UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TIANMA MICROELECTRONICS CO. LTD.,
Petitioner,

v.

JAPAN DISPLAY INC. and PANASONIC LIQUID CRYSTAL DISPLAY CO., LTD.,
Patent Owner.

Case No. IPR2021-01060
U.S. Patent No. 10,330,989

DECLARATION OF RICHARD FLASCK IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 10,330,989

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I. INTRODUCTION

1. I, Mr. Richard Flasck, submit this declaration to state my opinions on the matter described below.

2. I have been retained by Petitioner Tianma Microelectronics Co. Ltd., ("Tianma" or "Petitioner"), as an independent expert in this proceeding before the United States Patent and Trademark Office. Although I am being compensated at my usual and customary rate of $495.00 per hour, no part of my compensation depends on the outcome of this proceeding, and I have no other interest in this proceeding.

3. I understand that this proceeding involves U.S. Patent No. 10,330,989 (the "'989 patent"), and I have been asked to provide my opinions as to the patentability of the claims of the '989 patent. I understand that the application for the '989 patent was filed on September 21, 2016, and claims priority to a foreign application having a filing date of October 15, 2001.

4. I have been asked to consider the validity of certain claims of the '989 patent based on certain prior art references. I have also been asked to consider the state of the art and prior art available as of October 15, 2001, as well as September 10, 2002, the filing date of the earliest-filed United States application. Based on the prior art discussed in this declaration, it is my opinion that claims 1 and 2 of the '989 patent are unpatentable for the reasons provided below.

II. QUALIFICATIONS AND BACKGROUND

5. I believe that I am well qualified to serve as a technical expert in this matter based upon my educational and work experience, and specifically, flat panel display devices, including liquid crystal displays ("LCDs").

6. I received a Bachelor of Science degree in Physics from the University of Michigan, Ann Arbor, in 1970. I thereafter received a Master of Science degree in Physics from Oakland University in Rochester, Michigan, in 1976. I am the founder and CEO of RAF Electronics Corp., where I developed and patented Liquid Crystal on Silicon (LCOS) microdisplay projection technology as well as developed proprietary LED-based Solid State Lighting (SSL) products.

7. After receiving my Bachelor's degree, I was employed as a scientist and a manager by Energy Conversion Devices, Inc., from 1970 through 1982. My work at Energy Conversion Devices concerned the development of thin film photovoltaics, ablative imaging films, non-volatile memory, multi-chip modules, and superconducting materials. After leaving Energy Conversion Devices, I founded and served as CEO of Alphasil, Inc., where I developed amorphous silicon thin film transistor (TFT) active matrix liquid crystal displays (AMLCDs). I established one of the world's first TFT AMLCD production lines in 1985. My work at Alphasil included TFT process and circuit design, data driver and gate driver design, scalers,

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