

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: Walter G. Mayfield, et al.
U.S. Patent No.: 10,562,077 Attorney Docket No.: 50095-0030IP1
Issue Date: February 18, 2020
Appl. Serial No.: 16/460,770
Filing Date: July 2, 2019
Title: SYSTEM COMPRISING A PORTABLE SWITCHING
DEVICE FOR USE WITH A PORTABLE ELECTRONIC
DEVICE

SUPPLEMENTAL DECLARATION OF DR. JEREMY COOPERSTOCK

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I, Jeremy Cooperstock, of Montreal, Canada, declare that:

I. INTRODUCTION

1. I have been retained by Fish & Richardson, P.C., on behalf of Apple Inc. (“Petitioner”), as an independent expert consultant in this *inter partes* review (“IPR”) proceeding before the United States Patent and Trademark Office (“PTO”).

2. I understand that this declaration will be submitted in support of Petitioner’s Reply to Patent Owner’s Response to the Petition for *inter partes* review of the ’077 Patent (U.S. Patent No. 10,562,077). This declaration supplements, and is intended to be read in conjunction with, my declaration in support of Apple’s Petition (APPLE-1003, “my First Declaration”). In my First Declaration, I address many topics, including (but not limited to) my background and qualifications, the level of skill in art, an overview of the ’077 Patent, claim construction, certain legal standards explained to me by Apple’s counsel, and a detailed analysis of the prior art against the ’077 Patent’s claims. The opinions and explanations expressed in my First Declaration apply equally here.

3. In writing this Supplemental Declaration, I have considered the following: my own knowledge and experience, including my teaching and work experience in the field; and my experience of working with others involved in the field.

4. I have no financial interest in either party or in the outcome of this proceeding. I am being compensated for my work as an expert on an hourly basis, for all tasks involved. My compensation is not dependent on the outcome of these proceedings or on the content of my opinions.

II. PERSON OF ORDINARY SKILL IN THE ART

5. Based on my knowledge and experience in the field and my review of the '077 Patent and its file history, I believe that would have had would have had at least a Bachelor's degree in an academic area emphasizing electrical engineering, mechanical engineering, or a similar discipline, and at least two years of experience in the field working with electronic devices. Superior education could compensate for a deficiency in work experience, and vice-versa. I understand that Patent Owner and its expert, Dr. Toliyat, propose that the POSITA would have post-baccalaureate electronic device or system design experience. I agree.

III. TECHNICAL DISCUSSION

6. The analysis and opinions expressed in my First Declaration fully explain why each and every feature of the '077 Patent's claims is provided in the prior art. I understand that Patent Owner and Dr. Toliyat have considered my opinions and offered their own, some of which are inconsistent with my view. I will address some of those points below. The fact that I have not addressed all of Patent Owner and Dr. Toliyat's opinions should not be interpreted as agreement with them.

A. Lee’s teachings would have motivated a POSITA to pursue the Gundlach-Lee combination.

7. As explained in my First Declaration, Lee sought improvements relating to energy transfer and battery charging for wireless headsets. (Lee, 3:21-22; *see also id.*, 1:14-29.)

8. With reference to Figure 2, Lee describes an exemplary prior headset design using a USB power cable to charge a wireless headset conductively. (Lee, 1:39-46.) Lee then reasons that “[a]s improvements of technology become available, there is an opportunity for further reduction of size and weight of wireless headphone/headsets” attributed to “the necessity of connectors” like the above-described USB plugs/sockets. (*Id.*, 1:62-2:2.) Likewise, Lee recognized that such conductive connectors increase both “end user complexity” and “the risk of failure . . . caused by fatigue and corrosion of contact elements.” (*Id.*) Thus, Lee concluded that “[w]hat is needed in the art is a mechanism to re-charge batteries in wireless headphones/headsets in order to minimize size and weight, maximize reliability, and improve end user experience.” (*Id.*, 3:17-20.)

9. Lee’s solution to the above-discussed challenges with conductive charging for wireless headsets is to implement inductive charging. Lee describes several embodiments to this effect. (*See generally* Lee, 3:32-7:36, Figures 5-24.) Accordingly, a POSITA reading the disclosure would have noted Lee’s express

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