

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONY CORPORATION, SAMSUNG ELECTRONICS CO., LTD.,
SAMSUNG DISPLAY CO., LTD.

Petitioners

Patent No. 7,202,843
Issue Date: April 10, 2007
Title: DRIVING CIRCUIT OF A LIQUID CRYSTAL DISPLAY
PANEL AND RELATED DRIVING METHOD

**DECLARATION OF THOMAS CREDELLE
IN SUPPORT OF PETITION FOR
INTER PARTES REVIEW OF U.S. PATENT NO. 7,202,843**

No. IPR2015-00863

I, Thomas Credelle, do hereby declare that:

1. I have been retained by counsel for petitioner Sony Corporation (“Sony”) to provide assistance regarding U.S. Patent No. 7,202,843 (“the ’843 Patent”).

I. Professional Background

2. I have more than 40 years of industry experience in research and development in the areas of Liquid Crystal Display (LCD) technology and in other flat panel displays.

3. I received my M.S. degree in Electrical Engineering from the Massachusetts Institute of Technology in 1970, with an emphasis on Electro-optics and Solid State Materials. I received my B.S. degree in Electrical Engineering in 1969 from Drexel University.

4. I was employed by RCA at Sarnoff Labs in Princeton, NJ from 1970 through 1986. I was initially employed by RCA as an Individual Contributor. At the time of my departure from RCA, I held the title of Group Manager. During my time at RCA, I participated in research and development projects relating to optical materials and flat panel displays, including LCD devices. In 1983, I established the Thin-Film Transistor (TFT) LCD Program at Sarnoff Labs. As a Group Manager, I led a project that resulted in the development of the first poly-Silicon TFT LCD at

Sarnoff Labs. I received the Sarnoff Outstanding Achievement Award for Large-Area Flat Panel TV Developments.

5. From 1986 to 1991, I was employed by GE as the Manager of TFT LCD Research and Development at the GE Research and Development Center in Schenectady, NY. My duties included managing research and development efforts relating to TFT and LCD technology for avionics applications. While employed by GE, I led the team that built the world's first 1 million pixel color LCD device. I also led development of numerous other display devices utilizing LCD technology.

6. From 1991 to 1994, I was employed by Apple Computer as the Manager of Display Engineering. In my role at Apple, I supervised all LCD design, engineering, and qualification for the first Powerbook notebook computers introduced to market in the United States.

7. From 1994 to 1996, I was employed as the Director of Advanced Product Marketing by Allied Signal, where I was involved with the design and engineering of optical film for improving the viewing angle performance of LCD devices.

8. From 1996 to 1999, I was employed as the Director of Product Marketing for Motorola's Flat Panel Display Division, where I worked in the development of new flat panel technology, and I also worked closely with Motorola groups responsible for integrating LCD technology into mobile phone products.

9. From 1999 to 2001, I served as the Vice President of Operations of Alien Technology Corporation. During my time at Alien Technology, I was involved with the design and architecture of drive-electronics packaging technology suitable for flexible LCD devices.

10. From 2001 to 2007, I served as the Vice President of Engineering for Clairvoyante, Inc. My responsibilities as the VP of Engineering included managing research, development, engineering, and marketing of technologies for improving the resolution and power consumption of color flat panel displays. During my time at Clairvoyante, I was heavily involved with the design of LCD driving circuitry and image processing circuitry, including image processing algorithms that interacted with overdrive operations. My work resulted in the issuance of multiple patents relating to display technology.

11. From 2007 to 2008, I served as the Senior VP of Engineering for Puredepth, Inc. My responsibilities included the design of hardware and software to create 3D images on LCDs.

12. From 2012 through 2015, I served as the Vice President of Application Engineering and Device Performance for Innova Dynamics, Inc., a nanotechnology company developing materials to be used in LCDs and touch sensors. In 2008, I founded TLC Display Consulting, a company that provides technical consulting in the

areas of flat panel displays, liquid crystal displays, and related electronics. I currently serve as the President of TLC Display Consulting.

13. I have been a member of the Society for Information Display for over 40 years. I was a member of the Society for Information Display's Program Committee for 15 years, and the Director of the Society for Information Display's Symposium Committee for 10 years. In 1984, I was awarded the title of Society for Information Display Fellow in recognition of my achievements and contributions to flat panel display technology.

14. I am a named inventor on over 70 patents relating to flat panel display and LCD technology, including U.S. Patent No. 4,630,893, entitled "LCD Pixel Incorporating Segmented Back-to-Back Diode"; U.S. Patent No. 5,477,350, entitled "Interferometric Spatial Switch for Polarized or Unpolarized Light Using Liquid Crystal"; and U.S. Patent No. 7,791,679, entitled "Alternative Thin Film Transistors for Liquid Crystal Displays." I have also authored a number of articles relating to LCD technology and flat panel displays that were published by industry periodicals such as Information Display and peer-reviewed journals such as the Society for Information Display's Digest of Technical Papers.

15. My *curriculum vitae* is attached as Exhibit Sony-1016.

II. Assignment & Materials Considered

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