

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONY CORPORATION,
SAMSUNG ELECTRONICS, CO., LTD.,
SAMSUNG ELECTRONICS AMERICA, INC. and
SAMSUNG SEMICONDUCTOR, INC.
Petitioners

v.

RAYTHEON COMPANY,
Patent Owner

Case: IPR2016-00209

Patent 5,591,678

UPDATED PATENT OWNER EXHIBIT LIST

EXHIBIT LIST

Exhibit	Description
*2001PR	First page of Docket Control Order in 15-cv-341, August 17, 2015
*2002PR	Defendants' Invalidity Contentions and Disclosures Pursuant to Patent Rules 3-3 and 3-4, October 2, 2015
*2003PR	Defendants' Motion to Stay Cases Pending Inter Partes Review, January 4, 2016
*2001	Declaration of Eugene Fitzgerald
*2002	Excerpts from prosecution history of Application Serial No. 08/006,120, Office action dated December 10, 1993
*2003	U.S. Patent 4,612,083, "Process of Fabricating Three-Dimensional Semiconductor Device," Masaaki Yasumoto, issued Sept. 16, 1986
*2004	U.S. Patent 4,815,208, "Method of Joining Substrates for Planar Electrical Interconnections of Hybrid Circuits," Curt R. Raschke, issued March 28, 1989
*2005	Raytheon FAQ's http://investor.raytheon.com/phoenix.zhtml?c=84193&p=irol-faq#25748
*2006	Raytheon 2015 Annual Report
*2007	"Raytheon Acquires Hughes Wing in \$9.5-Billion Deal," James F. Peltz, January 17, 1997, http://articles.latimes.com/1997-01-17/news/mn-19463_1_hughes-aircraft
*2008	Declaration of John J. Drab
*2009	STC Bepi-Colombo Article
*2010	OmniVisionTech YouTube Video: OmniVision's Backside Illumination (BSI) Explained
*2011	Raytheon Co. v. Samsung Electronics Co., Ltd., Civil Action No. 1:15-CV-341-JRG-RSP, Dkt. 90 "Joint Statement Construction and Prehearing Statement" (E.D.T.X. Dec. 9, 2015), and Dkt. 116-1, "Claim Construction Chart" (E.D.T.X Feb. 17, 2016)
*2012	Declaration of A. Bruce Buckman, Raytheon Co. v. Samsung Electronics Co., Ltd., Civil Action No. 1:15-CV-341-JRG-RSP, Dkt. No. 100-2 (E.D.T.X Dec. 9, 2015) ("Buckman Decl.")
*2013	"The Technological Impact of Transistors", J.A. Morton and W.J. Pietenpol, Proceedings of Institute the of Radio Engineers (1958) 955. (Ex. 2020.)

<u>Exhibit</u>	<u>Description</u>
*2014	U.S. Patent No. 2,981,877, "Semiconductor Device-and-Lead Structure," Robert N. Noyce, issued Apr. 25, 1961
*2015	"VLSI Technology," S.M. Sze, McGraw-Hill, New York (1983).
*2016	"Cramming more components onto integrated circuits", G.E. Moore, Electronics 38 (1965).
*2017	"Progress in Digital Integrated Electronics", G.E. Moore, International Electron Devices Meeting, IEEE, 1975, pp. 11-13.
*2018	"Silicon Processing", D.C. Gupta, ASTM Special Technical Publication 804, Philadelphia (1983).
*2019A-F	Raytheon's Technology Tutorial originally submitted in Raytheon Co. v. Samsung Electronics Co., Ltd., Civil Action No. 1:15-CV-341-JRG-RSP (E.D.T.X.)
*2020	"High-efficiency AlGaAs/GaAs concentrator solar cells", R. Sahai, D. D. Edwall, and J. S. Harris Jr., Applied Physics Letters 34, 147 (1979).
*2021	"Bulk impurity charge trapping in buried channel charge coupled devices", McNutt, M.J.; Meyer, W.E., Journal of the Electrochemical Society, v 128, n 4, p 892-6, April 1981.
*2022	Definition of forming and furnish
*2023	"Integrated Movable Micromechanical Structures for Sensors and Actuators", L.S. Fan, Y.C. Tai, R.S. Muller, IEEE Transactions on Electronic Devices 35, (1998) p. 724.
*2024	"New Opportunities for Micro Actuators", H. Fujita and K.J. Gabriel, Transducers '91, 1991 International Conference on Solid-State Sensors and Actuators. Digest of Technical Papers (Cat. No.91CH2817-5), p 14-20, 1991.
*2025	"Failure Mechanisms and Fault Classes for CMOS-Compatible Microelectromechanical Systems", A. Castillejo, D. Veychard, S. Mir, J.M. Karam, and B. Courtois", Proceedings International Test Conference 1998 (IEEE Cat. No.98CH36270), p 541-50, 1998.
*2026	"Sony develops back-illuminated CMOS image sensor, realizing high picture quality, nearly twofold sensitivity and low noise", June 11, 2008
*2027	"Sony Develops "Exmor RS," the World's First Stacked CMOS Image Sensor Also introduces imaging modules that deliver high picture quality and compact size, for use in mobile devices such as smartphones and tablets", August 20, 2012
*2028	OmniBSI™ Technology Backgrounder, OmniVision Technologies,

<u>Exhibit</u>	<u>Description</u>
	Inc., Michael Okincha, Senior Staff Technical Production Manager, June 22, 2009
*2029	OmniVision BSI Presentation
2030	Corrected Patent Owner Response Redline dated October 6, 2016
2031	RAY00009970-00010007 redacted
2032	Fitzgerald Declaration dated March 11, 2016 (filed in IPR2015-01201 as Ex. 2019)

*Patent owner's exhibits 2001-2029 were previously filed and listed here again pursuant to 37 C.F.R. § 42.63.

Dated: October 7, 2016

Respectfully submitted,

/Thomas J. Filarski/

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CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing **UPDATED PATENT OWNER'S EXHIBIT LIST** was served on October 7, 2016 by filing this document through the Patent Trial and Appeal Board End to End system (PTAB E2E) as well as by delivering a copy via electronic mail to the following:

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Date: October 7, 2016

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