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(54) Title: METHOD AND APPARATUS FOR DYNAMICALLY ADAPTING A CONNECTION STATE IN A MOBILE COMMUNICATIONS SYSTEM

(57) Abstract

In a mobile communications system that provides packet data services, a packet data connection is established between a mobile station and a radio access network. The state of the connection is used to specify one of plural different types of radio channels bearing the connection over the radio interface. The connection state preferably also may specify other parameters including, for example, one of plural different mobility management schemes tailored to the selected channel type or channel bit rate(s). The connection is dynamically adapted to an optimal state based on one or more conditions relating to the connection. For example, one or more traffic parameters are determined for the connection and may be used to predict a future value of that parameter. Based on the predicted parameter value or values, an optimal connection state is determined and implemented. If the predicted parameter value changes later in the connection, another connection state may be dynamically selected that is better suited in accordance with the newly predicted parameter value. One example embodiment is based on the amount of data in queue for a packet data connection. Comparison is made with one or more thresholds to decide which type of radio channel should bear the connection. Other factors, parameters, and conditions may be employed along with threshold comparisons to select the optimal radio channel type.

