

## ABSTRACT

Mobile cellular communication system has experienced expansion either in technology or users number around the world. To cover areas which are impossible to be implemented terrestrial network so be used satellite systems. A weakness of satellite communication system is longer in propagation delay, so that used low orbit or medium orbit satellite which have smaller propagation delay.

To service much numbers of users has to be implemented multiple access technique which will service much users simultaneously. Because of much number of users have to be serviced, it will make an interference to the other users. To overcome high interference level so be used CDMA scheme where every users is given an unique code.

In this examination, it is simulated multiple access technique both CDMA and FDMA for satellite communication system to see the performance comparison of them. The simulation is done by MATLAB 7.1.

The result of the simulation have been done, are known that in higher noise level of an environment, CDMA systems is better to be implemented. With required BER  $10^{-3}$  and maximum users number are 20, to cover the users need Eb/No 11 dB, means that minimum satellite transmit power is 0.21345 mW. The result from calculation of capacity serviced by FDMA system is 104 users.