

PETITIONER'S EVIDENCE - DECLARATION OF
MATTHEW B. SHOEMAKE

I, Matthew B. Shoemake, declare under penalty of perjury as follows:

I. INTRODUCTION

1. I have twenty-five years of experience in a variety of technologies and industries, as well as standards, related to digital communications and wireless networks.

2. I make this declaration in support of Petitioner Hewlett Packard Enterprise Company's ("HPE") Petition for *Inter Partes* Review of U.S. Patent No. 8,155,012 ("012 patent") before the United States Patent and Trademark Office. I make this declaration of my own personal knowledge.

II. QUALIFICATIONS

3. I am currently the CEO of Peritum LLC, which provides consulting and expert engineering services relating to electrical engineering, communication systems, information theory, and standards. From 2008 to 2018, I was the CEO of Biscotti Inc., which designs Wi-Fi cameras and services for the home and office.

4. I graduated *magna cum laude* from Texas A&M University with Bachelor's Degrees in Electrical Engineering and Computer Science. I also have a Master's Degree and a Ph.D. in Electrical Engineering from Cornell University.

5. I have been a member of IEEE since 1991. I participated in the IEEE 802.11 standards development process between 1998 and 2004, including, but not

limited to, through my participation in the IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, IEEE 802.11e, IEEE 802.11i and IEEE 802.11n standards development processes. I also made numerous presentations to the participants in the groups that developed the IEEE 802.11b, 802.11g and 802.11n amendments. Based on those submissions, technologies of which I am an inventor were ultimately adopted into the IEEE 802.11b and 802.11g amendments. I was a voting member of the IEEE 802.11 Working Group during critical votes that were taken during the 802.11a, b, g, e, i, and n standards development processes. I have continued to actively monitor the 802.11 development process through the years and periodically attend meetings today.

6. In September of 1999, I organized and hosted the IEEE 802.11 Working Group meeting in Santa Rosa, California, the meeting at which IEEE 802.11a and IEEE 802.11b were ratified. And in January of 2001, I organized and hosted the IEEE 802.11 Working Group meeting in Dallas, Texas.

7. Having heavily participated in the IEEE 802.11b standardization process, I was elected by the membership of the 802.11 Working Group to chair a Study Group to develop a high rate extension to the IEEE 802.11b amendment, which ultimately became the IEEE 802.11g amendment. This Study Group evolved into a Task Group (known as Task Group G, or TGg), which I also chaired.

8. I am familiar with IEEE 802.3 and Ethernet in general. I am familiar generally with the 802.3 CSMA/CD MAC and channel access technique, history of physical layer speed increases, frame structure cabling, distance capabilities, power over Ethernet and media-independent interface (MII). I have developed products that use 802.3, including 802.11 access points, wireless USB docking stations, and Wi-Fi cameras.

9. Through my education and experience described above, I have interacted with and become personally familiar with the IEEE and its procedure in distributing or otherwise making available its standards and their drafts to the public.

III. DISTRIBUTION OF THE ADOPTED IEEE 802.3 STANDARDS

10. The primary purpose of the IEEE as a standards body is to promote adoption of its adopted IEEE standards by the industry, thereby encouraging companies in the industry to make IEEE-standards-compliant products to promote interoperability. To that end, the IEEE distributed its adopted IEEE 802.3 standards as widely as possible. Keeping the IEEE 802.3 standards confidential, or otherwise restricting access to the standards, would have stymied, and been antithetical to the primary goals of the IEEE standards body. Furthermore, IEEE members and others, including third-parties such as device manufacturers that use and implement IEEE technologies in their products, rely on the IEEE standards

development process to produce standards-compliant products that will interoperate with any other manufacturers' standards-compliant products.

11. I first attended an IEEE 802.3 meeting in first quarter of 1998. At that time, when an IEEE 802.3 standard was ultimately adopted, it was distributed to interested IEEE members in a number of ways. First, the adopted IEEE 802.3 standards (and often draft standards for balloting) were either attached to emails sent to the IEEE members, or put on FTP/HTTP servers for the members to download. In the latter case, the IEEE would send emails to the members containing the address of the FTP/HTTP server. I received such emails prior to April 1998 during my early involvement in IEEE 802.3. Second, the adopted IEEE 802.3 standards were stored and available on CD-ROMs or other disks, which were distributed at the IEEE meetings. I attended an IEEE 802.3 meeting in December 1998 and received a CD containing a collection of operative IEEE 802 published standards as of November 1998. Third, non-members could purchase the adopted IEEE 802.3 standards on the IEEE website. I personally purchased other IEEE 802 standards from the website in 1997 and 1999.

12. Furthermore, libraries commonly purchased the adopted IEEE 802.3 standards from the IEEE. Ex. 1022 (IEEE International Standard ISO/IEC 802-3: 1993) includes the text "Fourth Edition: 1993-07-08" and bears a reading "SPECIFICATION August 5, 1993 LINDA HALL LIBRARY" on its face

(Ex.1022 at 2). I have personally seen stamps like this on physical copies of IEEE standards at the libraries of Cornell University, Southern Methodist University, and University of Texas at Dallas. Consistent with my experience and conversations with librarians at Southern Methodist University and declarations I have read from librarians at University of Texas at Dallas and Cornell University, these stamps are typically the date the library received the standard and made it available for viewing or check-out by the public.

13. When an IEEE standard was voted on and adopted, the standards were made available to the public via at least the above mechanisms. Any person interested and ordinarily skilled in IEEE standards or networking/computing technology generally, exercising reasonable diligence, could locate adopted standards at latest by January 1998, and in many cases well before my formal involvement in IEEE 802.3.

14. For example, **Exhibit 1** to this declaration is a collection of true and correct printouts of the annual subscriptions webpage from 1997 (<https://web.archive.org/web/19970529095515/http://standards.ieee.org:80/catalog/subscrip.html#subscrip>) for purchasing the IEEE 802 standards, from which I have personally purchased various IEEE Standards.

15. **Exhibit 2** to this declaration is a catalog of all the standards available for purchase from the IEEE as of May 29, 1997

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