following detailed description of the preferred embodiments in conjunction with accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a diagram showing the structure of a mobile communication network.

FIG. **2** is a diagram illustrating a packet data communication system using reservation based access control.

FIG. **3** is a diagram showing a first example of the structure of a base station embodying transmission power control of the present invention.

FIG. **4** is a diagram showing the structure of an answer packet.

FIG. **5** is a diagram showing the structure of a unit for measuring a received level of a traffic channel.

FIG. **6** is a diagram showing the structure of a unit for generating a transmission power control signal of a traffic channel.

FIG. **7** is a diagram illustrating insertion of a transmission power control signal between answer packets.

FIG. **8** is a diagram showing a first example of the structure of a mobile terminal embodying the transmission power control of the invention.

FIG. **9** is a diagram illustrating a transmission power control state of an uplink traffic channel realized by the operations of a base station and mobile terminals according to the present invention.

FIG. **10** is a diagram showing a second example of the structure of a base station embodying the transmission power control of the invention.

FIG. **11** is a diagram showing a second example of the structure of a mobile terminal embodying the transmission power control of the invention.

FIG. **12** is a diagram illustrating an uplink traffic channel transmission power control method of a conventional portable telephone system.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

FIG. **1** shows the structure of a mobile communication network applied to the present invention. A public switched telephone network (PSTN) **200** is connected with a fixed terminal **201** such as a telephone and a mobile communication network **202**. The mobile communication network **202** is connected with a plurality of base stations **203***a*, **203***b*, . . . Each base station **203** communicates with mobile terminals **204***a*, **204***b*, . . . in its service area (cell) via radio channels **205**.

In the following, the invention will be detailed by applying it to a CDMA packet communication system using reservation based access control shown in FIG. **2**.

In the CDMA packet communication system using reservation based access control, channels shared by a plurality of mobile terminals in the service area include a reservation channel **1** (uplink channel), an answer channel **2** (downlink channel) and a pilot channel **8** (downlink channel). The pilot channel **8** is a channel used for transmitting a pilot signal **9** as a reference signal to each mobile terminal.

A mobile terminal having a data transmission request transmits a reservation packet **4** at a desired timing by using the reservation channel **1**. The base station performs scheduling of received reservation packets. The base station selects (schedules) a channel and a time slot (a time slot **7** is defined in an uplink traffic channel **3**) via which each mobile terminal can transmit data, from a plurality of uplink traffic channels **3**. In order to transmit the scheduling results to each mobile terminal, the base station generates an answer packet **5** corresponding to the reservation packet. The generated answer packet **5** is transmitted to the corresponding mobile terminal in the area by using the answer channel **2**. The mobile terminal identifies the answer packet destined to it from received answer packets **5**, and transmits a data packet by using the uplink traffic channel and time slot designated by the base station.

In the example shown in FIG. **2**, the mobile terminal transmitted the reservation packet **4***a* receives the answer packet **5***a* transmitted to it, selectively from answer packets transmitted from the base station, and transmits a data packet **6***a* by using the time slot **7***a* of the traffic channel **3***a* designated in the received answer packet **5***a*.

With reference to FIGS. **3** to **9**, a first embodiment will be described which realizes a method of controlling the transmission power of an uplink channel.

FIG. **3** shows an example of the structure of a base station. A signal received by an antenna **30** is input via a circulator **31** to a reception radio module **32**. The reception radio module **32** performs a high/middle frequency reception process to demodulate a signal in a carrier frequency band into a baseband signal. Since the received signal has a plurality of multiplexed channel signals, it is input to an acquisition/despread circuit (**33**, **42***a*–**42***n*) to be spectrum despread.

A reservation channel output from the reservation channel acquisition/despread circuit **33** is supplied via a signal line **50** to a detector **35** whereat it is detected and then supplied to a decoder **36** whereat an error correction decode process such as Viterbi decoding is performed. A packet interpretation unit **37** interprets the decoded reservation packet to obtain a terminal ID of the mobile terminal which transmitted the reservation packet and the reservation contents such as transmission data, and transfers the reservation contents to an answer packet generator unit **38**.

The reservation packet is also input via a signal line **51** to a unit **39** for measuring the received level of the reservation channel. This unit **39** measures a signal to noise power ratio (SN ratio) of the reservation packet. The measurement result of the received level is compared with a reference reception level by an initial transmission power control signal generator **40**. In accordance with this comparison result, a transmission power control signal is generated which designates a transmission power when the mobile terminal starts transmitting a data packet. The generated transmission power control signal is input to an answer packet generator **38**.

In accordance with the reservation contents interpreted by the packet interpretation unit **37** and the transmission power control signal generated by the initial transmission power control signal generator **40**, the answer packet generator **38** generates an answer packet. An example of the structure of an answer packet is shown in FIG. **4**. A mobile terminal ID is an ID of a mobile terminal which transmitted a reservation packet. This ID is used as a destination of the answer packet. An allocated channel **101** and an allocated slot number **102** indicate an uplink traffic channel and a time slot to be used by the mobile terminal and are designated by the answer packet generator **38**. An initial transmission power **103** indicates a transmission power when the mobile terminal starts transmitting data and is designated by the transmission power control signal input from the initial transmission power control signal generator **40**. This initial transmission