

EXHIBIT E

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

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4 WI-LAN, INC.)
5 DOCKET NO. 6:10cv521
6 -vs-)
7 Tyler, Texas
8 ALCATEL-LUCENT USA, INC., 9:01 a.m.
10 ET AL) July 12, 2013

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14 WI-LAN, INC.)
15 DOCKET NO. 6:13cv252
16 -vs-)
17 HTC CORPORATION,
18 ET AL)

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

COURT REPORTERS: MS. SHEA SLOAN
MS. JUDY WERLINGER
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Proceedings taken by Machine Stenotype; transcript was
produced by a Computer.

1 A. Right.

2 Q. Didn't invent time division multiplexing?

3 A. Right.

4 Q. Didn't invent combining TDMA and CDMA -- and
5 CDMA?

6 A. That's correct.

7 Q. Did not invent combining orthogonal codes and
8 overlay codes?

9 A. That's correct.

10 Q. And did not invent using overlay codes to
11 subdivide an orthogonal channel into multiple channels?

12 A. That's correct as well.

13 Q. So if Dr. Wells agreed that all of these
14 things were not things that were invented by the Airspan
15 inventors, what does he assert the inventors actually
16 invented?

17 A. It's my understanding that Dr. Wells and
18 Wi-LAN is claiming that it's a combination of these
19 elements that is the invention.

20 Q. Okay. Have you seen that combination that Dr.
21 Wells asserts in the prior art?

22 A. Yes, I have.

23 Q. And where have you seen that?

24 A. One of the references would be in the
25 Tiedemann reference.

1 Q. So let's talk about that. And who is
2 Tiedemann?

3 A. Tiedemann is a Qualcomm employee. And what
4 I've shown here is a picture of Qualcomm and what this
5 picture is, is the co-founders are celebrating their
6 10th anniversary, and this occurred in 1985. So
7 Qualcomm had been around since 1975. And that's why
8 I've included this picture, to show that Qualcomm has
9 been around a long time.

10 Q. So let's talk specifically about this
11 Tiedemann reference, which is Defendants' Exhibit 124.
12 Can you tell us what we're looking at?

13 A. Yes. This is a document that Mr. Tiedemann
14 presented at a telecommunications conference that was
15 held in Boston in 1994. And as I mentioned, the name,
16 if you look at the top right, shows that it's Edward G.
17 Tiedemann, Jr., and he is employed by Qualcomm out of
18 San Diego.

19 Now, the title of the -- of the document that
20 he provided was CDMA for Cellular and PCS.

21 In the bottom right-hand corner, you see in
22 the highlighting that Mr. Tiedemann is explaining that
23 his solution for PCS, this personal communications
24 system, is an extension to IS-95.

25 Q. So I'd like to talk about what you found here

1 in this Tiedemann paper.

2 Did you find that Tiedemann describes CDMA
3 using orthogonal codes and orthogonal code generators?

4 A. Yes, I did.

5 Q. Can you explain that?

6 A. As shown on this slide, you see the text
7 that's highlighted, and it says the orthogonal covering
8 codes are a set -- are the set of 64-ary Walsh
9 functions. In English, that means that there are 64
10 squared, or they're a square box of 64, and that's the
11 same 64 Walsh codes that I showed you on the slide.

12 So that 64-ary is probably not a common word
13 many of us use, but that's what is meant by that.

14 Q. And did you also find that TDM -- or that
15 Tiedemann described TDM techniques?

16 A. Yes, I did.

17 Q. And could you explain that?

18 A. Yes. And if this looks similar, this is very
19 similar to the language that I showed you for the
20 IS-95-A specification. And here at the top,
21 Mr. Tiedemann is describing the paging channel that I
22 talked about. It's divided into slots of 80
23 milliseconds' duration.

24 So this is the interval of time, are those
25 80-millisecond slots. And then he describes that there

1 is a period of repetition, and that would be the frame.

2 And those are assigned slots.

3 And then he discusses that there's hash
4 functions that are used on the paging channel for a
5 specific slot that the mobile and the base station are
6 to use. The mobile is to monitor.

7 So you can see -- and that is almost the exact
8 language out of the IS-95-A specification.

9 Q. And so did you find that the Tiedemann
10 document itself described TDM techniques under the
11 Court's construction?

12 A. Yes.

13 Q. And did you also find that Tiedemann described
14 overlay codes?

15 A. Yes.

16 Q. And could you explain that?

17 A. As you can see -- as you can see, it's pretty
18 easy to find. It actually says there is a technique
19 called overlay encoding, and overlay encoding adds
20 additional orthogonal channels.

21 And then he actually refers to an overlay
22 encoder block to show how he's modifying IS-95, or
23 extending it to support these new PCS system
24 requirements.

25 Q. And so there is a diagram in Tiedemann, Figure

1 4-2. Can you explain what we're looking at?

2 A. Yes. Mr. Tiedemann provided this block
3 diagram in his paper on the left. And I draw your
4 attention first to the top box on the blue -- it's here
5 (indicating) -- that says Walsh Code generator. And
6 those are those Walsh codes. That's where the Walsh
7 codes are generated. Those 64-ary Walsh codes are that
8 whole page.

9 He also then shows where the overlay encoder
10 and generator is at. And now I've also included on the
11 page a figure, Figure 7A, from the overlay patents.

12 As you can see, I've colored-coded to show
13 that the overlay code of patents have overlay code
14 generator. That's in purple.

15 And we also have the RW code generator here.
16 The RW, remember it stands for Rademacher-Walsh codes.
17 Those are the Walsh codes that match the Walsh codes on
18 the left, and the encoder.

19 Q. I would now like to go through the claims of
20 the asserted patents and see if we can find each one of
21 the elements, and I have some boards to do that.

22 MR. APPLEBY: Your Honor, may I set up
23 one of the boards?

24 THE COURT: Yes, you may.

25 MR. APPLEBY: And I will wear the

1 microphone, so I can come up to the board.

2 Q. (By Mr. Appleby) With regard to the Tiedemann
3 reference itself, did you find that the Tiedemann
4 reference disclosed what we call the preamble of Claim
5 1?

6 We're looking at Claim 2, and you understand
7 Claim 2 is dependent on Claim 1?

8 A. That's correct.

9 Q. And what does that mean?

10 A. That's a shorthand way, that's another one of
11 those things I had to learn. Why didn't they just write
12 all the claims as independent claims.

13 Well, it's a shorthand way of writing a claim.
14 So if you see a dependent claim, like we have here in
15 Claim 2, you just include everything with Claim 1, like
16 it was all written for Claim 2, and then add the part
17 for Claim 2. At least that's the easiest way I use to
18 remember it.

19 It's just so they don't use a lot of pages, is
20 the way I figure it of rewriting the same text over and
21 over.

22 So if you have a dependent claim, we have to
23 first look at the components of the claim it depends on.

24 And it says it depends on Claim 1, so that's
25 what we'll look at first.

1 Q. Okay. So did you find the preamble of Claim 1
2 in Tiedemann?

3 A. Yes, I did.

4 Q. And could you explain that?

5 A. Tiedemann is -- has -- you need to turn it a
6 little more.

7 Q. Sorry, Mr. Lanning.

8 A. I'm struggling to stay at the microphone and
9 seeing the slide. There you go.

10 Tiedemann describes a transmission controller
11 for processing the data items transmitted over the
12 wireless link. Well, that would be at least for the
13 paging channel.

14 And then to the subscriber terminal, that's to
15 the mobile phone.

16 And then a single frequency channel, the CDMA
17 system that he's describing uses a single frequency
18 channel, and it's transmitting data items pertaining to
19 the plurality of frames, meaning to the different cell
20 phones.

21 Q. So can I check this that was found in the
22 preamble?

23 A. Yes.

24 Q. So did you find an orthogonal code generator
25 in the Tiedemann reference?

1 A. Yes, and I pointed to it. I'll point to it
2 again. That would be the Walsh code generator that you
3 see right there in blue.

4 Q. So can I check the orthogonal code generator?

5 A. Yes.

6 Q. And did you find a first encoder? This is the
7 first encoder element in the Tiedemann reference?

8 A. Yes. And I'll circle this one, and it is a
9 circle with a plus in it. That's the encoder. You see
10 the arrow that goes from the Walsh code generator,
11 that's where it goes down and it's encoded with other
12 codes. That's what that means.

13 Specifically, it's an exclusive -- or a gate,
14 but we did put a circle with a plus in there. That
15 means it's included.

16 Q. And may I check that element?

17 A. Yes.

18 Q. And did you find a TDM encoder arranged to
19 apply time division multiplexing techniques in the
20 Tiedemann reference?

21 A. Yes. As I explained earlier, this slide shows
22 that this is the TDM techniques that they're explaining
23 here; that it has all three components.

24 It has -- it has the interval of time; it has
25 the predetermined frame; and it has one or more

1 characteristics associated with the data item, which
2 would be the actual identification of the cell phone.

3 Q. And so can I check that off?

4 A. Yes.

5 Q. Now, moving down the Claim 2, did you find --

6 MR. APPLEBY: Can I have the slide back
7 up?

8 Q. (By Mr. Appleby) Did you find an overlay code
9 generator in the Tiedemann reference?

10 A. One more slide. There it is.

11 Yes. If we can look -- if we look at this box
12 in purple, it actually says overlay code encoder as
13 required by the claim.

14 Q. So may I check that box?

15 A. Yes.

16 I should be clear. This box has both the
17 overlay code generator, which is the first part of Claim
18 2, and it has the second encoder, which is the overlay
19 encoder.

20 Q. So I can check both of those?

21 A. Yes.

22 Q. And Claim 2 is a preamble, a transmission
23 controller as claimed in Claim 1. Do we have that?

24 A. Yes, because we have the same transmission
25 controller in Claim 1 that I described.

1 Q. So I may check that?

2 A. Yes.

3 Q. And in the Tiedemann reference, are the -- is
4 the overlay code -- is the overlay encoding done on the
5 same channels that the TDM techniques are done?

6 A. No, they're not.

7 Q. So they are on separate channels?

8 A. Yes. They're all orthogonal channels, but
9 because the way a cellular system needs to work, you
10 have two different types of channels, at least two. One
11 type are the control channels and paging channel is part
12 of the control channels. Then you have what we refer to
13 as the traffic channels. The traffic channels are used
14 to carry the voice conversation.

15 And so there's two different types of
16 channels. And so the overlay encoder is used in
17 Tiedemann for the traffic channels, and the TDM encoder
18 is used for the paging channel.

19 Q. And looking back at our figure, did you -- did
20 you compare Figure 4-2 from Tiedemann that we see from
21 the overlay patents?

22 A. Yes, I did. And you can see there the
23 comparisons with the color codes for the relevant
24 portions of each diagram.

25 Q. And we see the overlay code generator and

1 second encoder in that comparison?

2 A. Yes.

3 Q. Where is that?

4 A. The overlay encoder with the -- in the purple
5 box here, and you see the overlay code generator and
6 encoder here in the pink.

7 Q. And we also see the orthogonal code generator
8 and first encoder in that comparison?

9 A. Yes. Here is the overlay code generator.
10 Here's the overlay code encoder. Here is the overlay
11 code generator. Here is the overlay code encoder
12 (indicating).

13 Q. So now I'd like to -- so now that we've
14 checked all of Claim 2, what is your opinion as to
15 whether Claim 2 is anticipated by the Tiedemann
16 reference?

17 A. The '326 patent, Claim 2 is anticipated,
18 because I've shown you that it actually describes each
19 and every limitation of Claim 2, which includes Claim 1.

20 So my opinion is that Tiedemann anticipates
21 Claim 2.

22 Q. Okay. So now I'd like to move to another
23 claim. Asserted claim? I'm going to move to the '211
24 patent, Claim 2.

25 And could you tell us what's different -- what

1 difference, if any, exists between the '211 patent,
2 Claim 2 and the Claim 2 we just saw in the '326 patent?

3 A. I realize you've heard this before, but if you
4 can think of the '326 as the transmitter or the base
5 station. The '211 claims are the receiver for the
6 mobile phone. And that's why you see a difference.

7 Instead of an encoder, there's a decoder. It
8 has to do the reverse function at the mobile phone.

9 Q. Okay. So did you find the preamble of Claim 1
10 in -- of the '211 patent in Tiedemann?

11 A. Yes, I did, for the same reasons I specified
12 earlier for the '326, Claim 2.

13 Q. So may I check that?

14 A. Yes.

15 Q. And did you find the orthogonal code generator
16 and decoder elements of Claim 2 in the Tiedemann
17 reference?

18 A. Yes, I did. And, again, to remind you that's
19 that Walsh code generator and the encoder right there.

20 Q. And so may I check those?

21 A. Yes.

22 Q. And did you find a TDM decoder disclosed in
23 the Tiedemann reference?

24 A. Yes, I did, for the same reasons. Again,
25 that's the paging channel.

1 Q. And the Tiedemann reference discusses both the
2 base station and the mobiles --

3 A. Yes.

4 Q. -- is that correct?

5 A. Yes.

6 Q. And so '211 would be directed to the mobiles,
7 and the '326 is directed to the base station?

8 A. That's correct. Yes.

9 Q. So moving down to Claim 2, do we find a
10 reception controller as in Claim 1 in the Tiedemann
11 reference?

12 A. Yes.

13 Q. And why is that?

14 A. Tiedemann describes it, and this would be the
15 same controller that we discussed earlier. This whole
16 block diagram is the controller, essentially.

17 Q. And did we -- did you find an overlay code
18 generator and second decoder in Tiedemann for Claim 2 of
19 the '211 patent?

20 A. Yes. This right here would be that box. It
21 performs both of those functions.

22 Q. And may I check those?

23 A. Yes.

24 Q. So what is your opinion as to whether Claim 2
25 of the '211 patent is anticipated by Tiedemann?

1 A. The Tiedemann indeed does anticipate the '211,
2 Claim 2.

3 Q. Okay. So let me move to another claim. Let
4 me go to the '211 patent, Claim 5.

5 And this is -- the '211 patent is directed to
6 a subscriber terminal or mobile unit, right?

7 A. Yes.

8 Q. So let's go through this.

9 Did you find a subscriber terminal of the
10 wireless communication system in Tiedemann?

11 A. Yes, I did.

12 Q. And why is that?

13 A. It essentially is this whole block diagram
14 that it's describing.

15 Q. So may I check that?

16 A. Yes.

17 Q. And did you find the orthogonal code generator
18 and first decoder of Claim 5? Are these elements any
19 different from what we saw before?

20 A. No. They're the same elements as the '211,
21 Claim 2. So they should look familiar to you. They are
22 the same.

23 So I believe we should check those as well.

24 Q. And is the TDM decoder element any different
25 in Claim 5 from the element we saw in Claim 2?

1 A. No. It's the same as Claim 2. So we should
2 check that as well.

3 Q. And is -- the overlay code generator and
4 second decoder elements, are they any different than
5 what we saw in Claim 2?

6 A. No. So, again, we should be able to check
7 those.

8 Q. Now, this last element we see is a different
9 color. Is that because Claim 5 has added another
10 element?

11 A. Yes. This essentially is the only difference
12 between Claim 2 and Claim 5. Claim 5 adds the use of
13 Rademacher-Walsh codes.

14 Q. And did you find those in the Tiedemann
15 reference?

16 A. Yes. As the box actually says, there's the
17 Walsh codes that are used for that. And Walsh codes and
18 Rademacher-Walsh codes are the same. Some people just
19 call them by both names or just one name for short.

20 Q. So in -- can I check that?

21 A. Yes.

22 Q. And so what is your opinion as to whether
23 Claim 5 of the '211 patent is -- is anticipated by the
24 Tiedemann reference?

25 A. Tiedemann anticipates Claim 5 of the '211

1 patent.

2 Q. Okay. Now I'd like to move to another claim.
3 And this is the '326 patent, Claim 5. And are any of
4 these elements that we see in Claim 5 the same as the
5 elements that we saw in the '326 patent, Claim 2?

6 A. Yes. If you look at the -- from the
7 beginning, it's referred to as the preamble, to the
8 limitations all the way down the blue, the orange, and
9 the purple. All of those limitations are essentially
10 the same, if not exactly the same, as the '326, Claim 2.

11 Q. And so have we found those elements in the
12 Tiedemann reference for the same reasons that you gave
13 previously?

14 A. Yes. So I believe we can check all the way
15 down until you get to the last two colors. Those will
16 be different.

17 Q. And with respect to the last two, I'd actually
18 like to start with the last one, the green one: Wherein
19 the set of orthogonal codes comprise a set of
20 Rademacher-Walsh codes.

21 Did you find that in Tiedemann?

22 A. Yes, I did. As I just discussed for the '211,
23 Claim 5, that the Rademacher-Walsh codes are there,
24 again, as described in this box.

25 Q. So may I check that?

1 A. Yes.

2 Q. Now, the last element that we have yet to
3 check is storage. What is that directed to?

4 A. This limitation requires that the set of
5 orthogonal codes -- and what it means by the set of
6 orthogonal codes -- in this case, it would be those 64
7 orthogonal codes that are 64-bits long -- are stored.
8 And those are stored in this Walsh code generator.

9 Q. And why do you believe that the Tiedemann
10 reference discloses storage?

11 A. Because the 64 Walsh functions are fixed.
12 It's very straightforward, and it's the only feasible
13 way to actually use the 64 Walsh code functions, is to
14 just simply store them in memory and pull them out.

15 It's a very small amount of memory. It's
16 only -- it only takes 512 bytes of memory to store all
17 64 of these codes.

18 To give you an idea -- you probably don't have
19 anything to relate that to. If you have a song stored
20 on your smartphone or your computer or one of the kids
21 have it stored, it uses at least 3 million bytes for one
22 of those songs.

23 To store these Walsh codes would be only 512
24 bytes. So if you were to play 512 bytes, that's
25 3/100ths of a second, to give you a comparison of how

1 small it is to store this chip.

2 Q. Okay. So may I check that?

3 A. Yes.

4 Q. So what is your opinion as to whether the
5 '326, Claim 5 is anticipated by Tiedemann?

6 A. Tiedemann anticipates Claim 5 of the '326
7 patent.

8 Q. Okay. Sir, I think we've gone through four of
9 the six asserted claims, and we've found those to be
10 anticipated by Tiedemann. And just to put -- put this
11 in the timeframe, can we explain what we have on this
12 slide?

13 A. This shows -- we've already looked at and saw
14 where IS-95 came out in 1993, and IS-95-A in 1995. Now,
15 I've added Tiedemann on the timeline to show that it was
16 published in 1994, the middle of 1994, which is more
17 than two years, two-and-a-half years before the Airspan
18 patents.

19 Q. Okay. So I want to move to your opinions on
20 obviousness. What does -- what does obviousness -- can
21 you explain that for us?

22 A. Obviousness is different than anticipation.
23 If you recall, for anticipation, the document has to
24 disclose each and every limitation.

25 For obviousness, there's -- there's two tests.

1 And obviousness can be for one document or one
2 publication, and it would be obvious to a person of
3 ordinary skill in the art that you could make extensions
4 or that the modification could be made to meet the same
5 requirements listed by the invention.

6 Or there's another way to show obvious (sic),
7 and that's where I can combine two or more references
8 together to show that those two references would be
9 obvious to be combined together that would then disclose
10 or describe the invention that's in the claims.

11 Q. So do you have an opinion as to who a person
12 of ordinary skill in the art would be?

13 A. A person of ordinary skill in the art is a
14 legal definition that I need to use. It's for a
15 hypothetical person. But typically, just in English, it
16 means a person that's knowledgeable, has an appropriate
17 education, working in the industry looking at these
18 documents.

19 I've provided the specific type of degree and
20 education that they need to have, in my mind, and the
21 type of experience.

22 In the second bullet, you'll see that I
23 explain that they need to have two or more years
24 experience in the design and configuration of cellular
25 networks. They need to have some knowledge of what a

1 cellular network is like.

2 And they also need to be familiar with the
3 second-generation and third-generation cellular --
4 cellular networks. And this hypothetical person of
5 ordinary skill also has access to all the prior art.

6 It's like that they have a knowledge and know
7 that that prior art exists.

8 Q. So let's turn to Claim 9 and -- of the '326
9 patent and Claim 11 of the '819 patent.

10 And are those dependent claims?

11 A. Yes. Yes, they are.

12 Q. And Claim 9 of the '326 patent depends on
13 Claim 5?

14 A. That's correct.

15 Q. And we've already found that Claim 5 has all
16 the elements that Tiedemann shows, all the elements of
17 Claim 5; is that right?

18 A. That's correct.

19 Q. So what does Claim 9 require?

20 A. Claim 9 requires that a -- that the control
21 channel, or the acquisition channel, as specifically
22 listed here, includes overlay codes instead of time
23 slots, or TDM encoders, or that TDM techniques as we
24 describe.

25 Q. And is that disclosed by Tiedemann?

1 A. No, it's not.

2 Q. And why do you say that?

3 A. Tiedemann applies the overlay codes only to
4 the traffic channels for increasing the data-rate or
5 slowing the data-rate down on the traffic channels that
6 I described that were used for either data connections
7 or voice connections. Tiedemann does not describe
8 applying overlay codes to a paging channel.

9 Q. Why do you believe Claim 9 -- I should say do
10 you believe that Claim 9 would be obvious in light of
11 Tiedemann?

12 A. Yes. This is the first test. This would be
13 just a single reference, obviousness. One of ordinary
14 skill in the art, reading Claim 9 in Tiedemann, would
15 understand that it would be obvious to modify Tiedemann
16 to just apply the overlay codes to the paging channel,
17 because that -- or instead of the TDM encoder because
18 overlay codes are already being used. All the circuitry
19 is there. As you saw, that circuitry was in the block
20 diagram.

21 Q. And so is it your conclusion that Claim 9 is
22 obvious in light of the Tiedemann reference?

23 A. Yes.

24 Q. So let me move to Claim 11 of the '819 patent.

25 And Claim 11 depends from Claim 7 of that

1 patent; is that right?

2 A. Yes, that's correct.

3 Q. Now, looking at Claim 7, are -- the elements
4 in Claim 7, have we seen those elements already today?

5 A. Yes. These are all of the elements -- these
6 elements are in Claim 5 of the '326, I believe. Yes.

7 Q. And we have already found all of those
8 elements in the Tiedemann reference; is that right?

9 A. That's correct, yes.

10 Q. And Claim 11, what does Claim 11 add to Claim
11 7?

12 A. Claim 11 is like the opposite of Claim 9.

13 And if we can read it, it says: A TDM encoder
14 arranged to apply time division multiplexing techniques,
15 TDM techniques, to data items sent over the traffic
16 channel.

17 Well, remember Tiedemann puts TDM on the
18 paging channel, but he doesn't put TDM on the traffic
19 channels. He put overlay codes.

20 So this is somewhat just the reverse of Claim
21 9.

22 Q. And so did you find Claim 11 disclosed by
23 Tiedemann?

24 A. No, I did not.

25 Q. And why not?

1 A. Because Tiedemann does not have a TDM encoder
2 that would be used for the traffic channels. He uses
3 just the overlay encoder.

4 Q. Do you believe that Claim 11 would have been
5 obvious in light of Tiedemann?

6 A. Yes, I do.

7 Q. And why is that?

8 A. Because, again, the same circuitry is all
9 there. If one of ordinary skill in the art wanted to
10 add that TDM functionality, all those slots that we saw
11 on the paging channel, if they wanted to just add slots
12 on the traffic channels, they would just simply use the
13 same circuitry to do that.

14 Q. And what would the motivation or purpose of
15 one of ordinary skill in the art have for modifying
16 Tiedemann that way?

17 A. If they wanted to actually divide the traffic
18 channels into different slots so that they could support
19 different users for each overlay code, that would be the
20 motivation to --

21 Q. And --

22 A. -- make that modification.

23 Q. If Tiedemann shows that TDM encoder on a
24 control channel, why would it have been obvious to one
25 of skill in the art to use that on a traffic channel?

1 A. Again, for the same reasons you have the TDM
2 encoder on the paging channel, so that you can actually
3 divide that orthogonal channel up into multiple time
4 slots.

5 Q. If -- would one of ordinary skill in the art
6 recognize that if you could use a Tiedemann -- TDM
7 encoder on a paging channel, that you could also use it
8 on a traffic channel?

9 A. Yes. It's -- everything is the same
10 essentially. It's just the choice, do I want to engage
11 this encoder or this encoding circuitry for my traffic
12 channels.

13 Q. In looking back at Claim 9, would one of
14 ordinary -- Claim 9 of the '326 patent, would one of
15 ordinary skill in the art recognize that if you did
16 overlay coding on a traffic channel, you could also use
17 that on a control channel?

18 A. Again, it's all the same circuitry. Tiedemann
19 has described how you do it on a traffic channel. If
20 there was a reason that I wanted to divide up the
21 channel for the paging channel using overlay codes, I
22 could do the same thing with the same circuitry, same
23 block diagram.

24 Q. Okay. So now I'd like to move to another
25 reference.

1 Can you describe what we're looking at here on
2 Slide 28?

3 A. This was a patent that was -- the inventor is
4 Gitlin, Richard Gitlin. You've heard of Dr. Richard
5 Gitlin. He was part of the Bell Labs or the Alcatel --
6 I should say Lucent. I think it was in the Lucent days.
7 He was an employee of Bell Labs. He's one of the
8 pioneers.

9 And this is a patent that describes how
10 CDMA -- how to combine CDMA with TDM.

11 Q. So let's look forward -- move ahead one slide.

12 And can you describe what Gitlin -- what
13 Gitlin disclosure exists, if any, about CDMA plus TDM
14 techniques?

15 A. All right. If we look -- so the CDMA or the
16 orthogonal codes, the CDMA, is shown here. And it's
17 labeled code space and it's C0 through C7. Those refer
18 to 7 -- 8 different codes. Since we start at 0, there's
19 8 different codes.

20 Then he also has time slots going sideways on
21 the horizontal from S0 to S6. So he's combining codes
22 with slots. CDMA plus TDM.

23 Q. And did you find TDM techniques as construed
24 by the Court?

25 A. Yes.

1 Q. Could you explain that?

2 A. You have TDM techniques. So there's a frame.

3 So we need three pieces, right? We need a --

4 we need this slot, or we need the increment of time.

5 And we see all kinds of different slots. This

6 would be the slots (indicating) that are shown from S0

7 to S6. And then the frame period would be from S0

8 through S6. That's the frame period.

9 And the third thing we need for that

10 construction -- for the Court's construction for TDM

11 techniques is a characteristic of the data. Well, if

12 you look down at the bottom of Gitlin, you'll see that

13 the characteristics of data have to do with whether you

14 have high-speed users, medium-speed users, or low-speed

15 users, and also the user ID.

16 So there's two different characteristics

17 associated with the data item.

18 Q. And why would the users need different speeds?

19 A. Users have different speeds, want to pay

20 different amounts, or they may only want to send a fax

21 part of the time, and then want lower speed for voice

22 calls or lower speed data connections at other times.

23 Q. Okay. So let's look quickly at the claim --

24 actually, yeah, let's look quickly at the claim

25 language.

1 And did you find a -- the preamble satisfied
2 by -- actually, it says Gitlin plus Tiedemann. Why
3 would you combine Gitlin and Tiedemann?

4 A. Because Gitlin doesn't have the overlay codes.
5 So, essentially, for at least the reason -- there's two
6 different reasons; but the main reason is that Gitlin
7 doesn't describe overlay codes. But as I showed you
8 earlier, Tiedemann does.

9 So in combining Gitlin with Tiedemann, Gitlin
10 gives us the CDMA plus TDM; Tiedemann gives us the
11 overlay codes.

12 Additionally, Tiedemann also gives us the
13 Walsh codes, if we need to show for the orthogonal codes
14 or CDMA. I have it in two places. Both Gitlin and
15 Tiedemann gives it -- gives us the orthogonal codes.

16 Q. Okay. So does the Gitlin plus Tiedemann
17 combination disclose the preamble of Claim 1?

18 A. Yes.

19 Q. And may I check that?

20 A. Yes.

21 Q. And does -- did you find in Gitlin an
22 orthogonal code generator -- let me start over.

23 Did you find in a combination of Gitlin and
24 Tiedemann an orthogonal code generator and a first
25 encoder?

1 A. Yes.

2 Q. And can you explain that?

3 A. That -- well, we can look at it two ways, but
4 it's at least in Tiedemann. As I've already explained,
5 that there is an orthogonal code generator and the first
6 encoder.

7 And if you remember, it's the box with Walsh
8 encoder or Walsh generator, and then the circle with the
9 plus in it.

10 Q. And we saw C -- CDMA in Gitlin, right?

11 A. Yes. And Gitlin is for CDMA as well.

12 Q. Okay. May I check those?

13 A. Yes.

14 Q. And did we find a TDM encoder arranged to
15 apply time division multiplexing techniques in Gitlin?

16 A. Yes, we did.

17 As you can see with the slots that are here,
18 this would be the TDM encoder. We also find a TDM
19 encoder in Tiedemann for the paging channels. So we've
20 doubled up there as well for the TDM encoder.

21 Q. And may I check that?

22 A. Yes.

23 Q. And the elements of Claim 2, the overlay code
24 generator and the second encoder, where do we find
25 those?

1 A. Those are found in Tiedemann and not Gitlin.

2 Q. Okay. And why would it have been obvious in
3 your mind to combine Gitlin and Tiedemann?

4 A. Because both of these patents are in regard to
5 cellular systems, specifically, CDMA wireless systems.

6 And Gitlin was from Bell Labs, AT&T Bell Labs.
7 Tiedemann was from Qualcomm. And as you've heard, in
8 the early 1990s, they were working together on CDMA
9 solutions.

10 So there's multiple reasons why one of
11 ordinary skill in the art would combine Gitlin with
12 Tiedemann.

13 Q. Okay. So may I check the elements of Claim 2?

14 A. Yes.

15 Q. And so what is your conclusion about whether
16 Claim 2 of the '326 patent is obvious over Gitlin plus
17 Tiedemann?

18 A. The combination of Gitlin plus Tiedemann
19 invalidates Claim 2 of the '326 patent.

20 Q. And if we look at Claim 5 of the '326, we
21 found all of these elements in Gitlin and Tiedemann
22 already; is that correct?

23 A. Yes, that's correct.

24 Q. And would your opinion of obviousness,
25 combining Tiedemann and Gitlin, be to render obvious

1 Claim 5 of the '326 patent?

2 A. Yes. The combination of Gitlin plus Tiedemann
3 invalidates Claim 5 of the '326 patent.

4 Q. For all the reasons you've already given?

5 A. Yes, that's correct.

6 Q. And with respect to -- with respect to the
7 '211 patent, Claim 2, we found all these elements in
8 Gitlin plus Tiedemann; is that correct?

9 A. That's correct.

10 Q. And so what's your opinion as to whether
11 Gitlin plus Tiedemann would render obvious Claim 2 of
12 the '211 patent?

13 A. That the combination of Gitlin plus Tiedemann
14 renders obvious or invalidates Claim 2 of the '211
15 patent.

16 Q. And with respect to Claim 5 of the '211
17 patent, we've found all those elements in Gitlin plus
18 Tiedemann already, as well, have we not?

19 A. That's correct.

20 Q. And what would your opinion be as to whether
21 Claim 5 of the '211 patent would be rendered obvious by
22 Gitlin plus Tiedemann?

23 A. That Claim 5 of the '211 patent is rendered
24 obvious or invalid, based on the combination of Gitlin
25 plus Tiedemann.

1 Q. And what's your opinion as to whether Claims 9
2 and -- of the '326 patent and Claim 11 of the '819
3 patent would be rendered obvious by Gitlin plus
4 Tiedemann?

5 A. That both of those claims would be rendered
6 obvious by the combination of Gitlin plus Tiedemann.

7 Q. Okay. So let me talk about one more thing.
8 Now, you heard Dr. Wells point to OVSF codes
9 in the -- as evidence of overlay codes in the accused
10 systems. You've heard that testimony, right?

11 A. Yes.

12 Q. Were OVSF codes known before the Airspan
13 patents?

14 A. Yes, they definitely were.

15 Q. And where were they known before the Airspan
16 patents?

17 A. This is a reference that you've seen at least
18 a couple of times, at least I remember seeing it a
19 couple of times, from Qualcomm, co-founder Klein
20 Gilhousen. And this describes OVSF codes.

21 Q. And could you explain how Gilhousen
22 describes -- how the Gilhousen OVSF codes relate to what
23 we see in the W-CDMA standard?

24 A. Yes. Again, this is another slide that you've
25 seen a couple of times, so I won't spend too much time

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
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/s/ Judith Werlinger
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