

Title (en)
MICROPROCESSOR CARD PAYMENT SYSTEM

Title (de)
Mikroprozessor-Kartenzahlungssystem

Title (fr)
SYSTEME DE PAIEMENT PAR CARTE A MICROPROCESSEUR

Publication
EP 1012762 A4 20010124 (EN)

Application
EP 97954503 A 19971203

Priority
• SG 9700065 W 19971203
• SG 1996011524 A 19961204

Abstract (en)
[origin: WO9825220A1] The present invention is a system for implementing electronic payment with a tamper resistant microprocessor card (230). The microprocessor card (230) generates joint signatures under a joint digital signature scheme which derives its secret signature key from secret values (240, 250) contributed by different parties such as user, bank and service provider of electronic commerce. The joint signature is used to certify (260) the payment among other information. It follows that no one party has complete knowledge of the secret signature keys (240, 250) of the other parties; therefore, the use of joint digital signature in conjunction with microprocessor card (230) provides unprecedented security. The present invention also defines a protocol including payment, deposit, withdrawal and account opening (200) in providing added protection against potential security attacks. Above all, the protocol also supports off-line payment transactions, thus allowing transaction to be conducted scalably and economically over various forms of electronic networks, including unsecured ones.

IPC 1-7
G06F 17/60; **H04L 9/32**; **G07F 7/10**; **H04L 9/30**

IPC 8 full level
G06Q 20/00 (2006.01); **G07F 7/08** (2006.01); **G07F 7/10** (2006.01)

CPC (source: EP)
G06Q 20/04 (2013.01); **G06Q 20/341** (2013.01); **G06Q 20/355** (2013.01); **G06Q 20/363** (2013.01); **G06Q 20/3825** (2013.01); **G06Q 20/388** (2013.01); **G06Q 20/40975** (2013.01); **G07F 7/0866** (2013.01); **G07F 7/1008** (2013.01)

Citation (search report)
• [A] US 5557678 A 19960917 - GANESAN RAVI [US]
• [A] US 4951247 A 19900821 - KRUSE DIETRICH [DE], et al
• [PA] US 5588061 A 19961224 - GANESAN RAVI [US], et al
• [XAY] EP 0588339 A2 19940323 - NIPPON TELEGRAPH & TELEPHONE [JP]
• [XAY] US 5440634 A 19950808 - JONES TIMOTHY L [GB], et al
• [A] US 5511121 A 19960423 - YACOBI YACOV [US]
• [A] US 4995082 A 19910219 - SCHNORR CLAUS P [DE]
• [A] "Cryptography and coding", 1989, CLARENDON PRESS, OXFORD (GB), XP002133828
• [A] "NEW ELECTRONIC MONEY SYSTEM", NTT REVIEW, JP, TELECOMMUNICATIONS ASSOCIATION, TOKYO, vol. 8, no. 6, 1 November 1996 (1996-11-01), pages 4, XP000642071
• See references of WO 9825220A1

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
WO 9825220 A1 19980611; AU 5893598 A 19980629; EP 1012762 A1 20000628; EP 1012762 A4 20010124; SG 64957 A1 19990525

DOCDB simple family (application)
SG 9700065 W 19971203; AU 5893598 A 19971203; EP 97954503 A 19971203; SG 1996011524 A 19961204