent would be improper,  
25 wouldn't it?

1 A. That would -- that's correct, yes.

2 Q. Okay.

3 MR. WEAVER: Let's go back to the slides.

4 Q. (By Mr. Weaver) Now, you also said that  
5 Alcatel-Lucent's base stations do not have what is  
6 called -- any kind of storage; is that correct?

7 A. No, I didn't say that.

8 Q. I apologize. You didn't say it didn't have  
9 any kind of storage. You said they didn't have storage  
10 as required by the -- Claim 5.

11 A. That's correct.

12 Q. Okay. Well, let's look at that software  
13 again, if we can.

14 You see down here (indicating) --

15 MR. WEAVER: And if you could blow this  
16 up, Jennifer, please, right here in the middle.

17 Oh, it's a PowerPoint. All right.

18 Q. (By Mr. Weaver) So if you focus on this  
19 section (indicating) -- do you see that?

20 A. Yes.

21 Q. And you see where I've highlighted ROM?

22 A. Yes, I do.

23 Q. And that's read-only memory, isn't it?

24 A. That's correct.

25 Q. Okay. So it is, in fact, using ROM, isn't it,

1 A. That's correct.

2 Q. Claim 5 also requires a first encoder, right?

3 A. That's correct.

4 Q. And that's the first encoder to apply the  
5 orthogonal codes from the orthogonal code generator,  
6 right?

7 A. Yes.

8 Q. And there is another element in the claim that  
9 requires a second encoder to apply overlay codes; is  
10 that right?

11 A. That's correct.

12 Q. Now, if we look at the Court's construction of  
13 overlay code, the Court construed overlay code as an  
14 additional code that subdivides an orthogonal channel,  
15 right?

16 A. That's correct.

17 Q. Did you apply that construction?

18 A. Yes.

19 Q. And you were asked a lot of questions about  
20 whether you were using the word "separate." Do you  
21 recall that?

22 A. Yes.

23 Q. Is that the construction you applied, or did  
24 you apply the construction that an overlay code must be  
25 an additional code that subdivides an orthogonal

1 channel?

2 A. The construction that I used was an additional  
3 code.

4 Q. So let's talk about what Dr. Wells is doing.

5 Dr. Wells says that the 256-chip spreading  
6 factor code that's used on control channels is both an  
7 orthogonal code and an overlay code.

8 Is that your understanding?

9 A. That's correct.

10 Q. So when he does that, what is he calling the  
11 orthogonal code in that 256 OVSF chip -- OVSF code that  
12 is used to create the control channel?

13 A. He's referring to the first 16 bits of the  
14 256-bit OVSF code as the orthogonal code.

15 Q. And what is he calling the overlay code in  
16 that 256-chip OVSF code?

17 A. He's referring to the entire 256-chip sequence  
18 as the overlay code.

19 Q. So he's not saying that the first 16 chips are  
20 the orthogonal code and the additional 240 chips are the  
21 overlay code. He's not saying that, is he?

22 A. That's not my understanding.

23 Q. And he's actually taking the first 16 chips of  
24 that code and counting them twice to get both an  
25 orthogonal code and an overlay code; is that correct?

1 A. That's correct.

2 Q. Do you think that meets the Court's  
3 construction?

4 A. No.

5 Q. Why not?

6 A. It's not an additional code. He's using the  
7 same code bits twice.

8 Q. Now, you were also asked about other opinions  
9 you might have about some of the other elements, and you  
10 certainly are an expert in this case, right?

11 A. Yes.

12 Q. And you provided opinions on the claims for  
13 all three claims of the patents we discussed today,  
14 right?

15 A. That's right.

16 Q. And you provided opinions on elements other  
17 than the ones we discussed this morning?

18 A. That's correct.

19 Q. Now, you understand that we've had a limited  
20 amount of time here. I think we have 15 hours a side.

21 A. Yes, that's my understanding.

22 Q. So we've focused on a subset of your arguments  
23 so that we could streamline the presentation.

24 Is that your understanding?

25 A. Yes.

1 the high -- that can't be used for high-speed downlink  
2 data, because it's frankly too small of a pipe, isn't  
3 it, at that point?

4 A. I think it would be more accurate to say it's  
5 simply too slow. The data rate is too slow.

6 Q. Too slow.

7 Let me go back to the overlay code.

8 Now, you agree with me that the basis of your  
9 opinions is that the overlay code must be separate from  
10 the orthogonal code.

11 A. My use of the construction was for additional.  
12 I understood additional to mean a separate sequence.

13 Q. So you agree with me, your opinions are based  
14 upon your view of the Court's construction that an  
15 additional code must be a separate code.

16 A. That's correct.

17 Q. And so if the Ladies and Gentlemen of the Jury  
18 don't agree with you, then your opinions are not  
19 appropriate in this case.

20 A. If they feel that I'm not using the  
21 construction properly, then they can -- they can take  
22 the consequences -- excuse me -- conclude from that that  
23 I'm not doing it properly.

24 Q. All right. Thank you.

25 MR. WEAVER: Your Honor, Plaintiffs move

1 Defendants' Exhibit 173.

2 THE COURT: Any objection?

3 MR. APPLEBY: No objection.

4 THE COURT: Be admitted.

5 MR. WEAVER: Thank you, Your Honor.

6 THE COURT: All right. Any further  
7 redirect?

8 MR. APPLEBY: Just briefly.

9 REDIRECT EXAMINATION

10 BY MR. APPLEBY:

11 Q. You were asked some more questions about the  
12 overlay code. Has Dr. Wells pointed to an additional  
13 code that subdivides an orthogonal channel?

14 A. No.

15 Q. And why is that?

16 A. There isn't one.

17 Q. There's only a single OVSF code used on each  
18 channel in HSDPA; isn't that right?

19 A. That's correct. One channel/one code. There  
20 are no additional codes.

21 Q. Now, just a couple of questions on CQI.

22 You were asked a question about if we hold all  
23 other things constant and we have interference from  
24 other cells, then that CQI will be indicative of other  
25 cell interference.

1                   You understand the question?

2                   THE WITNESS: Yes, Your Honor.

3                   THE COURT: Any objection from  
4 Defendants?

5                   MR. APPLEBY: No objection.

6                   THE COURT: Any objections from  
7 Plaintiffs?

8                   MR. WEAVER: No, Your Honor.

9                   THE COURT: All right. I continue to be  
10 amazed at our East Texas juries' comprehension of the  
11 technology.

12                   You may bring the jury in.

13                   (Pause in proceedings.)

14                   (Jury in.)

15                   THE COURT: Please be seated.

16                   All right, Dr. Wicker. The jury has some  
17 questions for you.

18                   The first question: Is there  
19 documentation in patent '327 that states that the first  
20 and second code generator can actually be one code  
21 generator?

22                   THE WITNESS: No. All the examples are  
23 given in terms of two separate generators.

24                   THE COURT: Based on that, does the HSDPA  
25 standard specify being separate generators or both

1 Q. Now, when you mentioned that -- as part of  
2 your investigation, you reviewed the HSDPA standards,  
3 correct?

4 A. That's correct.

5 Q. Did you see any reference to overlay codes in  
6 the HSDPA standard?

7 A. No, I did not.

8 Q. Well, did you also -- you understand the Court  
9 has construed the various terms in the patents, right?

10 A. That is correct.

11 Q. What is the Court's construction for overlay  
12 code?

13 A. It is an additional code that subdivides an  
14 orthogonal channel.

15 Q. Did you use that claim construction in  
16 analyzing whether the Ericsson base stations or Sony  
17 Mobile products infringe these patents?

18 A. Yes, I did.

19 Q. So you mentioned product documentation. Did  
20 you look at any textbooks or other resources to assist  
21 in your investigation?

22 A. Yes. I looked at textbooks, articles, along  
23 with the standards.

24 Q. Now, I want to step back to another slide that  
25 the jury has seen a couple of times already. Can you

1 Q. And when you talk about a length of 256, what  
2 are you referring to?

3 A. You're referring to the number of bits that's  
4 in the code. If you count the number of bits, you would  
5 add up to 256.

6 Q. And now are bits the same as codes?

7 A. No, they are not.

8 Q. How are -- how many -- how many possible  
9 values are there for a bit?

10 A. There's only two.

11 Q. There's only two?

12 A. For a bit, yes.

13 Q. Okay. What are those possible values under  
14 the HSDPA standard?

15 A. They would be 1 or negative 1.

16 Q. Is there any limitation on the number of codes  
17 that are possible?

18 A. No, there are not. They could be up to  
19 uncountably long codes, based on that recursion function  
20 we saw earlier.

21 Q. Now, how does the HSDPA standard define the  
22 codes that are used?

23 A. It defines them in these standards  
24 documentation.

25 Q. And when it says that the OVSF codes are

1 channelization codes, what does that mean?

2 A. That means that you use these OVSF codes -- a  
3 single OVSF code to create a single channel.

4 Q. Just a single code?

5 A. Yes.

6 Q. What do the -- what do the patents require?

7 A. The patents require an orthogonal code and an  
8 overlay code that's an additional code that subdivides  
9 an orthogonal channel.

10 Q. And what are you showing in this slide? This  
11 is -- I think is a figure that we just saw when  
12 Dr. Wicker was up here.

13 A. Again, we're showing the OVSF code tree here  
14 from a Qualcomm document.

15 Q. When was the first time you saw this document?

16 A. The first time I saw it was when I was looking  
17 at the preliminary infringement contentions from the  
18 Airspan patents.

19 Q. And when you say the preliminary infringement  
20 contentions, you're referring to a document that Wi-LAN  
21 served as part of this lawsuit?

22 A. That is correct.

23 Q. Okay. And is it your understanding that those  
24 infringement contentions where Wi-LAN first sets forth  
25 its allegations of infringement?

1 A. Yes, it is.

2 Q. You've highlighted some things in this -- on  
3 this figure. What -- what did you high -- what did you  
4 highlight?

5 A. Well, once again, this figure shows that when  
6 you assign a code to a particular channel, you block  
7 other assignments.

8 So the X shows what's being blocked in the  
9 OVSF code tree.

10 Q. And I think there was some discussion about  
11 this position right here (indicating).

12 Do you see that?

13 A. Yes.

14 Q. Is that a channel?

15 A. No.

16 Q. What is that?

17 A. That's a code word in the code tree.

18 Q. Can there be a channel created at that  
19 particular location under the HSDPA standard?

20 A. No.

21 Q. And why is that significant in light of  
22 whether the overlay patent -- how is that significant  
23 with respect to what the overlay code patents require?

24 A. As we've heard from the Court's claim  
25 construction, the overlay code is an additional code to

1     subdivide a channel.

2             Wi-LAN has been pointing to these control  
3 channels here in the bottom right; but as you can see,  
4 as soon as you assign a control channel lower in the  
5 tree, everything else above it is blocked. You cannot  
6 use that for assignment.

7             Q.     And so when you say you can't use it for  
8 assignment, are you saying there's not a channel that  
9 can be subdivided?

10            A.     There's not a channel that can be subdivided  
11 in an OVSF tree.

12            Q.     And is that something that the Court's claim  
13 construction requires?

14            A.     Yes, it is.

15            Q.     And how is that?

16            A.     Because we have a Markman order stating that  
17 the overlay code is an additional code to subdivide an  
18 orthogonal channel.

19            Q.     Let's take a look at the claim language.

20                    Based on your investigation, did you reach  
21 some conclusions with respect to the Ericsson base  
22 stations?

23            A.     Yes, I did.

24            Q.     And what did you determine?

25            A.     That the Ericsson base stations accused do not

1 infringe the overlay code patents.

2 Q. And why is that?

3 A. Because, first of all, there's no overlay  
4 code.

5 Q. Anything else?

6 A. There's also -- because there's no overlay  
7 code, there's no overlay code generator.

8 Q. Anything else?

9 A. And since there's no overlay code, you don't  
10 have a second encoder for applying the overlay code.

11 Q. Now, you heard Dr. Wicker talking about a  
12 couple of other elements of Claim 5 of the '326 patent.

13 A. Yes, I did.

14 Q. And specifically, he was pointing to the  
15 selectively operable language.

16 A. Yes, he was.

17 Q. Do you agree with Dr. Wicker's opinion  
18 regarding the selectively operable language?

19 A. Yes, I do.

20 Q. How about the opinions that Dr. Wicker gave  
21 with respect to the storage element?

22 A. I agree with those also.

23 Q. Now, are there other claims asserted against  
24 Ericsson base stations from the '326 patent?

25 A. Yes, there are. They are Claim 2 and Claim 9.

1 Ericsson base stations can infringe that claim?

2 A. Again, because there's no overlay code;  
3 there's no overlay code generator; there's no second  
4 encoder, the Ericsson base stations do not infringe  
5 Claim 11 of the '819 patent.

6 Q. Let's take a look at the '327 patent, which  
7 you referred to as the other cell interference patent.

8 What claims are asserted against Ericsson?

9 A. Against Ericsson, it's Claims 11 and 12.

10 Q. And are those claims the same as what  
11 Dr. Wicker addressed earlier?

12 A. Yes, they are.

13 Q. If we take a look at the limitations of the  
14 claims, what do they require?

15 A. They require a number of things. I have  
16 chosen to highlight just a portion of the claim right  
17 here, which is the section talking about the analyzers  
18 for receiving parameters pertaining to a wireless link  
19 within the cell, indicative of whether that wireless  
20 link is subject to interference from signals generated  
21 by another cell.

22 And also here in the channel controller, the  
23 limitation regarding selectively reduce the number of  
24 code division multiplexed channels in the channel pool  
25 in order to reduce the effective interference from other

1 cells.

2 Q. And do you understand the allegations that  
3 Wi-LAN is making with respect to Claim 11 of the '327  
4 patent?

5 A. Yes, I do. They are accusing the CQI.

6 Q. And this is a slide that's similar to what  
7 we've seen before. What factors can influence CQI?

8 A. It can be influenced by any number of factors  
9 because --

10 Q. Can you give us some examples?

11 A. As you've already heard: Obstructions,  
12 interference within the cell, which is called intracell  
13 interference; or interference from another cell, which  
14 is called intercell interference; quality of the phone.

15 Actually, the quality of the phone's receiver  
16 is most important; how the control algorithm is working  
17 in a TDMA system; and also function and absolute  
18 distance you are from the cell phone.

19 Q. And did you review any materials to determine  
20 how the CQI is -- is generated?

21 A. Yes, I did.

22 Q. Okay. And what did you look at?

23 A. I looked at textbooks and Ericsson  
24 documentation.

25 Q. When you say textbooks, can you give an

1 example of one of the textbooks you've looked at?

2 A. Sure. This textbook here called 3G Evolution  
3 was written by four Ericsson engineers, and it discusses  
4 CQI.

5 Q. I think that book has been designated DX 283.  
6 How did you -- did you rely on that book in  
7 doing your investigation?

8 A. Yes.

9 Q. Okay. And what does the 3G Evolution book say  
10 about the calculation of the channel quality indicator?

11 A. It says that the CQI -- generally, the CQI  
12 represents the instantaneous channel conditions. It's  
13 what the cell phone is receiving at this particular  
14 time.

15 Q. Does it explicitly state the channel quality?

16 A. Well, it goes on to say the CQI is not an  
17 explicit indication of channel quality. But as we heard  
18 before, it's actually a request from the cell phone to  
19 the cell phone tower saying give me this much data; I  
20 believe I can handle this much data accurately.

21 So it just continually requests data over and  
22 over again.

23 Q. Does the CQI provide any information to the  
24 base station as to why the CQI has the particular value  
25 it does?

1 A. No, it does not. It's just a number from 0 to  
2 30.

3 Q. Does it indicate whether a particular wireless  
4 link is experiencing intercell interference?

5 A. No, it does not.

6 Q. Does it indicate whether a particular wireless  
7 link is subject to an obstruction?

8 A. No, it does not.

9 Q. Does it indicate whether a particular wireless  
10 link is subject to interference from within the cell?

11 A. No, it does not.

12 Q. Does it indicate anything about the reasons  
13 why it has the particular value it has?

14 A. No, it does not.

15 Q. Now, can the CQI be affected by the design  
16 or -- of the mobile phone itself?

17 A. Yes. As I stated earlier, how advanced your  
18 receivers are, can affect your CQI value.

19 Q. Did you look at any Ericsson documentation  
20 that actually explains that?

21 A. Sure.

22 So this is the HSDPA User Plane document from  
23 Ericsson. And here in Section 8.1, they're talking  
24 about the calculation of channel quality estimate.

25 The important thing to see here is that the

1 CQI, first of all, is a recommended amount of data that  
2 you want to send down, such that the UE thinks he's  
3 going to receive the data with only a 10-percent  
4 probability of loss.

5 The base station, which is what we're talking  
6 about here, perceives the UE, which is the mobile, as a  
7 black box. And it's kind of an engineering term that  
8 means we're not going to go look in and figure out  
9 what's going on there.

10 A black box is something you don't -- kind of  
11 imagine it as a teenager's bedroom. You don't want to  
12 know what's going on in there. All you want to do is  
13 get the request out for the data, and you're going to  
14 operate on that.

15 And they go on to state that even a good  
16 receiver can report higher CQI than a bad receiver, even  
17 if you're in the same channel conditions.

18 Q. So that would mean if two phones were  
19 experiencing the exact same amount of intercell  
20 interference, they could report different CQIs?

21 A. Yes, they could.

22 Q. And so in that way, does the CQI indicate  
23 whether either of those phones is experiencing  
24 interference from other cells?

25 A. No, it does not.

1 Q. Now, what conclusions did you reach regarding  
2 the '327 patent?

3 A. Okay. For at least that reason, there is no  
4 receiving parameters indicative of whether the wireless  
5 link is subject to interference from other cells.

6 There's also no selectively reducing the  
7 number of code division channels in the pool in order to  
8 reduce the effect of interference from other cells.

9 Q. Did you hear questioning about whether the  
10 channel pool related to all of the channels that were  
11 available for the establishment of wireless links?

12 A. Yes, I did.

13 Q. And what is your opinion with regard to that?

14 A. My opinion is that channel pool applies to the  
15 central terminal. The channel pool is for the entire  
16 central terminal and not for a particular user.

17 Q. And is that how it's described in the '327  
18 patent?

19 A. Yes, it is.

20 Q. And with respect to the '211 patent that's  
21 asserted against Sony Mobile, can you describe the  
22 investigation that you performed?

23 A. Sure. So for Sony Mobile, I reviewed the Sony  
24 Mobile documentation and the source code from Qualcomm  
25 associated with that.

1 Q. If we take a look at the '211, Claim 5, it  
2 appears similar to the Claim 5 of the '326 patent we  
3 were discussing earlier, correct?

4 A. Correct.

5 Q. But are there any differences?

6 A. There's a subtle difference. As you all heard  
7 earlier, we're now talking about the receiver side, so  
8 we have the base station sending us a signal, the  
9 receiver gets the signal in its antenna. So we now use  
10 a decoder instead of an encoder.

11 Q. So what does the Claim 5 of the '211 patent  
12 require?

13 A. So I've highlight -- highlighted some of the  
14 requirements here. In the top part, we're talking  
15 about, again, those orthogonal codes and orthogonal code  
16 generator, and now we have a first decoder.

17 Later on in the claim, we have the overlay  
18 portion where the claim discusses an overlay code, an  
19 overlay code generator, and a second decoder.

20 Q. Now, does the -- does the same construction of  
21 overlay code apply to the '211 patent that it did for  
22 the patents asserted against the base station  
23 manufacturers?

24 A. Yes, it does.

25 Q. And what is that construction?

1           A.    That the overlay code is an additional code  
2   that subdivides an orthogonal channel.

3           Q.    Now, the requirements for the handset side, in  
4   other words, the '211 patent side, are they the same as  
5   for the transmitter side?

6           A.    The requirements for what?

7           Q.    For the codes.

8           A.    For the codes. For the codes, yes, they're  
9   the same codes that the transmitter sends, because it's  
10  the only way the other side can understand. Something  
11  that's been encoded, you use the same key to decode it.  
12  So we're still talking about these OVSF codes.

13          Q.    Now, do the Sony Mobile phones have an overlay  
14  code?

15          A.    No, they do not.

16          Q.    Well, what do they have?

17          A.    They have a single OVSF code per channel as  
18  required by the standards.

19          Q.    And is that because, like you were saying, you  
20  have to use the same codes on both sides?

21          A.    Right. In order to sync up and hear what the  
22  person from the other side is saying from the cell phone  
23  tower, you need to have the same code on both sides.

24          Q.    And how do you know which code to use?

25          A.    It's been assigned to a channel.

1 both you and Dr. Wicker on a number of points. And with  
2 putting the '211 patent to the side, the one that  
3 relates to the mobile phones, is it fair to say that you  
4 and Dr. Wicker essentially have the same opinions with  
5 respect to the reasons why the Ericsson and  
6 Alcatel-Lucent base stations do not infringe the base  
7 station patents?

8 A. I don't know all of his opinions. The only  
9 ones I know are the ones that he presented here today.

10 Q. And you agree with those, right?

11 A. I'm sorry?

12 Q. And you agree with those?

13 A. Yes, I agree with those.

14 Q. And those are the ones you went through in  
15 your testimony, right?

16 A. That is correct.

17 Q. All right. Now, so you agree with Dr. Wicker  
18 that in the definition of overlay code, when it says  
19 additional, that the Court's claim construction means  
20 separate, correct?

21 A. I agree with Dr. Wicker that the Court's claim  
22 construction, when you apply ordinary meaning to it, it  
23 requires a separate code.

24 Q. All right. And, again, like Dr. Wicker said  
25 when he was on the stand, if the jury disagrees with

1 your reading of that term, then the jury's free to  
2 disregard your opinions, correct?

3 A. The opinions regarding the overlay code, yes.

4 Q. Now, Dr. Wicker also, I believe, said this  
5 morning that you could use the same hardware and  
6 software to provide a first encoder and a second encoder  
7 for an orthogonal code generator and overlay code  
8 generator.

9 Do you remember that testimony?

10 A. I think you're confused. I don't understand  
11 your question.

12 Q. All right. Do you remember the testimony  
13 about the first encoder and the second encoder?

14 A. Yes, I do.

15 Q. All right. You remember the testimony about  
16 the orthogonal code generator and the overlay code  
17 generator, right?

18 A. Yes, I do.

19 Q. All right. Now, there was testimony about  
20 whether those have to be separate; in other words,  
21 separate hardware, separate software for the first  
22 encoder and the second encoder.

23 A. Okay. So we're talking about the first  
24 encoder and second encoder?

25 Q. Correct.

CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of our abilities.

/s/ Shea Sloan  
SHEA SLOAN, CSR  
Official Court Reporter  
State of Texas No.: 3081  
Expiration Date: 12/31/14

/s/ Judith Werlinger  
JUDITH WERLINGER, CSR  
Deputy Official Court Reporter  
State of Texas No.: 731  
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