Overlap-addition and Overlap-save Methods for Hilbert Transform Computation

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Abstract

The base of digital filtering is convolution. Several methods were developed in order to achieve the computation of convolution fitting different requirements (computational complexity, filter order, structure). As presented in this paper the Hilbert transform, used in complex signal filtering, can be computed using convolution. The input signal has infinite number of samples, thus convolution can be achieved using overlap-addition or overlap-save method.