

Literature Review on FIR Filter Optimization

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Abstract – In digital communication system, digital information can be sent on a carrier through changes in its fundamental characteristics such as phase, frequency and amplitude. The use of a filter plays an important part in a communication channel because it is effective at eliminating spectral leakage, reducing channel width, and eliminating interference from adjacent symbols (Inter Symbol Interference) ISI.

In order to reduce the effect of Inter Symbol Interference (ISI) in a digital communication system, different types of transmitting pulse shaping filters have been extensively used in practice. We need to design these filters with some constraints imposed by requirements of the communication system in which we are going to use them. The use of optimization techniques have been proved to be quite useful towards the design of those digital filters with certain specifications. This paper reviews about the uses of optimization systems in digital filter design.