Abstract

This paper is mainly concerned with providing security for messages in cellular networks. Encryption of data in cellular networks is mandatory since it is sensitive to eaves dropping. This project focuses on encrypting the data sent between the mobile stations and base stations using a stream cipher method. However, the keys for encryption are generated using an
evolutionary computation approach termed genetic algorithm. This genetic algorithm technique gives the best or optimal key for encryption. Before we single point cross over technique is used in generating optimal key for encryption but this paper emphasizes on genetic algorithm technique for different sizes of population and different number of iterations considering multi point crossover. The plain text which is to be encrypted along with the key are encoded using the arithmetic coding technique. Encryption is done to convert the plain text into cipher text. And the comparison with the existing system is explained in detail.

Reference

- Jingyuan Zhang, Ivan Stojmenovic, “Cellular Networks”, University of Alabama, University of Ottawa, Canada.

Index Terms

Computer Science Security
Key Generation for Text Encryption in Cellular Networks using Multi-point Crossover Function

Key words

Algorithms  Security  Ciphers

Networks

Encoding