

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

K.J. PRETECH CO., LTD.
Petitioner

v.

INNOVATIVE DISPLAY TECHNOLOGIES LLC
Patent Owner

Case: IPR2015-01868

Patent 7,434,974

DECLARATION OF THOMAS L. CREDELLE

VIZIO EX. 1004

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I. INTRODUCTION

1. My name is Tom Credelle, and I have been retained by the law firm of Mayer Brown LLP on behalf of K.J. Pretech Co. Ltd. as an expert in the relevant art.

2. I have been asked to provide my opinions and views on the materials I have reviewed in this case related to Ex. 1001, U.S. Patent No. 7,434,974 (“the ’974 Patent”) (“the patent-at-issue”), and the scientific and technical knowledge regarding the same subject matter before and for a period following the date of the first application for the patent-at-issue was filed.

3. I am compensated at the rate of \$350/hour for my work, plus reimbursement for expenses. My compensation has not influenced any of my opinions in this matter and does not depend on the outcome of this proceeding or any issue in it.

4. My opinion and underlying reasoning for this opinion is set forth below.

A. Background and Qualifications

5. 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.

6. 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.

7. I was employed by RCA at Sarnoff Labs in Princeton, NJ from 1970 through 1986 at first as a Member of the technical Staff and later as a Group Manager in charge of all Active Matrix LCD research. 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.

8. 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. A key part of this effort was the development of high-brightness backlighting systems for outdoor applications. We succeeded in engineering full sunlight-readable displays.

9. 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. A key part of my effort was the development of low-power backlighting systems for use in notebook computers. These designs involved edge lighting systems with various focusing structures and light extraction patterns to improve uniformity.

10. 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 films and custom focusing backlight designs for improving the viewing angle performance of LCD devices.

11. 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. These designs exclusively used LED light sources.

12. 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.

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