UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROCHIP TECHNOLOGY INCORPORATED; AND
MICROSEMI CORPORATION,

Petitioners,

v.

BELL SEMICONDUCTOR, LLC,

Patent Owner.

Case No. IPR2020-00191
U.S. Patent No. 7,221,173

DECLARATION OF DR. SAILESH MERCHANT IN SUPPORT OF PATENT OWNER'S PRELIMINARY RESPONSE UNDER 35 U.S.C. § 313 AND 37 C.F.R. § 42.107

I, Dr. Sailesh Merchant, hereby declare as follows:

I. INTRODUCTION

1. I am over the age of eighteen (18) years and otherwise competent to make this declaration.

2. I am Chief Technology Officer of Bell Semiconductor, LLC ("Bell Semic").

3. I make this declaration based on my personal knowledge.

4. Bell Semic is the owner of U.S. Patent No. 7,221,173 (the "'173 Patent"). Bell Semic purchased the '173 Patent from Avago Technologies General IP (Singapore) PTE. Ltd. ("Avago"), which acquired the '173 Patent from the original assignee, Agere Systems, Inc., through a series of mergers, acquisitions, and transfers.

5. From 1999-2007, at the time of the invention, I was a Distinguished Member of Technical Staff at Agere Systems. During my time I:

- Supported the design of novel test chips to address chip/package thermo-mechanical and metallurgical integrity issues of high-performance communications devices.
- Supported the development of novel bond pad designs with underlying circuitry for products with geometries below 90nm;

attained a reduction in chip sizes of between 4% and 35% and significant cost advantage

- Participated in the qualification of copper/low-k and copper/FSG processes, enabling the industry's first 130nm copper/low-k (Coral) foundry product

6. I am a named inventor or co-inventor on approximately 135 U.S. patents. Further, I am a co-inventor on U.S. Patent No. 7,221,173 ("'173 Patent") (Ex. 1001).

7. My co-inventors and I came up with the ideas disclosed in the Invention Submission form produced as Exhibit 2001 before May 10, 2004. Specifically, we were trying to determine how to avoid issues associated with probe marks and their impact on solder ball adhesion. The solution we devised is outlined in Exhibit 2001. Once our idea was fully developed, we memorialized it by setting forth our solutions in the Agere Invention Submission form (Exhibit 2001).

8. I have reviewed the Invention Submission submitted as Exhibit 2001 in this proceeding. To the best of my knowledge, Exhibit 2001 is a true and accurate copy of the invention submission submitted by my co-inventors and I that is the basis of the '173 Patent.

9. Exhibit 2001 is stamped with a date of May 10, 2004. I understand that to be the date the in-house attorney, on behalf of the Agere Patent Committee, received the invention submission submitted by me and my co-inventors. Further, I recall that Fred M. Romano was assigned as the in-house Agere attorney responsible for this application, as indicated by the initials "FMR" on the stamp in Exhibit 2001.

10. Based on my recollection, the Agere Patent Committee met once a month, sometimes once every other month.

11. If the Agere Patent Committee approved an engineer's idea, that invention submission would be transmitted to a lawyer, either inside the company or external counsel, to draft a patent application along with any other pertinent information.

12. Based on my experience with numerous patent applications at Agere, the patent application process was iterative, with drafts and revisions routinely exchanged between inventors and the lawyers drafting the application before the application was finalized and filed. Sometimes, when circumstances warranted, engineers/inventors would also participate in meetings with counsel drafting an application to ensure the attorney understood the invention's scope and to answer any questions about the invention.

13. It was, and remains, my general practice to review draft patent applications on which I am a named co-inventor before the applications were filed with the Patent Office and to work interactively with prosecution counsel. While I have been unable to locate any specific documents or drafts pertaining to the '173 Patent, I have no doubt that I reviewed and commented on draft applications stemming from Exhibit 2001 between May and September 2004.

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I hereby declare that all statements made are of my own knowledge are true and that all statements made on information and belief are believed to be true. I further declare 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 of the Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this proceeding.

March 19th, 2021

Dr. Sailesh Merchant