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This paper presents a method of efficiently incorporating frequency division duplex (FDD) and frequency division multiplexing (FDM) into MC-CDMA systems to exploit frequency diversity and reduce multiple access interference (MAI). The approach used in the novel FDD/MC-CDMA is to break the total available bandwidth into subbands and interleave the subbands used for the downlink and uplink. It is shown that this technique significantly improves the performance relative to an MC-CDMA system employing a traditional FDD scheme where the spectrum is divided into a single uplink block and a single downlink block. Furthermore, FDM is introduced in the novel FDD scheme to reduce MAI in MC-CDMA (without any loss in the capacity of the overall system).

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