Abstract

Molecular communication (MC) is a novel bio-inspired engineering communication paradigm for biological nano-machines operating over the nano- and micro scale range, where traditional communication is not suitable. This thesis presents the use of presence or absence of molecules to transmit the information by digitally encoding them via aqueous medium, known as diffusion type molecular system. Two different models of this system have been discussed, the first is called SISO, Single-Input-Single-Output system and the other one is Multi-Input-Single-Output (MISO). The efficacy of both systems has been measured and analyzed by various parameters like diffusion coefficient, distance between transmitters and receiver as well as especially by bit error ratio (BER). Conclusively it was observed that BER ratio of MISO is lesser than SISO thus making it higher efficient system.