

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

KOSS CORPORATION,
Patent Owner.

CASE: IPR2021-00381
U.S. PATENT NO. 10,491,982

DECLARATION OF JOSEPH C. MCALEXANDER III

September 28, 2021

TABLE OF CONTENTS

I.	BACKGROUND AND QUALIFICATIONS.....	1
II.	MATERIALS REVIEWED.....	4
III.	SUMMARY OF THE '982 PATENT	4
IV.	PERSON OF ORDINARY SKILL IN THE ART.....	7
V.	APPLICABLE LEGAL PRINCIPLES	10
	A. Claim Construction	10
	B. Obviousness	11
VI.	SUMMARY OF PRIOR ART FOR GROUND 1A.....	14
	A. Rosener.....	15
	B. Hankey	22
VII.	CLAIM 1 WOULD NOT HAVE BEEN OBVIOUS TO A POSITA	23
	A. A POSITA Would Not Have Been Technically Qualified to Modify Rosener in View of Hankey (and Dyer)	23
	B. A POSITA Would Not Understand the Transducers of Rosener and Thus, Could Not Modify Them in View of Hankey	26
	C. A POSITA Would Not Understand the Analog-to-Digital Converter and Buffer of Rosener and Thus, Could Not Modify Them in View of Hankey.....	27
	D. Petitioner’s Illustration of Rosener-Hankey-Dyer Evidences the Acoustic and Mechanical Infeasibility of the Asserted Combinations	30
VIII.	THE PROPOSED COMBINATIONS FAIL TO TEACH EVERY TECHNICAL FEATURE RECITED BY THE CLAIMS	33

A.	The Proposed Combinations Fail to Teach Two Wireless Earphones, Each Having a Microphone.....	33
B.	A POSITA Would Not be Motivated to Modify Rosener and Hankey (and Dyer) to Include a Microphone in Each Earphone...37	
IX.	DEPENDENT CLAIMS.....	41
A.	The Rosener, Hankey, and Price (and Dyer) Combination Does Not Teach or Suggest the “Firmware Upgrades” of Claim 14	41
B.	The Rosener and Hankey (and Dyer) Combination Does Not Teach or Suggest the “Activation of the Microphone ” of Claim 15	45
C.	The Rosener and Hankey (and Dyer) Combination Does Not Teach or Suggest the “Digital Signal Processor” of Claim 19	48
X.	SECONDARY CONSIDERATIONS BUTTRESS MY OPINIONS THAT THE CHALLENGED CLAIMS WOULD NOT HAVE BEEN OBVIOUS.....	53
XI.	CONCLUDING REMARKS	55

1. I, Joseph C. M^cAlexander III, declare as follows:

2. I have been retained by counsel for Koss Corp. (“Koss”) as a technical expert in connection with the *inter partes* review (“IPR”) proceeding identified above for U.S. Patent 10,491,982 (the “982 Patent”). I submit this declaration in support of Koss’s response to the petition.

I. BACKGROUND AND QUALIFICATIONS

3. I have a Bachelor of Science in Electrical Engineering from North Carolina State University and have studied neural science at the University of Texas Graduate School of Biomedical Science.

4. Upon completion of my electrical engineering degree in 1969, I was commissioned as an officer in the U.S. Army. For 2 years, I managed the air defense operation for the New England area, which included radar and secure communication channels to aircraft, missile batteries, and U.S. Command. I then commanded a signal battalion in South Korea for 1 year, designing and orchestrating at the division level the first of its kind communication power grid mapping study using AM and FM transmission/reception, among others, and utilizing crypto security transmission/reception methods.

5. I am a Registered Professional Engineer in the state of Texas (Reg. No. 79,454) and am a recognized inventor on thirty-one U.S. patents. I have forty-nine years of professional experience, during which I designed and analyzed a

variety of microcircuits, semiconductors, and control systems, amongst other technologies for Texas Instruments, Inc. and EPI Technologies, Inc. Specifically, I have designed Dynamic Random Access Memories (“DRAMs”), Static Random Access Memories (“SRAMs”), Charged Coupled Devices (“CCDs”), Shift Registers (“SRs”), and a variety of functional circuits, including input/output buffers for addresses and data transmission, decoders, clocks, sense amplifiers, fault tolerant parallel-to-serial data paths for video applications, level shifters, converters, pumps, logic devices, wireless communication systems, and microelectromechanical systems (“MEMs”). I possess significant expertise in operations and manufacturing associated with these technologies, including a sophisticated knowledge of quality control, testing, reliability, and failure analyses.

6. I have conducted high level instruction to design and process engineers and managers at Texas Instruments, among others, in Solid State Device Physics, Semiconductor Processing, Circuit Design Techniques, and Statistical Quality Control Methods. I have also instructed corporate audiences in Effectiveness Training, Japanese Manufacturing Techniques, and problem recognition and solution methods and tools.

7. As part of licensing of my IP circa 2002 – 2004, I negotiated and executed a number of licensing and design programs to provide GPS tracking and transmission of information wirelessly, using paging and CDMA. The

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.