

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO. LTD. AND
SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioners,

v.

GUI GLOBAL PRODUCTS, LTD.,
Patent Owner.

Case IPR2021-00337
Patent 10,562,077 B2

DECLARATION OF MARK N. HORENSTEIN, PH.D.

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I. INTRODUCTION AND QUALIFICATION

1. My name is Mark N. Horenstein. I have been retained by counsel for GUI Global Products, Ltd. (“Gwee” or “Patent Owner”) as a technical expert in this case. I have been asked by counsel for the Patent Owner to provide my opinions with respect to the petition by Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc. (collectively “Samsung” or “Petitioner”) in Inter Partes Review 2021-00337 concerning U.S. Patent No. 10,562,077 (“the ‘077 Patent”). In particular, I have been asked to review and comment upon the opinions in Ex. 1002, the “Declaration of Dr. Sayfe Kiaei,” dated December 29, 2020 (“Kiaei Declaration” or “Kiaei”).

2. I am currently Professor Emeritus of Electrical Engineering in the Department of Electrical and Computer Engineering at Boston University. From 1979 – 2020, I was a faculty member in that department, holding the rank of Full Professor from 2000 to 2020. I have held various other positions at Boston University, including the Associate Dean for Graduate Programs and Research for the College of Engineering (1999-2007), Associate Chair for Undergraduate Programs for the ECE Department (1990-1998 and 2012-2015), and appointments at the ranks of Associate Professor (1985-2000) and Assistant Professor (1979-1985).

3. I have a Ph.D. in Electrical Engineering from the Massachusetts Institute of Technology (MIT), which I earned in 1978 while working in the Electric Power Systems Engineering Laboratory. I also hold an M.S. degree in Electrical Engineering from the University of California at Berkeley (1975), and an B.S. degree in Electrical Engineering from MIT (1973).

4. I am a Life Fellow of the Institute of Electrical and Electronic Engineers (IEEE) and have been a Registered Professional Engineer (Electrical) in the Commonwealth of Massachusetts. I hold certification from the National Association of Radio and Telecommunications Engineers.

5. I am the author of two textbooks: *Microelectronic Circuits and Devices, 2nd Ed.* (Prentice-Hall 1996) and *Design Concepts for Engineers, 5th Ed.* (Pearson Education, 2016). I have authored book chapters in two reference books related to applied electromagnetics. I have authored or co-authored over 70 journal articles on a variety of topics in my fields of expertise, and approximately 125 conference papers. I have advised various Ph.D. students performing research in my fields of expertise; these students have gone on to hold positions in industry and academia.

6. My course teaching repertoire over the past 37 years has encompassed about ten different courses, each of which I have taught numerous times to over 4000 undergraduate and graduate students. The subject matter of these courses has

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