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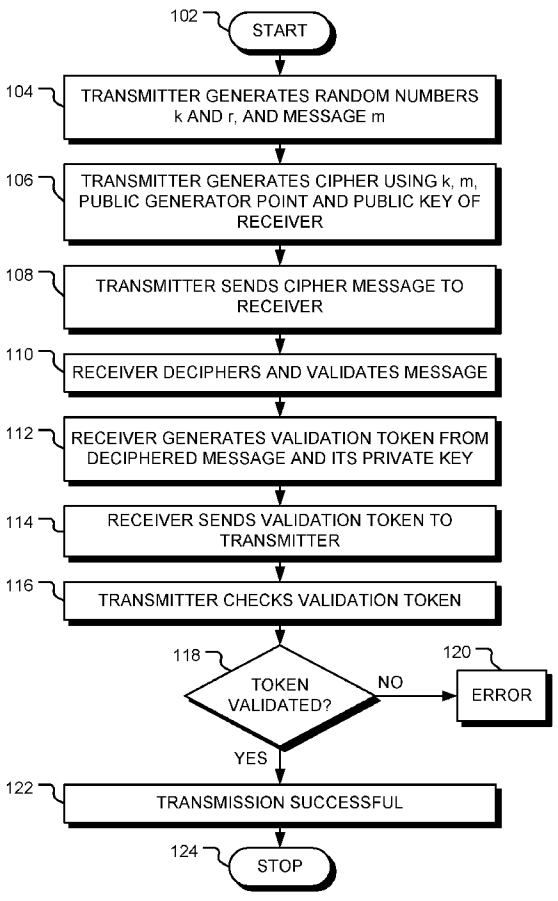
[Continued on next page]

(54) Title: METHOD FOR ELLIPTIC CURVE PUBLIC KEY CRYPTOGRAPHIC VALIDATION



(57) Abstract: Communication and validation of information transfer from a transmitter to a receiver is achieved by generating a cipher (400) from a message *m* (410) using parameters of an elliptic curve, a generator point *P* (406) on the elliptic curve and a public key *Q* (416) of the receiver. The cipher includes a first element that is the product *kP* of a random number *k* (404) with the generator point *P* and a second element that is the product of m and the x-coordinate of the product *kQ*. The message m is generated from two mathematically independent representations of the information and, optionally, a random number. The cipher is communicated to the receiver and decoded to recover a message *m'* (502). A validation token (500) is generated by the receiver and passed to the transmitter, which validates communication of the information to the receiver if the product *mkQ* is equal to the validation token.

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USPC: 380/28
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. : 380/28

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/0195973 A1 (Ibrahim) 08 September 2005, paragraphs 0180-0190 and 0194-0206	1-16

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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