

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GEOTAB INC. AND GEOTAB USA, INC.
Petitioners,

v.

FRACTUS, S.A.,
Patent Owner.

Case No. IPR2025-01027
Patent 11,349,200

**PATENT OWNER'S SUR-REPLY TO PETITIONERS' REPLY TO
PRELIMINARY RESPONSE**

A. Introduction

Petitioners' Reply mischaracterizes the Petition to avoid the counter arguments presented in Patent Owner's Preliminary Response (POPR). Petitioners should be held to the positions taken in the Petition. *Zscaler, Inc. v. Symantec Corp.*, No. IPR2017-01342, Paper 37 at 26 (P.T.A.B. Nov. 9, 2018).

B. Petitioners' Combination of Dou and Jing Relies on Spatial Diversity

Petitioners claim that Patent Owner mischaracterizes Dou because "Dou describes spatial diversity as just one of several 'diversity techniques' for creating diversity." Reply at 1. Petitioners miss the point. Petitioners' Dou+Jing combination would only be understood by the POSA as implementing spatial diversity as the Jing antenna is not suitable for either pattern or polarization diversity.

Indeed, as noted by *Petitioners'* expert, "[a] diversity architecture such as that described in Dou can be implemented in various forms: spatial diversity (using physically separated antennas), pattern diversity (using antennas with different radiation patterns), and/or polarization diversity (using orthogonally polarized elements)." EX1007, ¶115. The Dou+Jing combination proposed in the Petition provides two identical Jing antennas physically separated from each other on opposite ends of a ground plane. Petition at 36. In other words, the Dou+Jing combination allegedly provides diversity "using physically separated antennas," *which is spatial diversity*. EX1007, ¶115.

In contrast, the Petition nowhere proposes using “antennas with different radiation patterns,” nor does it propose using “orthogonally polarized elements.” *See id.* Rather, the Petition proposes using identical Jing antennas, which would exhibit identical substantially omnidirectional radiation patterns, in a parallel arrangement on the ground plane. *See* EX1011 at 2658-2659. Therefore, the only diversity possibly implemented in the Dou+Jing combination is spatial diversity.

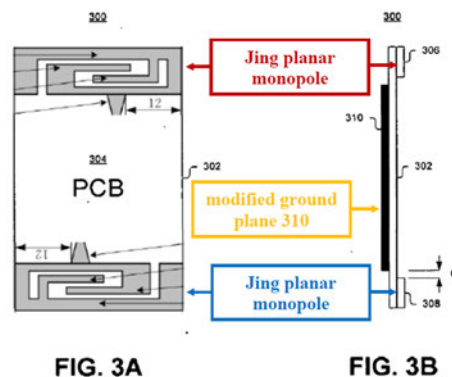
C. The Dou+Jing Combination Does Not Provide Any Antenna Diversity

Petitioners do not contest that a quarter wavelength spacing between antennas is required for spatial diversity. *See* Reply at 1-2; *see also* POPR at 6-7. Accordingly, as explained in the POPR, the 60 mm spacing between the two antennas in the Petition's modified antenna is well short of the lower bound (83.3 mm) of the spacing specified by Dou to achieve spatial diversity at the antennas' lowest frequency (900 MHz). POPR at 19-21; EX2010 at ¶ 46.

Petitioners now point to passages in Dou that purportedly describe “an embodiment in which antennas provide polarization diversity.” Reply at 1. Specifically, the Reply cites paragraph [0018] of Dou which the Reply characterizes as “describing polarization diversity with one antenna vertically polarized and another antenna ‘vertically polarized with a cross-polarization component.’” *Id.* at 2. This argument, however, *was not made in the Petition*. The Petition never purports to provide a combination of Dou and Jing that provides polarization

diversity. In fact, *paragraph [0018] of Dou, the alleged polarization diversity embodiment in the reference, was never cited in the Petition or by Petitioner's expert.* Therefore, these arguments should be accorded no weight. *Zscaler, Inc. v. Symantec Corp.*, Paper 37 at 26 (“This limited opportunity, however, is not intended to allow Petitioner to create new arguments that were not articulated in the original Petition in an attempt to cure deficiencies in its Petition. ... [W]e accord no weight to the new arguments.”).

Even if the Board were to give these arguments weight, the Dou+Jing antenna combination nevertheless fails to provide polarization diversity. As illustrated in the Petition, the Jing antennas are placed on the same ground plane and are provided with a parallel arrangement in the combination. Petition at 36.



As noted by Petitioner's expert, polarization diversity uses orthogonally polarized elements. EX1007, ¶115. Thus, even if one were to assume *arguendo* that the Jing antenna was a polarized element, the parallel arrangement of the Jing antennas in the combination would ensure that the antennas were parallelly polarized

elements, not orthogonally polarized elements. Therefore, under this assumption the Dou+Jing combination does not provide polarization diversity. As noted above, however, the Jing antenna is not, in fact, a polarized element. EX1011 at 2658-2659. Accordingly, the modified antenna would not provide polarization diversity.

For completeness, Patent Owner notes that the modified antenna of the Dou+Jing combination also does not provide pattern diversity. The modified antenna uses two identical Jing antennas which would have the same substantially omnidirectional radiation patterns. EX1011 at 2659; Petition at 36. Therefore, the modified antenna of the Dou+Jing combination does not provide pattern diversity. Accordingly, regardless of how Petitioners characterize their reliance on Dou's *diversity* techniques, the Dou+Jing combination does not implement *any* antenna diversity – the Jing antennas are not sufficiently separated for spatial diversity, the antennas would not have the different radiation patterns needed for pattern diversity, and they are not orthogonally polarized as needed for polarization diversity. Accordingly, regardless of Petitioners' improper new arguments, the Dou+Jing combination fails to provide antenna diversity and, therefore, a POSA would have had no motivation for the Dou-Jing combination.

D. Baliarda-543 is Not Prior Art

The Reply confirms that the disagreement between the Parties is a run-of-the-mill claim construction disagreement regarding the scope of “4G communication standard,” and not a written description or priority issue with the ‘200 Patent.

The Reply does not contest that the POSA would have understood “4G communication standard” as including LTE technologies. Reply at 2-5. This should end the discussion. Petitioners, however, argue that the POSA would not have understood this term as encompassing one specific LTE band, LTE Band 12. Reply at 2-4. Petitioners’ own evidence, however, explains that a study started in 2004 had the objective of developing the LTE framework for “flexible use of existing *and new* frequency bands.” EX1026 at 7 (emphasis added). Fractus’ evidence supports this same point. *See, e.g.*, EX2015 at 2 (“Spectrum flexibility, enabling deployment in different spectrum allocations.”). Therefore, the POSA would have understood that LTE, a “4G communication standard,” would have operated at new and different bandwidth (i.e., frequency) allocations. Whether or not LTE Band 12 was part of this understanding is an issue of pure claim construction.

Dated: October 28, 2025

Respectfully submitted,
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CERTIFICATE OF SERVICE

The undersigned certifies that pursuant to 37 C.F.R. § 42.6(e), a copy of the foregoing **PATENT OWNER'S SUR-REPLY TO PETITIONERS' REPLY TO PRELIMINARY RESPONSE** was served via email (as previously consented to by counsel) on October 28, 2025 to lead and backup counsel of record for Petitioners as follows:

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