UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

VISA INC., and VISA U.S.A. INC.,[1]

Petitioners,

v.

UNIVERSAL SECURE REGISTRY, LLC,

Patent Owner.

Case IPR2018-00809

U.S. Patent No. 9,530,137

PETITIONER APPLE INC.'S SUR-REPLY TO PATENT OWNER'S REPLY TO THE OPPOSITION TO THE CONDITIONAL MOTION TO AMEND

[1] Visa Inc. and Visa U.S.A. Inc., which filed a petition in IPR2019-00174, have been joined as a party to this proceeding

Contents

I. INTRODUCTION

In opposing the CMTA, Petitioner demonstrated that the substitute claims lack support in the '660 application, are obvious over the prior art made of record by Petitioner, and are not drawn to patent eligible subject matter. Patent Owner's ("PO") Reply does not overcome these showings, and instead mischaracterizes the prior art, the testimony of Petitioner's expert, the disclosure of the '660 application, and the impact of PO's disclaimer of claims 8 and 11 in the present proceeding. Accordingly, the Board should deny PO's CMTA.

II. ARGUMENT

A. The Prior Art Discloses A "Second Device" That Maps The ID Code To A Card Or Account Number, Thereby Rendering Obvious Substitute Claims 13 and 21.

The Petition and CMTA Opposition demonstrated substitute claims 13 and 21 are obvious over the '585 reference in view of Maritzen and Schutzer. In particular, Schutzer discloses authenticating a user with an "alternate card number" **[multidigit ID code for a credit/debit card account]** that substitutes for the card holder's actual card number and is mapped to the card holder's account by a card issuer – exactly what claims 13 and 21 seek to cover. Pet. at 63-72; *see also* CMTA Opp. at 17-20. PO attempts to distinguish its substitute claims by arguing that they require a networked validation-information entity ("NVIE") to perform the mapping of a multidigit ID code to a card number, whereas original claim 8

requires that a credit card issuer perform the same function. CMTA Reply at 2-6, 14-16. But this is a meaningless distinction because, as PO and its expert admit, a NVIE can be a credit card company, *see* CMTA Reply at 22, n. 7; Ex-2021, ¶46, n. 5, and therefore Schutzer's credit card issuer performing the recited function in the substitute claims is no different from an NVIE performing that function. *See* Pet. at 63-72; CMTA Opp. at 17-20 (citing the same).

Furthermore, contrary to PO's assertions (CMTA Reply at 14-16), Schutzer explicitly teaches that the card issuer **[NVIE]** can map the alternate card number **[multi-digit ID code]** to the actual card number. Schutzer explains that after receiving from the user via the merchant/merchant's bank the alternate card number "***linked*** to the user's actual card number," the alternate card number generator "sends the cardholder's actual card number to the card issuer's authorization processor," thereby mapping from the alternate card number to the linked actual card number.[2] *See, e.g.*, Ex-1115 Schutzer, ¶¶ 26, 32; *see also* Ex-1102, Shoup-Decl., ¶¶170-73. And like original claim 8, neither substitute claims 13 nor 21 explicitly recites the NVIE mapping a code to a card number—they merely require "allowing" the NVIE "to map the multi-digit ID code to a credit and/or debit card number," which PO does not dispute is possible in Schutzer's system. Accordingly, substitute claims 13 and 21 are obvious.

[2] Emphasis added unless otherwise noted.

B. <u>The '585 Reference Discloses A Combination Function That Produces An Authentication Code With Separable Fields, As Substitute Claim 13 Would Cover.</u>

The '585 reference discloses combination functions that would result in a signal having separable fields (*e.g.*, prepending/appending constituent codes and values) as substitute claim 13 would cover. CMTA Opp. at 18-20; Reply at 3-6, 9. PO is mistaken that the system of the '585 reference always uses an irreversible "one-way function." *See* CMTA Reply at 16-18. As PO's expert recognizes, one-way functions are practically irreversible, Ex-2010, Jakobsson-Decl., ¶58, but the '585 reference expressly discloses embodiments in which "[t]he verifier 105 ***reverses*** the [allegedly one-way] combination operation." Ex-1113, '585 Reference, ¶58. Were the combination function in the '585 reference always one-way as PO suggests, the verifier could never reverse it.

Indeed, the '585 reference contains multiple examples of ***reversible*** combination functions that would result in an authentication code with separable fields. Ex-1130, Juels-Decl., ¶¶39-43. PO overlooks these examples, and instead mischaracterizes Dr. Juels' testimony by suggesting he admitted prepending or appending values, instead of using an irreversible one-way function, are "inadequate way[s] to generate or protect the authentication code." CMTA Reply at 18. To the contrary, Dr. Juels explained that an eavesdropper can recover inputs only under particular situations where the eavesdropper has ***enhanced knowledge***

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