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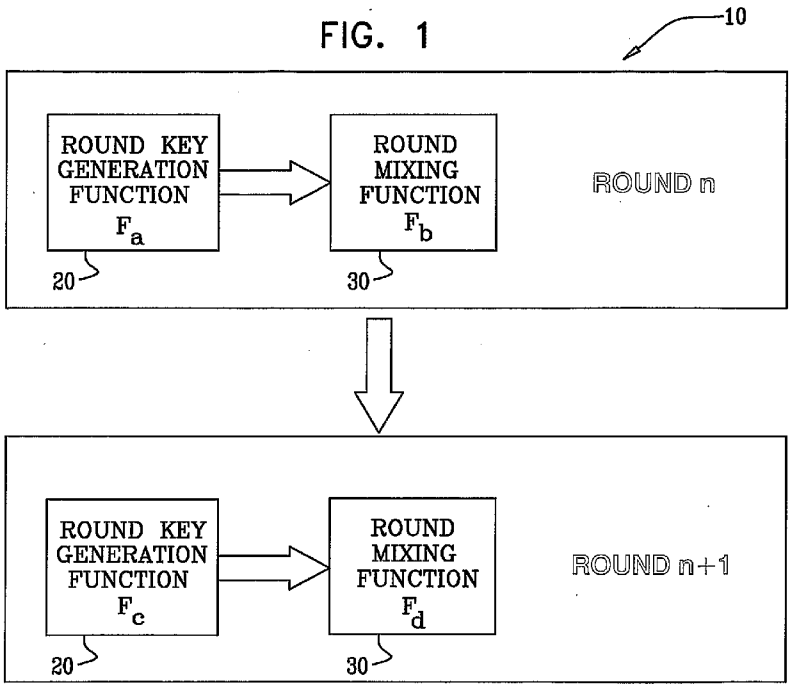

(57) Abstract: In an iterated block cipher, a method for round key encryption and key generation, the method including providing a first function Fi and a second function Fj, providing a round key generation function, the round key generation function being operative to utilize, in any given round, exactly one of the first function Fi, and the second function Fj, providing a round mixing function, the round mixing function being operative to utilize, in any given round, exactly one of the first function Fi, and the second function Fj, utilizing the round key generation function in at least a first round to generate a second round key for use in a second round, and utilizing the round mixing function in at least the first round to mix a first round key with a cipher state, wherein one of the following is performed in the first round the round key generation function utilizes the first function Fi to generate the second round key for use in the second round, substantially simultaneously with the round key mixing function utilizing the second function Fj to mix the first round key with the cipher state, and the round key generation function utilizes the second function Fj to generate the second round key for use in the second round, substantially simultaneously with the round key mixing function utilizing the first function Fi to mix the first round key with the cipher state. Related apparatus and methods are also described.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC: **H04L 9/00**(2006.01);**H04K 1/06**(2006.01)

USPC: 380/37
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. : 380/37

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)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2004/0047466 A1 (FELDMAN et al.) 11/November 2004 (11.11.2004), Entire Document.	1-47
A	US 2003/0108195 A1 (OKADA) 12 June 2003 (12.06.2003), Entire Document	1-47
A	US 2006/0029223 A1 (ARI) 09 February 2006 (09.02.2006), Entire Document.	1-47
A	Schneier, B., Applied Cryptograph, Protocols, Algorithms, and Source Code in C., Second Edition, 1996, pages 351-353.	1-47

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

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