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(54) Title: INCREASING CAPACITY IN WIRELESS COMMUNICATIONS

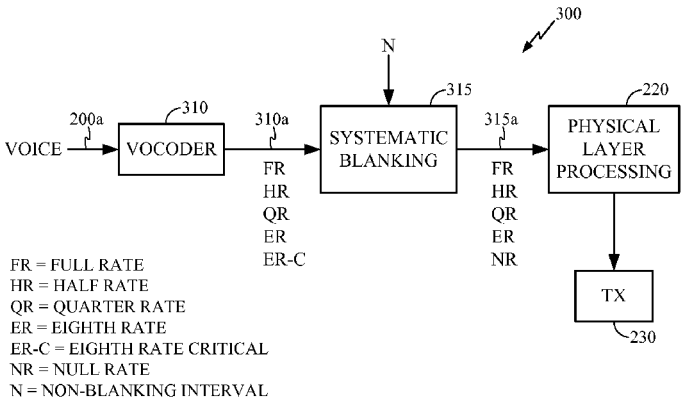

FIG 3

(57) Abstract: Techniques to increase capacity in a wireless communications system. In an aspect, systematic non-transmission, or "blanking," of minimal-rate frames transmitted in a communications system is provided. In an exemplary embodiment, eighth rate frames in a cdma2000 voice communications system are systematically substituted with null-rate frames carrying zero traffic bits. Provisions are nevertheless made for the transmission of certain designated as "critical" by, e.g., a vocoder. The receiver detects the presence of null rate or non-null rate transmissions and processes the received frames accordingly, including updating an outer loop power control only in response to non-null rate frames. Further techniques for changing the pilot transmission gating pattern to assist the receiver in detecting null rate frames are provided. In another aspect, early termination of a signal transmission over a wireless communications link is provided. In an exemplary embodiment, a base station (BS) transmits power control groups (PCG's) for a frame over a forward link (FL) to a mobile station (MS) until accurate reception of the frame is acknowledged by the MS over a reverse link (RL), possibly before all PCG's of the frame are received over the FL. Possible ACK signaling methods are defined for channels associated with a cdma2000 wireless communications system. In another exemplary embodiment, techniques for reverse link early termination are also provided.

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