

Filed on behalf of Valencell, Inc.

By: Justin B. Kimble (JKimble-IPR@bcpc-law.com)
Nicholas C. Kliewer (nkliewer@bcpc-law.com)
Jonathan H. Rastegar (jrastegar@bcpc-law.com)
Bragalone Conroy PC
2200 Ross Ave.
Suite 4500 – West
Dallas, TX 75201
Tel: 214.785.6670
Fax: 214.786.6680

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

VALENCELL, INC.,
Patent Owner.

Case IPR2017-00319
U.S. Patent No. 8,923,941

PATENT OWNER'S RESPONSE

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

Table of Contents

I.	Introduction.....	1
II.	Overview of the '941 Patent	3
III.	Claim Construction	7
	A. Legal Principles	7
	B. “PPG sensor” should be construed as “an optical sensor which obtains a plethysmogram that results from blood flow modulations caused by the subject’s heartbeat”	8
IV.	Grounds 1-5 fail because Petitioner cannot meet its burden to establish the combination of Luo and Craw renders claims 1, 2, and 6-13 obvious.....	9
	A. Luo and Craw do not relate to the same technology and do not attempt to solve the same problems.	10
	1. Luo does not process sensor signals into a serial data output..	10
	2. Craw is directed to a specific data formatting scheme to address interoperability between medical devices.....	13
	B. Neither Luo nor Craw discloses that respiration rate can be extracted from signals obtained by a PPG sensor.....	14
	C. Neither Luo nor Craw discloses elements [1.4] and [1.5], and a POSA would not have been motivated to combine Luo and Craw to render disclosures obvious.....	18
	1. Luo does not disclose the processing of signals into a serial data output of physiological information and motion-related information.....	21
	2. Craw also does not disclose the processing of signals into a serial data output of physiological information and motion-related information.....	22

3.	Luo and Crow cannot be combined to render “processing signals” limitation obvious.	24
D.	A POSA would not have been motivated to combine Luo and Crow because they are not directed to similar physiological monitoring devices.	24
V.	Grounds 6-11 fails because Petitioner fails to meet its burden to establish that Mault in view of Al-Ali renders claims 1, 2, and 6-13 obvious.	26
A.	Mault and Al-Ali describe entirely different technologies which solve completely different problems.	26
1.	Mault does not disclose a single monitoring device containing a PPG sensor capable of processing signals from which a respiration rate may be derived.	26
2.	Al-Ali is directed to a communications adapter that is compatible with existing sensors and monitors and that creates a wireless link replacement for traditional cable.	27
B.	Neither Mault nor Al-Ali discloses a <i>single</i> monitoring device capable of sensing both heart rate and respiration rate data.	28
C.	Neither Mault nor Al-Ali discloses a PPG sensor capable of having its signals processed to produce a serial data output from which respiration rate can be extracted.	30
D.	Neither Mault nor Al-Ali discloses the step of “processing signals from the at least one motion sensor and signals from the at least one PPG sensor via a processor of the monitoring device into a serial data output of physiological information and motion-related information.”	33
E.	A POSA would not have had a reason to combine Mault with Al-Ali.	36

..

VI. The dependent claims fail because Petitioner has not met its burden of showing that the independent claim from which they depend is obvious.....38

VII. Patent Owner does not consent to the PTAB adjudicating the patentability or validity of the '941 patent.....38

VIII. Conclusion39

...

PATENT OWNER'S EXHIBIT LIST

Exhibit No.	Description
2001	S. LeBoeuf, et al., Earbud-Based Sensor for the Assessment of Energy Expenditure, HR, and VO2max, OFFICIAL J. AM. C. SPORTS M., 2014, 1046–1052
2002	Biometrics Lab: Performance of Leading Optical Heart Rate Monitors During Interval Exercise Conditions
2003	Valencell website (http://valencell.com/customers/)
2004	CTA - It Is Innovation (i3) Magazine 2016 Innovation-Entrepreneur Awards
2005	Declaration of T. William Kennedy - PHV Motion
2006	Declaration of Luca Pollonini
2007	Deposition of Majid Sarrafzadeh

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.