UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Valeo, Inc.; Valeo S.A.; Valeo GmbH; Valeo Schalter und Sensor GmbH; Connaught Electronics Ltd. Petitioners,

v.

Magna Electronics Inc. Patent Owner

Patent No. 7,877,175 Issued: January 25 2011 Filed: April 21, 2010 Inventor: Michael J. Higgins-Luthman Title: IMAGING SYSTEM FOR VEHICLE

Inter Partes Review No.

Declaration of Dr.-Ing. Jan-Michael Frahm Regarding

U.S. Patent No. 7,877,175

Declaration of Dr.-Ing. Jan-Michael Frahm

DOC

LARM Find authenticated court documents without watermarks at <u>docketalarm.com</u>.

I, Dr.-Ing. Jan-Michael Frahm, 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: December 3, 2013

duce

Declaration of Dr.-Ing. Jan-Michael Frahm



Find authenticated court documents without watermarks at docketalarm.com.

## **TABLE OF CONTENTS**

I.	INTI	INTRODUCTION1				
	A.	Engagement				
	A.	Back	Background And Qualifications1			
	B. Compensation And Prior Testimony					
	C.	C. Information Considered				
II.	LEG	AL STANDARDS FOR PATENTABILITY				
	A.	A. Anticipation				
	B.	Obvi	9			
	C. The Person Of Ordinary Skill In The Art				15	
	D.	The	The State of the Art – Description of Background Technology			
III.	THE	THE '175 PATENT				
	A. Technical Overview Of The '175 Patent				26	
	В.	Claim Construction			27	
	C.	Pater	Patentability Analysis of the '175 Patent			
		1. Discussion of Relevant Patents and Publications			30	
			a.	Nissan Patent	30	
			b.	Hitachi Patent	33	
			c.	Gentex Patent	36	
			d.	Stam Patent	38	
			e.	Gutta Patent	41	
			f.	Broggi	45	
			g.	Sun	46	
	2. Motivations to Combine			47		
			a.	Obvious to combine Nissan and Stam	48	
			b.	Image Processing is obvious in view of Nissan	51	
			c.	Obvious to combine Nissan and Gutta	53	
			d.	Obvious to combine Hitachi and Broggi	56	
			e.	Obvious to combine Hitachi and Sun	58	
IV.	CON	CONCLUSION				

Declaration of Dr.-Ing. Jan-Michael Frahm

DOCKET

**A L A R M** Find authenticated court documents without watermarks at <u>docketalarm.com</u>.

1 ~ 1 ~

## **TABLE OF APPENDICES**

- Appendix A: List of Materials Considered
- Appendix B: Curriculum Vitae

Declaration of Dr.-Ing. Jan-Michael Frahm



Find authenticated court documents without watermarks at docketalarm.com.

#### I. INTRODUCTION

#### A. ENGAGEMENT

1. I have been retained by counsel for Valeo, 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 1-12, 15-19, and 21 of U.S. Patent No. 7,877,175 ("the '175 patent"), which is submitted herewith as Petition Exhibit 1001<sup>1</sup>. The following is my written report on that topic.

## A. BACKGROUND AND QUALIFICATIONS

2. I am currently an Assistant Professor of Computer Science at the University *of* North Carolina *at* Chapel Hill in the Department of Computer Science. I am also the head of the 3D Computer Vision Group in the Department of Computer Science.

3. Since the mid 1990s, I have studied and worked in the field of computer science and engineering. My experience includes research and teaching, with research interests in 3D camera vision technology, including issues arising out of camera motion, camera self-calibration, and multi-camera systems.

<sup>&</sup>lt;sup>1</sup> In this declaration, citations to "Pet. Ex. [No.]" refer to exhibits to Valeo's Petition for *Inter Partes* Review of U.S. Patent No. 7,877,175. Citations to "Att. [A, B, C, etc.]" refer to documents attached to this declaration that are not cited as exhibits in Valeo's *Inter Partes* Review Petition of U.S. Patent No. 7,877,175.



f De Les Ise Mishael F

## 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.