

**UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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LG ELECTRONICS, INC., LG ELECTRONICS U.S.A., INC., LG  
ELECTRONICS MOBILECOMM U.S.A. INC., LG ELECTRONICS MOBILE  
RESEARCH U.S.A. LLC, AND LG ELECTRONICS ALABAMA, INC.,

Petitioner

v.

FUNDAMENTAL INNOVATION SYSTEMS INT'L, LLC

Patent Owner

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IPR2018-00495  
U.S. Patent No. 7,239,111

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**DECLARATION OF JONATHAN R. WOOD, PH.D.**  
**UNDER 37 C.F.R. § 1.68 IN SUPPORT OF PETITION**  
**FOR INTER PARTES REVIEW**

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## I. INTRODUCTION

1. I, Jonathan R. Wood, have been retained by counsel for LG Electronics, Inc., LG Electronics U.S.A. Inc., LG Electronics Mobilecomm U.S.A. Inc., LG Electronics Mobile Research U.S.A. LLC, and LG Electronics Alabama, Inc. (collectively “LGE” or “Petitioner”) as a technical expert in connection with the proceeding identified above. I submit this declaration in support of LGE’s Petition for Inter Partes Review of U.S. Patent No. 7,239,111 (“the ’111 Patent”).

2. Compensation for my work in this matter is based on an hourly rate. In addition, reasonable and customary expenses associated with my work and testimony in this matter are reimbursed. This compensation is not contingent on the outcome of this matter, nor is it contingent on the specifics of my testimony. I have no personal or financial stake, nor any interest in the outcome of the present proceeding.

3. In the preparation of this declaration, I have studied:

- (1) The ’111 Patent, LGE-1001;
- (2) The prosecution history of the ’111 Patent, LGE-1002;
- (3) U.S. Patent No. 7,360,004 to Dougherty, *et al.* (“Dougherty”), LGE-1005;
- (4) U.S. Patent No. 6,745,024 to DeJaco, *et al.* (“DeJaco”), LGE-1006;
- (5) U.S. Patent No. 5,973,948 to Hahn, *et al.* (“Hahn”), LGE-1007;

- (6) U.S. Patent No. 6,625,738 to Shiga (“Shiga”), LGE-1008;
  - (7) U.S. Patent No. 5,884,086 to Amoni, *et al.* (“Amoni”), LGE-1009;  
and
  - (8) Universal Serial Bus Specification, Revision 2.0, April 27, 2000 (USB 2.0”), LGE-1010.
4. In forming the opinions expressed below, I have considered:
- (1) The documents listed above;
  - (2) Any additional documents discussed below; and
  - (3) My own knowledge and experience based upon my work in the fields of communication and power electronics.

## II. QUALIFICATIONS

5. My qualifications and professional experience are described in my *Curriculum Vitae*, a copy of which can be found in exhibit LGE-1004. The following is a brief summary of my relevant qualifications and professional experience.

6. I earned my Bachelor of Engineering degree in Electrical Engineering from the University of Auckland, New Zealand, in 1968. In 1969, I earned my Master of Engineering degree in Electrical Engineering, also from the University of Auckland. I earned my Doctorate in Electrical Engineering from the Massachusetts Institute of Technology in 1973. My doctoral thesis focused on

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