Integration of High Frequency Audio Reconstruction Techniques

Abstract

A method for decoding an encoded audio bitstream is disclosed. The method includes receiving the encoded audio bitstream and decoding the audio data to generate a decoded lowband audio signal. The method further includes extracting high frequency reconstruction metadata and filtering the decoded lowband audio signal with an analysis filterbank to generate a filtered lowband audio signal. The method also includes extracting a flag indicating whether either spectral translation or harmonic transposition is to be performed on the audio data and regenerating a highband portion of the audio signal using the filtered lowband audio signal and the high frequency reconstruction metadata in accordance with the flag. The high frequency regeneration is performed as a post-processing operation with a delay of 3010 samples per audio channel.

Figure 5