UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD., Petitioner,

v.

NETLIST, INC., Patent Owner.

Case No. IPR2022-00996 Patent No. 11,016,918

DECLARATION OF DR. WILLIAM HENRY MANGIONE-SMITH

I declare that all statements made here on my own knowledge are true and that all statements made contain information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 or Title 18 of the United States Code.

Date: $\frac{3/28/25}{}$

Dr. William Henry Mangione-Smith

DECLARATION OF DR. WILLIAM HENRY MANGIONE-SMITH, PH.D

I, William Henry Mangione-Smith, do hereby declare as follows:

I. INTRODUCTION

- 1. I have been retained on behalf of Netlist, Inc. ("Patent Owner") as an expert to evaluate certain technical aspects of U.S. Patent No. 11,016,918 ("the '918 patent"), and to provide certain related opinions. I am personally knowledgeable about the matters stated herein and am competent to make this declaration.
- 2. I understand that Patent Owner will submit this declaration ("Declaration") in connection with IPR2022-00996 ("Proceeding"), which I have been informed is an inter partes review (IPR) proceeding before the Patent Trial and Appeal Board challenging the patentability of claims 1-30 of the '918 patent.
- 3. I receive compensation at my normal consulting rate for my time working on this matter, plus expenses. I have no financial interest in Patent Owner or in the patents involved in this litigation, and my compensation is not dependent on the outcome of this litigation. The opinions I present are due to my own judgment.
- 4. All "EX10XX" cites herein are to exhibits I understand were submitted by Petitioner and all "EX20XX" cites herein are to exhibits I understand have or will be submitted by the Patent Owner in this Proceeding. All "Appendix _" cites followed by a letter are to appendices to this Declaration. All citations to "Section



XX" are internal citations to the sections of this Declaration. All citations to "Paragraph XX" are internal citations to the paragraphs of this Declaration.

II. BACKGROUND AND QUALIFICATIONS

- 5. I received my Bachelor of Science in Engineering in 1987 and my Master of Science in Engineering in 1992, both from the University of Michigan. I also received my Doctorate in Engineering from the University of Michigan.
- I am a Member of the Association for Computing Machinery (ACM) 6. and the Institute of Electrical and Electronics Engineers (IEEE). I've served as the Program Chair and the General Chair for the 26th and 36th International Symposiums on Microarchitecture, respectively. I have served as the Associate Editor of IEEE Transactions on Computers, the Associate Editor of ACM Transactions on Embedded Computing Systems, and the Associate Editor of IEEE Computer. I have served on various Program Committees, including ISCA, Network Workshop, Complexity-Effective Design, Processors and Workshop I have published numerous journal articles on Mediaprocessors and DSP. computing, given 49 conference presentations, and authored several book chapters and magazine articles on such issues. I am listed as an inventor on 121 patents nearly all of which are related to microprocessor and memory technology, and am listed on more than 200 pending patent applications.



7. I have an extensive background working with electronics and computer patents. I currently work as a consultant on intellectual property matters, including reviewing and valuing patents and patent portfolios for Phase Two LLC, and I have held this position since 2009. Prior to that, from 2005-2008, I was employed at Intellectual Ventures, working on patent valuation, with a focus on computer patents, and outbound licensing in consumer electronics, among other focuses. During my time at Intellectual Ventures the company developed intellectual property that resulted in several successful startups. I was not involved in any of the litigation while I was at Intellectual Ventures, focusing instead on developing new ideas. From 1995-2005, I worked as an Assistant and an Associate Professor in electrical engineering at the University of California, Los Angeles. From 1993-1995, I worked as a Systems Architect for the Motorola Wireless Data Group, where I worked on designing and developing the microprocessor for an early smartphone. From 1991-1992, I worked with Motorola Corporate research, focusing on parallel computer performance monitoring and low-power processor architecture. Finally, from 1986-1987, I worked as a Software Architect at Chrysler Corporation, where I operated supercomputers related to designing, testing, and simulating car designs. I have been accepted by various courts as an expert in the fields of computer engineering, including computer architecture and microarchitecture.



8. A current curriculum vitae is attached as Appendix A and includes the above listed credentials, additional background and information, and my experience as an expert witness from the previous four years.

III. MATERIALS CONSIDERED

- 9. I have considered information from various sources in forming my opinions. Besides drawing from my decades of experience in the computer industry, I have reviewed the Petition and supporting declaration from Dr. Wolfe, the '918 patent and its file history, the prior art discussed below, Dr. Wolfe's deposition transcript, along with the other documents and references cited here.
- 10. I have also reviewed the declaration submitted by Dr. Khatri in support of the preliminary patent owner response submitted in this Proceeding. Because of significant overlaps with points that I make throughout my report, in some instances I have adopt his positions as my own.

IV. LEGAL STANDARDS

- 11. I have relied on instructions from counsel as to the applicable legal standards to use in arriving at my opinions in this Declaration. I am relying only on instructions from Netlist's attorneys for these legal standards.
- 12. I understand that a patent claim is unpatentable and invalid if the subject matter of the claim as a whole would have been obvious to a person of ordinary skill in the art of the claimed subject matter, as of the time of the invention at issue.



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