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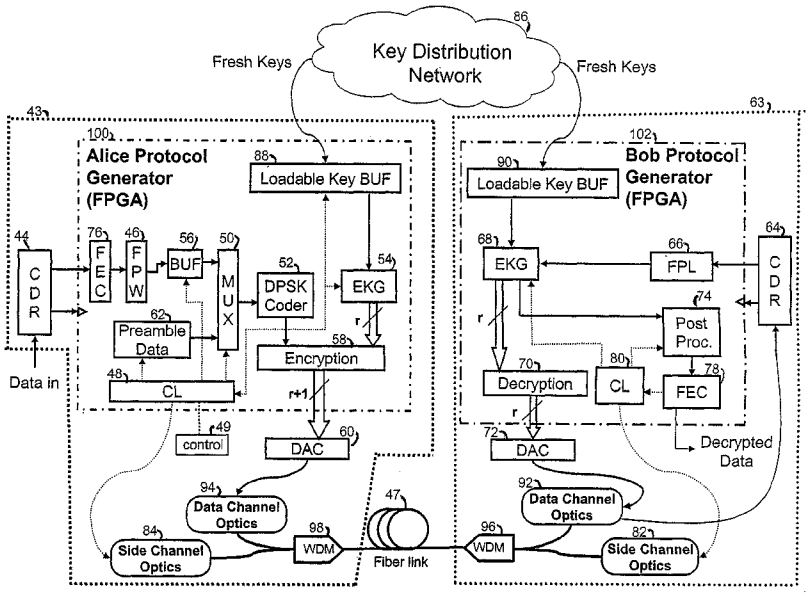
[Continued on next page]

(54) Title: STREAMING IMPLEMENTATION OF ALPHAETA PHYSICAL LAYER ENCRYPTION



(57) Abstract: A method of synchronizing the encryption/ decryption functions of an AlphaEta physical-layer encryption or key generation system. The method includes the insertion of a header to indicate the start of encryption after clock-synchronization has been established. The method also allows for a side- channel to signal other useful information, such as a loss-of -synchronization signal from Bob or to synchronize a dynamic key change.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 06/14258

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8): H04L 009/00 (2007.01)
USPC: 713/151; 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)
IPC(8): H04L 009/00 (2007.01)
USPC: 713/151; 380/28

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 713/151; 380/28; 725/143; 725/144; 725/148; 725/151

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PubWEST (PGPB,USPT,EPAB,JPAB); DialogPRO(Engineering); Google Scholar; Search terms: synchronize, encrypt, decrypt, physical layer, key generate, insert, clock, side channel, signal, loss, dynamic, stream

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/0060759 A1 (Rowe et al.) 17 March 2005 (17.03.2005), entire document especially Abstract, para [0313], para [0016], para [0144], para [0149] and FIG.7.	1-24
A	CATTANEO, G. et al. 'The Design and Implementation of a Transparent Cryptographic Filesystem for UNIX'. In Proceedings of the Annual USENIX Technical Conference, FREENIX Track, pages 245-252, June 2001. [retrieved 09 June 2007] - Retrieved from the Internet: <URL: http://www.usenix.org/publications/library/proceedings/usenix01/freenix01/full_papers/cattaneo/cattaneo.pdf >	1-24
A	KIM. Y.C. et al. 'Architecture and Implementation of an Encryption Processor Suitable for a Noisy Channel'. In South Korea Conference: Proceedings of the International Conference on Communications in Computing. CIC'2000 , Page: 129-34, and in Proceedings of CIC 2000 International Conference on Communicating in Computing , Sponsor: Buchtel College of Arts & Sci., Univ. Akron , 26-29 June 2000 , Las Vegas, NV, USA [retrieved 09 June 2007] - Retrieved from the Internet: <URL: http://altair.chonnam.ac.kr/~ngi/seminar/mpls/paper3.doc	1-24

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Date of the actual completion of the international search	Date of mailing of the international search report
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