(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 29 May 2008 (29.05.2008)

(51) International Patent Classification: G06F 12/00 (2006.01)

(21) International Application Number:

PCT/US2007/019956

(22) International Filing Date:

14 September 2007 (14.09.2007)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/860,049 19 November 2006 (19.11.2006) HS 11/679,108 26 February 2007 (26.02.2007) US

- (71) Applicant (for all designated States except US): **BROADON COMMUNICATIONS CORP.** [US/US]; 1200 Villa Street, Suite 100, Mountain View, CA 94041 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SRINIVASAN, Pramila [US/US]; 1853 Channing Ave., Palo Alto, CA

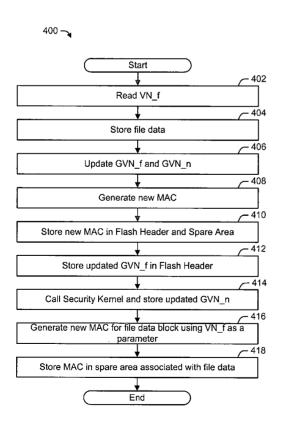
(10) International Publication Number WO 2008/063262 A3

94303 (US). PRINCEN, John [AU/US]; 10439 Plum Tree Lane, Cupertino, CA 95014 (US). CHAN, Andy [CA/US]; 1055 N. Capitol Avenue, San Jose, CA 95133 (US). MIELKE, Paul [US/US]; 1721 Guinda Street, Palo Alto, CA 94303 (US). WHEELER, Rob [US/US]; 11529 Rock Spring Court, Cupertino, CA 95014 (US).

- (74) Agent: AHMANN, William, F.; Perkins Coie LLP, 101 Jefferson Drive, Menlo Park, CA 94025 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW,
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: SECURING A FLASH MEMORY BLOCK IN A SECURE DEVICE SYSTEM AND METHOD



(57) Abstract: A technique for securing a flash memory block in a secure device system involves cryptographic techniques including the generation of a Message Authentication Code (MAC). The MAC may be generated each time a file is saved to one or more data blocks of a flash memory device and stored with the file's metadata and to each of the data blocks. A technique for reading and storing versioned files may be employed when applications utilize versioning.

WO 2008/063262 A3



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- (88) Date of publication of the international search report: 21 August 2008

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 07/19956

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - G06F 12/00 (2008.01) USPC - 711/101 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 - 711/101			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC - 711/100, 103; 713/182, 187-189; 714/5, 702			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)			
PubWEST (USPT, PGPB, EPAB, JPAB); DIALOG PRO (Engineering) & Google; encrypting data, encrypted data, flash memory block, flash memory device, cryptographic message authentication code (MAC), informational variables, operating system software, variables, flash device, MAC, validation check, retrieved data, flash memory			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where ap	propriate, of the relevant passages	Relevant to claim No.
	US 2006/0129848 A1 (Paksoy et al.) 15 June 2006 (15 Abstract, Fig. 3A, Fig. 5; Para [0001], [0004]-[0005], [0 [0039], [0043]-[0044], [0051], [0055], [0065], [0065], [00 [0095], [0098], [0105], [0117], [0120], [0131] and [0163	008], [0012], [0015]-[0026], [0032]-[0035], 067], [0072], [0076], [0078], [0080],	1-23
			•
Further documents are listed in the continuation of Box C.			
* Special categories of cited documents: "A" document defining the general state of the art which is not considered date and not in conflict with the application but cited to understand			
to be of particular relevance the principle or theory underlying the invention the principle or theory underlying the invention document of particular relevance; the claimed invention cannot be filing date "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive			
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other "Y" document of particular relevance; the claimed inventors and the control of			claimed invention cannot be
	tent referring to an oral disclosure, use, exhibition or other combined with one or more other such documents, such combination		
"P" document published prior to the international filing date but later than "&" document member of the same patent family the priority date claimed			
Date of the actual completion of the international search 08 March 2008 (08.02.2008) Date of mailing of the international search report 0.5 MAY 2008			h report
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents		Authorized officer: Lee WYoung	
P.O. Box 1450, Alexandria, Virginia 22313-1450 PCT Helpdesk: 571-272-4300			
racsimile No), 5/1-2/3-32U1	PCT OSP: 571-272-7774	