IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: Ezra Eddie Bakhash U.S. Patent No.: 9,696,868 Attorney Docket No.: 50095-0110IP1 Issue Date: July 4, 2017 Appl. Serial No.: 14/614,708 Filing Date: February 5, 2015 Title: SYSTEM AND METHOD FOR PROVIDING THREE-DIMENSIONAL GRAPHICAL USER INTERFACE

DECLARATION OF DR. HENRY FUCHS

I declare that all statements made herein on my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable under Section 1001 of Title 18 of

the United States Code.

Henry Fuchs, Ph.D.

022.12.13 Date:

Table of Contents

I.	INTRODUCTION4
II.	QUALIFICATIONS
III.	LEGAL STANDARDS10A. Person of Ordinary Skill in the Art11B. Obviousness11C. Claim Interpretation13
IV.	PERSON OF ORDINARY SKILL IN THE ART14
V.	MATERIALS CONSIDERED15
VI.	OVERVIEW OF CONCLUSIONS FORMED17
VII.	OVERVIEW OF THE '868 PATENT
VIII.	CLAIM CONSTRUCTION
IX.	OVERVIEW AND COMBINATIONS OF PRIOR ART REFERENCES23A. Overview of Anthony
X.	MANNER IN WHICH THE PRIOR ART REFERENCES RENDER THE '868 CLAIMS UNPATENTABLE 53 A. Claim 1 53 B. Claim 2 78 C. Claim 3 79 D. Claim 4 80 E. Claim 5 85 F. Claim 6 87 G. Claim 7 91 H. Claim 8 93 I. Claim 9 97 J. Claim 10 98 K. Claim 11 105 L. Claim 12 106 M. Claim 13 107

	N. Claim 14	
	O. Claim 15	
	P. Claim 16	
	Q. Claim 17	
	R. Claim 18	
	S. Claim 19	
	T. Claim 20	
XI.	CONCLUSION	112

I. INTRODUCTION

1. I have been retained as a technical expert by counsel on behalf of Apple Inc. ("Apple"/"Petitioner"). I understand that Apple is requesting that the Patent Trial and Appeal Board institute an *inter partes* review ("IPR") proceeding with respect to U.S. Patent No. 9,696,868 ("the '868 Patent") (APPLE1001).

2. I have been asked to provide my independent analysis of the '868 Patent in light of certain prior art publications, and I have done so based on my personal knowledge and experience.

3. I am not, and never have been, an employee of Apple. I received no compensation for this Declaration beyond my normal hourly compensation based on my time actually spent analyzing the '868 Patent, the prior art publications cited below, and various issues related thereto. I have no financial interest in the outcome of this proceeding, and will not receive any added compensation based on the outcome of any IPR or other proceeding involving the '868 Patent.

II. QUALIFICATIONS

4. In formulating my opinions, I have relied on my knowledge, training, and experience in the relevant field. My education and experience are described more fully in the attached curriculum vitae (Appendix A). For ease of reference, I have highlighted certain information below. 5. I am the Federico Gil Distinguished Professor of Computer Science and an Adjunct Professor of Biomedical Engineering at the University of North Carolina at Chapel Hill. I head the UNC Graphics and Virtual Reality research group, supervising research scientists, engineers, PhD, MS, and undergraduate students. Students I have advised have gone on to senior faculty positions at leading universities such as MIT, Stanford, and Georgia Tech, and leading research labs such as Google, Intel, Meta (fka Facebook), and Microsoft, as well as to smaller companies and startups around the world.

6. I received a Bachelor of Arts degree in Information and Computer Science from the University of California at Santa Cruz in 1970, and a Ph.D. from the University of Utah in 1975.

7. I have over 50 years of experience working in the field of computer graphics. I have worked in the Imaging Lab of Caltech's NASA Jet Propulsion Laboratory, and have consulted for numerous organizations, including General Electric, the RAND Corporation, Mitsubishi Electric Research Laboratory, and Xerox Palo Alto Research Center. I have held visiting professorships at ETH Zurich and at TU Wien (the Vienna University of Technology).

My research in computer graphics has been supported by, among others,
Cisco, DARPA, Google, Intel, Meta (fka Facebook), Microsoft, ONR, NIH, NSF,
NVIDIA, U.S. Air Force, and Xerox. I have published over 250 papers, including

DOCKET A L A R M



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.