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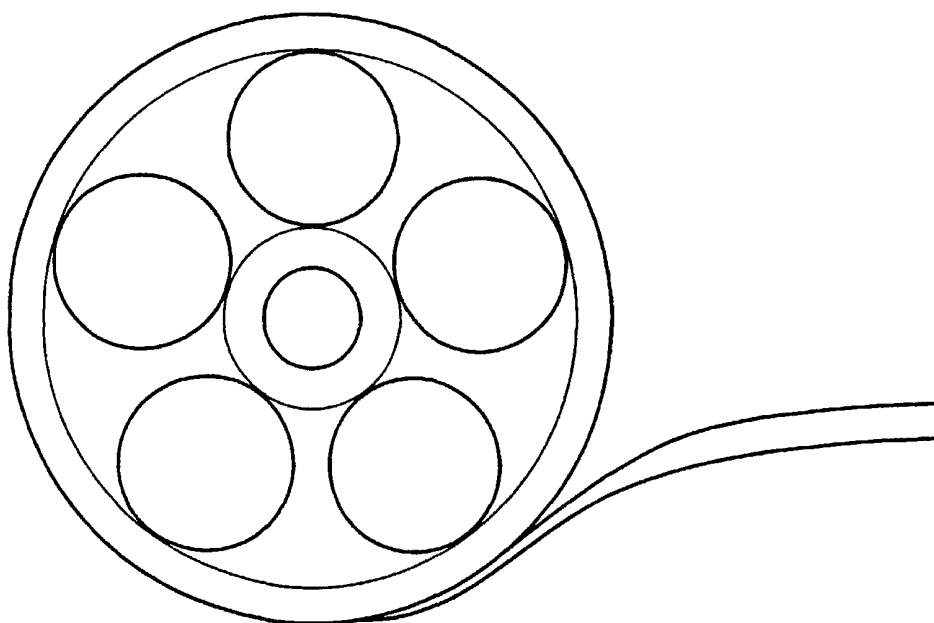
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(54) Title: ENCRYPTION KEY MANAGEMENT SYSTEM USING MULTIPLE SMART CARDS



(57) Abstract: Initially, a key range variable is created by concatenating the card group value, card number and reference number for an encryption key to be generated. A hashing algorithm generates an encryption key from a master key and the variable key range variable. The encryption key and the key range variable are output to the caller who requested the key. The encryption key is used to encrypt the information, while the variable key range is stored with the encrypted data. Generation of a decryption key requires a user call for a decryption key and includes the key range variable from the encrypted data. A hashing algorithm generates a decryption key from the master key and the key range variable. The decryption key is used to decrypt the information.



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# INTERNATIONAL SEARCH REPORT

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**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7 G07F7/10

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 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)

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	EP 0 138 320 A (VISA USA INC) 24 April 1985 (1985-04-24)  claim 1; figure 2 ---	1,6,7,9, 13,14, 16,22, 28,29, 32,33
A	WO 98 39745 A (DEUTSCHE TELEKOM AG) 11 September 1998 (1998-09-11) claim 1; figure 3 ---	1-38
A	US 4 757 534 A (MATYAS STEPHEN M ET AL) 12 July 1988 (1988-07-12) claim 1; figure 5 ---	1-38
A	US 5 721 777 A (BLAZE MATTHEW A) 24 February 1998 (1998-02-24) claim 1; figure 4 ---	1-38
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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 2 751 767 A (THOMSON CSF) 30 January 1998 (1998-01-30) claim 1; figure 1 ----	1-38
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