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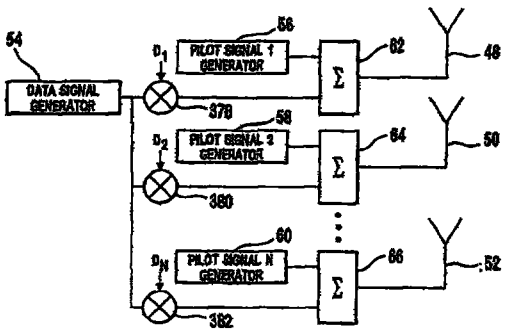
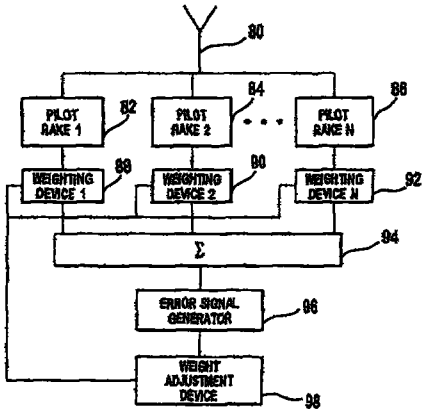
(54) Title: TRANSMISSION USING AN ANTENNA ARRAY IN A CDMA COMMUNICATION SYSTEM





(57) Abstract: The invention provides for transmission and reception of a data signal using a plurality of transmitting antennas. Each antenna transmits a different pilot signal having a pseudo random chip code sequence. A receiver filters each transmitted pilot using that pilot's chip code. The filtered pilots are weighted and combined. Each pilot signal's weight is adaptively adjusted in part on a signal quality of the combined signal. A data signal is transmitted such that different spread spectrum versions of the data signal are transmitted from each transmitting antenna. Each version having a different chip code identifier. Upon reception, each version is filtered with its associated chip code. The filtered versions are weighted in accordance with the adjusted weights associated with the pilot signal of the respective antenna.

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