Concealing Multimedia in DNA as a New Paradigm

Associate Professor Emad S. Othman, Senior Member IEEE - Region 8, High Institute for Computers and Information Systems, AL-Shorouk Academy, Cairo – Egypt, PH- 0020-01025830256

Abstract — Information and data has become significant asset in present centaury and the way toward giving security is additionally significant parameter. Such a significant number of ways are available to give security to the data. Cryptography is additionally one of the most significant segments in PC security. There are different number of cryptography calculation of various number of types are accessible. There are such a significant number of defects are available in some current regular and old style cryptography systems. So the attackers effectively break the ciphered message and make numerous problems to the approved people.

There is no connection in the middle of cryptography and molecular biology. Initially there are not important to one another but rather top to bottom investigation of molecular biology and furthermore current biotechnology DNA figuring is available these two regions are cooperate to give security to data. DNA cryptography and steganography are the new field of science in the zone of giving security to information.

This paper proposes a technique to execute information concealing utilizing DNA sequence hence the information is sent row wise to the receiver. Using DNA sequence as information carrier to hide information is a key challenge. The proposed algorithm expanded the level of confusion and diffusion to convey a higher security system.

Keywords— authentication, DNA, security, nucleotide, cryptography, steganography.