Abstracts

Reconstruction of the non-minimum phase function from amplitude only data

A procedure for non-minimum phase reconstruction from magnitude only data has been presented in this paper. Utilizing the fact that the auto-correlation of the time domain sequence is equal to the discrete cosine transformation of the square of the magnitude response, non-minimum phase component can be recovered. The nonminimum phase reconstruction does not have a unique solution. We select that solution which has a causal time domain response. The theory has been applied to extract the phase of the scattering parameters of microwave filters to illustrate the applicability of this approach.

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