

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
5 August 2004 (05.08.2004)

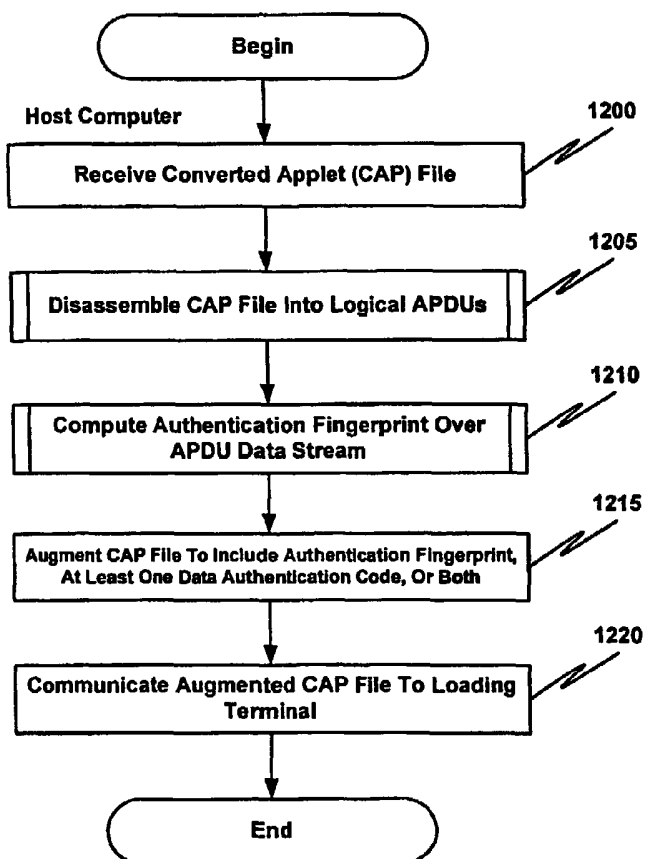
PCT

(10) International Publication Number
WO 2004/066129 A3

- (51) International Patent Classification⁷: **G06F 1/00** (74) Agent: **RITCHIE, David, B.**; Thelen Reid & Priest LLP, P.O. Box 640640, San Jose, CA 95164-0640 (US).
- (21) International Application Number: PCT/US2004/001049 (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 14 January 2004 (14.01.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
10/346,581 16 January 2003 (16.01.2003) US
- (71) Applicant (for all designated States except US): **SUN MICROSYSTEMS, INC.** [US/US]; 4150 Network Circle, MS SCA 12-203, Santa Clara, CA 95054 (US).
- (72) Inventor: **DE JONG, Eduard, K.**; 9 Warwick Road, Redland, Bristol B56 6HE (GB).
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, 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, IT, LU, MC, NL, PT, RO, SE, SI, SK,

[Continued on next page]

(54) Title: SYSTEM FOR COMMUNICATING PROGRAM DATA BETWEEN A FIRST DEVICE AND A SECOND DEVICE



(57) Abstract: A system for communicating program data between devices includes a first device configured to disassemble a program file comprising program data into at least one logical data unit, partition each logical data unit into at least one protocol data unit and compute a first fingerprint over the payload portion of the protocol data units. The first device is also configured to send the protocol data units and at least one member of the group comprising the first fingerprint and a first authentication code based on the first fingerprint to a second device. The second device is configured to compute a second fingerprint over the payload portion of the protocol data units and to commit the program to a memory based on whether the at least one member matches the second fingerprint or a second authentication code based on the second fingerprint.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
24 March 2005

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

ational Application No
/US2004/001049

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F1/00

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)

IPC 7 G06F G07F H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 005 942 A (CHAN ALFRED ET AL) 21 December 1999 (1999-12-21) column 4, line 25 - column 25, line 24	1-61
A	ZHIQUN CHEN: "Technology for Smart Cards: Architecture and Programmer's Guide" 'Online! 6 June 2000 (2000-06-06), ADDISON WESLEY , XP002305506 Retrieved from the Internet: URL: http://java.sun.com/developer/Books/consumerproducts/javacard/ch03.pdf 'retrieved on 2004-11-15! paragraphs '03.4!, '3.10.3! ----- -/--	1,22,41

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *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.
- *G* document member of the same patent family

Date of the actual completion of the international search

16 November 2004

Date of mailing of the international search report

10/12/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Segura, G

INTERNATIONAL SEARCH REPORT

ational Application No
/US2004/001049

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 03/003694 A (VERSADA NETWORKS INC) 9 January 2003 (2003-01-09) claims 56-61 -----	3-9, 24-30, 43-49
A	EP 1 022 638 A (IBM) 26 July 2000 (2000-07-26) paragraph '0016! - paragraph '0049! -----	1-61

INTERNATIONAL SEARCH REPORT

ational Application No
/US2004/001049

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6005942	A	21-12-1999	AU 746459 B2	02-05-2002
			AU 6578698 A	20-10-1998
			CA 2288824 A1	01-10-1998
			EP 1004992 A2	31-05-2000
			EP 1021801 A1	26-07-2000
			US 6233683 B1	15-05-2001
			WO 9843212 A1	01-10-1998
WO 03003694	A	09-01-2003	WO 03003694 A2	09-01-2003
			US 2003073440 A1	17-04-2003
			WO 03003653 A2	09-01-2003
			US 2003026289 A1	06-02-2003
EP 1022638	A	26-07-2000	EP 1022638 A2	26-07-2000
			JP 2000206876 A	28-07-2000
			KR 2000057713 A	25-09-2000
			TW 449991 B	11-08-2001