

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICRON TECHNOLOGY, INC.,
Petitioner,

v.

VERVAIN, LLC,
Patent Owner.

Case No.: IPR2021-01549
U.S. Patent No. 9,997,240
Original Issue Date: June 12, 2018

Title: LIFETIME MIXED LEVEL NON-VOLATILE MEMORY SYSTEM

PETITIONER'S NOTICE OF FILING DEMONSTRATIVE EXHIBITS

LISTING OF EXHIBITS

Exhibit	Description
1001	U.S. Patent No. 8,891,298 (the “298 patent”)
1002-1004	<i>Intentionally omitted</i>
1005	U.S. Patent No. 9,997,240 (the “240 patent”)
1006	File History of U.S. Patent No. 9,997,240
1007-1008	<i>Intentionally omitted</i>
1009	Declaration of Dr. David Liu (“Liu Decl.”) – IPR2021-01549
1010	U.S. Patent Application Publication No. 2011/0099460 (“Dusija”)
1011	U.S. Patent Application Publication No. 2008/0140918 (“Sutardja”)
1012	U.S. Patent Application Publication No. 2009/0327591 (“Moshayedi”)
1013	<i>Intentionally omitted</i>
1014	Betty Prince, Semiconductor Memories – A Handbook of Design, Manufacture, and Application (2d ed. 1991) (“Prince”)
1015	U.S. Patent No. 8,120,960 (“Varkony”)
1016	U.S. Patent No. 7,000,063 (“Friedman”)
1017	U.S. Patent Application Publication No. 2005/0251617 (“Sinclair”)
1018	Jan Axelson, USB Mass Storage: Designing and Programming Devices and Embedded Hosts (2006) (“Axelson”)
1019	Rino Micheloni et al., Inside NAND Flash Memories (1 st ed. 2010) (“Micheloni”)

Exhibit	Description
1020	U.S. Patent Application Publication No. 2011/0115192 (“Y. Lee”)
1021	U.S. Patent No. 7,453,712 (“Kim”)
1022	U.S. Patent Application Publication No. 2011/0096601 (“Gavens”)
1023	U.S. Patent No. 8,078,794 (“C. Lee”)
1024	U.S. Patent No. 7,733,729 (“Boeve”)
1025	Microsoft Computer Dictionary, Fifth Edition, 2002, definition of read-after-write
1026	Merriam-Webster’s Collegiate Dictionary, Eleventh Edition, 2006, definition of periodic
1027	New Oxford American Dictionary, 3 rd Edition, 2010, definition of module
1028	U.S. Patent Application Publication No. 2010/0172180 (“Paley”)
1029	U.S. Patent No. 7,853,749 (“Kolokowsky”)
1030	U.S. Patent Application Publication No. 2010/0017650 (“Chin”)
1031	European Patent Specification No. EP 2,291,746 B1 (“Radke”)
1032	U.S. Patent Application Publication No. 2015/0214476 (“Matsui”)
1033	<i>Intentionally omitted</i>
1034	Complaint for Patent Infringement, Dkt. No. 1, <i>Vervain, LLC v. Micron Technology, Inc., Micron Semiconductor Products, Inc., and Micron Technology Texas, LLC</i> , Case No. 6:21-cv-00487-ADA (May 10, 2021 W.D. Tex.)

Exhibit	Description
1035	Agreed Scheduling Order, Dkt. No. 24, dated September 16, 2021, in <i>Vervain, LLC v. Micron Technology, Inc., Micron Semiconductor Products, Inc., and Micron Technology Texas, LLC</i> , Case No. 6:21-cv-00487-ADA
1036-1037	<i>Intentionally omitted</i>
1038	Scott McKeown, “WDTX ‘Implausible Schedule’ & Cursory Markman Order Highlighted,” Ropes & Gray, Patents Post-Grant, Inside Views & News Pertaining to the Nation’s Busiest Patent Court, June 2, 2021
1039	Dani Kass, Judge Albright Now Oversees 20% of New U.S. Patent Cases, Law360, March 10, 2021
1040	Brian Dipert and Markus Levy, Designing with Flash Memory (1994) (“Dipert & Levy”)
1041	U.S. Patent No. 7,366,826 (“Gorobets”)
1042	U.S. Patent No. 6,901,498 (“Conley”)
1043	U.S. Patent No. 8,356,152 (“You”)
1044-1046	<i>Intentionally omitted</i>
1047	Ashok Sharma, Advanced Semiconductor Memories, Architectures, Designs, and Applications (2003) (“Sharma”)
1048	<i>Intentionally omitted</i>
1049	U.S. Patent No. 5,936,971 (“Harari”)
1050-1054	<i>Intentionally omitted</i>
1055	New Oxford American Dictionary, 3 rd Edition, 2010, definitions of frequency and threshold
1056	Declaration of Jared Bobrow In Support Of Petitioner’s Motion for Admission <i>Pro Hac Vice</i>

Exhibit	Description
1057	Reply Declaration of Dr. David Liu (“Liu Reply”) – IPR2021-01549
1058	<i>Curriculum vitae</i> of Dr. David Liu
1059	Deposition Transcript of Sunil Khatri (September 1, 2022) [IPR2021-01547, -01548 and -01549]
1060	<i>Intentionally omitted</i>
1061	U.S. Patent No. 8,130,554 (“Linnell”)
1062	U.S. Patent No. 7,917,709 (“Gorobets III”)
1063	<i>Intentionally omitted</i>
1064	Byung-Woo Nam, Gap-Joo Na, and Sang-Won Lee, “A Hybrid Flash Memory SSD Scheme for Enterprise Database Applications”
1065	Yuan-Hao Chang, Jen-Wei Hsieh, Tei-Wei Kuo, “Improving Flash Wear-Leveling by Proactively Moving Static Data”
1066	Muthukumar Murugan, “Rejuvenator: A Static Wear Leveling Algorithm for NAND Flash Memory with Minimized Overhead”
1067	Vervain’s Sur-reply Claim Construction Brief, Dkt. 33, dated January 3, 2022 in <i>Vervain, LLC v. Micron Technology, Inc., Micron Semiconductor Products, Inc., and Micron Technology Texas, LLC</i> , Case No. 6:21-cv-00487-ADA (W.D. Tex.)
1068-1069	<i>Intentionally omitted</i>
1070	Petitioner’s Hearing Demonstratives
1071	<i>Intentionally omitted</i>

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