

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,

Petitioner,

v.

JAWBONE INNOVATIONS, LLC,

Patent Owner.

Patent No. 11,122,357
Filing Date: August 5, 2013
Issue Date: September 14, 2021

Inventor: FORMING VIRTUAL MICROPHONE ARRAYS USING
DUAL OMNIDIRECTIONAL MICROPHONE ARRAY (DOMA)

DECLARATION OF AKBAR M. SAYEED, Ph.D.

Case No. IPR2023-01130

TABLE OF CONTENTS

	<u>Page(s)</u>
I. INTRODUCTION	1
A. Background and Qualifications	1
II. COMPENSATION	6
III. MATERIALS CONSIDERED	6
IV. LEGAL PRINCIPLES	7
V. LEVEL OF SKILL IN THE ART	8
VI. THE CLAIMED INVENTION OF THE ‘357 PATENT	8
VII. THE ALLEGED PRIOR ART	13
A. Brandstein	13
B. Gannot	14
VIII. CLAIM CONSTRUCTION	14
IX. PETITIONER’S COMBINATIONS DO NOT RENDER ANY CLAIM OBVIOUS	14
A. GROUND 1: The Combination of Brandstein in view of Gannot Does Not Render Obvious Claims 1-20	14
1. Petitioner’s Combination Does Not Disclose or Render Obvious “wherein the first virtual microphone and the second virtual microphone are distinct virtual directional microphones with substantially similar responses to noise and substantially dissimilar responses to speech” as recited in independent Claims 1 and 15	15
X. CONCLUSION	20

I, Akbar M. Sayeed, declare as follows:

1. I have been asked by counsel for Patent Owner, Jawbone Innovations, LLC (“Jawbone” or “Patent Owner”), to review U.S. Patent No. 11,122,357 (the “’357 Patent”) entitled FORMING VIRTUAL MICROPHONE ARRAYS USING DUAL OMNIDIRECTIONAL MICROPHONE ARRAY (DOMA), and to provide my technical review, analysis, insights, and opinions regarding the ’357 Patent in view of the prior art cited by Petitioner Meta Platforms, Inc. (“Meta” or “Petitioner”). I submit this declaration in support of Patent Owner’s Preliminary Response in this IPR proceeding. I have personal knowledge of the matters stated herein and would be competent to testify to them if required.

2. I have been retained on behalf of Jawbone for the above-captioned *inter partes* review proceeding. I understand that the ’357 Patent is currently assigned to Jawbone.

3. I am over 18 years of age. I have personal knowledge of the facts stated in this Declaration and could testify competently if asked to do so.

I. INTRODUCTION

A. Background and Qualifications

4. I have reviewed and am familiar with the specification of the ’357 Patent. I understand the ’357 Patent has been provided as Exhibit 1001. I will cite to the specification using the following format: ’357 Patent at col.:line.

5. My CV is being submitted simultaneously herewith (Ex. 2003).
6. I received my B.S. degree in Electrical and Computer Engineering (ECE) from the University of Wisconsin-Madison in 1991. I received my M.S. and Ph.D. degrees in ECE from the University of Illinois at Urbana-Champaign in 1993 and 1996, respectively. In my undergraduate and graduate studies, I took a variety of courses generally focusing on the areas of signal processing, communication theory, information theory, electromagnetics and antennas, and statistical techniques in signal processing and communications. My Ph.D. dissertation was entitled “Statistical Time-Frequency Analysis” in which I proposed a new framework for statistical signal processing using time-frequency representations, mathematical tools that extend the powerful theory of Fourier transforms and Fourier analysis to time-varying signals and systems.
7. I currently work as an Independent Researcher, Engineer and Technical Consultant, and worked as professor of Electrical and Computer Engineering at the University of Wisconsin-Madison from 1997-2021, where I directed the Wireless Communications and Sensing Laboratory until my retirement on August 1, 2021 to pursue a career as an independent researcher and consultant.
8. My current work as an independent researcher and consultant spans STEM (science, technology, engineering & mathematics) fields through the lens of

information science and technology. My STEM skills and experience cover a broad range of areas, including:

- Wireless technologies for sensing, processing and communication of information (5G/6G/XG), internet of things, and emerging technologies for untapped spectrum (e.g., millimeter-wave, THz).
- Sensing and acquisition of data in new modalities through technological innovation.
- Machine learning and statistical techniques for extracting useful information from data.
- Quantum information science and technology (computing, sensing and communication) spanning foundational concepts, algorithms, and platforms.
- Conception, design and development of new information technologies through basic theory, computational modeling, and hybrid software-hardware prototyping and experimentation.

9. I have written/co-written 200+ papers in leading journals and conferences. I am an inventor/co-inventor of 10 patents.

10. After receiving my Ph.D. in 1996, I spent a year at Rice University as a postdoctoral research fellow where I expanded the scope of my research to the growing field of wireless communications that underpins much of mobile cellular

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.