

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Intel Corporation
Petitioner

v.

Qualcomm Incorporated
Patent Owner

Case IPR2019-00048
Patent 9,154,356

**PATENT OWNER RESPONSE TO PETITION FOR *INTER PARTES*
REVIEW PURSUANT TO 37 C.F.R. § 42.220**

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Pursuant to the Board’s Decision to institute an *inter partes* review, (Paper 8) (“Institution Decision”), Patent Owner Qualcomm, Inc. (“Qualcomm” or “Patent Owner”) submits this Response in opposition to the Petition for *Inter Partes* Review of U.S. Patent No. 9,154,356 (“the ’356 Patent”).

I. INTRODUCTION

Each of Petitioner’s alleged grounds of unpatentability in this IPR is based on Jeon in view of the Xiong reference. However, Jeon in view of Xiong fails to disclose, among other limitations, the two “independently enabled or disabled” amplifier stages recited by the challenged claims. Petitioner concedes that Jeon fails to disclose the limitation. Xiong fails to disclose it as well. Xiong discloses a single differential amplifier stage that has one differential input and one differential output. This single amplifier stage includes a first and second gain path that can be switched, not to independently enable or disable the gain paths but to alter the amplifier’s total gain. Furthermore, Petitioner fails to sufficiently articulate a motivation to modify Jeon to include Xiong’s gain path switches. Accordingly, the patentability of the challenged claims of the ’356 Patent should be confirmed.

As an additional independent reason to confirm their patentability, Petitioner’s grounds are based on an unreasonably broad construction of the term “carrier aggregation.” During prosecution, the applicant amended each of the independent claims of the ’356 patent limiting their scope to an input RF signal

“employing carrier aggregation.” This narrowing amendment and the accompanying remarks distinguished the claimed invention over U.S. Patent 7,317,894 to Hirose. At the time, a person of ordinary skill would have understood that the term carrier aggregation, as recited in that amendment, meant “*simultaneous operation on multiple carriers that are combined as a single virtual channel to provide higher bandwidth.*” This understanding is supported by the specification, the file history, and extrinsic evidence.

Jeon in view of Xiong fails to disclose the “employing carrier aggregation” limitation. Jeon discloses a dual carrier input signal, not a carrier aggregated input signal. Petitioner does not argue that the limitation is disclosed by combining Jeon with Xiong. Recognizing this deficiency in Jeon’s disclosure, Petitioner proposes an unreasonably broad construction—“simultaneous operation on multiple carriers”—in order to argue that the ’356 Patent claims read on Jeon’s input signal. Petitioner’s proposed construction is so broad, however, that it violates the doctrine of prosecution disclaimer by attempting to recapture the subject matter that was disclaimed in order to overcome Hirose.

Furthermore, Petitioner’s proposed construction reads out the term “aggregation.” This failure to construe the term to indicate an “aggregation” of carriers improperly renders the term superfluous in the claims. Petitioner also fails to adequately explain how a person of ordinary skill understood that carriers are

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