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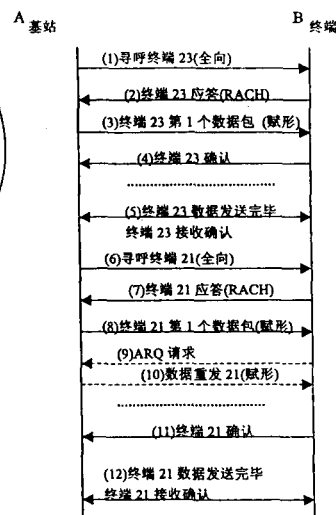
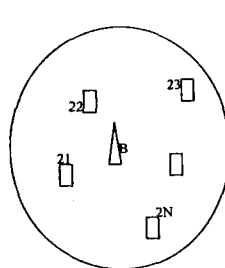
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本国际公布:
— 包括国际检索报告。

所引用双字母代码和其它缩写符号, 请参考刊登在每期PCT公报期刊起始的“代码及缩写符号简要说明”。

(54) Title: METHOD OF MOBILE COMMUNICATION SYSTEM WITH SMART ANTENNA

(54) 发明名称: 智能天线移动通信系统传输高速下行包交换数据的方法



A...BASE STATION
B...TERMINAL
(1)...PAGES THE TERMINAL 23 (OMNIDIRECTIONAL)
(2)...THE TERMINAL 23 RESPONDS (RACH)
(3)...TRANSMITS THE FIRST DATA PACKET TO THE TERMINAL 23 (SHAPED)
(4)...THE TERMINAL 23 ACKNOWLEDGES IT
(5)...COMPLETES THE TRANSMISSION OF DATA TO THE TERMINAL 23
THE TERMINAL 23 ACKNOWLEDGES THE RECEPTION
(6)...PAGES THE TERMINAL 21 (OMNIDIRECTIONAL)
(7)...THE TERMINAL 21 RESPONDS (RACH)
(8)...TRANSMITS THE FIRST DATA PACKET TO THE TERMINAL 21 (SHAPED)
(9)...ARQ REQUEST
(10)...RETRANSMITS THE DATA (SHAPED)
(11)...THE TERMINAL 21 ACKNOWLEDGES IT
(12)...COMPLETES THE TRANSMISSION OF DATA TO THE TERMINAL 21
THE TERMINAL 21 ACKNOWLEDGES THE RECEPTION

(57) Abstract: The present invention is a method that not only can take full advantage of radio beam shaping of smart antenna but also can transmit downlink package data high efficiency in mobile communication system with smart antenna. When downlink data packages are transmitted to each user terminal, whatever state the user terminal is in, it is called over through paging channel to learn its initial location so as to guarantee that the smart system can use initial shaped beam to transmit data to the terminal; after completing transmission of one package, the user terminal return an acknowledgement message when reception is correct or return a message of requiring retransmission when there is any error code, to guarantee that system can know location of the user at any moment and track the mobile user by updated shaped beam; according to quality of the data packages received by user terminal, the length of downlink data packages is self-adaptively adjusted to increase the speed at which beam of the smart antenna tracks the user, and improve transmission efficiency; and the lengths of downlink data packages are adjusted effectively by determining movement speed of the user.

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(57) 摘要

本发明是一种在具有智能天线的移动通信系统中，既可充分发挥智能天线无线波束赋形的优势，又能高效率传输下行包交换数据的方法。在对每个用户终端发送下行数据包时，无论用户终端处于何种状态，都通过寻呼 (Page) 信道进行点名，以获得用户终端的初始方位，保证智能天线系统可以使用初始的赋形波束向终端传输数据；在一个数据包传输完成后，用户终端在接收正确时返回确认消息或在有误码时返回要求重发的消息，以保证系统随时知道用户的位置，用更新的赋形波束跟踪移动用户；根据用户终端接收数据包的质量情况，自适应地调整下行数据包长度，以提高智能天线波束跟踪用户的速度，提高传输的效率；以及通过确定用户移动速度，来有效调整下行数据包长度。