

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTEL CORPORATION,

Petitioner

v.

FG SRC LLC,

Patent Owner

CASE NO.: 2020-01449

PATENT NO. 7,149,867

SUPPLEMENTAL DECLARATION OF RAJESH K. GUPTA, PH.D.

Mail Stop **PATENT BOARD**
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

I, Dr. Rajesh K. Gupta, declare as follows:

1. I am currently Professor and Qualcomm Endowed Chair at the Department of Computer Science and Engineering at University of California, San Diego (“UCSD”). I have served in that role since 2002. My resume and a detailed description of my work on the MORPH/AMRM project can be found in my declaration dated August 10, 2020, which was filed in the above-captioned case as Exhibit 1010.

2. I make this declaration based on my personal knowledge. I have not been compensated for my time or efforts in providing this testimony.

Publications of MORPH/AMRM Papers

3. Based on my personal knowledge as a member of the Institute of Electrical and Electronics Engineers, Inc. (“IEEE”) and the IEEE Computer Society, as well as an organizer, frequent attendee, and presenter at many such IEEE conferences since at least 1996, the IEEE and the IEEE Computer Society sponsor many technical meetings each year. Those conferences were (and are) considered premier conferences in the computer science field and were attended by leading experts and skilled practitioners in that field. Papers presented at these conferences were published by the IEEE as part of conference proceedings that were distributed to attendees in hard copy and then online. Once conference proceedings were published, in print and/or online, the public had access to print versions in libraries, and subscribing members had full electronic access to individual conference articles and the online abstracts and tables of contents were available for free to anyone.

4. In the first half of 1996, Dr. Andrew A. Chien and I coauthored a paper entitled *MORPH: A System Architecture for Robust Higher Performance Using Customization*. We presented this paper at *Frontiers '96, The Sixth Symposium on the Frontiers of Massively Parallel Computing*. (“Frontiers '96

Conference”). The Frontiers '96 Conference was sponsored by the IEEE, specifically the IEEE Computer Society, and held in Annapolis, Maryland between October 27-31, 1996.

5. I confirm based on my personal knowledge that this paper was submitted to the conference organizers before the Frontiers '96 Conference and that this paper was included in the IEEE printed publication that was distributed to the conference attendees during the conference. The paper that I co-authored was published as pp. 336-345 of the Frontiers '96 Conference Proceedings by the IEEE in 1996. As with other IEEE conferences, this paper was made available in 1996 to conference attendees at the Frontiers '96 Conference no later than the last day of that conference. My recollection is also consistent with my overall personal experience in attending conferences sponsored by the IEEE and the general practice in the scientific and engineering community during this period. The conference organizers generally reviewed submitted papers to determine who would be invited to speak at the conference. The conference materials were typically printed in advance so they could be distributed at the conference, as it would have been impractical to mail the conference presentations to all the conference participants after the conference. I attended the Frontiers '96 Conference and received a printed copy of these published papers no later than the last day of that conference. A copy of this paper from my personal files is attached to this declaration as Appendix G1001.

6. The purpose, scope, nature of presentations, and intended audience of the Frontiers '96 Conference are described in the front matter to the printed proceedings, available from the IEEE Computer Society Digital Library at <https://www.computer.org/csdl/proceedings/frontiers/1996/12OmNCaLEmP>, attached as Appendix G1002. These materials refresh and confirm my recollections of the Frontiers '96 Conference.

7. In 1997, after I had joined the faculty at University of California, Irvine (“UCI”), I co-authored a paper entitled *Architectural Adaptation for Application-Specific Locality Optimizations* with Xingbin Zhang, Ali Dasdan, and Dr. Chien (all at University of Illinois, Urbana-Champaign (“UIUC”) at the time) and Martin Schulz (at the Institut für Informatik, Technische Universität München). This paper was presented at the *International Conference on Computer Design - VLSI in Computers and Processors* (“VLSI ’97 Conference”). The VLSI ’97 Conference was sponsored by the IEEE, specifically the IEEE Computer Society Technical Committee on Design Automation and the IEEE Circuits and Systems Society, and was held in Austin, Texas between October 12-15, 1997.

8. I confirm based on my personal knowledge that this paper was submitted to the conference organizers before the VLSI ’97 Conference and that this paper was included in the IEEE printed publication that was distributed to the conference attendees. This paper that I co-authored was published as pp. 150-156 of the VLSI ’97 Conference Proceedings by the IEEE in 1997. The copyright page of the VLSI ’97 Conference Proceedings contains the following statement: “The papers in this book comprise the proceedings of the meeting mentioned on the cover and title page. They reflect the author’s opinions and, in the interests of timely dissemination, are published as presented and without change.” See Exhibit 1003 at 2; see also Exhibit 1028, Appendix EDM01 at 4. This is consistent with my overall personal experience in attending conferences sponsored by the IEEE Computer Society and the general practice in the scientific and engineering community during this period. The conference organizers generally reviewed submitted papers to determine who would be invited to speak at the conference. The conference materials were typically printed in advance so they could be distributed at the conference, as it would have been impractical to mail the conference presentations to all the conference participants.

9. The purpose, scope, nature of presentations, and intended audience of the VLSI '97 Conference are described in the front matter to the printed proceedings, available from the IEEE Computer Society Digital Library at <https://www.computer.org/csdl/proceedings/iccd/1997/12OmNB8Cj8h>, attached as Appendix G1003. These materials refresh and confirm my recollections of the purpose, scope, nature of presentations, and intended audience of the industry conferences sponsored by the IEEE and the IEEE Computer Society during this time frame.

10. In 2000, I authored a research paper entitled *Architectural Adaptation in AMRM Machines*. I presented this paper at the *Proceedings of the IEEE Computer Society Workshop on VLSI 2000* (“VLSI '00 Workshop”).¹ The VLSI '00 Workshop was sponsored by the IEEE, specifically the IEEE Computer Society Technical Committee on VLSI, and held in Orlando, Florida between April 27 - 28, 2000.

11. I confirm based on my personal knowledge that this paper was submitted to the conference organizers before the VLSI '00 Workshop and that this paper was included in the IEEE printed publication that was distributed to the conference attendees during the conference. The paper that I authored was published as pp. 75-79 of the VLSI '00 Workshop Proceedings by the IEEE in 2000. As with other IEEE conferences, this paper was made available to the conference attendees at the VLSI '00 Workshop no later than the last day of that conference. My recollection is also consistent with my overall personal experience in attending conferences sponsored by the IEEE Computer Society and the general practice in the scientific and engineering community during this period. The conference organizers generally reviewed submitted papers to determine who

¹ I have reviewed my prior declaration (Ex. 1010) and confirm that the reference to “in 1997” in paragraph 25 was a typographical error and should read “in 2000.”

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