

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

Valeo North America, Inc., Valeo S.A., Valeo GmbH,
VALEO Schalter und Sensoren GmbH,
and Connaught Electronics Ltd.
Petitioners,

v.

Magna Electronics, Inc.
Patent Owner

Case IPR2015-_____
U.S. Patent No. 8,643,724

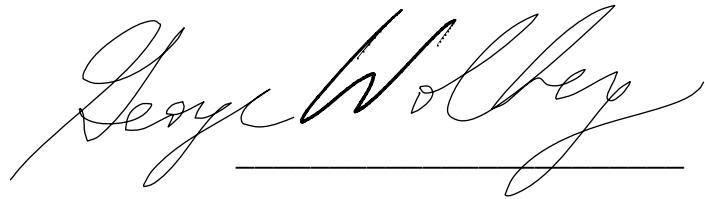
Mail Stop PATENT BOARD
Patent Trial and Appeal Board
United States Patent and Trademark Office
Madison Building (East)
600 Dulany Street
Alexandria, VA 22313

**DECLARATION OF DR. GEORGE WOLBERG REGARDING
U.S. PATENT NO. 8,643,724**

Declaration of Dr. George Wolberg
Regarding U.S. Patent No. 8,643,724

I, Dr. George Wolberg, do hereby declare and state, that all statements made herein of 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 by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: November 7, 2014



George Wolberg

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
A.	Engagement.....	1
B.	Background And Qualifications	1
C.	Compensation and Prior Testimony	4
D.	Information Considered	5
II.	LEGAL STANDARDS FOR PATENTABILITY	6
A.	The Person Having Ordinary Skill In The Art	7
B.	The State of the Art – Description of Background Technology.....	9
III.	THE '724 PATENT	16
A.	Technical Overview Of The '724 Patent.....	16
B.	Prosecution History Of The '724 Patent.....	20
C.	Claim Construction	20
D.	Patentability Analysis of the '724 Patent.....	23
E.	Discussion of Relevant Patents and Publications.....	24
1.	Japanese Publication No. H3-99952 (“Nissan”)	24
2.	Japanese Publication No. S62-16073 (“Hino”).....	27
3.	Japanese Publication No. 64-14700 (“Aishin”)	29
4.	Wang Publication on CMOS Video Cameras.....	31
5.	Japanese Publication No. 59-114139 assigned to Niles Co., Ltd. (“Niles”).....	31
6.	U.S. Patent No. 5,444,478 to Lelong (“Lelong”).....	33
F.	Motivations to Combine	35
1.	Claims 1-18, 20, 22, 23, 25, 29-32, 41, 42, 43, 45 and 48 are obvious over Nissan, Hino, and Lemelson.....	38
a.	Nissan renders obvious the limitation “without duplication of objects”	38
b.	Nissan and Hino render obvious “wherein said synthesized image approximates a view as would be seen by a virtual camera at a single location exterior of the equipped vehicle”	42

Declaration of Dr. George Wolberg
Regarding U.S. Patent No. 8,643,724

2.	Claims 2, 15, 16, and 18 of the '724 patent are obvious in view of Nissan, Hino, and Lemelson	46
3.	Claim 13 is rendered obvious by Nissan, Hino, and Lemelson	51
4.	Claim 19 is rendered obvious by Nissan, Hino, Lemelson, and Wang.....	54
5.	Claim 21 is obvious over Nissan, Hino, Lemelson, and Aishin	56
6.	Claim 24 is obvious over Nissan, Hino, Lemelson, and Niles	59
7.	Claims 46 and 47 are obvious over Nissan, Hino, Lemelson, and Lelong	62
8.	Claims 49, 65, and 78 are obvious in view of Nissan, Hino, Lemelson and Aishin.....	64
9.	Claims 53, 68 and 80 are obvious in view of Nissan, Hino, Lemelson, Aishin, and Wang	66
IV.	CONCLUSION	67

I. INTRODUCTION

A. Engagement

1. I have been retained by counsel for Valeo North America Inc., Valeo S.A., Valeo GmbH, Valeo Schalter und Sensor GmbH and Connaught Electronics Ltd., as an expert witness in the above-captioned proceeding. I have been asked to render an opinion regarding the validity of claims 1-86 (the “Challenged Claims”) of U.S. Patent No. 8,643,724 (“the ’724 patent), which is submitted herewith as Exhibit 1001. The following is my written report on that topic.

B. Background And Qualifications

2. I am currently a Professor of Computer Science at the City College of New York in the department of Computer Science. I have studied and worked in the field of computer science and engineering since 1985. My experience includes research and teaching, with research interests in image processing, computer graphics, and computer vision.

3. I have been working in the field of Computer Science, specifically Image Processing, Computer Vision, and Computer Graphics since 1985. I have a Bachelor’s Degree and Master’s Degree in Electrical Engineering, both from Cooper Union in 1985. I have a Ph.D. in Computer Science from Columbia University in 1990.

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.