Aliasing Errors in Discrete Hilbert Transform

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Abstract

This article is a study upon the influence of aliasing errors that occur in the use of Discrete Hilbert Transform. In order to analyze these errors we shall briefly present the mathematics behind the Hilbert transform and its properties. After that we discuss about the discrete Hilbert transform algorithm namely the algorithm that uses the relation between Hilbert and Fourier transforms. For illustrating the alias effect and how the errors occur we present a few results of Hilbert analysis for different type of signals using the Matlab tool.