# UNITED STATES PATENT AND TRADEMARK OFFICE

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# BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ericsson Inc. ("Ericsson"),

Petitioner,

V.

Uniloc 2017 LLC ("Uniloc"),

Patent Owner

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U.S. Patent No. 7,016,676

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DECLARATION OF JEFFREY FISCHER, UNDER 37 C.F.R. § 1.68 IN SUPPORT OF PETITION FOR INTER PARTES REVIEW



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### I. INTRODUCTION

- 1. My name is Jeffrey Fischer, and I have been retained by counsel for Ericsson Inc. ("Petitioner," "Ericsson") as a technical expert in connection with the proceeding identified above. I submit this declaration in support of Ericsson's Petition for *Inter Partes* Review of U.S. Patent No. 7,016,676 ("the '676 Patent").
- 2. I am being compensated for my time in this matter at an hourly rate. I am also being reimbursed for reasonable and customary expenses associated with my work and testimony in this matter. My compensation is not contingent on the outcome of this matter or the specifics of my testimony. I have no personal or financial stake or interest in the outcome of the present proceeding.
  - 3. In the preparation of this declaration, I have studied:
  - (1) The '676 Patent, Ex. 1001;
  - (2) The Prosecution History of the '676 Patent, Ex. 1002, ("'676 Prosecution History");
  - (3) U.S. Patent No. 6,937,158 to Lansford *et al.* ("Lansford"), Ex. 1005;
  - (4) U.S. Patent No. 7,039,358 to Shellhammer *et al.* ("Shellhammer"), Ex. 1006;
  - (5) U.S. Patent Provisional Application No. 60/196979 to Shellhammer *et al.* ("Shellhammer Provisional"), Ex. 1007;
  - (6) U.S. Patent No. 7,280,580 to Haartsen ("Haartsen"), Ex. 1008; and



- (7) U.S. Patent No. 6,643,278 to Panasik *et al.* ("Panasik"), Ex. 1009.
- 4. In forming the opinions expressed below, I have considered:
- (1) The documents listed above, any additional documents discussed below; and
- (2) My own knowledge and experience based upon my work in the field of communication networks.

## II. QUALIFICATIONS

- 5. I am an expert in the field of wireless communications. I have studied, taught, practiced, and researched this field for forty years. The following is a summary of my educational background, work experience, and other relevant qualifications. A true and accurate copy of my *curriculum vitae* can be found in exhibit Ex. 1004.
- 6. I obtained my Bachelor of Science degree in Electrical Engineering in 1979 and a Master of Engineering degree in Electrical Engineering in 1980, both from Cornell University.
- 7. I have been an Electrical engineer working in the wireless communications field for 40 years. I am currently an engineering consultant actively engaged in product design for wireless systems. I also perform expert consulting work in intellectual property cases. My product design work has included the design of digital, analog, and radio frequency (RF) circuits and



systems for wireless communication products. I design wireless hardware, software, low-level firmware, algorithms, protocols, and entire wireless system architectures. My work often includes system analysis and system engineering.

- 8. System analysis involves analyzing and comparing the performance of different approaches to wireless system architecture. System engineering involves the design of operational algorithms and specifying the details from input to output to achieve a wireless system that suits a specific set of architectural requirements. I also have done hands-on system integration—which includes working in an engineering laboratory building and debugging wireless hardware and software to put together a final product, including testing the product, making design adjustments to pass regulatory and performance requirements, ensuring interoperability with other products, and assisting in the development of test systems for mass production.
- 9. I was employed at MIT Lincoln Laboratory as a Senior Staff Member in the Analog Device Technology Group for 6 years between 1980 and 1986.

  Lincoln Laboratory is a federally funded research and development center administered by the Massachusetts Institute of Technology, with specialties in advanced radio communications and radar technology.
- 10. At Lincoln Laboratory, I led a project to build the packet signal processing, air protocol, and control circuits for the Defense Advanced Research



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