DYNAMIC DNA FOR KEY-BASED CRYPTOGRAPHY

Abstract

DNA Cryptography is a field in which DNA is used as an information shipper. DNA digital coding technique is used in which encoding and decoding can be done with the use of binary values. DNA digital encoding is based on the biological structure of DNA. The proposed system combines traditional cryptosystems, uses DNA digital coding and maps digital data in the biological DNA sequences and vice versa. The sender encodes the data using DNA digital coding and keycombination to produce the ciphertext and generate the random key used for the decryption process by the receiver. The receiver uses this key to get the original message. This proposed approach can accept various forms of data such as characters, images, and audio. The random key will be generated at the sender every time which will be used for decrypting the ciphertext at the receiver. This approach provides two-stage security, improved reliability and better time and computational complexities.

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