

Exhibit 2016

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WAVEMARKET, INC. D/B/A LOCATION LABS
Petitioner

v.

LOCATIONET SYSTEMS, LTD.
Patent Owner

Case No. IPR2014-00199
U.S. Patent 6,771,970

**DECLARATION OF DR. NARAYAN MANDAYAM IN SUPPORT OF
LOCATIONET SYSTEMS, LTD.'S PATENT OWNER RESPONSE**

I, Narayan Mandayam, do hereby declare:

1. I am making this declaration at the request of Locationet Systems, Ltd. in the matter of *Inter Partes* Review of U.S. Patent No. 6,771,970 (the ‘970 patent’) to Dan Meir.
2. In the preparation of this declaration, I have studied (1) the ‘970 patent (Ex. 1001), (2) file history of the ‘970 patent (Ex. 1012), (3) U.S. Patent No. 6,243,039 (“Elliot”; Ex. 1003), (4) Provisional Patent Application No. 60/157,643 (Ex. 1002), (5) Petition for *Inter Partes* Review (Paper 6), (6) Declaration of Scott Hotes (Ex. 1013); and (7) Institution Decision (Paper 18).
3. In forming the opinions expressed below, I have considered:
 - a. The documents listed above;
 - b. The relevant legal standards, including the standard for anticipation and any additional authorities as cited in the body of this declaration; and
 - c. My knowledge and experience based upon my work in this area as described below.

Qualifications and Professional Experience

4. I received a bachelor degree (with Honors) in 1989 from the Indian Institute of Technology, Kharagpur, and M.S. and Ph.D. degrees in 1991 and 1994 from Rice University, Houston, TX, all in electrical engineering.

5. I was a Research Associate at the Wireless Information Network Laboratory (“WINLAB”), Department of Electrical & Computer Engineering, Rutgers University, between 1994 and 1996. In September 1996, I joined the faculty of Department of Electrical & Computer Engineering at Rutgers where I became Associate Professor in 2001, Professor in 2003, and Distinguished Professor in 2014. I also served as the Peter D. Cherasia Endowed Faculty Scholar at Rutgers University from 2010 to 2014. Currently, I also serve as Associate Director at WINLAB where I conduct research in various aspects of wireless systems and networks. I teach courses at Rutgers related to Wireless System Design, Wireless Communication Technologies, Wireless Revolution, and Detection and Estimation Theory. I was a visiting faculty fellow in the Department of Electrical Engineering, Princeton University in Fall 2002 and a visiting faculty at the Indian Institute of Science in Spring 2003.
6. My research focuses on wireless networks and communications, and I have worked on various aspects of location tracking for wireless devices. Over the last 25 years, I have published a wide range of articles on various aspects of wireless systems including techniques for data transmission, resource allocation strategies, mathematical modeling and performance analysis. Using constructs from game theory, communications and networking, my work has focused on

system modeling and performance, signal processing as well as radio resource management for enabling wireless technologies to support various applications.

7. I have also coauthored papers on location tracking systems, including one of the early and well-cited papers titled “Decision Theoretic Framework for NLOS Identification” published in the IEEE Vehicular Technology Conference (“VTC”) in 1998. This paper addresses the problem of identifying whether a received radio signal at a base station is due to a line-of-sight (“LOS”) transmission or not (“NLOS”). Such identification is a first step towards estimating the mobile station’s location and the work in this paper laid the foundation for a decision theoretic framework where hypotheses tests of the range measurements are used for NLOS determination.
8. I have also worked on sensor assisted localization of mobile devices with a view to satisfying the E-911 requirements stipulated by the U.S. Federal Communications Commission. Specifically, as published in my paper titled “Sensor-Assisted Localization in Cellular Systems” published in the IEEE Transactions on Wireless Communications in 2007, I developed received signal strength based localization algorithms that use inter-sensor aided measurements to estimate the location of the mobile while meeting the E-911 requirements in a wide range of radio transmission environments. Aside from researching mobile location tracking algorithms in cellular networks, I also have

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