

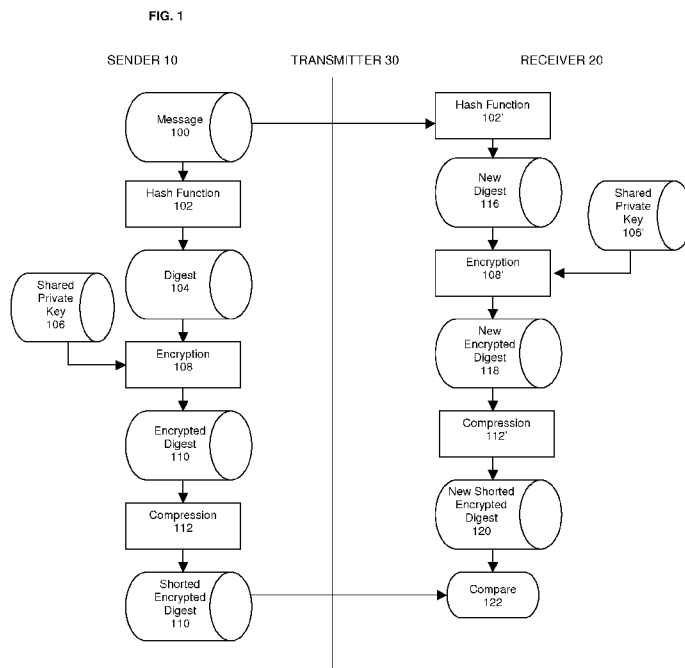


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- (71) **Applicant (for all designated States except US):**
PLURIBUS SYSTEMS LLC [US/US]; 101 Shockey Circle, Winchester, VA 22602 (US).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** **FOSTER, David** [US/US]; 4407 Hopson Rd, Apt 5305, Morrisville, NC 27560 (US). **FOSTER, Jacob** [US/US]; 5401 S Hyde Park Blvd, Apt 804, Chicago, IL 60615 (US). **FOSTER, John** [US/US]; 101 Shockey Circle, Winchester, VA 22602 (US).
- (74) **Agent:** **CRANDALL, Rebecca**; Olive & Olive, P.A., 500 Memorial Street, P.O. Box 2049, Durham, NC 27702 (US).
- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
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Declarations under Rule 4.17:

— as to the identity of the inventor (Rule 4.17(i))

[Continued on nextpage]

(54) Title: SECURE TRANSACTION FACILITATOR

(57) Abstract: A method, system, and devices are provided in which modified digital signatures are used to provide a dynamically generated number suitable for use in transactions requiring validation. The method uses symmetric key encryption to encode a message comprising authorization information and may use compression algorithms to provide a truncated message digest such that the dynamic number may be processed by existing credit card or other authorization systems. In part, this method is an improvement over other validation methods as decryption, which requires greater computing power, is not required. The method may be performed through the use of various devices. For example, credit cards may utilize the method to dispose the dynamic number in a magnetic strip or to transmit the dynamic number via radio transmitter. Smart cards, smart phones, or USB devices, optionally may be utilized to perform the inventive method.

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- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.1 7(H))* — *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*
- *of inventorship (Rule 4.17(iv))*

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- *with international search report (Art. 21(3))*

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 12/22540

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H04L 9/32 (2013.01)

USPC - 713/170

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
USPC: 713/170; IPC(8): H04L 9/32 (2013.01)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 713/150,170,182

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase; Google Scholar

Search Terms: process transact, authentic transact, verify transact, valid transact, private key, key store, key database, key repository, processor, memory, transact data, user ID, encrypt, crypt, cipher, message, alert, notify, digital digest, digital signature

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2009/0132813 A1 (SCHIBUK) 21 May 2009 (21.05.2009), abstract and para [0007]-[0010], [0012]-[0013], [0015]-[0016], [0018]-[0020], [0024]-[0025], [0028]-[0032], [0035]-[0036], [0040]-[0044], [0096]-[0097], [0104], [0107], [0122]-[0123], [0125], [0127], [0129], [0131], [0134]-[0135], [0139]-[0140], [0185], [0188], [0190]-[0191], [0200], [0216], [0227]-[0228], [0230], [0240], [0242]-[0243], [0247]-[0248], [0256], [0264]-[0265], [0316], [0349].	1-7, 9-17 ----- 8
Y	US 2008/0212771 A1 (HAUSER) 04 September 2008 (04.09.2008), abstract and para [0028], [0031], [0124], [0156]-[0157].	8
A	US 2010/0250944 A1 (SUZUKI) 30 September 2010 (30.09.2010), entire document.	1-17
A	US 2002/0191785 A1 (McBrearty et al.) 19 December 2002 (19.12.2002) entire document	1-17

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

11 March 2013 (11.03.2013)

Date of mailing of the international search report

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Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-3201

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300

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