

A symmetric cryptography for encrypting and decrypting information is provided, that can be implemented efficiently in hardware or in software. The symmetric cryptography uses a key generator, so that the cryptography is not dependent on a single, static cryptography key. The key generator is a value or collection of values from which the key is generated. The key generator substantially increases the computational complexity of differential cryptanalysis and other cryptographic attacks. In an embodiment, the key generator is updated with one-way functions exhibiting the avalanche effect, which generates an unpredictable sequence of keys used during the encryption or decryption process. In an embodiment, a dynamic key is derived from a key generator with a one-way hash function. In an embodiment, a block cipher uses a different dynamic key to encrypt each block of plaintext, where each key is derived from a different key generator.