UNITED STATES PATENT AND TRADEMARK OFFICE

_____

BEFORE THE PATENT TRIAL AND APPEAL BOARD

_____

Intel Corporation
Petitioner

v.

Qualcomm Incorporated
Patent Owner

_____

Case IPR2018-01154
Patent 8,698,558

_____

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

TABLE OF CONTENTS

Pursuant to the Board's Decision – Institution of *Inter Partes* Review (Paper 9) ("Institution Decision"), entered February 6, 2019 – 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. 8,698,558 (the "'558 Patent") filed by Intel Corporation ("Intel" or "Petitioner").

I.   INTRODUCTION

Petitioner raises three grounds against six claims, but all of those challenges hinge on an anticipation ground directed to the only independent claim challenged, claim 15. Petitioner's anticipation analysis on claim 15 fails because the cited prior art does not disclose a "*switcher adding an offset to the input current* to generate a larger supply current via the inductor than without the offset," as recited in the claim. The other challenged claims depend from claim 15, including Grounds II and III directed towards claims 16 and 19, respectively, and thus these Grounds also fail.

Petitioner's anticipation analysis relies on combining the teachings of two different embodiments from the cited reference Kwak. These embodiments, illustrated in Figures 5 and 6 of Kwak, however, include different circuit components that fundamentally alter the function of the embodiments. Contrary to established Federal Circuit precedent, Petitioner makes no attempt to explain how a person of ordinary skill in the art ("POSA") would at once envisage the claimed

arrangement or combination of the different embodiments. Accordingly, Petitioner fails to meet its burden of proof.

Moreover, Petitioner mathematically erred in its analysis attempting to prove that Kwak discloses a "switcher adding an offset to the input current to generate a larger supply current via the inductor than without the offset," as required by claim 15. When summing two alternating current ("AC") signals, Petitioner failed to account for the phase alignment of the AC signals. Petitioner's conclusion rests on the faulty premise that only the magnitude of the AC signals need be considered to determine whether the supply current via the inductor is increased. This is wrong.

Compounding its error, Petitioner completely disregards the test results presented in Figure 11 of Kwak, which show that the disclosed system does *not* "generate a larger supply current via the inductor than without the offset," as claim 15 requires. Figure 11 instead demonstrates that Kwak's results are attributable to aligning the phases of AC signals, *not* by increasing the magnitude of the supply current via the inductor. For at least these reasons, the Board should confirm the validity of claims 15-20 of the '558 Patent.

II. THE '558 PATENT AND ITS PROSECUTION HISTORY

A. Overview of the '558 Patent

The '558 Patent describes and claims inventions directed to managing the power associated with transmitting radio frequency ("RF") signals from a mobile

device. Ex. 1201 at 1:5-31. The '558 Patent teaches improvements over known power management schemes by employing a novel form of "envelope tracking." *Id.* at Title; 3:57-60. The '558 Patent's power management scheme achieves substantial power savings in mobile device transmitters, thereby extending a device's battery life. *Id.* at 3:46-48.

In wireless communication systems, mobile devices communicate by transmitting encoded data signals. Ex. 1201 at 1:11-17. Before transmitting through a communications channel, such encoded data signals are first conditioned to generate RF output signals. *Id.* Such conditioning typically includes an amplification step performed by a power amplifier (a "PA") that provides a high transmit power. *Id.* at 1:21-26. A desirable characteristic of mobile device power amplifiers is an ability to provide high transmit power with high power-added efficiency ("PAE") and good performance even when the device's battery is low. *Id.*

Before the priority date of the '558 Patent, typical PAs in a mobile device were supplied with a constant power supply voltage, regardless of the PA's output power. The '558 Patent illustrates this in Figure 2A, below with annotation:

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS
Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS
Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS
Sync your system to PACER to automate legal marketing.

WHAT WILL YOU BUILD? | sales@docketalarm.com | 1-866-77-FASTCASE

fastcase®
Smarter legal research.