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行動支付簽名識別之驗證協定

張浩銘[1,*]　林淑瓊[2]　陳志誠[3]　洪郁軒[4]

[1]崇右技術學院休閒事業經營系助理教授
[2]大同大學資訊經營系副教授
[3]大同大學資訊經營系教授
[4]大同大學資訊經營系研究生

摘要

行動支付是未來電子商務的重要給付方式；其中以信用卡為基礎的給付，更是廣為商家和消費者所接受的，尤其是在大額給付和跨國給付中。然而，為了證明信用卡的使用者就是所有者，現行法令規定是以簽名作為驗證；簽名在電子化、無紙化、行動化的環境中，是不易達成的。本研究提出了一種新的行動信用卡身分驗證方法，將簽名和近距離通訊結合到現有流程中，目的在卡片授權之前先強化身分驗證。既然簽名仍是信用卡交易的確認方法，我們建議了完整的交易工具、交易協定和身分驗證協定。在此一系統中，我們必須建立「簽名驗證管理中心」作為公正的第三方平臺，以管理商業相關的簽名驗證。本文提出的管理中心內設有簽名管理系統、簽名驗證系統和簽名資料庫。為了支援簽名動作和處理程序，我們建立了各種系統元件，並定義了簽名驗證管理中心與其它單位之間的通信協定和資料傳輸格式。系統模擬結果顯示簽名驗證可以提高交易安全並降低行動支付上的弱點，將驗證的責任由商家轉向銀行。在信用卡支付中加入簽名識別，與現行法令完全相容；

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* 通訊作者：張浩銘
電子郵件：hchang0608@gmail.com
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既可強化行動支付安全，又無須變更法令，是本系統的優越之處。此外，此研究提出一個標準化的簽名驗證流程，也能在當爭議發生時提供法律證據。

關鍵詞：行動支付、近距離通訊、簽名驗證

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A Verification Protocol of Mobile Payment Based on Signature Recognition

Hau-Ming Chang[1,*], Shu-Chiung Lin[2], Patrick S. Chen[3], Yu-Hsuan Hung[4]

[1]Department of Leisure Business Management, Chungyu Institute of Technology

[2]Department of Information Management, Tatung University

[3]Department of Information Management, Tatung University

[4]Department of Information Management, Tatung University

Abstract

Mobile payment is an important way of e-commerce payment in the future. And a credit card, which is one of the common payment methods, is widely accepted by businesses and consumers, especially in the big amount of international payments and cross-border payment .However, in order to prove that the user is also the owner of the credit card, current laws and regulations are to depend on the signature verification. To sign in person isn’t easy to reach the purpose of verification in the environment of e-formalization, non-paper, and actions. This research proposes a new method combining signature verification and near field communications into existing processes. We discuss transaction tools, transaction protocol and authentication protocol based on the principle of “identity verification prior to card authentication”. We also establish a fair third-party platform, Signature Verification Management Center, to manage businesses related to signature verification. A signature management system, a signature verification system and a signature database are designed in the proposed center. Various system components are established in which signature activities in the process are performed, and the agreement between center and other parties and the data transmission format are defined. System simulation shows that signature verification can improve transaction safety and reduce the

* Corresponding Author: Hau-Ming Chang
E-mail: hchang0608@gmail.com

vulnerability on mobile payment where the responsibility of verification is switched from merchants to the bank. In addition, the study suggests a standardized process of signature verification. It also provides legal evidence when dispute occurs.

Keywords: mobile payment, near field communication, signature verification