UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC., Petitioner,

V.

UNILOC Luxembourg S.A., Patent Owner

<u>Declaration of Joseph A. Paradiso, PhD</u> <u>under 37 C.F.R. § 1.68</u>



TABLE OF CONTENTS

I.	INT	FRODUCTION1				
II.	QU	ALIFICATIONS AND PROFESSIONAL EXPERIENCE2				
III.	LE	VEL OF ORDINARY SKILL IN THE ART8				
IV.	RELEVANT LEGAL STANDARDS					
	A.	An	ticipation	10		
	B.	Ob	viousness	10		
V.	OVERVIEW OF THE '902 PATENT					
	A.	Summary of the '902 Patent				
	B.	Prosecution History of the '902 Patent				
VI.	BROADEST REASONABLE INTERPRETATION					
	A.	"dominant axis"				
	B.	"ca	dence window"	16		
VII.	IDENTIFICATION OF HOW THE CLAIMS ARE UNPATENTABLE16					
	A.	Cha	allenge #1: Claims 1 and 2	16		
		1.	Summary of Mitchnick	16		
		2.	Mitchnick's Embodiments Are Combinable	18		
		3.	Detailed Analysis	19		
	B.	Cha	allenge #2: Claim 3	29		
		1.	Summary of Sheldon	29		
		2.	Reasons to Combine Mitchnick and Sheldon	29		
		3.	Detailed Analysis	32		
	C.	Cha	allenge #3: Claim 4	43		



		1.	Summary of Tanenhaus	43
		2.	Reasons to Combine Mitchnick, Sheldon, Tanenhaus	43
		3.	Detailed Analysis	46
	D.	Cha	allenge #4: Claims 5-6 and 9-10	52
		1.	State of the Art at the Time of the '902 Patent	52
		2.	Summary of Fabio	54
		3.	Summary of Pasolini	57
		4.	Reasons to Combine Fabio and Pasolini	60
		5.	Detailed Analysis	63
1/111	CO	NCI	LICION	101



I. INTRODUCTION

- 1. I am making this declaration at the request of Apple Inc. in the matter of the *inter partes* review of U.S. Patent No. 7,881,902 ("the '902 Patent") to Kahn, *et al*.
- 2. I am being compensated for my work in this matter at the rate of \$500/hour. I am also being reimbursed for reasonable and customary expenses associated with my work and testimony in this investigation. My compensation is not contingent on the outcome of this matter or the specifics of my testimony.
- 3. I have been asked to provide my opinions regarding whether claims 1-6 and 9-10 of the '902 Patent are unpatentable, either because they are anticipated or would have been obvious to a person having ordinary skill in the art ("POSITA") at the time of the alleged invention, in light of the prior art. It is my opinion that all of the limitations of claims 1-6 and 9-10 would have been obvious to a POSITA.
 - 4. In the preparation of this declaration, I have studied:
 - a) The '902 Patent, Ex. 1001;
 - b) The prosecution history of the '902 Patent, Ex. 1002;
 - c) U.S. Patent No. 7,463,997 to Fabio Pasolini et al. ("Pasolini"), Ex. 1005;



- d) U.S. Patent No. 7,698,097 to Fabio Pasolini et al. ("Fabio"), Ex. 1006;
- e) U.S. Publication No. 2006/0084848 to Mitchnick ("Mitchnick"), Ex. 1007;
- f) U.S. Patent No. 6,469,639 to Tanenhaus et al. ("Tanenhaus"), Ex. 1008; and
- g) U. S. Patent No. 5,957,957 to Sheldon ("Sheldon"), Ex. 1009.
- 5. In forming the opinions expressed below, I have considered:
 - a) The documents listed above, and
 - b) My own knowledge and experience based upon my work in the field of MEMS (micro-electro-mechanical systems) devices and body motion sensing systems, as described below.

II. QUALIFICATIONS AND PROFESSIONAL EXPERIENCE

- 6. My complete qualifications and professional experience are described in my *Curriculum Vitae*, a copy of which can be found in Ex. 1004. The following is a brief summary of my relevant qualifications and professional experience.
- 7. As shown in my curriculum vitae, I have devoted my career to various fields of physical, electrical, and computer science with more than two decades focused on embedding sensing, including wearable and wireless sensors. I have twenty years of experience in wearable devices and computing, during which I



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.

