UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner,

v.

FIRSTFACE CO., LTD.,

Patent Owner.

Case IPR2019-00614
Case IPR2019-01012
U.S. Patent No. 9,779,419

DECLARATION OF DR. ALFRED C. WEAVER

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A. The cited references do not disclose an activation button separate from a power button. 35

B. The cited art does not disclose turning on the display (displaying a lock screen) and performing a fingerprint authentication function in response to a one-time pressing of the activation button. 37

1. Griffin does not disclose turning on the display and performing a fingerprint authentication function in response to a one-time pressing of the activation button. 38

2. The Deficiencies of Griffin are not resolved by Davis. 41

C. A POSITA would not combine Griffin with Davis to arrive at the claimed invention. 47

IX. THE PETITION DOES NOT DEMONSTRATE THAT THE CHALLENGED CLAIMS ARE UNPATENTABLE UNDER GROUND 2....51

A. The cited references do not disclose an activation button separate from a power button. 52

B. The cited art does not disclose turning on the display and performing a fingerprint authentication in response to a one-time pressing of the activation button. 55

1. Goertz does not disclose turning on the display and performing a fingerprint authentication in response to a one-time pressing of the activation button. 56

2. The Deficiencies of Goertz Are Not Resolved by Davis. 58

C. A person of skill in the art would not combine Goertz with Davis to arrive at the claimed invention. 59

X. CONCLUSION....64

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I, Alfred C. Weaver, declare as follows:

I. INTRODUCTION

1. My name is Alfred C. Weaver. I am over the age of 18, have not been convicted of a crime involving moral turpitude, and am not otherwise disqualified from making this Declaration. I have personal knowledge of the facts contained in this Declaration and am competent to testify on the matters set forth below.

2. I have been asked to provide my opinions as to whether certain prior art references render claims of United States Patent No. 9,779,419 ("the '419 patent") obvious and my opinions about what a person of ordinary skill in the art would have understood with respect to the '419 patent in light of various prior art. I provide this testimony below.

II. PROFESSIONAL BACKGROUND AND EXPERIENCE

3. I am currently a Professor of Computer Science at the University of Virginia. I currently serve as the Associate Chair of the Computer Science Department, co-Director of the Computer Science Graduate Program, and Director of the Computer Science Ph.D. Graduate Program.

4. I have over forty years of experience in computer science, including in the area human-computer interaction ("HCI"). I am qualified by education and

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experience to testify as an expert with respect to user interface design and human-computer interaction, especially as it relates to mobile devices.

5. I earned a Bachelor of Science in Engineering Science from the University of Tennessee in 1971, having taken as many computer-related courses as were then available.

6. I earned a Master of Science in Computer Science in 1973 from the University of Illinois at Urbana-Champaign ("UIUC"). My master's thesis was related to the design and implementation of a novel programming language (VIPtran) with which a user could express industrial control logic. I designed a compiler that would parse the language statements and emit executable code.

7. I earned a Ph.D. in Computer Science in 1976, also from UIUC. My Ph.D. dissertation was related to the design and implementation of a graphical interface by which a human user could draw a relay ladder diagram (used to describe the control logic of industrial processes), including a graphical compiler that parsed the user's drawing and emitted executable code. I am a co-inventor of a patent related to my work: U.S. Patent No. 4,217,658, entitled "Process Control System that Controls Its Outputs According to the Results of Successive Analysis of the Vertical Columns of a Hypothetical Ladder Diagram."

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