

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 AND HTC AMERICA, INC.,  
ZTE (USA) INC.  
Petitioners

v.

INVT SPE LLC  
Patent Owner

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Case No. IPR2018-01476  
Patent No. 7,764,711

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**PETITIONERS' REPLY TO PATENT OWNER'S RESPONSE**

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## I. INTRODUCTION

Patent Owner's (PO) arguments for patentability in its Patent Owner's Response (Paper 11) ("POR") ignore the express teachings of the references, the actual grounds of rejection provided in the Petition, and the Board's findings in the Institution Decision (Paper 9) ("ID"), focusing instead on unclaimed features and an expert whose deposition testimony contradicts many of PO's own arguments. Accordingly, PO has not overcome the proposed grounds, and the Challenged Claims should be canceled.

## II. ARGUMENT

### A. Claim Construction

PO argues all Challenged Claims "require that spatial multiplexing and transmit diversity be implemented at the same time, or simultaneously" without providing any claim construction analysis or even identifying any specific claim language that imposes this purportedly key requirement. **Paper 11**, *POR* at 7. While the '711 Patent specification discloses a simultaneous embodiment of spatial multiplexing and transmit diversity, as the Board found at institution, PO has failed to show that the Challenged Claims include simultaneity as a requirement and are thus limited to such an embodiment. **Paper 9**, *ID* at 26-27 (noting PO disputes that "*Wallace* and *Walton* [satisfy] the challenged claims require[ment of] 'simultaneous' . . . spatial multiplexing and transmit diversity," but pointing out that PO "does not explain where such a limitation is recited in the challenged claims")

and concluding “the combination of *Wallace* and *Walton* teach[es] each limitation of claims 1 and 6”). PO’s Response has done nothing to alter that finding. Nonetheless, PO’s claim construction is moot because Ground 1 invalidates the Challenged Claims under both parties’ constructions.

1. *PO contends the Challenged Claims require simultaneous spatial multiplexing and transmit diversity, i.e., transmitting a specific data item, its replica, and at least one additional data item at the same time*

The POR explains that “utilizing different antennas . . . to transmit different data items in parallel . . . is known as “spatial multiplexing” and that “[r]eplicating [a single] data signal and transmitting copies of the data signal in parallel on the multiple antennas . . . is known as “transmit diversity.” Response, 3. The Response continues, “[t]he inventions of the ’711 Patent relate to” using “spatial multiplexing of a plurality of different data items transmitted over different antennas and also transmit diversity of a *specific* data item and its replica over a plurality of antennas **at the same time.**” *Id.*, 3 (emphasis in original).

To avoid any doubt, PO makes clear that its position is the Challenged Claims require at least three things transmitted at the same time: a specific data item, its replica for transmit diversity, and at least one additional data item for spatial multiplexing. *Id.*, 7 (noting “the specific data item described in transmit diversity (TD) with the replica data item, is also involved in spatial multiplexing (SM) at the same time (simultaneously or in parallel), with other data items” and concluding “the

challenged claims . . . teach simultaneous combination of SM and TD”). PO’s expert, Dr. Vojcic, also confirmed he interpreted the Challenged Claims to require simultaneous transmission of at least the same three data items. **Ex. 1020**, *Vojcic Transcript* at 12:17-21.

2. *Neither PO nor its expert identifies any limitation that requires simultaneous spatial multiplexing and transmit diversity*

The ’711 Patent specification describes simultaneous spatial multiplexing and transmit diversity, and the Challenged Claims may even *permit* these processes to occur simultaneously, but PO has identified nothing in the claims that *require* these processes to occur simultaneously. In alleged support of its narrow read, PO points to a single limitation:

wherein, in the mapping step, **a replica data item is generated by replicating a specific data item of the plurality of data items**, and the plurality of data items are mapped to the at least one of the plurality of antennas **such that the specific data item and the replica data item are transmitted from different antennas at a same time.**

POR, 5 (emphasizing the above limitation from Claim 1 and the variation of the above limitation from Claim 6). Without referencing any other claim language, PO concludes, “claim 1 (and also claim 6) recites . . . simultaneous use of *spatial multiplexing* and *transmit diversity*.” *Id.*, 6 (emphasis in original). But while the above limitation describes transmit diversity (*i.e.*, a specific data item and its replica

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