# UNITED STATES PATENT AND TRADEMARK OFFICE ————— BEFORE THE PATENT TRIAL AND APPEAL BOARD ————— WAVEMARKET, INC. D/B/A/ LOCATION LABS Petitioner,

# CALLWAVE COMMUNICATIONS, LLC

V.

Patent Owner.

Case IPR2014-00199

Patent 6,771,970

DECLARATION OF CRAIG ROSENBERG, Ph.D. IN SUPPORT OF PETITIONER'S REPLY



- I, Craig Rosenberg, do hereby declare:
- 1. I am making this declaration at the request of Wavemarket, Inc. d/b/a Location Labs in the matter of IPR2014-00199, an *Inter Partes* Review of U.S. Patent No. 6,771,970 (the "'970 Patent") to Meir Dan.
- 2. In the preparation of this declaration, I have studied:
  - (a) U.S. Patent No. 6,771,970 ("the '970 Patent"; **Exhibit 1001**)
  - (b) U.S. Patent No. 6,243,039 ("Elliot"; **Exhibit 1004**)
  - (c) Corrected Petition for *Inter Partes* Review of U.S. Patent No. 6,771,970 Pursuant to 35 U.S.C. §§ 311-312 and 37 C.F.R. §§ 42.100-106, 108 (December 19, 2013; Paper No. 5; "Petition")
  - (d) Decision Institution of Inter Partes Review 37 C.F.R. §42.108 (May 9, 2014; Paper No. 18; "Decision")
  - (e) Locationet Systems Ltd.'s Patent Owner Response (August 11, 2014; Paper No. 34)
  - (f) Declaration of Dr. Narayan Mandayam ("Mandayam Decl.";Exhibit 2016)
- 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 documents 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 hold degrees in Industrial Engineering and Human Factors, including a Ph.D. from the University of Washington. For over 25 years I have worked in the areas of user interface design and software architecture as applied to a wide variety of systems and devices, including GPS enabled systems and mobile devices similar to the systems and devices at issue in this *inter partes* reexamination proceeding. My Curriculum Vitae is appended to this report.
- 5. Over the past 19 years, I have served as a consultant for Global Technica, Sunny Day Software, Stanley Associates, Technizon LLC, and CDI Corporation. I specialize in software engineering, user centered design, information architecture, user experience, systems engineering, object oriented analysis, complex systems, and modeling and simulation, and I have extensive experience in the entire software design and development life



cycle applied to a wide range of domains from mobile devices though enterprise class mission critical applications. My responsibilities as an engineering consultant include system engineering, requirements analysis, functional specification, use case development, user stories, application prototyping, modeling and simulation, object oriented software architecture, graphical user interface analysis and design, as well as UML, C++, C#, and Java software development for many different kinds of systems.

I have consulted for Boeing Company as a senior human factors 6. engineer, user interface designer, and software architect for a wide range of advanced commercial and military programs. I was the lead system architect for a large number of Boeing Phantom Works advanced software projects. Some of the projects that I have been involved with include developing advanced discrete event and agent-based software tools, models and simulations, and mapping software in the areas of missile defense, homeland security, battle command management, networking and communications, mobile computing, air traffic control, software simulation, and Unmanned Aerial Vehicle ("UAV") command and control. I was a systems engineer and software developer for an advanced homeland security application for the Department of Homeland Security. I was a systems engineer and software developer for the US ARMY Future Combat Systems



program working on advanced command and control technologies that involved moving maps with intelligent overlays for planning and situational awareness. Additionally, I have performed as the lead system architect developing advanced air traffic control analysis applications for enhanced surveillance, navigation, and communication, developing toolsets, and trade study simulations for Boeing Air Traffic Management.

- 7. Additional responsibilities in my time as a consultant include system engineering, requirements analysis, functional specification, use case development, user stories, application prototyping, modeling and simulation, object oriented software architecture, graphical user interface analysis and design, as well as UML, C++, C#, and Java software development.
- 8. I am also the founder and CEO of WhereWuz, a Seattle technology company focusing on location tracking applications for GPS enabled smart phones as well as the inventor, designer, and author of several GPS mobile application software products currently available for iPhone and Android devices. I have published twenty-two research papers in professional journals and proceedings relating to computer software and applications, including user interface design, computer graphics, and the design of spatial, stereographic, and auditory displays.



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