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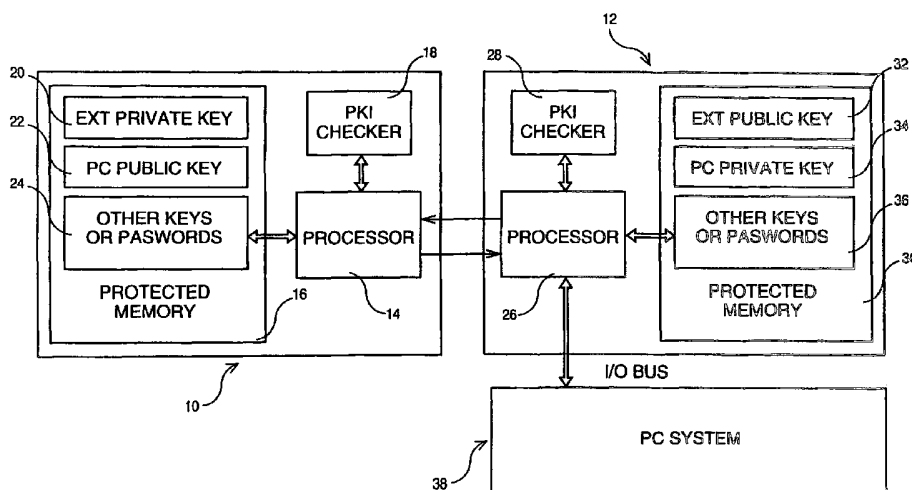
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[Continued on next page]

(54) Title: SECURITY SYSTEM FOR PREVENTING A PERSONAL COMPUTER FROM BEING USED BY UNAUTHORIZED PEOPLE



(57) Abstract: Security system for preventing a main computer device owned by an authorized user from beng used by unauthorized people comprising an extractable security piece (10) which can be removed from the computer device by the authorized user, such an extractable security pice containing at least an extractable main private key (20) and a main PC public key (22), a PC security area (12) which is a non-extractable part of the computer device, such a PC security area containing at least a PC private key (34) and an extractable main public key (32) constituting with the keys of the extractable security piece a Public Key Infrastructure (PKI), and processing means (14, 16) in each of the extractable security piece and the PC security area for carrying out a mutual authentication of the extractable security piece and the PC security area after the eytractable security piece, which had been previously removed, has been put back at its right location thereby enabling the authorized user to access data stored in the computer device.



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INTERNATIONAL SEARCH REPORT

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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

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	US 5 146 499 A (GEFFROTIN BERNARD) 8 September 1992 (1992-09-08) abstract; figures 1-3 column 1, line 10 -column 1, line 33 column 3, line 14 -column 4, line 34 column 6, line 19 -column 6, line 40	1-11
A	US 5 887 131 A (ANGELO MICHAEL F) 23 March 1999 (1999-03-23) the whole document	1-11
A	US 5 402 492 A (GOODMAN MICHAEL K ET AL) 28 March 1995 (1995-03-28) the whole document	1-11
A	WO 93 06542 A (TRES AUTOMATISERING B V) 1 April 1993 (1993-04-01) the whole document	1-11

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report	A	Publication date	Patent family member(s)	Publication date
US 5146499	A	08-09-1992	FR 2653914 A1 EP 0425053 A1 JP 3152653 A	03-05-1991 02-05-1991 28-06-1991
US 5887131	A	23-03-1999	NONE	
US 5402492	A	28-03-1995	NONE	
WO 9306542	A	01-04-1993	NL 9101594 A AU 2671192 A WO 9306542 A1	16-04-1993 27-04-1993 01-04-1993