PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

.(51) International Patent Classification ⁶ :	12	(11) International Publication Number:	WO 99/01960
G06K 7/00	AS	(43) International Publication Date:	14 January 1999 (14.01.99)

(21) International Application Number: PCT/IB98/01162
 (22) International Filing Date: 30 June 1998 (30.06.98)

(30) Priority Data:

60/051,326 30 June 1997 (30.06.97) US 09/107,033 29 June 1998 (29.06.98) US

(71) Applicant: SCHLUMBERGER INDUSTRIES, S.A. [FR/FR]; 50, avenue Jean–Jaurès, F–92120 Montrouge (FR).

(72) Inventors: MONTGOMERY, Michael, A.; 906 Nelson Ranch Road, Cedar Park, TX 78613 (US). GUTHERY, Scott, B.; 19 Foster Road, Belmont, MA 02178-3736 (US). DU CASTEL, Bertrand; 50 Pascal Lane, Austin, TX 78746 (US).

(74) Agent: AKERS, Noel, J.; Frohwitter Patent- und Rechtsanwaelte, Possartstrasse 20, D-81679 Munich (DE).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

Published

With international search report.

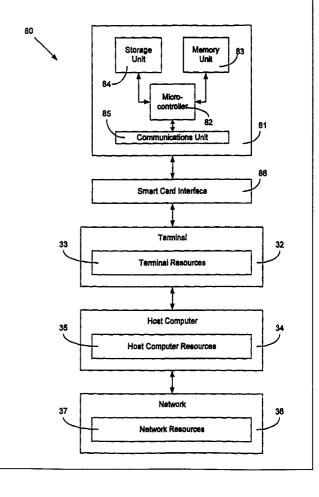
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(88) Date of publication of the international search report: 29 April 1999 (29.04.99)

(54) Title: SMART CARD CONTROL OF TERMINAL AND NETWORK RESOURCES

(57) Abstract

A smart card comprises a microcontroller, a memory unit, a storage unit, and a communications unit. The smart card may be connected to a terminal, which in turn may be connected to a host computer and/or a network. The smart card is configured to initiate communications with the terminal, which enables the smart card to control the terminal, host computer, or network and to access the resources connected to the terminal, host computer, or network. A communications protocol defines the commands that the smart card can send and allows the smart card to communicate using asynchronous or logical asynchronous communication.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
ΑT	Austria	FR	France	LU	Luxembourg	SN	Senegal
\mathbf{AU}	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav	TM	Turkmenistan
BF	Burkina Faso	GR	Greece		Republic of Macedonia	TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	zw	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's	NZ	New Zealand		
CM	Cameroon		Republic of Korea	PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DЕ	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

Int Itional Application No PCT/IB 98/01162

PCT/IB 98/01162 A. CLASSIFICATION OF SUBJECT MATTER IPC 6 G06K7/00 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 6 G06K G07F 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) C. DOCUMENTS CONSIDERED TO BE RELEVANT Category ° Citation of document, with indication. where appropriate, of the relevant passages Relevant to claim No. EP 0 662 674 A (FRANCE TELECOM : POSTE 1,4,9, (FR)) 12 July 1995 11-13, 15,20,21 Υ see column 3, line 5 - line 53; figure 1 2,3,5-8,10, 16-19, 22-26 Υ FR 2 701 133 A (GEMPLUS CARD INT) 2,3,10, 5 August 1994 22-26 see page 8, line 20 - line 27 see page 10, line 10 - line 18 Υ EP 0 427 465 A (AMERICAN TELEPHONE & 5-8. TELEGRAPH) 15 May 1991 16-19 see column 12, line 33 - line 50; figure 6 Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: "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 "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to "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) 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 docu-"O" document referring to an oral disclosure, use, exhibition or other means ments, such combination being obvious to a person skilled in the art. "P" document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 15. 03. 1999 22 February 1999 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Chiarizia, S Fax: (+31-70) 340-3016

3

Inte ional Application No
PCT/IB 98/01162

	1
OCUMENTS CONSIDERED TO BE RELEVANT	
n or document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
R 2 667 419 A (GEMPLUS CARD INT) April 1992 ee page 7, line 28 - page 9, line 35; igure 4	30,31
P 0 356 237 A (HITACHI MAXELL) 3 February 1990 9e column 4, line 3 - column 5, line 25; 1 igure 1	30,31
3 4 777 355 A (TAKAHIRA KENICHI) 1 October 1988 2e column 5, line 20 - line 61; figure 1	30,31
	April 1992 ee page 7, line 28 - page 9, line 35; igure 4 P 0 356 237 A (HITACHI MAXELL) B February 1990 ee column 4, line 3 - column 5, line 25; igure 1 S 4 777 355 A (TAKAHIRA KENICHI) Cotober 1988 ee column 5, line 20 - line 61; figure 1

International application No. PCT/IB 98/01162

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows:
see additional sheet
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark on Protest The additional search fees were accompanied by the applicant's protest. X No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-29

Smart card system and method of operating a smart card where the smart card initiates the communication with the terminal.

2. Claims: 30,31

Method of debugging a smart card

Information on patent family members

Inti ional Application No PCT/IB 98/01162

					1 , .	30, 01102
	atent document d in search report		Publication date		Patent family member(s)	Publication date
EP	0662674	Α	12-07-1995	FR JP	271 49 87 A 8 055 175 A	13-07-1995 27-02-1996
FR	2701133	A	05-08-1994	DE DE EP ES WO JP SG US	69411889 D 69411889 T 0682792 A 2118382 T 9418628 A 8502846 T 48123 A 5651116 A	27-08-1998 14-01-1999 22-11-1995 16-09-1998 18-08-1994 26-03-1996 17-04-1998 22-07-1997
EP	0427465	Α	15-05-1991	US CA DE DE JP JP	5120939 A 2023872 A,C 69016589 D 69016589 T 1921556 C 3158955 A 6052518 B	09-06-1992 10-05-1991 16-03-1995 07-09-1995 07-04-1995 08-07-1991 06-07-1994
FR	2667419	Α	03-04-1992	NON	E	
EP	0356237	Α	28-02-1990	JP US	20 59 937 A 5126541 A	28-02-1990 30-06-1992
US	4777355	A	11-10-1988	JP JP DE DE FR	1131980 A 63159993 A 3743639 A 3745144 C 2609175 A	24-05-1989 02-07-1988 07-07-1988 30-07-1998 01-07-1988