

Abstract

Method for Transmitting High-Speed Downlink Package Data in Mobile Communication System with Smart Antenna

The invention discloses a method for transmitting high-speed downlink package data in a mobile communication system with a smart antenna, which not only can take full advantage of radio beamforming of smart antenna but also can transmit downlink package data high efficiency. In this method, at the beginning of downlink package data transmission, no matter whether a subscriber terminal is at any state, a call for all ready subscriber terminal is made through a paging channel to obtain an initial DOA (direction of arrival) of every subscriber terminal, and then with this initial DOA the smart antenna transmits downlink package data to a subscriber terminal with an initial beamforming; having received one package, the subscriber terminal returns an acknowledgement message, if the downlink package is correctly received, or retransmission is required, if the received downlink package has error codes, so the system knows current position of the subscriber terminal and can use an updated beamforming to trace the subscriber terminal moving; based on received package quality, the system adaptively adjusts the length of a downlink package, and based on the moving speed of the subscriber terminal, the system adaptively adjusts the length of the downlink package too.



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