

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

**DECLARATION OF BRIAN W. ANTHONY, PH.D.
IN SUPPORT OF PETITION FOR INTER PARTES REVIEW OF
U.S. PATENT 8,989,830**

TABLE OF CONTENTS

I.	Introduction.....	1
II.	Qualifications.....	2
III.	My Understanding of Legal Principles.....	6
IV.	Level of Ordinary Skill in the Art	11
V.	State of the Art.....	12
A.	Non-invasive Optical Biosensors	12
B.	Photoplethysmography (PPG)	15
C.	Artifacts and Non-invasive Optical Biosensors	17
D.	Progression from Wired to Wireless Devices	18
VI.	The '830 Patent.....	19
A.	Overview of the '830 Patent.....	19
B.	Summary of the Prosecution History	22
VII.	Claim Construction.....	23
VIII.	Overview of the Applied References	26
A.	Goodman.....	27
B.	Hicks	28
C.	Asada	30
D.	Hannula.....	35
E.	Delonzor.....	36
IX.	Overview of my Analysis	38
X.	Ground 1: Goodman renders claims 1-4 and 11-14 obvious.	39
A.	Goodman Renders Independent Claim 1 Obvious.	39
B.	Goodman Renders Independent Claim 11 Obvious.....	47
C.	Goodman renders claims 2 and 12 obvious.....	56
D.	Goodman renders claims 3 and 13 obvious.....	57
E.	Goodman Renders Claims 4 and 14 Obvious.....	57
XI.	Ground 2: The combination of Goodman and Hicks renders claims 5 and 15 obvious.....	58
A.	Motivation for the Combination of Goodman and Hicks.....	58

B.	The Combination of Goodman and Hicks Discloses that “the light transmissive material comprises a lens region in optical communication with the at least one optical emitter that focuses light emitted by the at least one optical emitter.”	60
XII.	Ground 3: The combination of Goodman, Hannula, and Asada renders claims 6 and 16 obvious.	61
A.	Motivation for the Combination of Goodman, Hannula, and Asada	61
B.	The Combination of Goodman, Hannula, and Asada Renders Claims 6 and 16 Obvious.....	65
XIII.	Ground 4: The combination of Goodman and Asada renders claims 8, 9, 18 and 19 obvious.....	71
A.	Motivation for the Combination of Goodman and Asada.....	71
B.	The Combination of Goodman and Asada Renders Claims 8 and 18 Obvious.....	72
C.	The Combination of Goodman and Asada Renders Claims 9 and 19 Obvious.....	73
XIV.	Ground 5: The combination of Goodman and Delonzor renders claims 10 and 20 obvious.....	74
A.	Motivation for the Combination of Goodman and Delonzor.....	74
B.	The Combination of Goodman and Delonzor Discloses that “the at least one window comprises at least two windows” [10.1 / 20.1].....	76
C.	The Combination of Goodman and Delonzor Discloses “light blocking material positioned between the at least one optical emitter and the at least one optical detector such that the at least one optical emitter and the at least one optical detector are not in direct optical communication with each other” [10.2 / 20.2].....	77
XV.	Conclusion	78

I. Introduction

I, Dr. Brian W. Anthony, declare as follows:

1. I have been retained on behalf of Apple Inc. for the above-captioned *inter partes* review proceeding to provide my expert opinions and expert knowledge. I understand that this proceeding involves U.S. Patent No. 8,989,830 (“the ’830 patent”) titled “Wearable Light-Guiding Devices for Physiological Monitoring” by Steven F. LeBoeuf, Jesse B. Tucker, and Michael E. Aumer, and that the ’830 patent is currently assigned to Valencell, Inc.

2. In preparing this declaration, I have reviewed and am familiar with all the references cited herein. I have reviewed and am familiar with the ’830 patent and its file history. I confirm that to the best of my knowledge the accompanying exhibits are true and accurate copies of what they purport to be, and that an expert in the field would reasonably rely on them to formulate opinions such as those set forth in this declaration.

3. The ’830 patent describes non-invasive optical biosensors for health monitoring. I am familiar with the technology described in the ’830 patent as of its September 12, 2014 filing date and its claimed February 25, 2009 priority date.

4. I have been asked to provide my independent technical review, analysis, insights, and opinions regarding the ’830 patent and the references that form the basis for the three grounds of rejection set forth in the Petition for *Inter*

Partes Review of the '830 patent.

5. I am being compensated at my rate of \$350 per hour for my work on this case. My compensation is not dependent upon my opinions or testimony or the outcome of this case.

II. Qualifications

6. As indicated in my *curriculum vitae* (“CV”), included as Exhibit 1004, I am currently a Principal Research Scientist at the Massachusetts Institute of Technology (“MIT”). My CV includes additional information about my professional history and contains further details on my experience, publications, patents, and other qualifications to render an expert opinion. Herein, I highlight experiences relevant to the technology of the patent at issue.

7. I earned a Bachelor of Science in Engineering from Carnegie Mellon University in 1994 and a Master’s degree in Engineering from MIT in 1998. My thesis topic related to anisotropic wave guides and acoustic non-destructive testing. In 2006, I earned my Ph.D. in Engineering from MIT. My research focused on high-performance computation, signal processing, and electro-mechanical system design.

8. In 1997, I co-founded Xcitex Inc., a company that specialized in video-acquisition and motion-analysis software. I served as the Chief Technology Officer and directed and managed product development until 2006. Our first demo-

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