EXHIBIT 5-1



UNITED STATES DISTRICT COURT WESTERN DISTRICT OF TEXAS WACO DIVISION

PARKERVISION, INC.,

Plaintiff,

v.

INTEL CORPORATION,

Defendant.

Case No. 6:20-cv-00562

JURY TRIAL DEMANDED

DECLARATION OF DR. MICHAEL STEER



I have personal knowledge of the facts set forth in this Declaration and, if called to testify as a witness, would testify under oath:

I. BACKGROUND

- 1. I have been retained as an expert on behalf of ParkerVision, Inc. ("ParkerVision") in the above-captioned litigation action against Intel Corporation ("Intel").
- 2. I have been asked by ParkerVision to provide my opinions regarding U.S. Patent Nos. 6,049,706 and 7,050,508 ("'706 patent" and "'508 patent," respectively). In particular, I have been asked to provide my opinions on certain technical aspects relating to the '706 and '508 patents, and indefiniteness under 35 U.S.C. § 112.
- 3. I am currently the Lampe Distinguished Professor of Electrical and Computer Engineering at North Carolina State University.
- 4. I received my Bachelor of Engineering with Honors (B.E. Hons) and Ph.D. in Electrical Engineering from the University of Queensland, Brisbane, Australia, in 1976 and 1983 respectively.
- 5. I was a pioneer in the modeling and simulation of nonlinear radio frequency and microwave circuits. To put this in perspective, the first commercial cellular phone became available in 1983, and in that same year, I began teaching classes in radio frequency design. Specifically, I joined the Electrical Engineering Department at North Carolina State University, Raleigh, North Carolina, as a Visiting Assistant Professor in August 1983. I became an Assistant Professor in 1986 when the department was renamed the Department of Electrical and Computer Engineering. I have been promoted throughout the years, first becoming an Associate Professor in 1991, a Professor in 1996, a Named Professor in 2005, and a Distinguished Professor in 2010.



- 6. During the 1990s, I began working very closely with the U.S. Department of Defense, and in particular with the U.S. Army, on radio frequency communications and advanced radio frequency circuits. Between 1996 and 1998, I also worked as a consultant for Zeevo, Inc., a Silicon Valley-based provider of semiconductor and software solutions for wireless communications.
- 7. In 1999, I moved to the United Kingdom to become Professor and Director of the Institute of Microwaves and Photonics at the University of Leeds, one of the largest university-based academic radio frequency research groups in Europe. I held the Chair in Microwave and Millimetrewave Electronics. I also continued my work with the U.S. Army and worked with the European Office of the U.S. Army Research Office. I returned to the United States in 2000, resuming the position of Professor of Electrical and Computer Engineering at North Carolina State University.
- 8. Further details on various aspects of my professional experience and qualifications can be found in my curriculum vitae, which is attached hereto.
- 9. Based on my experience in the wireless communications industry, I have a detailed understanding of radio frequency circuit design, including the radio frequency front end of cellular phones.

II. RELEVANT LEGAL PRINCIPLES

A. Level of Ordinary Skill in the Art

10. I have been informed and understand that claims are construed from the perspective of a person of ordinary skill in the art ("POSITA") at the time of the claimed invention.



- 11. In my opinion, one of ordinary skill with respect to the '706 and '508 patents would have (i) a Bachelor of Science degree in electrical or computer engineering (or a related academic field), and at least two (2) additional years of work experience in the design and development of radio frequency circuits and/or systems, or (ii) at least five (5) years of work experience and training in the design and development of radio frequency circuits and/or systems.
- 12. In view of my qualifications, experience, and understanding of the subject matter of the invention, I believe that I meet the above-mentioned criteria and consider myself a person with at least ordinary skill in the art pertaining to the '706 and '508 patents.

B. Legal Standard for Indefiniteness

13. I understand that, under 35 U.S.C, patent claims must "particularly point out and distinctly claim . . . the subject matter which the applicant regards as his invention." See § 112 ¶ 2. I understand that the Supreme Court has held that a claim term is indefinite only if "read in light of the specification delineating the patent, and the prosecution history, fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014).

III. OPINIONS

A. '706 Patent

14. I have reviewed the disclosure of the '706 patent, including the prosecution history, specifications, drawings, and claims.



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