
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LG ELECTRONICS INC.

Petitioner

V.

IMMERVISION, INC.
Patent Owner

IPR2020-00179 IPR2020-00195

Patent No. 6,844,990

DECLARATION OF DAVID AIKENS

IMMERVISION Ex. 2009 LG v. ImmerVision IPR2020-00179



TABLE OF CONTENTS

		page
I.	INTRODUCTION	1
II.	QUALIFICATIONS	2
III.	MATERIALS CONSIDERED	4
IV.	APPLICABLE LEGAL STANDARDS	5
V.	LEVEL OF SKILL IN THE ART	9
VI.	'990 PATENT AND CLAIM SUMMARY	10
VII.	CLAIM CONSTRUCTION	10
VIII.	ANALYSIS OF THE CHALLENGED CLAIMS AND ASSERTED REFERENCES	14
A.	Asserted References	15
1	. Overview of Tada	15
2	2. Overview of Nagaoka	18
3	8. Overview of Baker	21
B.	Claims 5 and 21 Over Tada Alone	23
1	. Dr. Chipman's Entire Opinion is Predicated on a Flawed Analysis of Tada's Embodiment 3	23
2	2. Dr. Chipman's Flawed Analysis is Provided at Wavelengths Never Mentioned in Tada	
3	8. A POSA Would Not Have Plotted an Image Point Distribution Functio because it is Not a Standard Output	
4	A More Correct Analysis Would Use Centroids Instead of Chief Ray Heights to Define Image Points	59
5	5. Dr. Chipman Chose Embodiment 3 Exactly Because it is Described Incorrectly in Table 5	68



6. A POSA Would Not Have Been Motivated to Add Distortion to Tada72
C. Claims 5 and 21 Over Tada and Nagaoka75
1. Dr. Chipman's Analysis of Tada is Based on a Readily Apparent Error75
2. Nagaoka Actually Teaches Away from Image Point Distribution Functions having Compressed Image Heights at the Periphery
D. Claims 5 and 21 Over Tada and Baker79
1. Dr. Chipman's Analysis of Tada is Based on a Readily Apparent Error79
Dr. Chipman Misinterprets Baker's Teachings to Detract from Baker's Focus on Peripheral Content Enhancement
IX. CONCLUSION84



I. INTRODUCTION

- I, David Aikens, declare as follows:
- 1. I have been retained by Patent Owner ImmerVision, Inc. ("ImmerVision") for the above-captioned *inter partes* reviews to provide expert opinion and testimony. I understand that these proceedings involve U.S. Patent No. 6,844,990 ("the '990 Patent") titled "Method for Capturing and Displaying a Variable Resolution Digital Panoramic Image." I understand that the '990 Patent is currently assigned to ImmerVision.
- 2. I was retained in this matter by ImmerVision through IMS Expert Services and ImmerVision's counsel, Panitch Schwarze, as an expert witness in the field of optics and lens design. IMS Expert Services charges a rate of \$600 per hour for my services in connection with these proceedings, of which I receive a fixed percentage. My compensation in these matters is in no way dependent upon or contingent upon the opinions and testimony that I render during these proceedings, nor on the ultimate outcomes of these proceedings.
- 3. In preparing this declaration, I have reviewed and am familiar with all of the references cited herein, and in the Petition. I have also reviewed and am familiar with the '990 Patent.
- 4. In this declaration, I set forth the independent opinions that I have reached and the basis for those opinions using the information currently available



to me. Such opinions are based on my education, career, and relevant experience in optics and lens design unless otherwise noted. A list of documents I have reviewed and, in some cases, relied upon in forming my opinions are presented below. I reserve the right to supplement or revise my opinions should additional documents or other information be provided to me.

II. QUALIFICATIONS

- 5. My curriculum vitae ("CV"), a copy of which is provided attached hereto, provides details on my education, experience, publications, and other qualifications.
- I received a Bachelor of Science degree in Optical Engineering in
 1983, and a Master of Science degree in Optical Engineering in 1984, both from
 the University of Rochester.
- 7. From 1983 to 1987, I worked as an Optical Engineer for the Hughes Aircraft Company in El Segundo, California. From 1987 to 1989, I worked as an Optical Engineer for the Lawrence Livermore National Laboratory in Livermore, California. I then worked as the President and Founder of the Dema Bekz Corporation in Portland, Oregon from 1989 to 1991, as a freelance optical designer and engineer. From 1991 to 1994, I worked as a Senior Optical Engineer at KLA Instruments in San Jose, California. I then returned to the Lawrence Livermore National Laboratory as an NIF Optical Engineering Manager from 1994 to 2000.



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.

