

Abstract

The presence of wireless technology in today telecommunication technology get attention from world operators. In the early, this technology just as elementary beside wired network, but their characteristics are flexible to become as one primary implementation on telecommunication network. This condition makes great probability for vendors and suppliers to build wireless industries in large scale. Wireless Local Area Network is wireless development application for data communication. IEEE 802.11b dan 802.11i standards define cryptography method that use in WLAN is WEP algorithm (RC4) and AES as optional security. In this Final Project has researched on designing and implementing simulation software client server system that can be implemented for WLAN network in form application channel for data communication with input as ASCII or hex. Application channel client server resemble with chatting channel, and build simulation software for analysis level security and performance parameters algorithm WEP and AES like avalanche Effect, alteration plaintext and ciphertext, comparison velocity encryption and decryption, finding weak key from WEP and AES, finding semi weak key. Design using method structural that implementate in procedure simulation. The experiment result that AES algorithm has better performance then RC4 in many aspects for wireless LAN security application. AES has better avalanche effect 50,00%, better plaintext-ciphertext difference 49,49% and doesn't have any weak keys and semi-weak keys, compare to RC4.