Filed on behalf of Apple Inc.

By: Michelle K. Holoubek

Michael D. Specht Mark J. Consilvio

Sterne, Kessler, Goldstein & Fox PLLC

1100 New York Avenue, NW

Washington, D.C. Tel: (202) 371-2600 Fax: (202) 371-2540

### UNITED STATES PATENT AND TRADEMARK OFFICE

### BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC. Petitioner

V.

VALENCELL, INC. Patent Owner

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 8,923,941

# **Mail Stop PATENT BOARD**

Patent Trial and Appeal Board U.S. Patent & Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450



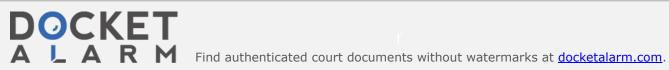
# TABLE OF CONTENTS

1.	Introduction			
II.	Iden	tification of Challenge (37 C.F.R. § 42.104(b))	7	
	A.	Summary of the Grounds of Unpatentability	7	
	B.	Citation of Prior Art	8	
III.	The	'941 Patent	9	
	A.	Overview	9	
	B.	Summary of the Prosecution History	9	
	C.	Level of Ordinary Skill in the Art	11	
	D.	Claim Construction	11	
	1. "a body"		12	
		"headset"		
	3.	"housing"	13	
	4.	"chipset"	14	
	5. "window"1		14	
IV.	Ground 1: Claims 14–15 and 21 are unpatentable under pre-AIA 35 U.S.C. § 103(a) over Kosuda in view of Maekawa			
	A.	Overview of Kosuda	14	
	B.	Overview of Maekawa	18	
	C.	Claim 14	20	
	[1	4.P] A wearable device	20	
	[14.1] a housing20			
	[14.2] a chipset enclosed within the housing21			
	[14.3] at least one PPG sensor			
	[1	4.4] at least one motion sensor	24	
	[14.5] at least one signal processor configured to process signals from the at least one motion sensor and signals from the at least one PPG sensor to reduce motion artifacts from the PPG signals			
		4.6] the housing comprises at least one window that optically expose at least one PPG sensor to a body of a subject wearing the device		



# Petition for Inter Partes Review of U.S. Patent No. 8,923,941

		the housing comprises non-air light transmissive material in optical ommunication with the at least one PPG sensor and the window	26		
	D.	Claim 15	27		
	E.	Claim 21	28		
V.		Ground 2: Claims 18–20 are unpatentable under pre-AIA 35 U.S.C. § 103(a) over Kosuda in view of Maekawa and Han			
	A.	Overview of Han	29		
	В.	Rationale to combine the teachings of Kosuda, Maekawa, and Han	31		
VI.		Ground 3: Claims 14–19 and 21 are unpatentable under pre-AIA 35 U.S.C. § 103(a) over Aceti in view of Fricke			
	A.	Overview of Aceti	32		
	B.	Overview of Fricke	35		
	C.	Claim 14	38		
	[14	[14.P] A wearable device			
	[14	[14.1] a housing38			
	[14	[14.2] a chipset enclosed within the housing			
	[14	[14.3] at least one PPG sensor40			
	[14	[14.4] at least one motion sensor			
	[14.5] at least one signal processor configured to process signals from the at least one motion sensor and signals from the at least one PPG sensor to reduce motion artifacts from the PPG signals				
	[14.6] the housing comprises at least one window that optically exposes the at least one PPG sensor to a body of a subject wearing the device43				
	[14.7] the housing comprises non-air light transmissive material in optical communication with the at least one PPG sensor and the window44				
	D.	Claim 15	44		
	E.	Claims 16 and 17	44		
	F.	Claims 18 and 19	45		
	G.	Claim 21	47		
VII.		and 4: Claim 20 is unpatentable under pre-AIA 35 U.S.C. § 103(a)	17		



# Petition for Inter Partes Review of U.S. Patent No. 8,923,941

	A.	Overview of Comtois	47
	B.	Rationale to combine the teachings of Aceti, Fricke, and Comtois	50
VIII.	Conc	lusionlusion	
IX.	Stand	ing (37 C.F.R. § 42.104(a))	52
X.	Mand	latory Notices (37 C.F.R. § 42.8(a)(1))	52



# TABLE OF AUTHORITIES

### Cases

Cuozzo Speed Techs., LLC v. Lee, US, 136 S. Ct. 2131 (2016)	12
In re Am. Acad. Of Sci. Tech Ctr., 367 F.3d 1359 (Fed. Cir. 2004)	12
<i>In re Nilssen</i> , 851 F.2d 1401 (Fed. Cir. 1988)	27, 31
KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398 (2007)	passim
Statutes	
35 U.S.C. § 102(b)	9
35 U.S.C. § 102(e)	9
35 U.S.C. § 103	7
35 U.S.C. § 112	8
Regulations	
37 C.F.R. § 42.100(b)	12
37 C.F.R. § 42.104(a)	52
37 C.F.R. § 42.104(b)	7
37 C.F.R. § 42.8(a)(1)	52



# DOCKET

# 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.

