### Declaration of Jose Sasian In Support Of Petition for *Inter Partes* Review of USP 8,783,882

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re <i>Inter Partes</i> Review of:	)
U.S. Patent No. 8,783,882	)
Issued: July 22, 2014	)
Application No.: 14/054.004	)

For: Extended Field of View Exterior Mirror Element For Vehicle

**FILED VIA E2E** 

DECLARATION OF DR. JOSE SASIAN IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 8,783,882



## TABLE OF CONTENTS

I.	INTRODUCTION AND QUALIFICATIONS		
II.	SUM	MARY OF MATERIALS REVIEWED AND CONSIDERED	∠
III.		EL OF SKILL IN THE ART AND PERSPECTIVE APPLIED HIS DECLARATION	7
IV.	BAC	KGROUND LAW	8
	A. B. C.	Written Description	8
V.	SUM	MARY OF OPINIONS	11
VI.	THE	'882 PATENT	12
	A. B.	The '882 Patent's Disclosure	
VII.	THE '666 APPLICATION LACKS WRITTEN DESCRIPTION SUPPORT FOR THE CLAIMS OF THE '882 PATENT		14
	A. B.	A POSA Would Not Understand The 666 Patent Application To Incorporate With Particularity The Two-Mirror Assembly Of The '712 And '451 Patent Family	21
	C.	Patents Were Fully Incorporated By Reference	
VIII.	CLA	IM CONSTRUCTION	38
	A.	"side-by-side"	38
IX.	THE	PRIOR ART AND BACKGROUND EVIDENCE	40
	A.	Prior Art Relied Upon For Anticipation	40



# Declaration of Jose Sasian In Support Of Petition for *Inter Partes Review* of USP 8,783,882

		1. U.S. Patent Application Publication No. 2002/00/2026	
	_	("the '026 publication")	
	В.	Prior Art Relied Upon For Obviousness Combinations	
		1. International Pub. No. WO 2001/44013 ("Henion")	
		2. International Pub. No. WO 2001/81956 ("Platzer")	
		3. U.S. Pat. No. 5,721,646 ("Catlin")	
		4. U.S. Pat. No. 6,984,048 ("Yamabe")	
		5. FR 2650982 ("Silvestre")	
	C.	Background Evidence	45
X.	THE	E Claims 1-20 OF THE '882 ARE ANTICIPATED BY THE	
•		6 PUBLICATION	45
	<b>A</b>		1.0
	A.	Claim 1	
		1. Preamble, [a], [b], [1]	
		2. [c] A electrically-operated actuator	
		3. [k] Backing plate mounted to actuator	
		4. [d], [f] Support portions and capable of supporting	
		5. [e], [h] mirror elements	
		6. [g] Mounted adjacently	55
		7. [i], [j] Different and overlapping rearward fields of	
		view and directed downwardly	59
		8. [n], [o] "overall rearward field of view"	
		9. [m] Reflective Element Substrates	
	В.	Claims 2, 3, 7, 11, 14	
	C.	Claim 4 - rearward field of view	
	D.	Claim 5 - tilting	73
	E.	Claim 6 - blind spot	
	F.	Claim 8 – overlapping fields of view	75
	G.	Claim 9 – fixed reflectance	76
	H.	Claim 10 – attachment	77
	I.	Claim 12 - heater element	78
	J.	Claim 13 – metallic reflector coating types	79
	K.	Claim 15	
		1. Preamble, 15[a]-[f], [h], [j]-[q]	80
		2. [g] Metallic Reflector	
		3. [i] Matching curvature	
	L.	Claims 16-17	
	M	Independent Claim 18	86



# Declaration of Jose Sasian In Support Of Petition for *Inter Partes Review* of USP 8,783,882

		1. Preamble, 18[a]-[t], [h]-[p]	86
		2. [g] Fixed reflectance	89
	N.	Claims 19-20	
371	CI A	TMC 1 2 2 10 AND 20 WOLLD HAVE DEEN ODWOLG	
XI.		AIMS 1, 2, 3, 18, AND 20 WOULD HAVE BEEN OBVIOUS	
		ER HENION, PLATZER, CATLIN, SILVESTRE, AND	0.1
	YAI	MABE	91
	A.	Claim 1	91
		1. Preamble, [a] Mirror Housing	
		2. [b] Backing Plate	
		3. [c] Actuator	
		4. [d] Plano Mirror	95
		5. [f] Auxiliary Mirror	
		6. [e], [h] Rearward Field of View	
		7. [g] Mounted Adjacently, Side-By-Side, And Not	
		Superimposed	102
		8. [i] Overlapping Fields of View	
		9. [j] Angled	
		10. [k] Common Actuator	
		11. [l] Polymeric Molding	114
		12. [m] Reflective Element Substrate	
		13. [n] At Least About 25 Degrees	120
		14. [o] Less Than About 50 Degrees	123
	B.	Claim 2	
		1. Preamble and [a] Convex-Curved Substrate, Reflector	
		Coating	124
		2. [b] Convex-Curved Backing Plate	
		3. [c] Spherical Curvature	127
	C.	Claim 3	129
		1. Spherical Backing Plate	129
	D.	Claim 18	
		1. Preamble and [a]-[f], [h]-[i], [k]-[p]	130
		2. [g] Fixed Reflectance	
		3. [j] About 2 to 20 Degrees	
	E.	Claim 20	
ХII	CON	NCLUSION	151



#### I. INTRODUCTION AND QUALIFICATIONS

- 1. I have been retained by SMR Automotive Systems USA Inc. ("SMR") to provide my opinion concerning the validity of U.S. Patent No. 8,783,882 (attached to the accompanying Petition and henceforth referred to as "the '882 patent") in support of SMR's Petition for *Inter Partes* Review of U.S. Patent No. 8,783,882.
- 2. I have extensive academic and industry experience with optical engineering. Specifically, I have over thirty years of academic and industry experience in the field of optical sciences and optical engineering in general, including optical instrumentation, optical design, and optical fabrication and testing.
- 3. I am currently a full-time, tenured Professor of Optical Sciences at the College of Optical Sciences at the University of Arizona in Tucson, Arizona, a position I have held since 2002. As a professor, I teach and perform research in the field of optical design. For example, I teach my students how to design lenses and mirrors and how to think about light so that they can design useful optical systems.
- 4. As part of my academic and research responsibilities I am frequently involved with the design, fabrication, and testing of optical devices. Prior to receiving tenure, I was an Associate Professor of Optical Sciences at the



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