## UNITED STATES PATENT AND TRADEMARK OFFICE

## BEFORE THE PATENT TRIAL AND APPEAL BOARD

Intel Corporation Petitioner

v.

Qualcomm Incorporated Patent Owner

U.S. Patent No. 8,698,558 Claims 12-14

Case IPR2018-01152

REPLY DECLARATION OF ALYSSA APSEL, PH.D. ON BEHALF OF PETITIONER



## **TABLE OF CONTENTS**

I.	BACKGROUND			1	
II.	CLAIM CONSTRUCTION			2	
	A.	Pate	Patent Owner's Proposed Construction Is Wrong		
		1.	Patent Owner's Proposed Construction Contradicts The Plain Claim Language		
		2.	Patent Owner's Proposed Construction Would Exclude Disclosed Embodiments	5	
		3.	Patent Owner's Remaining Arguments Have No Merit	7	
III.	GROUNDS			8	
	A.	Patent Owner Concedes That Claims 12 and 14 are Unpatentable		9	
	В.	The Petition Demonstrates Motivation to Combine Chu with Choi 2010		9	
		1.	The Motivation To Combine Chu and Choi 2010 Is Rooted In References Themselves And Common Knowledge	9	
		2.	Petition Explains How To Modify Chu In View Of Choi 2010		
	C.	Patent Owner Is Wrong That Petition Fails To Demonstrate a Motivation to Combine Chu and Choi 2010 with Myers		16	
		1.	Patent Owner Is Wrong That Choi 2010 Teaches Away From "Selective Boost"	17	
		2.	A POSA Would Have Modified Chu and Choi 2010 To Apply Myers' Power Selection Functionality	20	
IV.	AVAILABILITY FOR CROSS-EXAMINATION		24		
V.	RIG	RIGHT TO SUPPLEMENT			
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I, Alyssa Apsel, declare as follows:

### I. BACKGROUND

- 1. I am the same Alyssa Apsel who submitted a prior declaration in this matter, which I understand was filed on June 28, 2018. I am currently the Director of the School of Electrical and Computer Engineering and a professor of electrical and computer engineering at Cornell University in Ithaca, New York. Between September 2016 to June 2018, I was a visiting professor at Imperial College in London, England, where I worked on low power RF interfaces for implantable electronics. My background and qualifications remain as stated in paragraphs 2-14 and Appendix A of that declaration, filed as Exhibit 1003 in this case. My statements in paragraphs 17-19 of my prior declaration regarding my review of U.S. Patent No. 8,698,558 ("the '558 patent") and related materials also remain unchanged, as do my understandings of the relevant legal principles stated in paragraphs 20-31.
- 2. Since my prior declaration, I have reviewed Patent Owner's Preliminary Response of October 17, 2018 ("POPR"), the Board's Decision to Institute of January 16, 2019, the transcript of my deposition taken on March 6, 2019, the Patent Owner's Response of April 15, 2019 ("POR"), the Declaration of Arthur W. Kelley of April 15, 2019 (Ex. 2005), the transcript of Dr. Kelley's



deposition taken on June 21, 2019. (Ex. 1028), and the related district court litigation claim construction order (Ex. 1026).

3. I confirm that everything included in my prior declaration of June 28, 2018, and all of the testimony given during my deposition of March 6, 2019, remain true to the best of my knowledge.

#### II. CLAIM CONSTRUCTION

## A. Patent Owner's Proposed Construction Is Wrong

- 4. Patent Owner contends that the term of claim 13 "based on the first supply voltage or the boosted supply voltage" should be construed such that "the envelope amplifier must be able to operate, selectively, based on either the first supply voltage or the boosted supply voltage (referred to herein as a 'selective boost')." (POR, 9.) In other words, under Patent Owner's construction, an amplifier that received only the first voltage or only the boosted voltage would not meet this limitation. I have been informed and understand that this proposed construction is far from the broadest reasonable construction of "or," is contrary to the plain meaning, and excludes disclosed embodiments, and, therefore, it should be rejected.
  - 1. Patent Owner's Proposed Construction Contradicts The Plain Claim Language
- 5. Claim 13 recites an "envelope amplifier" that "operates based on the first supply voltage *or* the boosted supply voltage." Ex. 1001, 13:13-15. As Dr.



Kelley conceded, the term "or" is a conjunction that identifies two alternatives: this "or" that. (Ex. 1028, 130:10-18 ("Q. I'm asking at the Schoolhouse Rock level, or is a conjunction that joins two alternatives, correct? A. Well, if we're going to import Schoolhouse Rock into the deposition, in that context, yes, it is.").) Under its plain English meaning, the requirement for an amplifier that operates based on "the first supply voltage *or* the boosted supply voltage" is met by an amplifier that operates based on either one of those alternative alone. (*Id.* at 130:19-131:2 ("Q. ... If I said I would like coffee *or* tea, you could give me tea and that would meet my requirement, right? A. In that hypothetical abstract outside the bounds of the '558, sure.").) Patent Owner has identified no sound basis to deviate from that broad plain meaning.

6. To the contrary, Patent Owner concedes that the common meaning of "or" in patent claims is to recite alternatives. *See*, POR, 23 ("The use of 'or' is sometimes an acceptable mechanism for claiming alternatives such that only one of the limitations need be found in the prior art to support anticipation." I have been informed and understand that this is exactly how Hon. Dana M. Sabraw construed "or" in the related district court litigation on the '558 patent. (Ex. 1026 [Claim Constr. Order] at 5-6 (holding the limitation "a source receiving the boosted supply voltage *or* the first supply voltage" in claim 6 does not require "selective boost").)



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