

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE, INC., HTC CORPORATION,  
HTC AMERICA, INC. and ZTE (USA), INC.  
Petitioners,

v.

INVT SPE, LLC  
Patent Owner.

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Case IPR2018-01476  
Patent 7,764,711 B2

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Record of Oral Hearing  
Held: January 14, 2020

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Before THU A. DANG, BARBARA A. BENOIT and  
J. JOHN LEE, *Administrative Patent Judges*.

Case IPR2018-01476  
Patent 7,764,711 B2

APPEARANCES:

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The above-entitled matter came on for hearing Tuesday, January 14, 2020, at 12:58 p.m., at the U.S. Patent and Trademark Office, 600 Dulany Street, Alexandria, Virginia.

PROCEEDINGS

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THE USHER: All rise.

JUDGE LEE: Good afternoon. You can be seated.

All right. Good afternoon. We are here for the oral hearing in IPR2018-01476 captioned Apple, Inc, HTC Corporation, HTC America, Inc. and ZTE (USA) Inc. v. INVT SPE, LLC. Apologies if I mispronounced anything. This proceeding concerns U.S. Patent No. 7,764,711.

Let's begin with appearances by counsel starting with Petitioner.

MR. SEITZ: Thank you, Your Honor. Adam Seitz with the law firm of Erise here on behalf of the Petitioner, Apple. Also with me today is Aaron Huang from Apple.

JUDGE LEE: Thank you, Mr. Seitz.

And for Patent Owner?

MR. HARTING: Good afternoon, Your Honor. John Harting with the law firm Robins Kaplan. With me today is INVT's lead counsel, Cy Morton.

JUDGE LEE: Thank you, Mr. Harting.

Unless either party wishes to raise any preliminary matters, Petitioner you may begin your presentation when you're ready.

MR. SEITZ: Your Honor, I'd like to reserve 10 minutes today, please. Thank you, Your Honors. Judge Benoit and Judge Dang, good to see you again. May it please the Board. We're going to be discussing the '711 Patent today and specifically referring to the demonstratives I'll announce the slides as I go along. Everybody is here, so that should be

1 easier today. But we're going to be talking about two grounds today, but in  
2 large part we're going to focus our time on ground one.

3 A major issue kind of overseeing this entire dispute between the  
4 parties relates to claim construction. Ground two rises and falls with the  
5 claim construction. If you ultimately agree that the claim construction does  
6 not require a simultaneity aspect which we're going to get into briefly, then  
7 ground two is dispositive. And so, for that reason, I'm going to start with  
8 claim construction today and then focus on ground one after that to discuss  
9 some of the more substantive disputes that have been raised between the  
10 parties with regard to claim -- ground one.

11 Before we start, I want to just briefly set an understanding of what the  
12 technology is that we're going to be discussing today. The '711 Patent deals  
13 with, fundamentally, ways to handle communication wirelessly in the  
14 example of a cell phone and there's two different things that we're going to  
15 be focusing on today with regard to that communication.

16 The fundamental aspect that we're going to be talking about today is  
17 something that relates to the ability to have a diversity of antennas to help  
18 with communication in two specific ways. And if you think of a cell phone  
19 and how communication would work, typically when your signal is sent out  
20 it can run into problems called multipath propagation. Fancy way of saying  
21 that your signal is going to fade the more things that it runs into.

22 So a signal that leaves your phone and goes to a tower may run into  
23 trees, may run into buildings, may just travel a distance and when all that is  
24 combined your signal may have faded by the time it reaches the recipient so  
25 that it's difficult to discern what the original data was.

26 Now, the idea of having antenna diversity dates all the way back to

1 World War II when the idea of saying, “Okay. We can use more antennas to  
2 help make our communication and our signal more robust.” One of those  
3 things was referred to as a transmit diversity and this idea says that we’re  
4 going to take my data, my signal, and I’m going to duplicate it. So it’s the  
5 same data that’s duplicated and then that same data or that same  
6 communication is sent out over multiple antennas.

7 In that way, you have multiple antennas going to multiple other  
8 antennas on the receiving end with the exact same signal. The purpose of  
9 this, the ultimate goal of this, is that you receive a stronger signal on the  
10 back end, multiple signals, that allow you to see what the original signal and  
11 data was. It’s referred to as MIMO; multiple in, multiple out.

12 Now, another idea came about after this transmit diversity of using  
13 multiple antennas in a different way to solve a different problem and that  
14 was referred as spatial multiplexing. Now, it’s the same idea of using  
15 multiple antennas, but this time instead of wanting to correct for errors due  
16 to multipath propagation, the idea was that we could have quicker and better  
17 communications that sent more data along the path.

18 And so here we’re not going to duplicate the signal this time. We’re  
19 going to take our signal, we’re going to split it up into multiple components  
20 and then I’m going to transmit those multiple components on a different  
21 antenna. Those will travel to multiple antennas on the receiving end where  
22 that signal will be put back together and sent along to the intended recipient.

23 The idea here is not so much to fix the fading or worry about the  
24 propagation that may take place, but to say that we can put more data on  
25 different antennas so it’s going to be a faster and fuller signal. So we’re  
26 going to increase bandwidth in that situation.

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