

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD. AND SAMSUNG
ELECTRONICS AMERICA, INC.,

Petitioner,

v.

APEX BEAM TECHNOLOGIES LLC,

Patent Owner.

Case IPR2023-00603

Patent No. 10,944,527

DEPOSITION OF MIGUEL GOMEZ

DATE: MARCH 13, 2024

REPORTED STENOGRAPHICALLY BY: JENNIFER MILLER,

RMR, CRR, CCR-NJ, CCR-NM, CCR-WA

Notary Public

Patent No. 10,944,527

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TRANSCRIPT of the witness, called for
Oral Examination in the above-captioned matter,
taken by and before JENNIFER MILLER, a Notary
Public and Registered Merit Reporter, Certified
Realtime Reporter and Certified Court Reporter
of the State of New Jersey, at FABRICANT, LLP,
51 John F. Kennedy Parkway, 7 First Floor West,
Short Hills, New Jersey, on March 13 2024,
commencing at approximately 10:00 in the
morning.

1 A P P E A R A N C E S:

2

3

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I N D E X

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(NO EXHIBITS MARKED.)	

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

2 MIGUEL GOMEZ, after
3 having been first duly sworn, was
4 examined and testified as follows:

5 - - -
6 E X A M I N A T I O N
7 - - -

8 BY ATTORNEY YU:

9 Q. Good morning, Mr. Gomez.
10 Could you please state your full
11 name and address for the record?

12 A. Miguel Gomez. 2178 Sirah Court,
13 Livermore, California 94550.

14 Q. Do you understand that you are under
15 oath this morning?

16 A. I do.

17 Q. And this means that you are sworn to
18 tell the truth as if you were in a courtroom
19 with a judge and jury?

20 A. I do.

21 Q. Is there anything that would prevent
22 you from giving me full and truthful answers
23 today?

24 A. No.

25 Q. Have you been deposed before?

1 **A. Yes.**

2 Q. How many times?

3 **A. 15, 16 times, thereabouts.**

4 Q. There may be times I do not ask a
5 clear question.

6 If you don't understand any of
7 my questions, please ask me to clarify. Okay?

8 **A. I will.**

9 Q. Is it fair for me to assume that if I
10 ask you a question and you answer it, that you
11 understood what I asked you?

12 **A. Correct.**

13 Q. When you answer a question, I ask
14 that you give affirmative response because
15 shaking your head or nodding your head is not
16 going to be picked up by the Court Reporter.

17 Okay?

18 **A. Okay.**

19 Q. We'll try and take breaks every so
20 often. Before we take a break today, I will
21 ask you to complete your answer to any question
22 that's pending.

23 Is that okay?

24 **A. Yes.**

25 Q. Also please let me know if you need a

1 break. Again, I just ask you that you complete
2 your answer to any question that's pending
3 prior to the break.

4 **A. Sounds fair.**

5 Q. And during the break, do you
6 understand that you may not discuss the
7 substance of any of your testimony with
8 Apex Beam's counsel or anyone else?

9 **A. I do.**

10 Q. Thank you.

11 I'm handing you what's been
12 previously marked as Exhibit 1001.

13 Do you recognize this document?

14 **A. I do.**

15 Q. What is it?

16 **A. It's the '527 patent, otherwise known**
17 **as the 10,944,527. And the applicant was**
18 **Langbo.**

19 - - -

20 **(Stenographer clarification.)**

21 - - -

22 THE WITNESS: Langbo,

23 L-A-N-G-B-O.

24 BY ATTORNEY YU:

25 Q. I'll refer to Exhibit 1001 as the

1 '527 patent. Okay?

2 **A. That's fine.**

3 Q. Please turn to claim 1 of the
4 '527 patent, which is on page 32.

5 On column 29, lines 12 through
6 13, you see that it says:

7 "Wherein the first radio signal
8 is transmitted by K antenna port
9 groups of the base station."

10 **A. I see that.**

11 Q. Does the first radio signal being
12 transmitted by K antenna port groups of the
13 base station require that the first radio
14 signal be transmitted by K groups of internet
15 ports of the base station at the same time?

16 **A. I think I've written that in my
17 declaration, that the first radio signal is
18 transmitted by K antenna groups collectively,
19 which would be, you know, similar to at the
20 same time.**

21 Q. Can you please turn to Figure 9 of
22 the '527 patent.

23 Figure 9 shows K different time
24 resource pools the horizontal axis labeled
25 "time," right?

1 **A. I see it says "time resource pool**
2 **number 1 all the way through "time resource**
3 **pool number K."**

4 Q. And that's all different positions
5 over the time axis, correct?

6 ATTORNEY PYMENTO: Objection.
7 Form.

8 THE WITNESS: Those are time
9 resource pools number 1 through number K.
10 BY ATTORNEY YU:

11 Q. Do time resource pool number 1 and
12 time resource number K share the same time
13 resource?

14 ATTORNEY PYMENTO: Objection.
15 Form.

16 THE WITNESS: They're identified
17 as different.

18 BY ATTORNEY YU:

19 Q. So Figure 9 shows also antenna port
20 groups number 1 through number K, each
21 corresponding to a separate time resource pool,
22 correct?

23 **A. It shows that there's antenna port**
24 **group number 1 through group number K.**

25 Q. And do you see antenna port group

1 number 1 corresponds to time resource pool

2 number 1, as shown on Figure 9?

3 **A. It shows that it's above it, yes.**

4 Q. And, similarly, you agree that

5 antenna port group number K corresponds to time

6 resource pool number K?

7 **A. In the diagram, it's above the**

8 **time -- the antenna port group number K is**

9 **above the time resource pool number K.**

10 Q. So Figure 9 of the '527 patent shows

11 transmitting K antenna port groups using

12 separate time resources, correct?

13 ATTORNEY PYMENTO: Objection.

14 Form.

15 THE WITNESS: It doesn't

16 necessarily say that. It doesn't say

17 whether it's referring to the -- to the

18 radio signal or the first radio -- first

19 radio signal or the first signaling.

20 BY ATTORNEY YU:

21 Q. The question I'm asking you does not

22 involve any radio signal.

23 I'm just asking you that -- you

24 agree Figure 9 of the '527 patent shows

25 transmitting K antenna port groups using

1 separate time resources?

2 **A. Well, I would need --**

3 ATTORNEY PYMENTO: Objection.
4 Form.

5 THE WITNESS: I would need to
6 know which -- what's being transmitted
7 here.

8 This is -- just in isolation,
9 it's just showing that there are some
10 beams that are associated with different
11 time pools.

12 BY ATTORNEY YU:

13 Q. So you agree, at least, that Figure 9
14 shows K antenna port groups associated with
15 separate time resources?

16 **A. It says "antenna port group**
17 **number 1." And then below, it says "time**
18 **resource pool number 1," all the way up through**
19 **"antenna port group number K" and "time**
20 **resource pool K."**

21 Q. Do you disagree that Figure 9 shows
22 any relationship between antenna port group 1
23 and time resource pool 1?

24 ATTORNEY PYMENTO: Objection.

25 THE WITNESS: I'm just simply

1 showing it to say what's on the diagram

2 and how it's depicted.

3 BY ATTORNEY YU:

4 Q. Do you have an understanding of what
5 the diagram shows here?

6 ATTORNEY PYMENTO: Objection.
7 Form.

8 THE WITNESS: It shows that
9 there's a set of antenna port group --
10 groups, and it shows that there's also
11 time resource pools.

12 BY ATTORNEY YU:

13 Q. Does Figure 9 show antenna port group
14 number 1 used different time resource pool from
15 antenna port group number K?

16 ATTORNEY PYMENTO: Objection.
17 Form.

18 THE WITNESS: K is a variable.
19 It could be anything.

20 BY ATTORNEY YU:

21 Q. Is it your opinion that K can be just
22 one in Figure 9?

23 ATTORNEY PYMENTO: Objection.

24 THE WITNESS: K is not defined
25 in this diagram. I think there are some

1 embodiments where there are definitions of
2 K. I'd have to go find them.

3 But sitting here, I don't find
4 them right now.

5 BY ATTORNEY YU:

6 Q. So in Figure 9, does -- time resource
7 pool number K is at a different time from time
8 resource pool number 1?

9 ATTORNEY PYMENTO: Objection.
10 Form.

11 THE WITNESS: It's drawn in a
12 different place of the diagram.

13 BY ATTORNEY YU:

14 Q. And you cannot tell, based on
15 Figure 9, whether the time resource number K is
16 a different time from time resource number 1?

17 ATTORNEY PYMENTO: Objection.
18 Form.

19 THE WITNESS: It just calls it
20 "time resource pool number K." It doesn't
21 specify a different time. It's just
22 identifying it as number K.

23 BY ATTORNEY YU:

24 Q. But you do agree the time axis on the
25 horizontal axis there's a arrow pointing to the

1 right direction?

2 ATTORNEY PYMENTO: Objection.

3 Form.

4 THE WITNESS: I'm sorry. Is

5 there a question there?

6 BY ATTORNEY YU:

7 Q. So does the arrow pointing to the
8 right direction labeled "time" have any meaning
9 in general in the diagram?

10 ATTORNEY PYMENTO: Objection.

11 Form.

12 THE WITNESS: Well, it does
13 identify that arrow to have the word
14 "time" next to it.

15 BY ATTORNEY YU:

16 Q. Does the box located on the right
17 side of arrow have a different time on the box
18 located on the left side of the arrow labeled
19 "time"?

20 ATTORNEY PYMENTO: Objection.

21 Form.

22 THE WITNESS: Well, typically,
23 you would have a progression of time along
24 the time axis.

25

1 BY ATTORNEY YU:

2 Q. Okay. With that understanding, do
3 you agree that time resource pool number K has
4 a different time from time resource pool
5 number 1?

6 A. Again, the diagram is fairly -- it's
7 fairly, you know, representative of the antenna
8 port groups. And it's along the time axis.

9 But since it's identified as K,
10 it could be anything.

11 Q. And you said that sitting here now
12 you don't have an understanding of whether the
13 number K can have a value of 1, do you?

14 A. I didn't say that. I said I'd have
15 to go look through the embodiments to get an
16 understanding of that.

17 It would take me some time. I'd
18 be happy to do that.

19 Q. Okay. Let's assume K is a number
20 greater than 1.

21 Would you agree that time
22 resource pool number K is at a different time
23 from time resource number -- time resource pool
24 number 1?

25 ATTORNEY PYMENTO: Objection.

1 Form and scope.

2 THE WITNESS: The question one
3 more time, please.

4 BY ATTORNEY YU:

5 Q. Let's assume the value of K is
6 greater than 1.

7 Would you agree that time
8 resource pool number K has a different time
9 from time resource pool number 1?

10 ATTORNEY PYMENTO: Same
11 objections.

12 THE WITNESS: Well, that's
13 assuming that the association for antenna
14 port group K corresponds to time resource
15 pool K.

16 Again, I'd have to look through
17 the embodiments. It is drawn above it,
18 but that doesn't necessarily mean that
19 they're directly linked.

20 So I would have to go back
21 through the embodiments and look at it
22 again.

23 At 9 -- column 9, 57 -- or 58,
24 there is an embodiment where the K is
25 positive energy greater than 1.

1 BY ATTORNEY YU:

2 Q. Okay. Let's turn to column 17,
3 line 2. I'll read the text here.

4 A. **Let me get there.**

5 Q. Do you see where this says [as read]:

6 "The K antenna port groups
7 respectively correspond to K
8 different beam groups. The K
9 antenna port groups respectively
10 correspond to K time resource
11 pools..."?

12 A. **And it continues on [as read]:**

13 "and the time resource pool is
14 a time resource pool corresponding
15 to the antenna port groups."

16 Is that -- that's where you're
17 at?

18 Q. Yes.

19 A. **Yes, I see that.**

20 Q. Okay. So with this description of
21 the '527 patent, now do you agree that Figure 9
22 of the '527 patent shows transmitting K antenna
23 port groups using separate time resources?

24 ATTORNEY PYMENTO: Objection.

25 Form.

1 THE WITNESS: I think you may be
2 missing the context of whether this is in
3 regard to signaling or the first radio
4 signal, and that does make a difference in
5 how to interpret this information on 17.

6 But, you know, what you read
7 here is what it says. So without knowing
8 the context, it's really difficult to make
9 a blanket statement.

10 BY ATTORNEY YU:

11 Q. Okay. I'll repeat my question.

12 It does not involve any radio
13 signal. I was just simply asking you:

14 Do you agree Figure 9 of the
15 '527 patent shows transmitting K antenna port
16 groups using separate time resources?

17 A. Yeah, but what's --

18 ATTORNEY PYMENTO: Objection.
19 Form. And asked and answered.

20 THE WITNESS: Again, without
21 knowing the context of whether -- whether
22 you're applying 9 -- Figure 9 to the
23 signaling or applying it to the first
24 radio signal, it's difficult to make a
25 blanket statement.

1 BY ATTORNEY YU:

2 Q. Have you read the '527 patent
3 specification drawings?

4 A. I have.

5 Q. In order to provide your opinions on
6 the '527 patent, did you read the patent to
7 ensure you understood the specification, the
8 figures, and the claims?

9 A. I haven't memorized the patent. And
10 to the extent that I need to go back and
11 refresh myself on Figure 9, I'd be happy to do
12 that.

13 But all I'm saying here is that
14 the claim itself, which you pointed me to when
15 we first started discussing this, identifies
16 the first transceiver receiving a first radio
17 signal from a base station and a second
18 receiver receiving a first signaling from a
19 base station.

20 Then it goes on to say
21 [as read]:

22 "Wherein the first radio signal
23 is transmitted by K antenna groups
24 of the first base station; the
25 antenna port group includes a

1 positive integer number of antenna
2 port(s)."

3 And now you're asking me to make
4 a blanket statement about Figure 9 but without
5 regard to whether it's the first signaling of
6 the first radio signal.

7 Q. Mr. Gomez, I'm asking you the
8 question about what's described in Figure 9
9 without asking you the meaning of any of the
10 claim terms currently. So you don't have to
11 read entire claim to me.

12 So I'm going to try one more
13 time.

14 Looking at Figure 9 of the
15 '527 patent, do you agree it shows antenna port
16 groups 1 through K each corresponding to a
17 separate time resource pool?

18 A. So embodiment 9 of the '527 patent
19 describes it fairly succinctly, and you've
20 already read part of it.

21 It starts off [as read]:

22 "Embodiment 9 illustrates a
23 schematic diagram of an antenna port
24 group(s)" -- group(s) in
25 parenthesis -- "corresponding to a

1 resource pool, as shown in Figure 9.

2 "In Embodiment 9, the first
3 antenna port group is one of the K
4 antenna port groups. The K antenna
5 port groups respectively correspond
6 to K different beam groups. The
7 K antenna port groups respectively
8 correspond to K time resource pools,
9 and the first time resource pool is
10 a time resource pool corresponding
11 to the first antenna port group."

12 I think that describes it pretty
13 clearly.

14 Q. So sitting here today, you are not
15 able to answer my question specifically whether
16 Figure 9 shows antenna port groups 1 through K
17 each corresponding to a separate time resource
18 pool?

19 ATTORNEY PYMENTO: Objection.
20 Form. Asked and answered. Argumentative.

21 THE WITNESS: So when I read
22 these claims and when I look at the
23 diagrams, I also look to the specification
24 for information about them.

25 And the bottom of column 16, top

1 of column 17 describes Figure 9.

2 BY ATTORNEY YU:

3 Q. Do you have a understanding of
4 whether Figure 9 of the '527 patent shows
5 antenna port groups 1 through K each
6 corresponding to a separate time resource pool?

7 ATTORNEY PYMENTO: Objection.
8 Form. Asked and answered.

9 THE WITNESS: The patent says
10 that [as read]:

11 "Embodiment 9 illustrates a
12 schematic diagram of an antenna port
13 group and groups corresponding to a
14 time resource pool, as shown in
15 Figure 9."

16 BY ATTORNEY YU:

17 Q. Okay. Let's move on to column 29,
18 line 16 through 17.

19 You see where it says [as read]:

20 "The first signaling is used to
21 determine a first time resource
22 pool."

23 **A. Did you say column 29?**

24 Q. Yes. Still part of claim 1.

25 **A. Okay. Claim 1.**

1 **Can you reask your question?**

2 Q. Do you see where it says [as read]:
3 "The first signaling is used to
4 determine a first time resource
5 pool"?

6 **A. I do.**

7 Q. Does the term "time resource pool"
8 require a shared use of the time resources by
9 all K antenna port groups?

10 **A. It's -- one more time on the**
11 **question. I just lost the --**

12 ATTORNEY YU: Can the Court
13 Reporter repeat the question?

14 - - -

15 (Whereupon, the record was read
16 as follows:

17 "QUESTION: Does the term 'time
18 resource pool' require a shared use
19 of the time resources by all K
20 antenna port groups?")

21 - - -

22 BY ATTORNEY YU:

23 Q. Does the term 'time resource pool'
24 require a shared use of the same time resources
25 by all K antenna port groups?

1 **A. It's shared among a port -- I'm**
2 **sorry -- a port group.**

3 Q. So the time resource pool can be time
4 resources shared for use by one antenna port
5 group?

6 **A. Yes.**

7 ATTORNEY YU: Okay. Can we take
8 a two-minute break?

9 - - -

10 (Whereupon, a short recess was
11 taken.)

12 - - -

13 BY ATTORNEY YU:

14 Q. So, Mr. Gomez, earlier on, I asked
15 you:

16 Does the first radio signal
17 being transmitted by K antenna port groups of
18 the base station in claim 1 of the '527 patent
19 require that the first radio signal be
20 transmitted by K groups of antenna ports of the
21 base station at the same time?

22 Do you recall that?

23 **A. Yeah.**

24 ATTORNEY PYMENTO: Objection.
25 Form.

1 THE WITNESS: And I -- I gave
2 you an answer. If we have further
3 questions about my answers, maybe I could
4 get my declaration so I can point you to
5 where I have my opinions in it.

6 BY ATTORNEY YU:

7 Q. I think your answer -- I just want to
8 make sure the record is clear.

9 You said the term "first radio
10 signal being transmitted by K antenna port
11 groups of the base station" does require that
12 the first radio signal be transmitted by
13 K groups of antenna ports of the base station
14 at the same time, correct?

15 ATTORNEY PYMENTO: Objection.
16 Form.

17 THE WITNESS: That's not what I
18 said.

19 BY ATTORNEY YU:

20 Q. Okay. Then can you answer the
21 question again?

22 **A. What was the question again?**

23 Q. Does -- the first radio signal is --
24 scratch that.

25 Okay. Does the term "the first

1 radio signal is transmitted by K antenna port
2 groups of the base station" require that the
3 first radio signal be transmitted by K groups
4 of antenna ports of the base station at the
5 same time?

6 ATTORNEY PYMENTO: Objection.
7 Form.

8 THE WITNESS: Again, I'd like to
9 get my declaration. I think I'll point
10 you to the point where, in my declaration,
11 I say that they're sent collectively.

12 BY ATTORNEY YU:

13 Q. By "collectively," do you mean that
14 the first radio signal must be transmitted by
15 K groups of antenna ports of the base station
16 at the same time?

17 A. They would be sent collectively to
18 the same -- from -- they would be sent
19 collectively.

20 And I'd like to just get my
21 report so I can be clear on it and don't
22 misstate what I've written in my report.

23 Q. Have you read the '527 patent
24 specification drawings again?

25 A. I'm sorry? The '527 what?

1 Q. '527 patent specification drawings.

2 A. **Have I read the drawings?**

3 Q. And specification?

4 A. **Yes.**

5 **We had that question earlier.**

6 Q. Were there any aspects of the
7 '527 patent that were more difficult to
8 understand?

9 ATTORNEY PYMENTO: Objection.
10 Form.

11 THE WITNESS: Other than not
12 having memorized the entire patent, it
13 wasn't a difficult patent to understand.

14 BY ATTORNEY YU:

15 Q. Were you able to discern the meaning
16 of the term "the first radio signal is
17 transmitted by K antenna port groups of the
18 base station" in light of the '527 patent
19 specification and drawings?

20 A. **Yes. I believe we had this**
21 **discussion already, where I pointed out that**
22 **there are embodiments that describe the '925,**
23 **and I think that was in Embodiment 9.**

24 Q. So sitting here today, you are not
25 able to answer my question what the term "the

1 first radio signal being transmitted by K
2 antenna port groups of the base station"
3 require without referring to your declaration?

4 ATTORNEY PYMENTO: Objection.
5 Form. Argumentative. Asked and answered.

6 THE WITNESS: I gave you my
7 answer, and I did not have to refer to the
8 declaration because you haven't given it
9 to me yet.

10 BY ATTORNEY YU:

11 Q. I'm handing you what's previously
12 marked as Exhibit 2004.

13 Let me know when -- if you are
14 ready to answer the question.

15 ATTORNEY PYMENTO: Objection to
16 form.

17 THE WITNESS: So on paragraph 31
18 of my declaration, this is where I cite
19 that -- that a person of ordinary skill in
20 the art would understand that the first
21 signal is not transmitted by each group
22 separately but, rather, transmitted by
23 K groups collectively.

24 And, you know, the '527 patent
25 confirms that in column 344 through -49.

1 In one embodiment, the first
2 radio signal is transmitted by K antenna
3 groups in a manner that the first radio
4 signal carries the K reference signal
5 groups, and the antenna virtualization of
6 that corresponding to the K reference
7 signal groups are respectively used to map
8 the K reference signal groups to a set of
9 physical antennas to be transmitted.

10 BY ATTORNEY YU:

11 Q. Okay. You're not answering my
12 question. I'll repeat my question here.

13 Whether the term "the first
14 radio signal is transmitted by K antenna port
15 groups of the base station" required that the
16 first radio signal be transmitted by K groups
17 of antenna ports of the base station at the
18 same time?

19 ATTORNEY PYMENTO: Objection.
20 Form. Asked and answered.

21 THE WITNESS: I will look to see
22 if, in the specification, it says "at the
23 same time" or something or above --
24 something similar to that.

25 I don't have a searchable copy

1 right now, so I'll have to look for it.

2 But my opinion is that they are
3 sent collectively.

4 BY ATTORNEY YU:

5 Q. What do you mean by "collectively"?

6 **A. Together.**

7 Q. Does collectively require the signal
8 be transmitted by K groups of antenna ports
9 simultaneously?

10 **A. Well, you know, they're sent**
11 **together, for sure, and...**

12 Q. Do you mean something other than "at
13 the same time" when you say "together"?

14 ATTORNEY PYMENTO: Objection.
15 Form.

16 THE WITNESS: I just use that in
17 the ordinary sense of the word "together,"
18 "collectively."

19 BY ATTORNEY YU:

20 Q. Do you mean that the term "the first
21 radio signal being transmitted by K antenna
22 port groups of the base station" allows the
23 first radio signal to be transmitted by
24 K groups of antenna ports over separate time
25 resources?

1 ATTORNEY PYMENTO: Objection.

2 Form.

3 THE WITNESS: I'm sorry. I
4 missed that. I was reading something
5 here.

6 Go ahead.

7 BY ATTORNEY YU:

8 Q. By "collectively" or "together," do
9 you mean that the first radio signal can be
10 transmitted by K groups of antenna ports over
11 separate time resources?

12 ATTORNEY PYMENTO: Objection.
13 Form.

14 THE WITNESS: So the word
15 "collectively," the way I use it, is that
16 it would be a number of channels treated
17 as a group or it would never have -- let
18 me get the right wording here.

19 I'm sorry. One more time on the
20 question.

21 BY ATTORNEY YU:

22 Q. By "collectively" or "together," do
23 you mean that the first radio signal can be
24 transmitted by K groups of antenna ports over
25 separate time resources?

1 ATTORNEY PYMENTO: Objection.

2 Form.

3 THE WITNESS: What I mean by
4 "collectively" is that all of the time
5 resources are treated as a group -- or as
6 a unit, rather.

7 - - -

8 (Stenographer clarification.)

9 - - -

10 BY ATTORNEY YU:

11 Q. So by "collectively," you do mean
12 that the first radio signal should be
13 transmitted by K groups of antenna ports at the
14 same time?

15 ATTORNEY PYMENTO: Objection.

16 THE WITNESS: Again, they're
17 treated -- they're sent collectively as a
18 unit.

19 BY ATTORNEY YU:

20 Q. Do you have a understanding of
21 whether the first radio signal should be
22 transmitted by K groups of antenna ports at the
23 same time?

24 ATTORNEY PYMENTO: Objection.

25 Form. Scope.

1 THE WITNESS: I don't think the
2 patent -- the '527 patent defines "at the
3 same time." I don't think it describes it
4 at all.

5 Perhaps you can point me to the
6 '527 patent where it says that it's the
7 same time.

8 ATTORNEY YU: Can we take a
9 two-minute break.

10 - - -

11 (Whereupon, a short recess was
12 taken.)

13 - - -

14 ATTORNEY YU: I have no further
15 questions at this time.

16 ATTORNEY PYMENTO: Can we take a
17 ten-minute break.

18 - - -

19 (Whereupon, a short recess was
20 taken.)

21 - - -

22 E X A M I N A T I O N

23 - - -

24 BY ATTORNEY PYMENTO:

25 Q. Mr. Gomez, counsel previously asked

1 about Figure 9 in the '527 patent.

2 Could you please turn to
3 Figure 9.

4 **A. I'm there.**

5 Q. Do you see on Figure 9 "time resource
6 pool number 1," "first time resource pool," and
7 "time resource pool number K"?

8 **A. Yes.**

9 Q. Does Figure 9 describe what signals,
10 if any, are being transmitted over the first
11 time resource pool or any time resource pool?

12 **A. No. I don't see any signals.**

13 Q. Therefore, it's not possible, from
14 Figure 9, to tell whether a transmission by the
15 first antenna port group is done within a first
16 time resource pool or not, correct?

17 ATTORNEY YU: Objection. Form.
18 Leading.

19 THE WITNESS: All that Figure 9
20 shows is that there's a set of antenna
21 port groups represented by beams and that
22 there's no signals or information that's
23 described that would be sent through these
24 beams for these antenna port groups.

25

1 BY ATTORNEY PYMENTO:

2 Q. Let's turn to claim 1 of the
3 '527 patent.

4 Do you see where claim 1 recites
5 [as read]:

6 "Wherein the first radio signal
7 is transmitted by K antenna port
8 groups of the base station"?

9 **A. Yes, I see that.**

10 Q. Is it your understanding that that
11 claim limitation means that one radio signal is
12 transmitted by all the K antenna port groups?

13 ATTORNEY YU: Objection.

14 Leading.

15 THE WITNESS: The first radio
16 signal was transmitted by all the antenna
17 K port groups, correct.

18 BY ATTORNEY PYMENTO:

19 Q. Is that understanding what you meant
20 by "collectively" when testifying earlier?

21 **A. Yes.**

22 ATTORNEY YU: Objection.

23 Leading.

24 BY ATTORNEY PYMENTO:

25 Q. Does claim 1 ever discuss

1 transmitting the first radio signal over any
2 given time resource?

3 **A. No, it doesn't -- there's no**
4 **reference of the first radio signal with regard**
5 **to the time resources in claim 1.**

6 Q. Do you see claim 1, line 25, which
7 states or recites that the K is a positive
8 integer greater than 1?

9 **A. Yes.**

10 Q. What is the lowest integer that K
11 could be?

12 ATTORNEY YU: Objection. Scope.

13 BY ATTORNEY PYMENTO:

14 Q. I'm sorry. What was the lowest
15 integer K could be based on the claim
16 limitation?

17 **A. 2.**

18 Q. Do you see that claim 1 also
19 describes a first signaling received from the
20 base station?

21 ATTORNEY YU: Objection. Scope.

22 This was not asked during the
23 direct deposition.

24 THE WITNESS: I see that claim 1
25 says [as read]:

1 "receiving a first signaling
2 from the base station."

3 BY ATTORNEY PYMENTO:

4 Q. Can you turn to Figure 1?

5 ATTORNEY YU: Objection. Scope.

6 Again, this is not asked during
7 the direct examination.

8 BY ATTORNEY PYMENTO:

9 Q. Counsel previously asked you about
10 transmitting the first radio signal over
11 K antenna port groups, correct?

12 A. Yes.

13 Q. Based on Figure 1, is the first radio
14 signal transmitted before transmitting the
15 first signaling?

16 ATTORNEY YU: Objection. Scope.

17 THE WITNESS: Well, we see that
18 at the top of the diagram it says the
19 "first radio signal." And above that,
20 it's S11 transmitting the first radio
21 signal.

22 So that -- as the -- counsel
23 earlier described that the arrows would be
24 pointing in the direction of time.

25 There's no time on this, but it looks like

1 the first radio signal would be
2 transmitted.

3 Then you would have a second
4 information or first information, both of
5 which are optional.

6 And then you would have the
7 first signaling. So the first radio
8 signal is transmitted before the first
9 signaling.

10 ATTORNEY PYMENTO: No further
11 questions.

12 ATTORNEY YU: Two minutes,
13 please.

14 - - -

15 (Whereupon, a short recess was
16 taken.)

17 - - -

18 ATTORNEY YU: I have no further
19 questions.

20 - - -

21 (Whereupon, the deposition
22 was concluded at 11:12a.m.)

23 - - -

24

25

CERTIFICATE

I HEREBY CERTIFY that the
proceedings, evidence and objections are
contained fully and accurately in the
stenographic notes taken by me upon the
deposition of MIGUEL GOMEZ, taken on March
13, 2024 and that this is a true and correct
transcript of same.

Jennifer Miller

Jennifer Miller, RMR, CCR, CRR
and Notary Public

(The foregoing certification of
this transcript does not apply to any
reproduction of the same by any means
unless under the direct control and/or
supervision of the certifying reporter.)

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