

# Exhibit B

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

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

7 \*\*\*\*\*

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

14 TRANSCRIPT OF TRIAL  
15 MORNING SESSION  
16 BEFORE THE HONORABLE LEONARD DAVIS,  
17 UNITED STATES CHIEF DISTRICT JUDGE, AND A JURY

18  
19  
20 COURT REPORTERS: MS. SHEA SLOAN  
21 MS. JUDY WERLINGER  
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23  
24 Proceedings taken by Machine Stenotype; transcript was  
25 produced by a Computer.

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 mathematics were known for a long time.

2           For example, I summarized them in my first  
3 book. Klein Gilhousen actually patented the OVSF tree,  
4 the actual structure that's now being used in HSDPA. He  
5 did that in 1993, several years before the Airspan  
6 patents were applied for.

7           Q.    And although OVSF codes were known, did the  
8 Airspan inventors describe them in their patents?

9           A.    No.

10          Q.    What did they describe?

11          A.    They described two completely different sets  
12 of sequences. They had the set of orthogonal sequences  
13 that I showed you in one table, and then they had  
14 overlay codes in a different table.

15                They showed two different sets of codes, one  
16 for orthogonal channels, one for subdividing those  
17 orthogonal channels.

18          Q.    So, in summary, do you believe

19 HSDPA-compatible base stations use overlay codes?

20          A.    No, they don't.

21          Q.    Do you believe that HSDPA base stations have  
22 an overlay code generator?

23          A.    No, they don't.

24          Q.    And do you believe that HSDPA-compatible base  
25 stations have the second encoder required by the claims

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 but I'd like you to note first this switch, 109. That's  
2 the way we draw switches in such block diagrams. It's  
3 basically creating a connection -- let me do that a  
4 little better -- it's either creating a connection with  
5 this line or with this line (indicating).

6           So the switch is taking the TDM encoder in and  
7 out of the circuit. What that switch allows us to do is  
8 to use the TDM encoder, in which case the overlay code  
9 generator won't be doing anything, all right?

10           Alternatively, we can switch so that we're not  
11 connected to the TDM encoder, in which case the overlay  
12 code generator will be in use. That switch allows us to  
13 selectively operate either in TDM mode or overlay code  
14 mode, selectively enable the first solution or the  
15 second solution.

16           Q. And do you have an animation that illustrates  
17 how this might work?

18           A. Yes.

19           Okay. What this shows is we've got two  
20 possible solutions: Add time division multiplexing or  
21 add overlay codes. So now I want to show you how this  
22 might work.

23           We can bring in the TDM encoder, in which case  
24 the second encoder and overlay code generator are off.

25           So right now, we're using the TD -- TDM

1 Alcatel-Lucent's base stations in particular?

2 A. No. No. If you go through the documents and  
3 you read what the engineers said about the base  
4 stations, you will not find an overlay code generator.

5 You will not find overlay codes. You won't  
6 find the second encoder, and you won't find the  
7 selective operability.

8 Q. So you had anticipated my next question, which  
9 was about storage.

10 MR. APPLEBY: So let's go to Slide 51.

11 Q. (By Mr. Appleby) And I want to talk about an  
12 additional requirement that's in Claim 5.

13 Could you -- could you tell us what we're  
14 looking at here?

15 A. Okay. This is a portion of the last of the  
16 claim elements for Claim 5. And what this says is that  
17 the orthogonal code generator -- now remember,  
18 there's -- the claim requires two different kinds of  
19 code generators.

20 We've got overlay code generators. That's  
21 here. This is referring back up here to the orthogonal  
22 code generator, which is there (indicating).

23 So what the claim calls for is the orthogonal  
24 code generator being a storage arranged to store the set  
25 of orthogonal codes. So what it's saying is that the

1 orthogonal codes used to create those original channels  
2 are going to be stored; in other words, they'll be in  
3 memory, so when we need them we will just read them out  
4 of memory.

5 Q. Okay. Restoring a set of orthogonal codes?

6 A. That's right. It says the set, so that would  
7 be all of them.

8 Q. And do the patents discuss storage of the set  
9 of orthogonal codes?

10 A. Yes, they do.

11 Q. So let's look at the patent, and this is an  
12 excerpt from the '326 patent.

13 Could you -- could you explain what we're  
14 looking at?

15 A. Okay. This is the '326 patent, and it's on  
16 Column 3, Lines 30 through 36. It's talking about  
17 different ways you can obtain these orthogonal code  
18 sequences. So what it's saying is the orthogonal code  
19 generator may be arranged to generate orthogonal codes  
20 on-the-fly.

21 In other words, whenever you need them, you  
22 generate them using predetermined algorithms. We have  
23 actually seen some of those algorithms today.

24 However, the orthogonal code generator may be  
25 provided as a storage arranged to store the set of

1 orthogonal codes. So it's saying there are two  
2 different approaches. You could do it on-the-fly, or,  
3 alternatively, you can have a storage arranged to store  
4 the set of orthogonal codes.

5 Q. So it's one or the other. You either generate  
6 the codes on-the-fly, or you can store the entire set of  
7 orthogonal codes?

8 A. Yes. I think it's -- you know, it's really  
9 clear. It's basically saying here is one technique  
10 on-the-fly. Alternatively, there's another thing you  
11 can do, which is storage arranged to store, et cetera.

12 Q. So if we turn back to Claim 5, which of those  
13 two approaches is the claim directed to?

14 A. Well, it's the second approach. In fact, you  
15 can see the language is exactly the same: Storage  
16 arranged to store the set of orthogonal codes.

17 If you go back to the previous slide -- if we  
18 can go back to the previous slide -- it stays storage  
19 arranged to store the set of orthogonal codes. It's the  
20 exact same words.

21 Q. So now I'd like to talk about what  
22 Alcatel-Lucent's base stations actually do.

23 And do you recall that Dr. Wells testified  
24 about that during his testimony?

25 A. Yes.

1 Q. I'd like to show you a question and answer  
2 from Dr. Wells, if I could.

3 So this is testimony from a couple of days  
4 ago, and Dr. Wells was asked: So now let's talk very  
5 briefly about where those codes are or where they sort  
6 of physically reside in the products. And it's correct,  
7 isn't it, that the Defendants' products basically have  
8 an on-the-fly system where they generate the codes as  
9 they need them? Right?

10 Answer: Yes, they do.

11 Do you recall Dr. Wells giving that testimony?

12 A. Yes.

13 Q. And what is he telling us?

14 A. He's telling us that the accused products do  
15 the first solution, the on-the-fly generation of the  
16 codes, as opposed to the storage.

17 Q. Now, have you looked at Alcatel-Lucent's base  
18 stations to see if they do the storage element of Claim  
19 5?

20 A. Yes, I have.

21 Q. And do you agree with Dr. Wells that  
22 Alcatel-Lucent's base stations generate on-the-fly?

23 A. Yes, he's correct about that.

24 Q. And what did you do to confirm this point?

25 A. Well, I went to the code. There's a kind of

1 off channels?

2 A. Yes.

3 Q. And we have some excerpts from the '327 patent  
4 on the next slide.

5 Could you explain what they're telling us?

6 A. Okay. If you'll look at this first excerpt,  
7 it's from Column 2, Line 16 through 20. It says: Since  
8 taking a code division multiplexed channel out of  
9 commission, enhances the interference rejection.

10 So it's saying once we see that a particular  
11 channel is affected by the interference, we're going to  
12 take it out of commission. It's not going to be  
13 available to anybody. It's going to be locked out.

14 We see similar language over here on the  
15 right, that a code -- this is from the '327, Column 3,  
16 Lines 4 through 11: That a code division multiplexed  
17 channel should be removed from use. So it's as if we've  
18 got this big pool of channels, and we've identified some  
19 that are particularly affected by interference. We're  
20 going to take them out of the pool. No one can use  
21 them.

22 Q. Now, do you recall Dr. Wells testifying that  
23 this patent described simply removing a channel from use  
24 from one subscriber terminal and then giving it to  
25 another subscriber terminal?

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 words -- an analyzer for receiving parameters indicative  
2 of whether that wireless link is subject to interference  
3 from signals generated by other cells.

4           So this is what determines the other cell  
5 interference.

6           We then have a channel controller right here  
7 (indicating) that selectively reduces the number of code  
8 division multiplexed channels in the channel pool --  
9 that complete set of channels that's available to  
10 everybody -- we're going to reduce the number of  
11 channels in the pool in order to reduce the effect of  
12 interference from the other cells.

13         Q.    Now I'd like to show you a document -- I think  
14 you have it in your binder.  Exhibit 2 -- Defendants'  
15 Exhibit 203?

16                     MR. APPLEBY:  We can bring it up too.

17         A.    Okay.

18         Q.    (By Mr. Appleby) And what is Defendants'  
19 Exhibit 203?

20         A.    Okay.  Defendants' Exhibit 203 is the file  
21 history.  The file history -- I think I mentioned this  
22 yesterday -- is the conversation -- it's kind of thick.  
23 It's a conversation between the inventor and the Patent  
24 Office.

25                     And as I noted yesterday, it's helpful because



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 but at no point do we take a channel and say: We're  
2 going to take this out of the -- of the pool. No one  
3 can use it.

4 In this example, all the channels are being  
5 used all the time.

6 Q. So turning back to Claim 11, have you formed  
7 an opinion about whether the last element is present in  
8 HSDP -- HSDPA-compatible base station itself?

9 A. Yes.

10 Q. And what is that opinion?

11 A. It's not there.

12 Q. And have you formed an opinion about whether  
13 Claim 11 is infringed by HSDPA-compatible base stations?

14 A. Yes.

15 Q. And what is that opinion?

16 A. Well, once again, all the elements have to be  
17 present, and I've shown you that these two are not  
18 present. Since they're not present, the claim's not  
19 infringed.

20 Q. And your opinion is based on the HSDPA  
21 standard; is that correct?

22 A. That's correct.

23 Q. So regardless of who manufactures the  
24 HSDPA-compatible base station, be it Alcatel-Lucent or  
25 Ericsson, is it your view that that base station would

1 not the reason that your clients -- or your opinion that  
2 your clients don't infringe, correct?

3 A. That's correct.

4 Q. All right. Well, let's look at DDX 10-41 for  
5 just a minute.

6 You believe -- I believe you pointed to this  
7 (indicating) as the encoder; is that correct?

8 A. As the second encoder.

9 Q. As the second encoder.

10 A. That's correct.

11 Q. And this was the first encoder (indicating)?

12 A. Yes, sir, that's right.

13 Q. All right.

14 MR. WEAVER: Let me have Slide 23.

15 Q. (By Mr. Weaver) All right. This is DDX 10-37.

16 And do you remember this from your  
17 conversations with Mr. Appleby this morning?

18 A. Yes.

19 Q. Now, I want to focus down here on overlay  
20 code.

21 You said that you were applying the Court's  
22 claim construction in your analysis of these claims,  
23 which is that the overlay code is an additional code  
24 that subdivides an orthogonal channel, correct?

25 A. That's correct.

1 Q. Well, in fact, sir, you applied a different  
2 construction. You applied -- you've changed the Court's  
3 construction, and you said that an overlay code is an  
4 additional code that is separate from the orthogonal  
5 code that subdivides an orthogonal channel, didn't you,  
6 sir?

7 A. No.

8 Q. Well, in fact, you did. You said that the  
9 claim requires that it's got to be separate from the  
10 orthogonal code. You said that they could not be part  
11 of the same -- that one code could encompass both of  
12 them, didn't you, sir?

13 A. That's correct.

14 Q. Okay. So you said they had to be separate.

15 A. I am simply disagreeing with regard to the  
16 claim construction.

17 Q. All right. Well, I want to go to your -- it  
18 was DDX 10-50.

19 And this is where, for Claim 5, you walked  
20 through the bases for your opinions. Do you recall that  
21 from this morning?

22 A. Yes, I do.

23 Q. And you said that there's no overlay code  
24 generator, no overlay code, no second encoder, and no  
25 selectively operable second encoder.

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 that the orthogonal code generator is a storage arranged  
2 to store all the orthogonal codes at the same time,  
3 didn't you?

4 A. Yes.

5 Q. That is your testimony?

6 A. Yes, it is.

7 Q. So you'd like to shoehorn that language into  
8 the -- into the claim itself, don't you, sir?

9 A. No.

10 Q. Well, your testimony was --

11 MR. WEAVER: And can we pull up -- can we  
12 pull up the slide with his testimony in it, please?

13 Q. (By Mr. Weaver) All right. And this was from  
14 yesterday, sir.

15 You said that: At no point did I see any  
16 memory that would store all the orthogonal codes at the  
17 same time.

18 A. That's correct.

19 Q. So you do want the "at the same time language"  
20 in the claim, don't you, sir?

21 A. I don't agree that we're adding it. I think  
22 that's what the language means.

23 Q. I understand that's your opinion, sir. But  
24 that language is being added under your opinion.

25 A. (No response.)



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           A.    Yes, I did.  In one of the patents, that is  
2 true.

3           Q.    In the '326 patent, that's what it talks  
4 about --

5           A.    That's correct.

6           Q.    -- doesn't it?

7                    In the '819 patent, it talks about it that way  
8 too, doesn't it, sir?

9           A.    Yes, it does.

10          Q.    And in the '211 patent, it talks about it that  
11 way, doesn't it, sir?

12          A.    Yes.

13          Q.    So it wasn't just one of the patents; it's all  
14 three of the patents that deal with the overlay code  
15 generation.

16          A.    Well, they certainly all three deal with  
17 overlay codes, that's correct.

18          Q.    So is your opinion that the inability to  
19 modify a channel, such as Channels RW 14 or RW 15 from  
20 Figure 15A does not fall within the scope of the  
21 selectively operable limitation we've been talking  
22 about?

23          A.    No.

24          Q.    It's not your opinion that that's the case.

25          A.    No.  It wouldn't be just one channel; it would

1 be the entire system.

2 Q. I'm sorry?

3 A. In other words, the fact that one channel  
4 can't be modified doesn't mean that another channel can  
5 be modified. The selective operability in the claim  
6 language, as opposed to this figure, says that we have a  
7 choice. We have a choice between the first solution and  
8 the second solution.

9 So we get one or the other, according to the  
10 claim language.

11 Q. But here -- I mean, you're not suggesting that  
12 these first 15 channels are not subject to TDM  
13 techniques?

14 A. They can be shared in different ways among  
15 different users. I would not call them TDM techniques  
16 as construed by the Court.

17 Q. Sir, are these time division multiplex  
18 channels, 0 through 15?

19 A. They may be used by different users at  
20 different times, but they don't cycle in a frame  
21 structure.

22 Q. So your position is, even though the lawyers  
23 have talked about this during opening and throughout  
24 this case that these channels are subject to time  
25 division multiplexing, that they aren't subject to time

1 division multiplexing?

2           Is that your position?

3           A.    I'm sorry.  You'll have to repeat the  
4 question.  You gave me both sides.

5           Q.    Is it your position that these channels are  
6 not subject -- channels 0 through 14 are not subject to  
7 time division multiplexing?

8           A.    They are not time division multiplexed as  
9 construed by the Court.

10          Q.    Sir, you've read the Court's claim  
11 construction opinion in this case.

12          A.    Yes, I have.

13          Q.    Okay.  And with respect to overlay codes,  
14 you'd agree with me that you can apply the overlay code  
15 before you apply the orthogonal code, correct?

16          A.    That's correct.

17          Q.    And you could apply the overlay code after you  
18 apply the orthogonal code, correct?

19          A.    That's correct.

20          Q.    Doesn't matter which order you do it?

21          A.    That's correct.

22          Q.    And, in fact, you can apply it simultaneously,  
23 can't you?

24          A.    That's correct.

25          Q.    And -- and that's the -- the construction

1           A.    I believe that's correct.  Yes.

2           Q.    And we can go all the way down to 256 down to  
3 these channels, all right, and the first 16 bits are  
4 going to be those 16 bits?

5           A.    That's correct.

6           Q.    So 256 bits long, the first 16 bits are going  
7 to be the 16 bits for this spreading factor 16 code?

8           A.    The first 16 bits, the length 256 sequence,  
9 the 128 that you indicated in the 64 will be the same  
10 bits that comprise the spreading factor of 16.

11          Q.    Okay.

12          A.    The spreading factors are different, even  
13 though they have different time sequences, et cetera.  I  
14 just want to be sure that's clear.

15          Q.    Yes.  The spreading factors will be different.  
16 That's the whole point, right?

17          A.    Yes, exactly.

18          Q.    You want to spread that data out.  You're  
19 getting a smaller portion of the pipe, so less data can  
20 go through, which is why we use that for control  
21 channels, isn't it?

22          A.    Exactly.  We want the control channels to be  
23 more reliable, so we trade off data-rate for spreading  
24 factor.

25          Q.    Exactly.  What we don't want is to be sending

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           Also asserted against Ericsson is the '327,  
2 which is that other cell interference patent.

3           Against Sony Mobile, there's just one patent  
4 asserted against them, and that's the '211, which we've  
5 also looped into being an overlay code patent.

6           Q.    Could you describe for the jury what  
7 investigation you did to determine whether there was any  
8 infringement by the Ericsson or Sony Mobile products?

9           A.    Sure.  The first thing I did is, I got the  
10 patents, got the file histories for the patents, read  
11 and studied those.  Then I proceeded to the court  
12 documents, the depositions, the pleadings, the expert  
13 reports, and especially the claim construction order.

14           I then went to get technical documents to  
15 further my opinions and support my opinions, such as  
16 standards documents, published articles.

17           And then finally, I looked at product  
18 information, such as product documentation from Sony and  
19 Mobile -- Sony Mobile and Ericsson source code and  
20 schematics.

21           Q.    And approximately how many hours have you  
22 spent doing this investigation?

23           A.    Over a hundred hours.

24           Q.    And over what period of time?

25           A.    Since April last year.

1 Q. April of 2012?

2 A. Yes.

3 Q. Now, I'm sure the jury doesn't -- wouldn't  
4 appreciate going all the way through all of the details  
5 of your analysis, but could you summarize the  
6 conclusions that you've reached?

7 A. Sure.

8 My conclusions are that the Ericsson base  
9 stations do not infringe the Airspan patents; and we're  
10 talking about the '326 patent here, the '819, and the  
11 '327.

12 It's also my opinion that the Sony Mobile  
13 phones do not infringe the Airspan patent, the '211  
14 patent.

15 Q. And is it your understanding that the Ericsson  
16 base station products and the Sony Mobile products  
17 comply with the HSDPA standard?

18 A. Yes, it is.

19 Q. Is there any dispute about that in this case?

20 A. I don't believe so.

21 Q. Now, were you present in the courtroom for all  
22 of Dr. Wicker's testimony?

23 A. Yes, I was.

24 Q. And based on the independent investigation  
25 that you performed, do you disagree with any of the

1 opinions that Dr. Wicker reached regarding

2 HSDPA-compatible products?

3 A. No, I do not.

4 Q. And are -- in fact, are Dr. Wicker's opinions

5 consistent with those that you made as part of your

6 independent investigation?

7 A. Yes, they are.

8 Q. And, in fact, have you ever even discussed

9 your opinions with Dr. Wicker?

10 A. Never.

11 Q. And when was the first time you met

12 Dr. Wicker?

13 A. Here in the courtroom.

14 Q. Before we go further, is it possible for

15 Ericsson or Sony Mobile to comply with the HSDPA

16 standard and infringe the HS -- or the Airspan patents?

17 A. Yes. I'm sorry. I misunderstood your

18 question.

19 Q. Okay. Can Ericsson and Sony Mobile comply

20 with the HSDPA standard and infringe the Airspan

21 patents?

22 A. No, they cannot.

23 Q. And why -- why is that?

24 A. Because the HSDPA standards describe a system

25 that is fundamentally different than what's claimed in

1 the Airspan patents.

2 Q. Well, with respect to the Ericsson base  
3 stations, can you explain how the HSDPA standard is  
4 different from the asserted claims of the Airspan  
5 patents?

6 A. Sure.

7 We've already heard this before, but briefly,  
8 for the overlay code patents on the Ericsson base  
9 station -- we're talking about the '326 and '819 -- I  
10 could find no overlay codes, no overlay code generator,  
11 and no second encoder for applying the overlay code in  
12 the HSDPA standards.

13 And, additionally, for the '327 patent, I  
14 could find no receiving parameters indicative of  
15 interference from other cells or removing channels based  
16 on interference from other cells.

17 Q. Do Ericsson's base stations use overlay codes?

18 A. No, they do not.

19 Q. And did you determine that -- how did you  
20 determine that?

21 A. By looking at the documentation, looking at  
22 the source code, looking at the schematics.

23 Q. And do the Ericsson base stations have the  
24 ability to analyze parameters indicative of interference  
25 generated by signals from other cells?

1           A.    No, they do not.

2           Q.    Now, did you -- could you summarize your  
3 opinions for the Sony Mobile phones?

4           A.    Sure.

5                   For the Sony Mobile phones, it's a very  
6 similar slide.

7                   For the '211 patent, I could find no overlay  
8 codes, no overlay code generators, and no second decoder  
9 for applying the overlay codes in the Sony Mobile  
10 products.

11          Q.    And, again, what type -- what investigation  
12 did you do with respect to the Sony Mobile phones?

13          A.    Product documentation, reviewing the  
14 standards, looking at schematics and source code.

15          Q.    Well, does Sony -- does Sony Mobile  
16 manufacture the internal components of its phones that  
17 actually implement the HSDPA standard?

18          A.    No, they do not.

19          Q.    Where do they get those components?

20          A.    They get them primarily from Qualcomm and some  
21 others from ST Ericsson.

22          Q.    And are those computer chips that they  
23 purchase?

24          A.    Yes. They can purchase a small chip that does  
25 that functionality.

1           Q.    Let's first take a look at the patents that  
2 are asserted against the Ericsson base stations.

3                    Now, can you characterize the -- the claims of  
4 the overlay code patents that you mentioned earlier?

5           A.    Sure.

6                    So we've all seen this before.  The overlay  
7 code patents are the '326 patent, the '819 patent, as  
8 far as the transmitter, and the asserted claims in those  
9 are 2, 5, and 9 for the '326 patent and Claim 11 for the  
10 '819 patent.

11          Q.    Now, this is a slide similar to what we've  
12 seen before, correct?  But could you briefly describe  
13 the various parts of the '326 patent, Claim 5.

14          A.    Sure.  So just looking at these particular  
15 areas of Claim 5 of the '326 patent, we have that top  
16 portion where we're talking about the overlay code  
17 parts.

18                    We -- you know, we're talking about the  
19 orthogonal code parts.  We have the orthogonal code  
20 generator, an orthogonal code, and a first encoder for  
21 applying that orthogonal code.

22                    Later we have the overlay code portion of the  
23 claim where we're talking about an overlay code  
24 generator, an overlay code, and a second encoder for  
25 applying that overlay code.

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 Q. And have you included Claim 1 just for  
2 completeness?

3 A. Yes. Claim 2 is one of those dependent  
4 claims, which means that we have to look to another  
5 claim to understand what's required in Claim 2.

6 Q. But Claim 1 is not asserted in this case,  
7 right?

8 A. That's my understanding. Yes.

9 Q. So what did you conclude about the -- all of  
10 the overlay code patents in the '326 patent?

11 A. That, again, they're missing this key element  
12 at least, which is an overlay code, an overlay code  
13 generator, and a second encoder for applying the overlay  
14 code.

15 Q. And what conclusions did you reach regarding  
16 whether the Ericsson base stations infringe these  
17 claims?

18 A. For at least those reasons, they cannot  
19 infringe these claims.

20 Q. Now, is there another claim that's been  
21 asserted that also includes overlay code?

22 A. Yes, there is.

23 Q. What is that?

24 A. That's Claim 11 of the '819 patent.

25 Q. And did you reach conclusions about whether

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 no overlay code, no overlay code generator, and no  
2 second decoder, the Sony Mobile HSDPA phones do not  
3 infringe the asserted claims of the '211 patent.

4 Q. Thank you. Thank you, Dr. Olivier.

5 MR. WYNNE: Pass the witness.

6 THE COURT: All right. Cross-exam?

7 MR. BORGMAN: Yes, Your Honor. Thank  
8 you.

9 CROSS-EXAMINATION

10 BY MR. BORGMAN:

11 Q. Good morning, Dr. Olivier.

12 A. You barely made it. It's almost noon.

13 Q. Good afternoon, Dr. Olivier.

14 Do you remember meeting me about 10 years ago?

15 A. No, I do not. I'm sorry.

16 Q. It's been a number of years. We met in a  
17 different patent case, the NetIQ case.

18 A. Okay.

19 [Laughter]

20 Q. (By Mr. Borgman) I remember you.

21 [Laughter]

22 A. I apologize.

23 Q. (By Mr. Borgman) You know, I'm happy to be  
24 forgettable.

25 Now, we've heard testimony all morning from

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.