UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC
Petitioner

v.

UNILOC 2017 LLC
Patent Owner

IPR2020-00756
PATENT 9,564,952

PATENT OWNER RESPONSE TO PETITION

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EXHIBIT LIST

Exhibit	Description
2001	Google's Invalidity Contentions in *Uniloc 2017 LLC v. Google LLC*, No. 2:18-cv-552 (E.D. Tex.), dated August 26, 2019.

I.   INTRODUCTION

Uniloc 2017 LLC ("Uniloc" or "Patent Owner") submits this Response to the Petition for *Inter Partes* Review ("Pet." or "Petition") of United States Patent No. 9,564,952 ("the '952 patent" or "Ex. 1001") filed by Google LLC ("Google" or "Petitioner") in IPR2020-00756. The Petition fails to prove obviousness of the claims challenged therein—i.e., independent claim 9 and claims 10–12 depending therefrom.

II.   OVERVIEW OF THE '952 PATENT

The '952 patent, titled "Near Field Authentication Through Communication of Enclosed Content Sound Waves," issued on Feb. 7, 2017 and claims priority to a provisional application filed on Feb. 6, 2012.

In general, the '952 patent teaches a method for near field authentication of a computing device, such as a cell phone, using sound waves. The teachings can be used, for example, to authenticate a transaction in a store between (i) a point-of-sale computer (i.e., a computerized cash register) operated by a merchant and (ii) a mobile phone operated by a customer who is doing business inside the store. The invention is particularly useful for virtual credit card transactions in which credit card information is exchanged between the point-of-sale computer and the mobile phone. *See* Ex. 1002 (Prosecution History), p. 5−6 (providing a patentee's overview of the claimed invention).

In lieu of or in addition to a WAN or Internet-based authentication procedure in which the merchant's computer verifies a credit card number provided by the

mobile phone, the invention provides a way to verify that the transaction is in fact being authorized by a customer who is physically present inside the store and who is a registered owner of the mobile phone. It does this by using near-field signals transmitted between the mobile phone and the merchant's computer. Near-field signals are low power signals limited to transmission over very short distances (*e.g.*, as measured in centimeters or feet). *Id.*

In certain embodiments, to authenticate the transaction, the merchant computer may send a text message to the mobile phone asking the customer to transmit a device identifier or biometric identifier (or both) to the merchant's computer using a sound wave. Because sound waves generated through the acoustic speaker of a mobile phone are very low power signals, when such a wave is picked up by the microphone of the merchant computer, it provides a very high level of confidence that the customer is physically present inside the store, and probably within a few feet of the merchant computer. The invention allows the customer's mobile phone to modulate the sound wave with an encoded message (i.e., a "periodic enclosed content message") that contains the device identifier data and/or the biometric identifier. The merchant computer can then decode the message, extract the identifier, and compare it against a list of pre-authorized identifiers to complete the authentication. *Id.*

To discern the identifier, the merchant computer is constantly "listening" on a plurality of frequencies, whether acoustic or electromagnetic. There may be multiple mobile devices simultaneously attempting local transactions with the merchant computer. Therefore, according to the invention, each mobile device must scan the

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