

Exhibit 2124

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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. IPR2014-00920
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 Patent Owner LocationNet 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: (a) the ‘970 patent (Ex. 1101); (b) file history of the ‘970 patent (Ex. 1111); (c) Provisional Patent Application No. 60/157,643 (Ex. 1102); (d) U.S. Patent No. 6,321,092 (Fitch; Ex. 1105); (e) U.S. Patent No. 6,002,936 (Roel-Ng; Ex. 1107); (f) U.S. Patent No. 6,243,039 (“Elliot”; Ex. 1003); (g) U.S. Patent No. 6,741,927 (Jones; Ex. 1108); (h) U.S. Patent No. 5,758,313 (Shah; Ex. 1109); (i) Petition for *Inter Partes* Review (Paper 3); (j) Declaration of Scott Hotes (Ex. 1116); (k) Decision – Institution of *Inter Partes* Review in IPR2014-00199, dated May 9, 2014 (Ex. 1104); (l) December 17, 2014 Claim Construction Memorandum Opinion, *CallWave Communications, LLC v. AT&T Mobility, LLC, and Google, Inc.*, Civil Action No. 1:12-cv-01701-RGA (D. Del.), Docket No. 224 (Ex. 2122); (m) Patent Owner’s Preliminary Response (Paper 8); (n) Decision – Institution of *Inter Partes* Review in IPR2014-00920, dated Dec. 16, 2014 (Paper 11); (o) Ericsson Review, No. 4, 1999 – The Telecommunications Technology Journal – “Ericsson’s Mobile Location Solution” (Ex. 1115).
3. In forming the opinions expressed below, I have considered:

- a. The documents listed above;
- b. The relevant legal standards, including the standard for obviousness 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.

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