

Filed on behalf of Apple Inc.

By: Michael D. Specht  
Michelle K. Holoubek  
Jason A. Fitzsimmons  
Sterne, Kessler, Goldstein & Fox P.L.L.C.  
1100 New York Avenue, N.W.  
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. 8,989,830**

**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**

I.	Introduction.....	1
II.	Mandatory Notices (37 C.F.R. § 42.8(a)(1)).....	2
III.	Grounds for Standing (37 C.F.R. § 42.104(a)).....	4
IV.	Identification of Challenge (37 C.F.R. § 42.104(b)).....	4
	A. Citation of Prior Art .....	4
	B. Statutory Grounds for the Challenge.....	6
	C. The Board should institute both petitions against the '830 patent claims because doing so would not be unduly burdensome. ....	6
V.	The '830 Patent.....	8
	A. Overview of the '830 Patent.....	8
	B. Summary of the Prosecution History .....	11
	C. Level of Ordinary Skill in the Art .....	11
	D. Claim Construction.....	12
	1. “cladding material” (claims 1 and 11).....	13
	2. “near” (claims 1 and 11) .....	14
VI.	Overview of the Applied References .....	14
	A. Goodman .....	15
	B. Hicks.....	16
	C. Asada .....	18
	D. Hannula.....	21
	E. Delonzor .....	23
VII.	Overview of the Grounds .....	24
VIII.	Ground 1: Goodman Renders Claims 1-4 and 11-14 Obvious .....	25
	A. Goodman renders independent claim 1 obvious.....	25
	1. Goodman discloses “[a] monitoring device configured to be attached to the body of a subject” [1P]. ....	25
	2. Goodman discloses “an outer layer and an inner layer secured together” [1.1]. ....	26

*Petition for Inter Partes Review of  
U.S. Patent No. 8,989,830*

3. Goodman discloses “the inner layer comprising light transmissive material, and having inner and outer surfaces” [1.2].....27
4. Goodman discloses “a base secured to at least one of the outer and inner layers and comprising at least one optical emitter and at least one optical detector” [1.3]. .....27
5. Goodman discloses “a layer of cladding material near the outer surface of the inner layer” [1.4].....28
6. Goodman discloses “at least one window formed in the layer of cladding material that serves as a light-guiding interface to the body of the subject” [1.5].....29
7. Goodman discloses “wherein the light transmissive material is in optical communication with the at least one optical emitter and the at least one optical detector, wherein the light transmissive material is configured to deliver light from the at least one optical emitter to the body of the subject along a first direction and to collect light from the body of the subject and deliver the collected light in a second direction to the at least one optical detector, wherein the first and second directions are substantially parallel” [1.6].....30
- B. Goodman renders independent claim 11 obvious. ....33
  1. Goodman discloses “[a] monitoring device configured to be attached to the body of a subject” [11.P]. ....33
  2. Goodman discloses “a first layer comprising light transmissive material, the first layer having inner and outer surfaces” [11.1]. ....34
  3. Goodman discloses “a base secured to the first layer and comprising at least one optical emitter and at least one optical detector” [11.2]. ....35
  4. Goodman discloses “a layer of cladding material near the inner and outer surfaces of the first layer” [11.3]. ....36
  5. Goodman discloses “at least one window formed in the layer of cladding material that serves as a light-guiding interface to the body of the subject” [11.4].....37
  6. Goodman discloses “wherein the light transmissive material is in optical communication with the at least one optical emitter and the at least one optical detector, and is configured to deliver light from the at least one optical emitter to the body of the subject along a first direction and to collect light from the body of the subject and deliver the collected light in a

*Petition for Inter Partes Review of  
U.S. Patent No. 8,989,830*

	second direction to the at least one optical detector, wherein the first and second directions are substantially parallel” [11.5].....	38
C.	Goodman renders claims 2 and 12 obvious. ....	40
D.	Goodman renders claims 3 and 13 obvious. ....	41
E.	Goodman renders claims 4 and 14 obvious. ....	42
IX.	Ground 2: The Combination of Goodman and Hicks Renders Claims 5 and 15 Obvious.....	43
A.	Motivation for the Combination of Goodman and Hicks .....	43
B.	The combination of Goodman and Hicks render claims 5 and 15 obvious. ....	44
X.	Ground 3: The Combination of Goodman, Hannula, and Asada Renders Claims 6 and 16 Obvious.....	45
A.	Motivation for the Combination of Goodman, Hannula, and Asada.....	45
B.	The combination of Goodman, Hannula, and Asada renders claims 6 and 16 obvious. ....	49
1.	The combination of Goodman, Hannula, and Asada teaches or suggests “a light reflective material on at least a portion of one or both of the inner and outer surfaces of the [inner / first] layer” [6.1 / 16.1].....	49
2.	The combination of Goodman, Hannula, and Asada discloses that “the at least one optical detector comprises first and second optical detectors” [6.2 / 16.2]. ....	50
3.	The combination of Goodman, Hannula, and Asada discloses “a signal processor” [6.3 / 16.3]. ....	50
4.	The combination of Goodman, Hannula, and Asada discloses that “at least a portion of light reflected by the light reflective material and detected by the second optical detector is processed by the signal processor as a motion noise reference for attenuating motion noise from signals produced by the first optical detector” [6.4 / 16.4].....	51
XI.	Ground 4: The Combination of Goodman and Asada Renders Claims 8, 9, 18 and 19 Obvious.....	53
A.	Motivation for the Combination of Goodman and Asada.....	53
B.	The combination of Goodman and Asada renders claims 8 and 18 obvious. ....	54

*Petition for Inter Partes Review of  
U.S. Patent No. 8,989,830*

C. The combination of Goodman and Asada renders claims 9 and 19 obvious. ....54

XII. Ground 5: The Combination of Goodman and Delonzor Renders Claims 10 and 20 Obvious .....56

A. Motivation for the Combination of Goodman and Delonzor.....56

B. The combination of Goodman and Delonzor discloses that “the at least one window comprises at least two windows” [10.1 / 20.1].....57

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].....58

XIII. Conclusion .....60

# 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.