

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC,
Petitioner,

v.

SCRAMOGE TECHNOLOGY LTD.,
Patent Owner.

IPR2022-00118
U.S. Patent No. 10,804,740

**DECLARATION OF DR. JOSHUA PHINNEY,
UNDER 37 C.F.R. § 1.68 IN SUPPORT OF PETITION FOR
INTER PARTES REVIEW**

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I, Joshua Phinney, do hereby declare as follows:

I. INTRODUCTION

1. I am making this declaration at the request of Apple Inc. in the matter of the *Inter Partes* Review of U.S. Patent No. 10,804,740 (“the ’740 Patent”) to *An et al.*

2. I am being compensated for my work in this matter at my standard hourly rate. I am also being reimbursed for reasonable and customary expenses associated with my work and testimony in this investigation. My compensation is not contingent on the outcome of this matter or the specifics of my testimony.

3. I have been asked to provide my opinions regarding whether claims 6, 7, 16, 17, 19, and 20 (“the Challenged Claims”) of the ’740 Patent are unpatentable as they would have been obvious to a person having ordinary skill in the art (“POSITA”) at the time of the alleged invention, in light of the prior art. It is my opinion that all of the limitations of the challenged claims would have been obvious to a POSITA.

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

- a. the ’740 Patent, Ex.1001;
- b. the prosecution history of the ’740 Patent (“’740 File History”),

Ex.1002;

- c. U.S. Patent Application Publication No. US 2009/0021212 to Hasegawa et al. (“**Hasegawa**”), Ex.1005;
- d. U.S. Patent Application Publication 2007/0069961 to Akiho et al.; Ex. 1006;
- e. U.S. Patent Application Publication 2014/0306656 Tabata et al.; Ex.1007;
- f. U.S. Patent 8,384,263 to Hiramatsu et al; Ex.1008;

5. In forming the opinions expressed below, I have considered:

the documents listed above;

the relevant legal standards, including the standard for obviousness, and any additional authoritative documents as cited in the body of this declaration; and

my own knowledge and experience based upon my work in the field of networking as described below.

6. Unless otherwise noted, all emphasis in any quoted material has been added.

II. QUALIFICATIONS AND PROFESSIONAL EXPERIENCE

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

experience.

8. I am a Principal Engineer in the Electrical Engineering and Computer Science practice at Exponent, an engineering and scientific consulting firm headquartered at 149 Commonwealth Drive, Menlo Park, California 94025. I received a Ph.D. in Electrical Engineering from the Massachusetts Institute of Technology (“MIT”) in 2005. I also earned S.M. and B.S. degrees in Electrical Engineering from MIT and the University of Illinois, Chicago (“UIC”), respectively.

9. My master’s thesis at MIT focused on the miniaturization of power converters, by reducing the energy storage and improving the performance of inductors. As part of this work, I designed, tested, and constructed ferrite, iron-powder, and air-core inductors, while minimizing magnetic losses. During this time, I invented with my advisor, Dr. David Perreault, an electrical component with a capacitive impedance and an inductance-cancellation feature provided by magnetically coupled windings. A filter having a capacitor with inductance cancellation provides enhanced performance over frequency compared with conventional capacitors. This work was later extended to a second patent, with magnetically coupled windings used to improve EMI filters and common-mode chokes.

10. My doctoral work at MIT centered on miniaturization of power

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