## **PCT**

# WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6:

G06K 9/00

A3

(11) International Publication Number: WO 99/52060

(43) International Publication Date: 14 October 1999 (14.10.99)

(21) International Application Number: PCT/US99/07900
 (22) International Filing Date: 7 April 1999 (07.04.99)

(30) Priority Data:

60/080,962 7 April 1998 (07.04.98) US 60/088,498 8 June 1998 (08.06.98) US 60/109,511 23 November 1998 (23.11.98) US

(71)(72) Applicant and Inventor: BLACK, Gerald, R. [US/US]; Suite 160, 30590 Southfield Road, Southfield, MI 48076 (US). (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, 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, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, 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, GW, ML, MR, NE, SN, TD, TG).

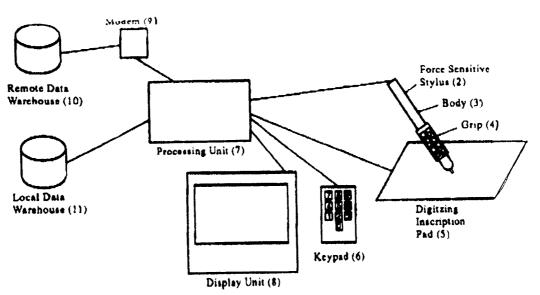
#### Published

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:
23 December 1999 (23.12.99)

### (54) Title: IDENTIFICATION CONFIRMATION SYSTEM



#### (57) Abstract

A stylus (2) with biometric sensors disposed in a grip (4) captures a wide variety of biometrics while the pen is being used. The stylus senses the prints of index finger and thumb along with other properties, while the customer uses the stylus to sign his name.

### 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
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
ΑÜ	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
ΑZ	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
ВJ	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
СН	Switzerland	KG	Kyrgyzstan	NO	Norway	$\mathbf{z}\mathbf{w}$	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		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	$\mathbf{s}\mathbf{G}$	Singapore		

# INTERNATIONAL SEARCH REPORT

International application No. PCT/US99/07900

A. CLASSIFICATION OF SUBJECT MATTER IPC(6) :G06K 9/00									
US CL: 382/115, 116, 119, 124; 345/179; 340/825.34; 235/380  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)									
U.S. : 382/115, 116, 119, 120, 121, 122, 123, 124; 345/179; 340/825.34; 235/380, 382, 382.5									
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 practicable, search terms used)									
APS search terms: biometrics, authenticate, fingerprint, signature, stylus, grip									
C. DOCUMENTS CONSIDERED TO BE RELEVANT									
Category*	Citation of document, with indication, where app	propriate, of the relevant passages	Relevant to claim No.						
Y, P	US 5,781,661 A (HIRAIWA et al) 14	1-21							
Y, P	US 5,862,247 A (FISUN et al) 19 Janu	1-21							
Y, P	US 5,892,824 A (BEATSON et al) 06 1-7.	1-21							
A, P	US 5,838,306 A (O'CONNOR et al) 1 figures 1-2.	1-21							
Furt	her documents are listed in the continuation of Box C	. See patent family annex.							
١ .	pecial categories of cited documents:	*T* later document published after the inte- date and not in conflict with the appi	lication but cited to understand						
	ocument defining the general state of the art which is not considered be of particular relevance	the principle or theory underlying the	e invention						
ł	arlier document published on or after the international filing date	"X" document of particular relevance; the considered novel or cannot be conside when the document is taken alone							
ci	ocument which may throw doubts on priority clashes of which is ted to establish the publication date of another citation or other secial reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is							
*O* de	ocument referring to an oral disclosure, use, exhibition or other leans	considered to involve an inventive combined with one or more other suc being obvious to a person skilled in	h documents, such combination						
	ocument published prior to the international filing date but later than to 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							
30 SEPT	EMBER 1999	0 3 NOV 19	99						
	mailing address of the ISA/US oner of Patents and Trademarks	Authorized officer							
Box PCT	on, D.C. 20231	BHAVESH MEHTA Jani Hill							
1	No. (703) 305-3230	Telephone No. (703) 308-3900							