

UNITED STATES PATENT AND TRADEMARK OFFICE

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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LG ELECTRONICS, INC.  
Petitioner

v.

INNOVATIVE DISPLAY TECHNOLOGIES LLC  
Patent Owner

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**Case:** \_\_\_\_\_

**Patent 7,300,194**

**DECLARATION OF MICHAEL J. ESCUTI, PHD**

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## **I. INTRODUCTION**

1. My name is Dr. Michael J. Escuti, and I have been retained by the law firm of Mayer Brown LLP on behalf of LG Electronics, Inc. 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. 7,300,194 (“the ’194 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 \$330/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 am currently a tenured Associate Professor at North Carolina State University (“NCSU”), in the Department of Electrical and Computer Engineering. As detailed below, I have over 16 years of experience directly relevant to the ’194 Patent, including in the fields of liquid crystal display (“LCD”) technologies, backlight design, optical physics, and electronic materials.

6. I received my PhD in Electrical Engineering from Brown University in Providence, RI, in 2002. My dissertation topic focused on novel LCD systems and devices, including both experimental and theoretical study. Upon earning my PhD, I

apprenticed as a Postdoctoral Scholar in the Department of Chemical Engineering at Eindhoven University of Technology (Netherlands), where my research focused on LCDs, novel backlight approaches, diffractive optical films/sheets, and polymer-based organic electronics. Since 2004, I have been on the faculty of NCSU in Raleigh, NC, currently as a tenured Associate Professor in the Department of Electrical and Computer Engineering. I have supervised the graduation of seven Ph.D. and three M.S. students, and currently advise an additional three Ph.D. students. In addition, I have mentored nineteen undergraduate researchers.

7. In 2005, I co-founded ImagineOptix Corporation, which commercializes components, systems, and optical thin-film technology developed within my academic laboratory. The primary markets are LCDs, projectors, and telecommunications hardware. Since its inception, I have been a part-time advisor to the company with the title of Chief Scientific Officer, and in 2013, I joined the Board of Directors.

8. With my students and collaborators, I have authored over 102 publications, including journal articles, refereed conference proceedings, and book chapters. I am a named inventor on 11 issued and 19 pending United States patents, and several additional foreign patents. I have offered 29 invited research presentations.

9. I have received numerous awards and distinctions, including the following:

- a. (2011) Presidential Early Career Award for Scientists and Engineers (“PECASE”), the highest award by the U.S. Government for young researchers;

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