

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

U.S. Patent No. 8,698,558  
Claims 15-20

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Case IPR2018-01154

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

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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 1203 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 February 6, 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. 2002), the transcript of Dr. Kelley’s

deposition taken on June 21, 2019 (Ex. 1229), and the related district court litigation claim construction order (Ex. 1227).

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 19 “the envelope amplifier operates 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, 11, 35.) In other words, under Patent Owner’s construction, an amplifier that received only the first voltage or only the boosted voltage would not satisfy 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 19 recites an “envelope amplifier” that “operates based on the first supply voltage *or* the boosted supply voltage.” Ex. 1201, 14:25-27. As Dr.

Kelley conceded at his deposition, the term “or” is a conjunction that identifies two alternatives: this “or” that. (Ex. 1229, 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 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 alternatives 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, 39 (“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. 1227 [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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