

# EXHIBIT D



(12) **United States Patent**  
**Tsunehara et al.**

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(54) **CDMA COMMUNICATION SYSTEM AND ITS TRANSMISSION POWER CONTROL METHOD**

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(73) Assignee: **Hitachi, Ltd., Tokyo (JP)**

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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(65) **Prior Publication Data**  
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**Related U.S. Application Data**

(63) Continuation of application No. 09/818,510, filed on Mar. 28, 2001, now Pat. No. 6,483,816, which is a continuation of application No. 08/985,281, filed on Dec. 4, 1997, now Pat. No. 6,307,844.

**Foreign Application Priority Data**

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(51) **Int. Cl.**  
**H04B 7/185 (2006.01)**  
**H04B 7/216 (2006.01)**

(52) **U.S. Cl.** ..... **370/318; 370/335; 455/69**

(58) **Field of Classification Search** ..... **370/310, 370/318, 320, 322, 332, 335, 342; 455/68-70, 455/115, 432, 522**

See application file for complete search history.

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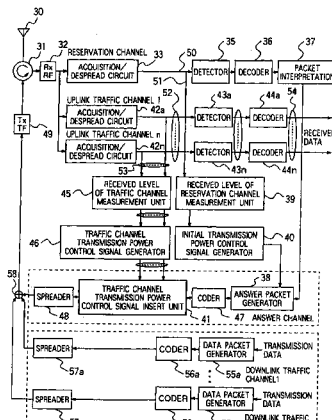
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(57) **ABSTRACT**

An uplink channel transmission power control method is provided for a CDMA mobile communication system performing one way communication. A base station measures the received level of data transmitted from each mobile terminal at each channel, and generates a transmission power control signal of each uplink traffic channel. The generated transmission power control signals are multiplexed, and the multiplexed common transmission power control signal is transmitted to all mobile terminals by using the common channel shared by the mobile terminals. Each mobile terminal derives the transmission power control signal of the uplink traffic channel used by the terminal, from the received common transmission power control signal, and controls the transmission power of a data packet.

**18 Claims, 10 Drawing Sheets**



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# FIG. 1

## PRIOR ART

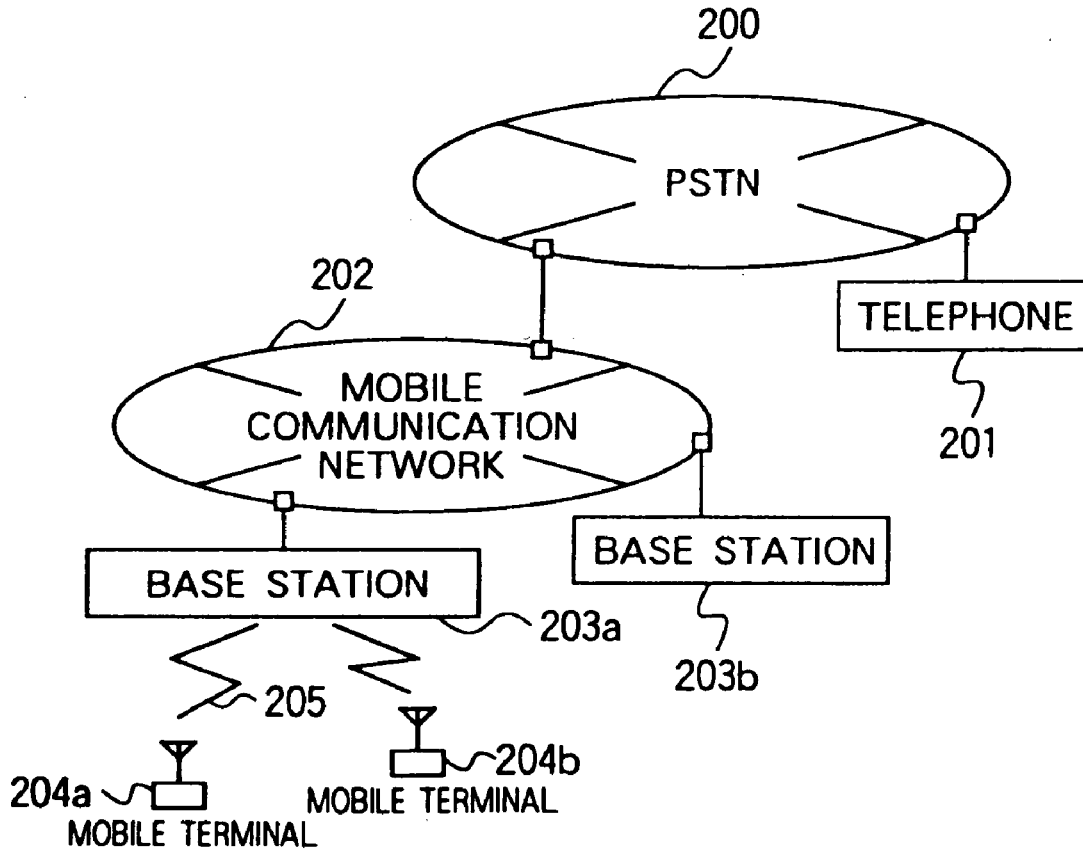
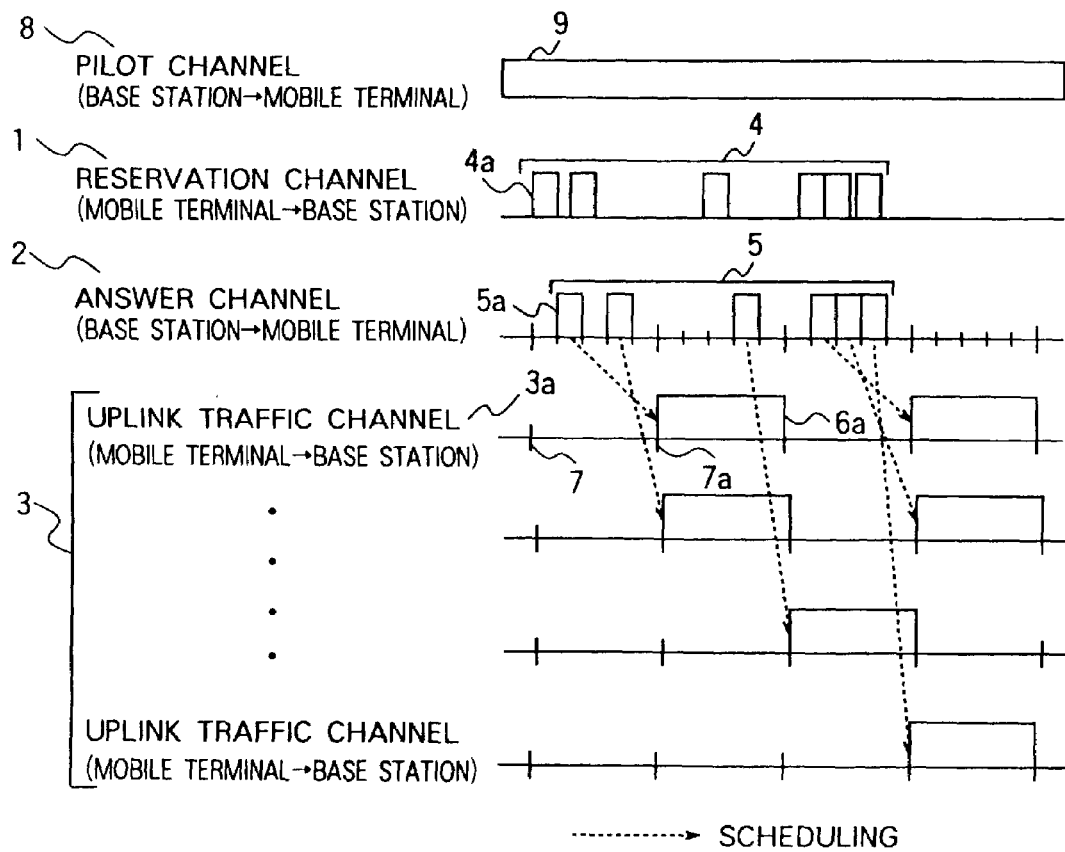


FIG. 2



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