

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

DEMARAY LLC,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD (A  
KOREAN COMPANY), SAMSUNG  
ELECTRONICS AMERICA, INC.,  
SAMSUNG SEMICONDUCTOR, INC., and  
SAMSUNG AUSTIN SEMICONDUCTOR,  
LLC

Defendants.

Case No. 6:20-CV-00636

**JURY TRIAL DEMANDED**

**DEMARAY LLC'S COMPLAINT  
FOR INFRINGEMENT OF U.S. PATENT NOS. 7,544,276 AND 7,381,657**

Plaintiff Demaray LLC ("Demaray"), by and through its undersigned counsel, pleads the following against Samsung Electronics Co., LTD (a Korean Company) ("Samsung Electronics"), Samsung Electronics America, Inc. ("Samsung Electronics America"), Samsung Semiconductor, Inc. ("Samsung Semiconductor"), and Samsung Austin Semiconductor LLC ("Samsung Austin Semiconductor") (collectively, "Samsung" or "Defendants"), and alleges as follows:

**THE PARTIES**

1. Dr. Richard Ernest Demaray, a named inventor on both of the patents at issue in this case, has been working in and with the semiconductor industry for more than forty years.

Dr. Demaray began his training in chemical physics, studying ultraviolet photoconductivity of

materials. His doctoral work focused on cross-supersonic molecular and atomic beams with which he demonstrated lossless conversion of molecular vibration to light in vacuum. During his post-doctoral fellowship, he designed and built some of the first pulsed excimer laser driven tunable dye lasers for resonant multiphoton photoionization in the cooled beam. That work became instrumental to understanding the photo-physics of the high lying states of small and aromatic molecules.

2. Much of Dr. Demaray's work in industry has involved advances in thin film technology. In the 1980s, he worked as a senior physicist at BOC Group on electron beam evaporation technology used to deposit thermal barrier coatings. His work on adherent electron beam evaporation thermal barrier coatings revolutionized high-temperature jet engine performance, efficiency and longevity. Dr. Demaray's zirconia coatings are in worldwide production today on military, commercial and power generation turbine hot section blades and vanes. Later that decade and continuing into the early 1990s, Dr. Demaray worked at Varian Associates. He served as Varian's R&D Director for thin film systems, and developed full-face erosion and sputter physical vapor deposition technology now used extensively in semiconductor manufacturing worldwide. In the late 1990s, he helped form Applied Komatsu, where he served as General Manager of the PVD division and developed wide-area magnetron sputter machines. Thereafter, he managed several additional companies in the thin film space, including Symmorphix Inc., where he served as Chief Technology Officer and Chairman of the Board.

3. After serving in senior management roles at some of the more prominent companies in the industry, he founded Demaray in order to focus on research, development, and commercialization of new product applications based on technologies he had developed, including technologies protected by the patents at issue in this case. Much of that work—which

remains ongoing—relates to the production of low-defect thin films for advanced electronic devices. In the course of his work, Dr. Demaray discovered that his patented technology was being used by Samsung, without authorization, to manufacture thin films in Samsung electronic devices with which Samsung is generating many tens of billions of dollars per year.

4. Demaray is a Delaware limited liability company duly organized and existing under the laws of the State of Delaware. The address of the registered office of Demaray is 9 East Loockerman Street, Suite 202, Dover, DE 19901. The name of Demaray’s registered agent at that address is Spiegel & Utrera, P.A.

5. Demaray is the assignee and owns all right, title, and interest to U.S. Patent Nos. 7,544,276 (“the ’276 Patent”) and 7,381,657 (“the ’657 Patent”) (collectively, the “Asserted Patents”). A true and correct copy of the ’276 Patent is attached hereto as Exhibit 1. A true and correct copy of the ’657 Patent is attached hereto as Exhibit 2.

6. On information and belief, Defendant Samsung Electronics America is a corporation duly organized and existing under the laws of the State of New York, having a regular and established place of business in the Western District of Texas, including at 12100 Samsung Blvd, Austin, Texas 78754.<sup>1</sup> Defendant Samsung Electronics America may be served with process through its registered agent CT Corporation System, 1999 Bryan St., Ste. 900, Dallas, TX 75201-3136.

7. On information and belief, Defendant Samsung Electronics is a company duly organized and existing under the laws of the Republic of Korea with its principal offices at 129 Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea. Further, upon information and belief, Samsung Electronics directs and controls the actions of Samsung

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<sup>1</sup> <https://www.samsung.com/semiconductor/about-us/location/manufacturing-centers/>.

Electronics America such that it too maintains a regular and established place of business in the Western District of Texas, including at 12100 Samsung Blvd, Austin, Texas 78754, and 2800 Wells Branch Pkwy, Austin, Texas 78728.

8. On information and belief, Defendant Samsung Semiconductor is a corporation organized and existing under the laws of the State of California, and is located at 3655 North First Street, San Jose, California 95134, and is believed to be a wholly-owned subsidiary of Samsung Electronics America. Defendant Samsung Semiconductor may be served with process through its registered agent National Registered Agents, Inc., 1999 Bryan St., Ste. 900, Dallas, TX 75201-3136.

9. On information and belief, Defendant Samsung Austin Semiconductor is a limited liability company organized and existing under the laws of the State of Delaware, and is located at 12100 Samsung Boulevard, Austin, Texas 78754, and is believed to be a wholly owned subsidiary of Samsung Semiconductor. Defendant Samsung Austin Semiconductor operates the semiconductor fabrication plant known as the “S2-Line” in Austin, Texas, in which it uses manufacturing processes for semiconductors pertinent to this Complaint. Defendant Samsung Austin Semiconductor may be served with process through its registered agent CT Corporation System, 1999 Bryan St., Ste. 900, Dallas, TX 75201-3136.

#### **JURISDICTION AND VENUE**

10. This is an action arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.* Accordingly, this Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

11. Each Defendant is subject to this Court’s specific and general personal jurisdiction consistent with the principles of due process and/or the Texas Long Arm Statute.

12. Personal jurisdiction exists generally over the Defendants because each Defendant has sufficient minimum contacts with the forum as a result of business conducted within the State of Texas and the Western District of Texas and/or has engaged in continuous and systematic activities in the Western District of Texas, and Defendants Samsung Electronics America, Samsung Semiconductor, and Samsung Austin Semiconductor are registered with the Secretary of State to do business in the State of Texas. Personal jurisdiction also exists over each Defendants because each, directly or through subsidiaries, makes, uses, sells, offers for sale, imports, advertises, makes available, and/or markets products or processes within the State of Texas and the Western District of Texas that infringe one or more claims of the Asserted Patents , as alleged more particularly below.

13. Venue in this District is proper under 28 U.S.C. §§ 1400(b) and 1391(b) and (c) because each Defendant is subject to personal jurisdiction in this District and has committed acts of infringement in this District. Each Defendant, directly or through subsidiaries, makes, uses, sells, and/or offers to sell infringing products or processes within this District, has a continuing presence within the District, and has the requisite minimum contacts with the District such that this venue is a fair and reasonable one. Upon information and belief, each Defendant, directly or through subsidiaries, has transacted, and at the time of the filing of the Complaint, is continuing to transact business within this District.

### **TECHNOLOGY BACKGROUND**

14. Semiconductor devices are generally manufactured using a series of process steps applied to a substrate. A particularly important portion of typical semiconductor manufacturing processes involves the deposition of thin films used to form structures in the final product. One of the most practical and effective approaches to thin film deposition used to make modern

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