

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Google LLC

Petitioner

v.

Cywee Group Ltd.

(record) Patent Owner

Patent No. 8,552,978

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**DECLARATION OF PROF. MAJID SARRAFZADEH**

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## **I. ENGAGEMENT AND COMPENSATION**

1. My name is Majid Sarrafzadeh. I have been retained by Google LLC for the purpose of providing my opinion with respect to the unpatentability of U.S. Pat. No. 8,552,978 (“the ’978 patent”). I am being compensated for my time in preparing this declaration at the rate of \$650/hr, and my compensation is not dependent upon my opinions or the outcome of the proceedings.

## **II. QUALIFICATIONS**

2. I currently hold the title of Distinguished Professor and Director of Embedded and Reconfigurable Computing (ER) Laboratory in the Computer Science Department at the University of California, Los Angeles (UCLA). I also have a courtesy appointment in the Department of Electrical Engineering at UCLA. I am the Co-Director of the Center for SMART Health, Co-Director for the BRITE Center on Minority Health Disparities, and a Co-Founder of the UCLA Wireless Health Institute.

3. I believe that I qualify as an expert in the field of sensors and sensor data processing, and as at least a person of ordinary skill in the art. My current Curriculum Vitae is attached to the end of this declaration, and summarizes my qualifications.

4. I received my Bachelor’s Degree from the University of Illinois at Urbana-Champaign in Electrical and Computer Engineering in 1982, a Master of

Science Degree in Electrical and Computer Engineering University of Illinois in 1984, and a Ph.D. in Electrical and Computer Engineering University of Illinois in 1987.

5. From 1987 to 1991, I was an Assistant Professor in the Department of Electrical and Computer Engineering at Northwestern University. From 1991-1997, I held the title of Associate Professor, also in the Department of Electrical and Computer Engineering at Northwestern University. From 1997-2000, I held the title of Full Professor in that department.

6. I am an author or co-author on more than 500 publications in electrical engineering and computer sciences. Many of my publications relate to the use of sensors and sensor networks to track human body movement and health indicators.

7. I have used various sensors including motion sensors in my research. I have designed and built hardware and software systems for motion tracking, gait analysis, 3D rehab systems, and gaming just to name a few. I have performed data capture, data processing and analytics with these mobile systems. I have utilized the design in remote monitoring systems. In many of my projects I have developed algorithms relating to sensor fusion. For example, I have used motion sensor fusion to cancel motion noise in other signals, such as when working with photoplethysmography (PPG). I have used pressure sensors, accelerator and gyroscope fusion to construct motion data.

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