## UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD APPLE INC., SAMSUNG ELECTRONICS CO., LTD., and SAMSUNG ELECTRONICS AMERICA, INC., Petitioners, V. FIRSTFACE CO., LTD., Patent Owner. Case IPR2019-00612 U.S. Patent No. 8,831,557

**DECLARATION OF BENJAMIN B. BEDERSON** 



## TABLE OF CONTENTS

TAB	LE O	F CONTENTS	i	
I.	INTRODUCTION			
	A.	Engagement	1	
	B.	Background and Qualifications	2	
	C.	Basis of My Opinion and Materials Considered	7	
	D.	Legal Standards for Patentability	8	
II.		DESCRIPTION OF THE RELEVANT FIELD AND THE RELEVANT TIMEFRAME1		
III.		THE PERSON OF ORDINARY SKILL IN THE RELEVANT FIELD IN THE RELEVANT TIMEFRAME		
IV.	TECHNICAL BACKGROUND AND STATE OF THE ART12			
	A.	Basic Operation of Mobile Devices	12	
	B.	Security	15	
	C.	Hardware / Software Integration	16	
V.	OVE	OVERVIEW OF THE '557 patent1		
VI.	CLA	IM INTERPRETATION	.20	
	A.	"Simultaneously"	21	
VII.	DISCUSSION OF RELEVANT PRIOR ART			
	A.	Brief Summary of Fadell (Ex. 1105) in view of iOS (Ex. 1107) and Gagneraud (Ex. 1106)	22	
	В.	Limitation-by-limitation explanation of how the prior art—Fadell, iOS, and Gagneraud—render obvious claims 1, 8-9, and 15 of the '557 patent	29	
	C.	Brief Summary of Goertz (Ex. 1113) in view of Herfet (Ex. 1114)	39	



		Limitation-by-limitation explanation of how the prior art—Goertz at Herfet—render obvious claims 1, 8-9, and 15 of the '557 patent	
VIII.	SECO	NDARY CONSIDERATIONS	54
IX.	CONC	CLUSION	55



I, Benjamin B. Bederson, declare as follows:

### I. INTRODUCTION

1. My name is Benjamin B. Bederson. I am over the age of eighteen (18) and am competent to make this Declaration.

## A. Engagement

- 2. I submit this report on behalf of Apple Inc., Samsung Electronics, Co., Ltd., and Samsung Electronics America, Inc. in connection with their request for *inter partes* review of U.S. Patent No. 8,831,557 ("the '557 patent")—to review and to provide my opinion on the scope and content of "prior art" predating the application for the '557 patent and regarding the subject matter recited in the claims of the '557 patent. I understand that this Declaration relates to a petition for the above-captioned *inter partes* review (IPR) of the '557 patent.
- 3. For my efforts in connection with the preparation of this declaration, I have been compensated at my standard hourly consulting rate of \$600. My compensation is in no way contingent on the results of these or any other proceedings relating to the above-captioned patent. I have no expectation or promise of additional business with the petitioner in exchange for the positions explained herein.
- **4.** I make this declaration based on personal knowledge.

## **B.** Background and Qualifications

- 5. A detailed description of my professional qualifications, including a listing of my specialties/expertise and professional activities, is contained in my curriculum vitae, a copy of which is attached as Appendix A. In what follows, I provide a short summary of my professional qualifications.
- 6. I received a Bachelor of Science degree in Computer Science with a minor in Electrical Engineering from Rensselaer Polytechnic Institute ("RPI") in 1986. I received a Master of Science degree and a Ph.D. in Computer Science from New York University ("NYU") in 1989 and 1992, respectively.
- 7. Since 1998, I have been a Professor of Computer Science at the University of Maryland ("UMD"), where I have joint appointments at the Institute for Advanced Computer Studies and the College of Information Studies (Maryland's "iSchool"), and am currently on leave. I was also Associate Provost of Learning Initiatives and Executive Director of the Teaching and Learning Transformation Center from 2014 to 2018. I am a member and previous director of the Human-Computer Interaction Lab ("HCIL"), the oldest and one of the best known Human-Computer Interaction research groups in the country. I was also co-founder and Chief Scientist of Zumobi, Inc. from 2006 to 2014, a Seattle-based startup that is a publisher of content applications and advertising platforms for smartphones. I am also co-founder and co-director of the International Children's Digital Library ("ICDL"), a web site



# 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.

