Lth Band Filter Design and Performance Analysis for WIMAX Application

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Abstract

Nyquist Filters which are generally used for equalization of video signals, are an essential part of communication systems. In this paper two Nyquist filters have been compared and analyzed having different L-bands. Its implementation can be easily found in the developing communication systems, but here results are claimed for WIMAX applications. The proposed design and analysis have been developed with the help of MATLAB with same order, sampling frequency, transition width and roll off factor as per the WIMAX specifications. The filters are then decimated by a decimation factor of 4. The cost implementation of both has been taken into consideration and a result is drawn which concludes that Nyquist filter two bands is much more cost effective as compared to the Nyquist filter with three bands.

References


Index Terms

Computer Science Wireless

Keywords

DDC, DUC, Digital Signal Processing, FIR filter, MATLAB, Signal Sampling, WIMAX