ABSTRACT

METHOD AND APPARATUS FOR ACHIEVING FLEXIBLE BANDWIDTH USING VARIABLE GUARD BANDS

Techniques to flexibly support different bandwidths in a wireless communication system are described. The system supports a configurable operating bandwidth using a fixed design bandwidth and variable guard bands. Values for various parameters such as fast Fourier transform (FFT) size, cyclic prefix length, and sample rate may be selected based on the design bandwidth. The design bandwidth may be associated with K total subcarriers. Different operating bandwidths may be supported by selecting different numbers of usable subcarriers. A transmitter and a receiver may perform processing for a transmission using the same FFT size, cyclic prefix length, and sample rate regardless of the selected operating bandwidth. The system may use different operating bandwidths and/or different parameter values (e.g., FFT sizes) for different portions of a transmission, e.g., a preamble and a main body of the transmission.

Figure 8