

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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TRW AUTOMOTIVE U.S. LLC

Petitioner

v.

MAGNA ELECTRONICS, INC.

Patent Owner

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Cases IPR2015-00436, IPR2015-00437,  
IPR2015-00438, IPR2015-00439

Patent 8,599,001 B2

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**PETITIONER'S REPLY TO PATENT OWNER RESPONSE**

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**Exhibit List**

Ex. No.	Description
Ex. List (Ex. 1001)	Exhibit List
'001 Patent (Ex. 1002)	U.S. Patent No. 8,599,001 for <i>Vehicular Vision System</i> , issued to Schofield <i>et al.</i> on December 3, 2013.
'001 FH (Ex. 1003)	Prosecution History File Wrapper of U.S. Patent No. 8.599,001
Vellacott (Ex. 1004)	Vellacott, Oliver, "CMOS in Camera," IEE Review, pp. 111-114 (May 1994)
Kenue (Ex. 1005)	U.S. Pat. No. 4,970,653 issued to Kenue on Nov. 13, 1990
Yanagawa (Ex. 1006)	Japanese Kokai Application for <i>Travelling Vehicle Recognition Device</i> , by Yanagawa <i>et al.</i> , No. S62-131837, published June 15, 1987, together with certified translation.
Venturello (Ex. 1107)	European Pat. Appl. No. 0 353 200 published Jan. 31, 1990 to Venturello
Schofield (Ex. 1108)	U.S. Pat. No. 4,930,742 issued to Schofield on June 5, 1990
Denyer (Ex. 1009)	PCT Pub. No. WO 93/11631, published June 10, 1993
Bottesch (Ex. 1010)	U.S. Pat. No. 5,166,681 issued to Bottesch on Nov. 24, 1992
Miller Dec. (Ex. 1011)	Expert Declaration of Jeffrey A. Miller
(Ex 1012)	Original Transcript of Board Telephone Conference Hearing (January 12, 2016)
(Ex 1013)	G. Moore, "Cramming more components onto integrated circuits," <i>Electronics</i> , Vol. 38, No. 8, April 19, 1965
(Ex 1014)	<i>Curriculum Vitae</i> of Lester J. Kozlowski
(Ex 1015)	L. Kozlowski <i>et al.</i> , "2.5 $\mu$ m PACE-I HgCdTe 1024x1024 FPA," <i>Proc. IRIS Detector Specialty</i> , August 1994
(Ex 1016)	Business Wire, "Rockwell Scientific and UMC Develop Ultra Large Readout IC for Infrared Astronomy," Aug. 22, 2002

(Ex 1017)	J. Beletic, "Exotic Imaging: IR focal plane arrays enable imaging that is out of this world," Laser Focus World, October 2007
(Ex 1018)	P. Noble, "Self-Scanned Silicon Image Detector Arrays," IEEE Trans. ED, Vol. ED-15, No. 4, April 1968
(Ex 1019)	P. Fry and P. Noble, "Fixed Pattern Noise in Photomatrices," IEEE JSSC, Vol. SC-5, No.5, Oct. 1970
(Ex 1020)	V. Graefe, "Vision for Intelligence Road Vehicles"
(Ex 1021)	J.D. Plummer and J.D. Meindl, "A Low Light Level Self-Scanned MOS Image Sensor," ISSCC72, Feb. 1972
(Ex 1022)	G.J. Michon and H.K. Burke, "Charge Injection Imaging," ISSCC 73, Feb. 15, 1973
(Ex 1023)	G.J. Michon and H.K. Burke, "Operational Characteristics of CID Imager," ISSCC 74, Feb. 13, 1974
(Ex 1024)	C. Anagnostopoulos, "Signal Readout in CID Image Sensors," IEEE JSSC, Vol. SC-13, No. 1, Feb. 1978
(Ex 1025)	R. Ballingall et al., "Two-Dimensional Random Access Infrared Arrays," IEE Advanced Infrared Detectors and Systems, No. 228, London, 1983
(Ex 1026)	I. M. Baker et al., "Photovoltaic CdHgTe – silicon hybrid focal plane," Infrared Technology X, Proceedings of SPIE v. 510, 1984
(Ex 1027)	Renshaw et al., "ASIC Image Sensors," IEEE International Symposium on Circuits and Systems, 1-3 May 1990, pp. 3038-3041 Vol. 4 (1990)
(Ex 1028)	K. Chen, M. Afghani, P.E. Danielson, and C. Svensson, "PASIC: A processor-A/D converter-sensor integrated circuit," ISCAS90, pp. 1705-1708, 1-3 May 1990
(Ex 1029)	T. Ozaki, et al., "A Low-Noise Line-Amplified MOS Imaging Devices", IEEE Transactions on Electron Devices, Vol. 38, No. 5 (May 1991)
(Ex 1030)	U.S. Patent No. 3,949,162 issued to Malueg on April 6, 1976
(Ex 1031)	U.S. Patent No. 4,000,418, issued to Waldron on Dec. 28, 1976
(Ex 1032)	U.S. Patent No. 4,011,442 issued to Engeler on March 8, 1977
(Ex 1033)	U.S. Patent No. 4,079,422, issued to Anagnostopoulos on March 14, 1978
(Ex 1034)	U.S. Pat. No. 4,434,441, issued to Ishizaki on Feb. 28, 1984
(Ex 1035)	U.S. Patent No 8,637,801 issued to Schofield et al. on January 28, 2014

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