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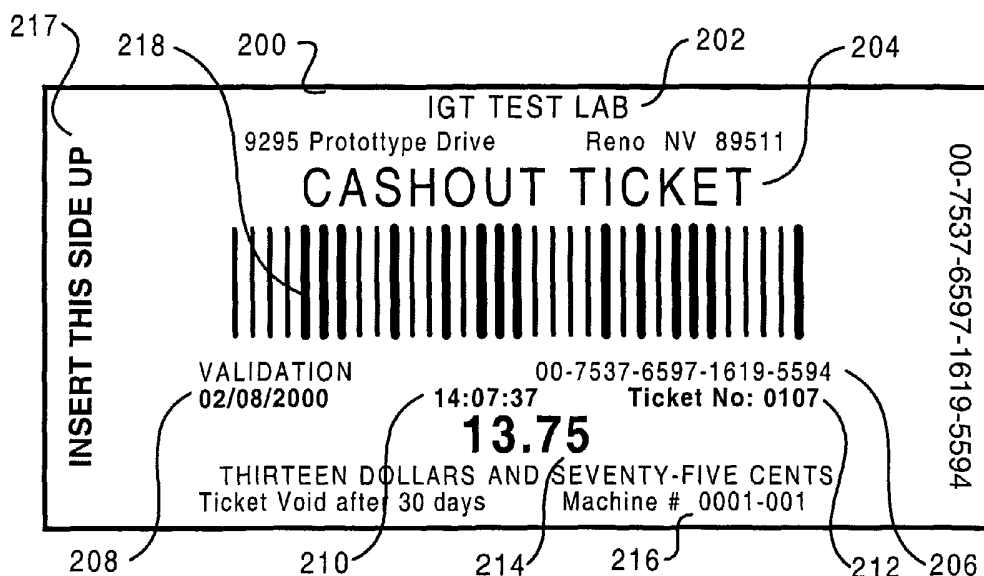
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[Continued on next page]

(54) Title: TRANSACTION SIGNATURE



(57) Abstract: The present invention provides systems and methods for protecting transaction information stored in a database of a gaming network. To accomplish this, a transaction signature is generated each time the user completes a transaction on a gaming machine. The transaction signature is generated using transaction information from a particular transaction. The transaction signature and transaction information are stored together in a network database. Upon subsequent access to the transaction information in the database, the transaction signature for the transaction information is recalculated based on the transaction information at that time. The new transaction signature is then compared to the transaction signature previously stored. Any differences between the two transaction signatures may be used to signal unauthorized alteration in the database transaction information.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G07F17/32

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)
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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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 47113 A (ORUS HERVE ;FOGLINO JEAN JACQUES (FR); GEMPLUS CARD INT (FR)) 22 October 1998 (1998-10-22) page 4, line 7 - line 30 page 10, line 5 -page 11, line 21 page 13, line 30 -page 14, line 6 abstract; figures ---	1-30
X	WO 98 26537 A (SCHMID ALFRED ;ASCOM SYSTEC AG (CH)) 18 June 1998 (1998-06-18) page 4, line 13 -page 5, line 3 page 10, line 19 -page 11, line 8; figures ---	1,21-24
X	WO 99 65579 A (ARISTOCRAT LEISURE IND PTY LTD ;BOND EUGENE THOMAS (US)) 23 December 1999 (1999-12-23) page 5, line 19 - line 29 page 7, line 4 - line 20; figure 2 ---	1-13
A	----- -/--	14-20

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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Inter: I Application No
PCT/US 01/29112

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 555 565 A (BALLY WULFF AUTOMATEN GMBH) 18 August 1993 (1993-08-18) column 5, line 39 -column 6, line 58; figures 1A-B,2,4,5 ---	14-20, 25-30
A	US 6 012 832 A (SORENSEN DENNIS WILLARD ET AL) 11 January 2000 (2000-01-11) abstract; figures 1,2 ---	14-20, 25-30
A	US 6 048 269 A (BURNS JAMES G ET AL) 11 April 2000 (2000-04-11) column 2, line 27 - line 47; figures 2-4 ---	14,25-30
A	US 5 643 086 A (ALCORN ALLAN E ET AL) 1 July 1997 (1997-07-01) column 7, line 41 -column 8, line 26 ---	1-20
A	GB 2 121 569 A (BALLY MFG CORP) 21 December 1983 (1983-12-21) page 2, line 60 -page 3, line 50 -----	1-20

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inter I Application No
PCT/US 01/29112

Patent document cited in search report		Publication date	Patent family member(s)	Publication date			
WO 9847113	A	22-10-1998	FR 2762118 A1	16-10-1998			
			AT 205004 T	15-09-2001			
			AU 724023 B2	07-09-2000			
			AU 7050198 A	11-11-1998			
			BR 9806199 A	18-09-2001			
			CA 2258149 A1	22-10-1998			
			CN 1228181 T	08-09-1999			
			DE 69801500 D1	04-10-2001			
			DE 69801500 T2	11-04-2002			
			EP 0981808 A1	01-03-2000			
			ES 2163863 T3	01-02-2002			
			WO 9847113 A1	22-10-1998			
			JP 2001506031 T	08-05-2001			
			US 2002047044 A1	25-04-2002			
WO 9826537	A	18-06-1998	WO 9826537 A1	18-06-1998			
			EP 0947072 A1	06-10-1999			
WO 9965579	A	23-12-1999	AU 4490699 A	05-01-2000			
			WO 9965579 A1	23-12-1999			
EP 0555565	A	18-08-1993	EP 0555565 A1	18-08-1993			
			AT 166480 T	15-06-1998			
			DE 59209336 D1	25-06-1998			
			ES 2117653 T3	16-08-1998			
US 6012832	A	11-01-2000	AU 8158198 A	04-01-1999			
			US 6340331 B1	22-01-2002			
			WO 9859311 A1	30-12-1998			
US 6048269	A	11-04-2000	AT 190856 T	15-04-2000			
			AU 6027394 A	15-08-1994			
			CA 2132019 A1	04-08-1994			
			DE 69423555 D1	27-04-2000			
			DE 69423555 T2	09-11-2000			
			DE 639998 T1	18-01-1996			
			EP 0639998 A1	01-03-1995			
			ES 2073387 T1	16-08-1995			
			GR 95300045 T1	31-07-1995			
			JP 7505079 T	08-06-1995			
			WO 9416781 A1	04-08-1994			
			US 2002034977 A1	21-03-2002			
			US 5643086	A	01-07-1997	AU 6282096 A	30-01-1997
						CN 1191644 A	26-08-1998
EP 0882339 A1	09-12-1998						
TR 9701723 T1	21-04-1998						
WO 9701902 A1	16-01-1997						
US 6149522 A	21-11-2000						
US 6106396 A	22-08-2000						
ZA 9700320 A	22-09-1997						
GB 2121569	A	21-12-1983				AU 1432583 A	17-11-1983
			BE 896722 A1	01-09-1983			
			BR 8302453 A	17-01-1984			
			DE 3316414 A1	22-12-1983			
			DK 211683 A	13-11-1983			
			ES 522284 D0	16-05-1984			

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inter	Application No
PCT/US 01/29112	

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2121569	A	ES 8405185 A1	01-09-1984
		FR 2527359 A1	25-11-1983
		FR 2533722 A1	30-03-1984
		IT 1168870 B	20-05-1987
		NL 8301708 A	01-12-1983
		NO 831648 A	14-11-1983
		PT 76671 A ,B	01-06-1983
		SE 8302671 A	13-11-1984
