UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MOTOROLA MOBILITY LLC Petitioner

v.

UNILOC 2017 LLC Patent Owner

IPR Case No. IPR2020-00038 U.S. Patent No. 6,868,079

DECLARATION OF ZHI DING, PH.D. IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW UNDER 35 U.S.C. § 311 *ET SEQ*. AND 37 C.F.R. § 42.100 *ET SEQ*. (CLAIM 17 OF U.S. PATENT NO. 6,868,079)

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INTRODUCTION

1. My name is Zhi Ding. I have been retained as a technical expert on behalf of Motorola Mobility LLC to provide assistance in the above-captioned matter. I understand that Motorola Mobility LLC is the Petitioner in this proceeding. I have no financial interest in or affiliation with the Petitioner or the Patent Owner, which I understand is UNILOC 2017 LLC. My compensation does not depend upon the outcome of, or the specifics of my testimony in, this *inter partes* review proceeding or any litigation proceedings.

2. I have reviewed each of the following documents, which I am informed that some are also identified in the Petition.

| Ехнівіт | DESCRIPTION |
|---------|---|
| 1001 | U.S. Pat. No. 6,868,079 ("the '079 Patent") |
| 1002 | Prosecution History of the '079 Patent |
| 1003 | Merakos (U.S. Patent No. 5,521,925) |
| 1004 | Kay (U.S. Patent No. 5,299,198) |
| 1005 | Borth (U.S. Patent No. 4,829,543) |
| 1006 | Alamouti (U.S. Patent No. 5,933,421) |
| 1008 | Curriculum Vitae of Zhi Ding, Ph.D. |
| 1009 | Dahlman (U.S. Patent No. 6,606,313) |
| 1010 | Barnett (U.S. Patent No. 6,216,009) |

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| 1011 | Raitola & Ranta, Comparison of Diversity Combining Techniques for GSM (1996). |
|------|--|
| 1012 | Zhang, A Bandwidth Reservation Multiple Access Protocol for Wireless ATM Local Networks (1997). |
| 1013 | Brennan, Linear diversity combining techniques (1959). |
| 1014 | Meierhofer, Priority scheduling algorithm for ATM wireless network access (1997). |
| 1015 | Simpson & Houts, Fundamentals of Analog and Digital Communication Systems (1971). |
| 1016 | Van Trees, Detection, Estimation, and Modulation Theory, Part I (Wiley 1968). |
| 1017 | Lee (U.S. Patent No. 5,301,333) |
| 1018 | Crisler (U.S. Patent No. 5,142,533) |
| 1019 | Andersson (U.S. Patent No. 5,604,744) |
| 1020 | Tobagi (U.S. Patent No. 4,503,533) |
| 1021 | Claim Construction Order |
| 1023 | Messerschmitt (U.S. Patent No. 5,267,244) |
| 1024 | Order Staying Apple Case |
| 1025 | Order Dismissing Samsung Case |
| 1026 | Order Staying LG Case |
| 1027 | Fenwick (U.S. Patent No. 4,001,692) |
| 1028 | Order Staying Motorola Case |
| 1029 | Atkinson (U.S. Patent No. 5,031,193) |
| 1030 | Raitola (U.S. Patent No. 6,445,757) |

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| 1031 | Jasper (U.S. Patent No. 5,140,615) |
|------|------------------------------------|
|------|------------------------------------|

Ding Declaration re Petition for *Inter Partes* Review of U.S. Patent No. 6,868,079 (IPR2020-00038)

3. I understand that the application leading to U.S. Patent No. 6,868,079 ("the '079 Patent") was filed as U.S. Application No. 09/455,124 on December 6, 1999. This application claims priority to Great Britain Application No. 9827182, filed on December 10, 1998, which I have been asked to treat as the effective filing or priority date of the '079 Patent (also referred hereafter as the "Critical Date").

QUALIFICATIONS AND PROFESSIONAL EXPERIENCE

4. I presently serve as a Professor in the Department of Electrical and Computer Engineering at the University of California, Davis. I have held this position since my appointment on July 1, 2000. I am also a private technical consultant on various technologies related to information systems. I have more than three decades of research experience on a wide range of topics related to data communications and signal processing.

5. I earned my Bachelor of Science degree in 1982 in wireless engineering from the Nanjing Institute of Technology (later renamed as Southeast University) in Nanjing, China. I earned my Master of Science degree in 1987 in electrical engineering from the University of Toronto in Toronto, Canada. I earned my Ph.D. in 1990 in electrical engineering from Cornell University in Ithaca, New York.

-1-

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