

**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 IPR2018-01154  
Patent 8,698,558

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**PATENT OWNER'S SUR-REPLY**

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## I. INTRODUCTION

Petitioner's Reply introduces unpersuasive and belated arguments that cannot salvage the shortcomings of the Petition. Petitioner cites to no explicit teachings in Kwak that disclose the claim 15 limitation of a "switcher adding an offset to the input current to generate a larger supply current via the inductor than without the offset." Instead, Petitioner argues, for the first time, that Kwak's Figure 11 somehow proves that Kwak discloses this limitation. But Figure 11 does no such thing, and in fact demonstrates that Kwak's supply current ( $i_d$ ) does not increase as a result of its feedforward path.

Aside from the strained viewing of Figure 11, Petitioner identifies no other disclosure in Kwak that explicitly teaches the above-cited claim 15 limitation. Instead, Petitioner doubles down on its insistence that the equation  $i_o = i_a + i_d$  means that ( $i_d$ ) must increase when ( $i_o$ ) is constant and ( $i_a$ ) decreases. Because Kwak does not explicitly disclose an increase in ( $i_d$ ), Petitioner argues that Kwak's equation means that it *must* disclose an increase in ( $i_d$ ). Petitioner is making an inherency argument without the courtesy of characterizing it as such. But Petitioner's conclusion that ( $i_d$ ) must increase based on this equation does not hold true when working with AC signals. As Petitioner's expert admitted, the AC version of the equation has six variables, not three (three for magnitude and three for phase). In the correct six-variable equation, the magnitude of ( $i_d$ ) may increase, decrease, or

remain the same. Kwak does not provide a POSA with enough information to determine whether  $(i_d)$  increases. Therefore, Petitioner cannot show, as it must for inherency, that the magnitude of  $(i_d)$  *must* increase as a result of the magnitude of  $(i_a)$  decreasing.

Furthermore, Petitioner argues for the first time in its Reply that claim 15 is anticipated based *only* on the embodiment of Figure 5 in Kwak, and not Figure 5 combined with the embodiment of Figure 6. This argument is improperly raised in Petitioner's reply and should not be given any weight. But even if the Board were to consider Petitioner's belated argument, Figure 5 alone fails to disclose the claim 15 limitation "adding an offset to the input current."

Finally, Petitioner's arguments with respect to the selective boost limitation in claim 19 are unpersuasive. To support its flawed claim construction for the claim 19 limitation of "a boost converter operative to receive the first supply voltage and provide a boosted supply voltage having a higher voltage than the first supply voltage, wherein the envelope amplifier operates based on the first supply voltage or the boosted supply voltage," Petitioner mischaracterizes the opinion of District Court Judge Sabraw, twists the testimony of its own expert, Dr. Apsel, and ignores fundamental Federal Circuit case law. The broadest reasonable interpretation of the claim 19 limitation, when properly read in the context of the respective claim as a whole, requires a selective boost. Because Petitioner's argument with respect to

claim 19 is based only on Petitioner's incorrect proposed construction, the Board should confirm the patentability of claim 19 for at least this independent reason.

For at least these reasons, the Board should confirm the patentability of claims 15-20 of the '558 Patent.

## II. INDEPENDENT CLAIM 15 IS NOT ANTICIPATED BY KWAK

Petitioner identifies no teachings in Kwak that explicitly disclose the claim 15 limitation of a “switcher adding an offset to the input current to generate a larger supply current via the inductor than without the offset.” Petitioner's Reply, for the first time, alleges that Figure 11 illustrates an increase in supply current ( $i_d$ ) as a result of the feedforward path. But Petitioner's blown-up and annotated version of Figure 11 does not establish that it is more likely than not that the magnitude of supply current ( $i_d$ ) increased.

Petitioner's remaining evidence depends on mathematical errors to reach a conclusion that Kwak *must* disclose an increase in supply current ( $i_d$ ) when the linear amplifier current ( $i_a$ ) is decreased. But Petitioner's misleading mathematical argument is no more than an argument that Kwak *inherently* discloses an increase in supply current ( $i_d$ ). Inherency requires that Kwak *necessarily* teaches an increase in the magnitude of supply current ( $i_d$ ), but as explained below, there are infinite possibilities for the magnitude of ( $i_d$ ) as a result of a decrease in the magnitude of ( $i_a$ ). Accordingly, Petitioner fails to establish by a preponderance of the evidence

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