UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TRILLER, INC.,
Petitioner

v.

TIKTOK PTE. LTD,
Patent Owner

U.S. Patent No. 9,648,132
IPR2022-00179

U.S. Patent No. 9,992,322
IPR2022-0180

SUPPLEMENTAL DECLARATION OF MICHAEL SHAMOS, PH.D.

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I, Michael Shamos, declare as follows:

I. INTRODUCTION

1. I am over the age of eighteen (18) and otherwise competent to make this Declaration.

2. I have been retained by counsel for Petitioner as an independent technical expert consultant in proceedings before the United States Patent and Trademark Office challenging U.S. Patent 9,648,132 (IPR2022-0179) and U.S. Patent 9,992,322 (IPR2022-0180) ("Challenged Patents"). I am being compensated at my rate of $550 per hour for my services. No part of my compensation is dependent on my opinions or on the outcome of this proceeding. I have no financial interest in any of the parties to this proceeding.

3. I previously submitted a declaration entitled "Declaration of Michael Shamos, Ph.D.," dated November 10, 2021 ("Shamos I"). Shamos I is Exhibit 1025 in both IPRs 2022-00179 and 2022-00180. A single declaration is appropriate here for both IPRs because the Challenged Patents are intimately related, in that the '322 Patent is a continuation of the '132 Patent, and both are continuations of U.S. Patent 9,924,430. Further, the Patent's Owner's POPRs and the Board's Institution Decisions in both IPRs raised substantially the same issues.

4. My background and qualifications were given in ¶¶ 9-21 of Shamos I, which I incorporate herein by reference.

II. CLAIM CONSTRUCTION

A. "software application"

5. On pages 8-10 of the Institution Decision for IPR2022-00179 ("the '179 Institution Decision") and on pages 8-10 of the Institution Decision for IPR2022-00180 ("the '180 Institution Decision"), the Board found that the term "software application," which appears, expressly or by dependency, in all the Challenged Claims, should be construed "[a]t this stage of the proceeding" according to the gloss provided for the capitalized term "Software Application," which appears in a "Definitions" section of the specification:

> *Software Application: The Client software application which is to be delivered over-the-air to, or pre-installed on, the Wireless Computing Device.*

6. This ostensible definition raises more questions than it answers, however, and should not be applied to the claims in my opinion. First, the definition applies to the capitalized term "Software Application." The specification uses capitalized terms rather than lower-case terms to refer to defined terms and uses the capitalized "Software Application" and the lower-case term "software application" in different contexts. *See* '132 patent, 8:6-9:14, 8:65; '322 patent, 8:8-9:15, 8:67. The Challenged Claims use only the lower-case term.

7. Second, the definition by its own literal terms uses the lower-case term to define the upper-case term, that is, "Software Application" is recited to be a type of "software application." The lack of further explanation of the lower-case term

"software application" in the specification indicates that the lower-case term has its ordinary meaning in the art.

8. Third, the definition is itself ambiguous because the meaning of "pre-installed" is unclear. The prefix "pre" means prior to some event, but that event is not defined in the specification or the claims. "Pre-installed" could mean installed prior to the sale of the device, prior to the first use of the device, or prior to the use recited in the claims. My best interpretation, although I do not believe any is needed, is that "pre-installed" means installed "before it reaches the end user." This follows from the specification at 57:52-54:

> *The preferred method for distributing the MusicStation application to a handset is to preload (preinstall) the application on the device before it reaches the end-user.*

9. Fourth, if applied to the claims, the definition creates a gaping logical hole. It is possible to have a software application that is not installed on the device before it reaches the end user (not pre-installed), but is also not delivered over-the-air. For example, the software application could be installed on the device by inserting a SIM card with the software application into the device after reaching the end user. In that instance, the "software application" would not be a "Software Application" because it would not conform to the supposed definition. Yet there is no suggestion in the specification that such a "software application" would not fall within the scope of the claims. Surely a POSITA reading the claims would not view

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