

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re *Inter Partes* Review of:)
U.S. Patent No. 7,329,970)
Issued: Feb. 12, 2008)
Application No.: 11/480,868)
Filing Date: July 6, 2006)

For: **Touch Sensor And Location Indicator Circuits**

FILED VIA PRPS

**DECLARATION OF PAUL BEARD IN SUPPORT OF
PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 7,329,970 [CORRECTED]**

For ease of reference, Mr. Beard refers to this declaration as being in support of
“970 Petition” challenging claims 1, 3-5, 10-14, 19, 48, 49, 51, and 52.

Apple Inc., et al. Exhibit 1003 Apple Inc., et al. v. Global Touch Solutions, LLC IPR2015-01173
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TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION AND QUALIFICATIONS.....	1
II. MY EXPERIENCE WITH PORTABLE, BATTERY-POWERED DEVICES IN THE MID-1990S.....	6
III. UNDERSTANDING OF THE GOVERNING LAW.....	9
A. Invalidity by Anticipation or Obviousness.....	9
B. Interpreting Claims Before the Patent Office.....	11
C. Relevant Time Period for the Obviousness Analysis.....	11
D. Materials Relied on in Forming My Opinion.....	12
IV. LEVEL OF SKILL IN THE ART.....	12
A. Use of a Signal Switch in a User Interface.....	12
B. Use of a Microchip to Control the Battery and Device.....	13
C. Person of Ordinary Skill in the Art.....	18
V. PERSPECTIVE APPLIED IN THIS DECLARATION.....	19
VI. OVERVIEW OF THE '970 PATENT.....	20
A. Disclosure of the '970 Patent.....	20
B. Prosecution History of the '970 Patent.....	23
VII. THE PRIOR ART.....	26
A. Beard.....	26
B. Rathmann.....	34
C. Danielson.....	38
VIII. MOTIVATIONS TO COMBINE THE PRIOR ART.....	40
A. Motivation to Combine Beard with Rathmann.....	40
B. Motivation to Combine Beard and Rathmann with Danielson.....	45
IX. CLAIM CONSTRUCTIONS.....	49
A. Legal Standard.....	49

B. “energy consuming load”49
C. “mains”51

X. GROUNDS OF INVALIDITY52

A. Ground 1: Claims 1, 3, 5, 10, 11, 12, 14, 19, 48, and 49 are invalid under 35 U.S.C. § 103 on the ground that they are rendered obvious by Beard in view of Rathmann.....52

1. Claim 153
2. Claim 373
3. Claim 574
4. Claim 1076
5. Claim 1178
6. Claim 1279
7. Claim 1482
8. Claim 1982
9. Claim 4885
10. Claim 4986

B. Ground 2: Claims 4, 13, 51, and 52 are invalid under 35 U.S.C. § 103 on the ground that they are all rendered obvious by Beard in view of Rathmann and Danielson88

1. Claim 488
2. Claim 1391
3. Claim 5192
4. Claim 5293

I, Paul Beard, resident of Bigfork, Montana, hereby declare as follows:

I. INTRODUCTION AND QUALIFICATIONS

1. I have been retained by Apple Inc. (“Apple”) to provide my opinion concerning the validity of U.S. Patent No. 7,329,970 (Ex. 1001, the “’970 patent”) in support of its Petition for *Inter Partes* Review of U.S. Patent No. 7,329,970 (“’970 Petition”). I have not previously been employed or retained by Apple in any capacity.

2. From 1980 to 1983, I attended the University of Manchester (U.K.) where I received a B.Sc. (Honors) degree in Electrical and Electronics Engineering.

3. From 1978 to 1989, I was employed by British Telecom (BT) in England. I received a series of promotions culminating in my eventual position as Head of Group for BT’s ISDN voice and data terminals. These terminals were portable electronic devices with microcontroller chips.

4. From 1989 to 1991, I was employed as a member of technical staff for VMX Inc., where I designed a world-wide approved subscriber line interface circuit.

5. From 1991 to 1994, I was the Vice President of Systems Engineering at DSP Group, where I architected a low-cost, fixed-point digital signal processing chip.

6. From 1994 to 1998, I was the Chief Architect and a Fellow of Norand Corporation, a developer of portable, wireless, pen-based data-entry devices that were battery-powered.

7. From 1998 to 2000, I founded a wireless (radio frequency) product development company called Alation Systems based on my invention of a new type of radio frequency modulation scheme. I sold Alation Systems to Cypress Semiconductor in 2000.

8. From 2000 to 2005, I was the Chief Technology Officer (CTO) of Wireless Systems at Cypress Semiconductor. I directly reported to the CEO, and was the only Engineering Fellow in the entire company. During my time at Cypress, I invented the technology underlying the 2.4 Ghz wireless mouse as described in U.S. Patent No. 8,442,437. Cypress's WirelessUSB line of radio frequency chips is based on this technology, and the technology is also widely used in portable, battery-powered electronic devices such as microphones, electronic toys, mice and keyboards.

9. WirelessUSB was a major commercial success, and received four international electronics product awards, including a prestigious EDN (Electrical Design News) innovation award. I also designed two Cypress radio and wireless integrated circuits (IC), the CYRF6951 and CYRF6961.

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