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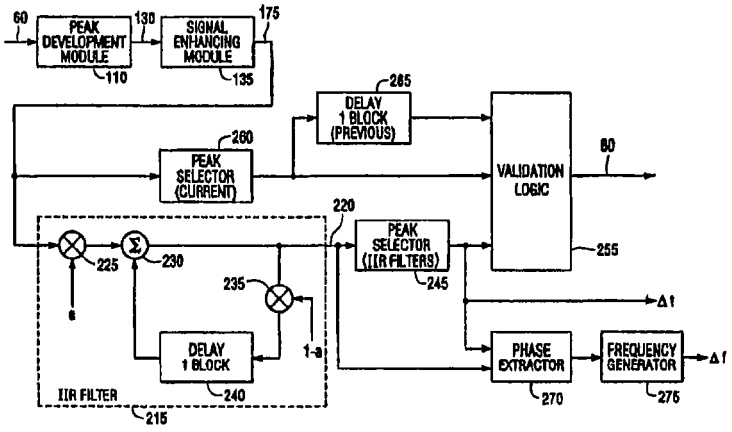
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(54) Title: A SYSTEM AND METHOD FOR RECOVERING SYMBOL TIMING OFFSET AND CARRIER FREQUENCY ERROR IN AN OFDM DIGITAL AUDIO BROADCAST SYSTEM



(57) Abstract

The system for recovering symbol timing offset and carrier frequency error from an orthogonal frequency division multiplexed (OFDM) signal includes a receiver circuit for receiving an OFDM modulated signal representing a series of OFDM symbols, and providing a received signal to an output thereof. A peak development circuit is included for developing a signal having a plurality of signal peaks representing symbol boundary positions for each received OFDM symbol, where each of the signal peaks is developed responsive to an amplitude and phase correspondence produced between the leading and trailing portions of each of the received OFDM symbols. The system includes a circuit for enhancing the signal peak detectability, which includes a circuit for additively superimposing and then filtering the signal peaks, to produce an enhanced signal peak having an improved signal-to-noise ratio. A circuit for establishing a temporal position indicative of the symbol boundary position from at least one of the enhance signal peaks output from the signal enhancing module is also provided. Further, a circuit for recovering the received OFDM signal carrier frequency error corresponding to the temporal position is included.



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