A Secure Communication through Quantum Key Distribution Protocols

P.Satya Sai Teja
Kakatiya Institute of Technology and Science, Hanamkonda, Warangal, India
Satyateja401@gmail.com

P.Mounika Lakshmi
TechMahindra
Hyderabad, Telangana, India
pmounikalakshmi401@gmail.com

K.Vinay Kumar
Kakatiya Institute of Technology and Science, Hanamkonda, Warangal, India
kotte.vinaykumar@gmail.com

Abstract - Quantum cryptography is a new method of communication offering the security of the inviolability by using Law of Nature.Quantum Cryptography uses different secure communication by applying the phenomena of quantum physics. Unlike traditional classical cryptography, which uses mathematical techniques to restrict eavesdroppers, quantum cryptography is focused on the properties of physics of light for information. Quantum cryptography depends only on the validity of quantum theory, i.e., it is guarantied directly by the laws of physics. This is a different from any classical cryptographic techniques. This paper summarizes the current state of quantum cryptography and provides potential extensions of its feasibility as a mechanism for securing existing communication systems.

Keywords: Cryptography, Classical Cryptography, Quantum Cryptography, Qubits, Quantum Key Distribution, QKD Protocols

IRJECE

This is an open access article under the CC BY-SA 4.0 license (https://creativecommons.org/licenses/by-sa/4.0/)