

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

MASIMO CORPORATION,
Patent Owner.

Case IPR2022-01465
U.S. Patent 10,687,745

**PETITIONER'S RESPONSE TO EXPERT TESTIMONY
PROFFERED WITH PATENT OWNER'S SUR-REPLY**

TABLE OF CONTENTS

I.	CLAIM CONSTRUCTION	1
A.	“determine a physiological parameter ... wherein the physiological parameter comprises oxygen saturation (Claims 9, 18).....	1
B.	“plurality of photodiodes are arranged in an array having a spatial configuration corresponding to a shape of the portion of the tissue measurement site encircled by the light block” (Claim 15).....	1
II.	IWAMIYA-SARANTOS GROUNDS.....	2
A.	Iwamiya-Sarantos Renders Obvious “a dark-colored coating” (elements [1.4] and [20.4]).....	3
B.	Iwamiya-Sarantos Renders Obvious the Claimed Photodiode Arrangement (element [15.4] and claims 6 and 26).....	4
C.	Iwamiya-Sarantos Combination.....	6
III.	SARANTOS-SHIE GROUNDS.....	7
A.	A POSITA Would Have Been Motivated to Combine Sarantos and Shie and Would Have Reasonably Expected Success	7
B.	Sarantos-Shie Renders Obvious a “light bock having a circular shape” (element [15.3]) and the Photodiode Array (element [15.4])	7
IV.	REASONABLE EXPECTATION OF SUCCESS (“REOS”) IN DETERMINING OXYGEN SATURATION AT THE WRIST	8
A.	The Corroborating References Demonstrate REOS	8
B.	The Apple Engineers’ ITC Testimony Regarding Development of the Apple Watch is not Probative of REOS.....	10

EXHIBITS

- APPLE-1001 U.S. Pat. No. 10,687,745 to Al-Ali (“the ’745 Patent”)
- APPLE-1002 Prosecution History of the ’745 Patent (Serial No. 16/835,772)
- APPLE-1003 Declaration of Dr. Brian Anthony
- APPLE-1004 U.S. Pat. No. 8,670,819 (“Iwamiya”)
- APPLE-1005 U.S. Pat. No. 9,392,946 (“Sarantos”)
- APPLE-1006 U.S. Pub. No. 2014/0275854 (“Venkataraman”)
- APPLE-1007 U.S. Pat. No. 6,483,976 (“Shie”)
- APPLE-1008 U.S. Pat. No. 6,801,799 (“Mendelson-799”)
- APPLE-1009 U.S. Pub. No. 2015/0018647 (“Mandel”)
- APPLE-1010 U.S. Pub. No. 2009/0275810 (“Ayers”)
- APPLE-1011 PCT. Pub. No. 2011/051888 (“Ackermans”)
- APPLE-1012 U.S. Pat. No. 6,158,245 (“Savant”)
- APPLE-1013 Design of Pulse Oximeters, J.G. Webster; Institution of Physics Publishing, 1997 (“Webster”)
- APPLE-1014 U.S. Pub. No. 2009/0054112 (“Cybart”)
- APPLE-1015 U.S. Pat. No. 5,893,364 (“Haar”)
- APPLE-1016 U.S. Pat. No. 5,952,084 (“Anderson”)
- APPLE-1017 U.S. Pat. No. 10,470,695 (the “’695 patent”)
- APPLE-1018 *Apple v. Masimo*, Case No. IPR2020-01722, Paper 29 (Final Written Decision) (PTAB May 5, 2022) (the “’695 FWD”)

APPLE-1019 – APPLE-1030 RESERVED

- APPLE-1031 *Masimo Corporation, et al. v. Apple Inc.*, Redacted Complaint, ITC Inv. No. 337-TA-1276
- APPLE-1032 *Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation*, issued June 21, 2022 (“Interim Guidance”)
- APPLE-1033 Final Initial Determination on Violation of Section 337, Public Version, ITC Inv. No. 337-TA-1276, January 10, 2023
- APPLE-1034 Emails re Masimo’s Request for Authorization to Motion for Additional Discovery
- APPLE-1035 Protective Order
- APPLE-1036 CONFIDENTIAL - ITC Inv. No. 337-TA-1276 Hearing Transcript of Dr. Ueyn Block
- APPLE-1037 CONFIDENTIAL - ITC Inv. No. 337-TA-1276 Hearing Transcript of Dr. Saahil Mehra
- APPLE-1038 ITC Inv. No. 337-TA-1276 Exhibit RX-0335 (U.S. Pat. No. 5,830,137 (“Scharf”))
- APPLE-1039 ITC Inv. No. 337-TA-1276 Exhibit RX-0504 (Austin Wareing, Optimization of Reflectance-Mode Pulse Oximeter Sensors)
- APPLE-1040 ITC Inv. No. 337-TA-1276 Exhibit RX-0508 (Jianchu Yao and Steve Warren, Stimulating Student Learning with a Novel “In-House” Pulse Oximeter Design (2005))
- APPLE-1041 ITC Inv. No. 337-TA-1276 Exhibit RX-0632
- APPLE-1042 CONFIDENTIAL - Supplemental Declaration of Dr. Brian Anthony

- APPLE-1043 Excerpt of The American Heritage Dictionary of the English Language, Fifth Edition, Houghton Mifflin Harcourt Publishing Company (2011)
- APPLE-1044 Excerpt of Collins Dictionary, HarperCollins Publishers (2010)
- APPLE-1045 Excerpt of Merriam-Webster's Collegiate Dictionary, Eleventh Edition, Merriam-Webster, Incorporated (2014)
- APPLE-1046 Excerpts from Bronzino, The Biomedical Engineering Handbook, CRC Press, Inc. (1995) ("Bronzino")
- APPLE-1047 U.S. Patent No. 6,014,576 to Raley
- APPLE-1048 Severinghaus et al., Recent Developments in Pulse Oximetry, Anesthesiology, Vol. 76, No. 6 (June 1992)
- APPLE-1049 Duffy, MIO Alpha BLE Review, PC Magazine (Jan. 28, 2013) available at <https://www.pcmag.com/reviews/mio-alpha-ble>
- APPLE-1050 Pang et al., A Neo-Reflective Wrist Pulse Oximeter, IEEE Access, Volume 2 (January 12, 2015)
- APPLE-1051 Li et al., A Wireless Reflectance Pulse Oximeter With Digital Baseline Control for Unfiltered Photoplethysmograms, IEEE Transactions on Biomedical Circuits and Systems, Vol. 6, No. 3 (June 2012)
- APPLE-1052 U.S. Patent Application Publication No. 2006/0253010 to Brady et al.
- APPLE-1053 Cai et al., Implementation of a Wireless Pulse Oximeter Based on Wrist Band Sensor, 2010 3rd International Conference on Biomedical Engineering and Informatics (BMEI 2010)
- APPLE-1054 International Publication No. WO 2001/17421 to Lindberg et al.
- APPLE-1055 Maattala et al., Optimum Place for Measuring Pulse Oximeter Signal in Wireless Sensor-Belt or Wrist-Band, 2007 International

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.