

ABSTRACT

The digital wireless communication system evolve to give real 3G services (high data rate) and reliable performance eventough there are multipath fading causing instable channel.

Interference will influence the system capacity in CDMA system, outside and inside. Increasing the user on this system will also affect the interference inside the system. Limiting transmit level for each user can minimize total interference, equally, changing on user power transmit level will change the system capacity. Therefore CDMA is interference limited, while another cellular system, such as TDMA or FDMA, are bandwidth or power limited.

The CDMA 200 3x system is one of the 3G cellular standard that should have triple data rate from the CDMA 200 1x. This is an alternate for AMPS (1G), CDMA IS-95 (2G) and CDMA 200 1x (2,5G) network to evolve on 3G with CDMA 2000 3x RTT/ Spreading Rate 3 using 3 CDMA IS-95 channel so that the services are vary and more reliable.

The simulation is performed using software Matlab 7 to compare performance of two CDMA 2000 3x/SR3 technology that is CDMA 2000 3x-MC (SR3 MC) and CDMA 2000 3x-DS (SR3 DS). The output is a comparison graphic based on the BER and SNR between Single Carrier DS CDMA (SR3 DS) and Multi Carrier DS CDMA (SR3 MC) that use three CDMA IS-95 channel (3,75 MHz).