

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SMR AUTOMOTIVE SYSTEMS USA, INC.,
Petitioner,

v.

MAGNA MIRRORS OF AMERICA, INC.,
Patent Owner.

Case IPR2018-00506
Patent No. 8,591,047

**DECLARATION OF MICHAEL NRANIAN IN SUPPORT OF PATENT
OWNER MAGNA MIRRORS OF AMERICA, INC.'S PRELIMINARY
RESPONSE**

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I. INTRODUCTION AND QUALIFICATIONS

1. I have been retained by patent owner Magna Mirrors of America, Inc. (“Magna”) to provide my opinion on certain matters regarding SMR Automotive Systems USA Inc. (“SMR”)’s Petition for *Inter Partes* Review of U.S. Patent No. 8,591,047 (“the ‘047 patent”).

2. All statements herein made of my own knowledge are true, and all statements herein based on information and belief are believed to be true. I am over 21 years of age and am competent to make this declaration.

3. At this stage, I have been asked to provide my opinions on certain discrete issues that are relevant to Magna’s Preliminary Patent Owner Response. I have not been asked to and do not opine regarding the ultimate issues addressed by SMR’s proposed grounds. The fact that I do not opine on any given issue in this declaration should not be construed as agreement with SMR’s positions. I reserve the right to provide additional opinions in the event that an IPR is instituted.

4. I am being compensated at the rate of \$350 per hour for time preparing this declaration. My compensation is not contingent on the outcome of this proceeding.

5. Although I have a law degree, and I am licensed to practice before the United States Patent and Trademark Office, I have not been asked to opine on any legal issues. I will not be giving any legal opinions throughout this declaration and

throughout my work on this matter. My opinions provided herein are based on my engineering, technical, scientific, and business education and experience.

6. My academic background is in engineering. I possess a Bachelor of Science in Electrical and Computer Engineering, a Master of Science in Electrical Engineering, a Bachelor of Science in Chemical Engineering and a Juris Doctor from Wayne State University. I also received a Master of Business Administration from the University of Michigan. I also am a licensed Professional Engineer, Certified Project Management Professional, as well as a Lean Six Sigma Black Belt certified through the American Society for Quality and the International Quality Federation.

7. I have extensive industry experience in the automotive industry for multiple companies. Specifically, I worked as a design engineer, senior project engineer, design analysis engineer, technical specialist, and engineering manager in the automotive industry from 1985 to 2007. This included experience at Ford, General Motors, and Allied Signal. I worked at Allied Signal from 1992 to 1993, General Motors from 1993 to 1995, and Ford Motor Company from 1985 to 1992, and from 1995 to 2007.

8. While at Ford, General Motors, and Allied Signal, I worked as a Product Design Engineer, a Senior Project Engineer, a Technical Specialist, a Design Analysis Engineer, and an Engineering Manager. My work included the

design and development of automotive safety systems and components for various different types of automotive applications. This included, among other things, testing and development of systems and components for active and passive safety.

9. Areas of my work included both active and passive sensing systems which can be used in the vehicle interior or exterior, including the design and development of sensing components and systems that incorporate electromagnetic wave sensing and visual perception (including, but not limited to, vision, camera, radar, lidar, infrared ultraviolet, night vision, mirrors, and other optical devices, including those containing lenses and mirrors) as well as acoustical sensing. Areas of my work also specifically included vision systems, occupant ergonomic evaluations, user and occupant audio and visual perception, visual interfaces and displays, infrared, vision, mirrors, lenses, camera, sonar, acoustic, radar, lidar, sensing and detection technologies and systems. I also worked on sensing systems for various automotive applications, including sensor fusion technologies, for image and object detection, discrimination, and identification and the appropriate status notifications to vehicle drivers and occupants, and visual perception techniques and methods.

10. My work specifically involved the testing and development of the aforementioned systems. This included both laboratory tests and technology

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