

ABSTRACT

CDMA IS-95 using direct sequence spread spectrum (DSSS) technique. the Performance of DSSS 's receiver is influenced by code synchronization in receiver. In reverse link of CDMA IS-95, information that has been coded become walsh code by Orthogonal modulation is spread using m-sequence code that have 42 register length-that is known longcode. and sent using 2 channel, then scrambled using code that is formed by 15 register length generator. both of channel have different m-sequence code. For that reason, the three of them-long code, m-sequence in In-phase and Quadrature channel- is have to synchronized simultaneously. the different of every user is lies in offset of its long code.

This final project will investigate the code's synchronization process for walsh code that is used in orthogonal modulation, scramble code and spreader code in receiver by simulate it using Mathlab simulink software. its focused in CDMA IS-95 synchronization code system model. The synchronization process pass through process. the process are aquisition to determine where is the first code phase that will synchronize between transmitter and receiver. and Tracking to keep that code stay in synchron. we use serial search for aquisition process and Non Coherent Delay-Locked Loop (DLL) for tracking process.

Based on simulation result indicates that aquisition and tracking performance is very influenced by interference and noise on channel and integration period. the longer integration period will make the system more insentive from noise because of channel as well as interference. however the longer integration period makes the aquisition time is longer too. for that reason, is investigated the noise effect because channel and interference with integration period . This simulation using 20/6 ms for integration period because this time is still more shorter than its preamble frame period.