

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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**Intel Corporation**  
Petitioner

v.

**Qualcomm Incorporated**  
Patent Owner

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Case IPR2019-00047  
Patent 9,154,356

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

## TABLE OF CONTENTS

	Page
I. INTRODUCTION .....	1
II. THE ALLEGED GROUNDS OF UNPATENTABILITY .....	3
III. THE '356 PATENT AND ITS PROSECUTION HISTORY .....	4
A. Overview of the '356 Patent.....	4
B. Prosecution History of the '356 Patent .....	8
IV. CLAIM CONSTRUCTION .....	11
A. “carrier aggregation” .....	11
V. OVERVIEW OF THE CITED REFERENCES.....	31
A. U.S. Patent Pub. No. 2011/0217945 (“Uehara”).....	31
B. Digitally-Controlled RF Passive Attenuator in 65 nm CMOS for Mobile TV Tuner ICs (“Youssef”).....	34
C. Resistive-Feedback CMOS Low-Noise Amplifiers for Multiband Applications (“Perumana”) .....	37
D. 3GPP TR 36.912 V9.1.0 (2009-12) (“the Feasibility Study”).....	38
VI. GROUND 1: UEHARA DOES NOT ANTICIPATE CLAIMS 1, 11, 17, OR 18.....	39
A. Claim 1 .....	39
B. Claims 11, 17, and 18.....	48
VII. GROUND 2: UEHARA AND PERUMANA DO NOT RENDER OBVIOUS CLAIMS 7 OR 8.....	48
VIII. GROUND 3: UEHARA AND YOUSSEF DO NOT RENDER OBVIOUS CLAIM 10.....	50
IX. GROUND 4: UEHARA AND THE FEASIBILITY STUDY DO NOT RENDER OBVIOUS CLAIMS 1, 11, 17, OR 18 .....	52
A. Petitioner Fails To Establish That The Feasibility Study Is Analogous Art .....	52
B. Petitioner Fails To Sufficiently Articulate A Motivation To Combine .....	53

**TABLE OF CONTENTS**  
(continued)

	<b>Page</b>
C. A Person Of Ordinary Skill Would Not Have Been Motivated To Select And Combine Uehara And The Feasibility Study .....	54
X. GROUND 5: UEHARA, THE FEASIBILITY STUDY, AND PERUMANA DO NOT RENDER OBVIOUS CLAIMS 7 OR 8 .....	56
XI. GROUND 6: UEHARA , THE FEASIBILITY STUDY, AND YOUSSEF DO NOT RENDER OBVIOUS CLAIM 10.....	57
XII. CONCLUSION.....	57

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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 are based on the Uehara reference. However, among other defects in Petitioner’s grounds, Uehara fails to disclose the two “independently enabled or disabled” amplifier stages limitation recited by the challenged claims. The two stages identified by Petitioner are not independent. They are configured in a dependent fashion where the second stage is only enabled or disabled depending on the output configuration of the first stage. Petitioner does not identify any other reference for use in a combination to overcome Uehara’s failure to disclose this limitation. This deficiency is dispositive of each ground in this IPR. Accordingly, the patentability of the challenged claims of the ’356 Patent should be confirmed.

As an additional independent reason to confirm 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.

Uehara fails to disclose the “employing carrier aggregation” limitation. Uehara discloses a dual carrier input signal, not a carrier aggregated input signal. Recognizing this deficiency in Uehara’s disclosure, Petitioner proposes an unreasonably broad construction—“simultaneous operation on multiple carriers”—in order to argue that the ’356 Patent claims read on Uehara’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 “aggregated” under its proposed construction. In fact, Petitioner’s own inventors described carrier aggregation as referring to an “aggregation of multiple smaller

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