Abstract

A channel filter has been designed for Digital Down converter (DDC), that meets the standard of WiMAX in wireless communication. WiMAX is a technology emerging in the wireless communication system, in order to enhance the broadband wireless internet access. Digital Up Converter (DUC) and Digital Down Converter (DDC) are integral part of WiMAX system, that results in efficient low cost WiMAX system. In order to fulfill the spectral requirement of bandwidth reduction, effective spectral leakage and eliminating interference from adjacent channels, in WiMAX system, DDC and DUC utilizes a channel filter for pulse shaping. Channel Filter in DDC applies pulse shaping to attenuate any out of band energy in the baseband data after decimation. The raised cosine filter and Gaussian filters are the most common pulse-shaping filters in communications systems. In present paper raised cosine filter technique and Gaussian filter is utilizes and compared for designing and analysis of channel filter using MATLAB.

**Index Terms**

Computer Science  Wireless

**Keywords**
WiMAX, DDC, DUC, MATLAB, RRC filter.