UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ZTE (USA) Inc., Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc.,

Petitioner

v.

Fundamental Innovation Systems International LLC,

Patent Owner

DECLARATION OF JAMES T. GEIER

Case No. IPR2018-00276



Table of Contents

I.	Introd	oduction1						
II.	Back	Background/Qualifications1						
III.	Docu	Documents and Materials Considered						
IV.	Legal	egal Principles3						
V.	Perso	on of Ordinary Skill in the Art9						
VI.	'111 patent background							
	A.	Summary						
	B.	Prosecution history						
	C.	Priority date11						
VII.	Technology background & State of the Art							
	A.	USB Architecture						
	B.	USB Device Configuration and Detection						
	C.	USB Current and Voltage Limits						
	D.	USB Signaling States						
	E.	Auxiliary USB Ports						
VIII.	Clain	n Construction20						
IX.	Ground 1: Claims 1-3, 6-8, and 16-18 are obvious in light of Theobald and Shiga21							
	A.	Theobald						
		1.	Resistor embodiment	24				
		2.	Controller embodiment	26				
	B.	Shiga2						
	C.	Theobald/Shiga combination32						
	D.	Application of the Theobald/Shiga combination to claims 1-3, 6-7, and 16-18						
		1.	Claim 1	40				
		2.	Claim 2	47				
		3.	Claim 3	48				



Table of Contents (continued)

		4.	Claim 6	49		
		5.	Claim 7	50		
		6.	Claim 8	51		
		7.	Claim 16	52		
		8.	Claim 17	53		
		9.	Claim 18	55		
X.	Ground 2: Claim 15 is obvious over Theobald in light of Shiga and Kfoury					
	A.	Kfoury56				
	В.	Theo	obald/Shiga/Kfoury Combination	57		
	C.	Application of the Theobald/Shiga/Kfoury Combination to Claim 15				
		1.	Claim 15	60		
XI.		Ground 3: Claims 12 and 14 are obvious over Dougherty in light of Hahn and Amoni				
	A.	Doug	gherty	63		
	B.	Hahn6				
	C.	Doug	gherty/Hahn Combination	69		
		1.	Reasons to Combine Dougherty/Hahn	70		
		2.	Reasons to Combine Dougherty/Hahn with the Teachings of Amoni	71		
	D.	Application of the Dougherty/Hahn/Amoni Combination to Claims 12 and 147				
		1.	Claim 12	73		
		2	Claim 14	92		



I. Introduction

- 1. My name is James T. Geier. I submit this declaration on behalf of ZTE (USA) Inc., Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. ("Petitioner"), which I understand are challenging the validity of claims 1-3, 6-8, 12, and 14-18 ("the challenged claims") of U.S. Patent No. 7,239,111 B2 ("the 111 patent") in a petition for interpartes review.
- 2. I have been asked to provide an opinion on the validity of the challenged claims. In my opinion, claims 1-3, 6-8, 12, and 14-18 of the 111 patent are obvious based on the following grounds:
 - Ground 1: U.S. Patent No. 5,925,942 ("Theobald") and U.S. Patent No. 6,625,738 ("Shiga") render obvious claims 1-3, 6-8, and 16-18 of the '111 patent.
 - Ground 2: Theobald, Shiga, and U.S. Patent No. 6,049,192 ("Kfoury") render obvious claim 15 of the '111 patent.
 - Ground 3: U.S. Patent No. 7,360,004 ("Dougherty"), U.S. Patent No. 5,973,948 ("Hahn"), and U.S. Patent No. 5,884,086 ("Amoni") render obvious claims 12 and 14 of the '111 patent.

II. Background/Qualifications

3. Appendix A to this declaration is my curriculum vitae, which sets forth my qualifications.



- 4. I received a B.S. degree in Electrical Engineering from California
 State University in 1985. In 1990, I received an M.S. degree in Electrical
 Engineering from the Air Force Institute of Technology.
- 5. I have 30 years' experience in the communications industry designing, analyzing, and implementing communications systems, wireless networks, and mobile devices. I have authored over a dozen books on mobile and wireless topics, including Designing and Deploying 802.11 Wireless Networks (Cisco Press), Implementing 802.1X Security Solutions (Wiley), Wireless Networking Handbook (New Riders) and Network Re-engineering (McGraw-Hill). I have been an active participant within standards organizations, such as the IEEE 802.11 Working Group and the Wi-Fi Alliance. I have served as Chairman of the IEEE Computer Society, Dayton Section, and various conferences.
- 6. I have significant experience with USB, which includes reviewing and analyzing USB specifications and designing and integrating corresponding USB interfaces within various applications. Since 1998, I have been analyzing the operation and limitations of USB in relation to mobile devices that I have designed. For example, during 1998-1999, I analyzed and tested the integration of USB into Monarch Marking Systems bar code scanners and printers. Also, during 2008-2009, I integrated USB into a microcontroller-based monitoring and control system, which involved writing software drivers to interface the microcontroller to



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.

