IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application of:

        Sung Jun PARK et al.

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Filed:	August 10, 2009	Art Unit: 2465
For:	DATA TRANSMISSION METHOD AND USER EQUIPMENT FOR THE SAME	Examiner: J. PEZZLO

AMENDMENT UNDER 37 C.F.R. § 1.111

MS AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In reply to the Office Action dated June 11, 2010, the following amendments and remarks are respectfully submitted in connection with the above-identified application:

Amendments to the Claims begin on page 2.

Remarks begin on page 8.

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AMENDMENTS TO THE CLAIMS

1.   (Currently Amended) A method of transmitting data by a user equipment through an uplink, the method comprising:

receiving an uplink grant (UL Grant) signal from a base station on a specific message;

determining whether there is data stored in a message 3 (Msg3) buffer when receiving the UL Grant signal on the specific message;

determining whether the specific message is a random access response message; [[and]]

transmitting the data stored in the Msg3 buffer to the base station using the UL Grant signal received on the specific message, if there is data stored in the Msg3 buffer when receiving the UL Grant signal on the specific message and the specific message is the random access response message; and

transmitting new data to the base station in correspondence with the UL Grant signal received on the specific message, if there is no data stored in the Msg3 buffer when receiving the UL Grant signal on the specific message or the specific message is not the random access response message.

2.   (Cancelled)

3.   (Currently Amended) The method according to claim 2claim 1, wherein the transmitting the new data to the base station includes:

acquiring a Medium Access Control Protocol Data Unit (MAC PDU) from a multiplexing and assembly entity; and

transmitting the MAC PDU to the base station.

4.   (Currently Amended) The method according to ~~claim 2~~claim 1, wherein the UL Grant signal received on the specific message is a UL Grant signal received on a Physical Downlink Control Channel (PDCCH), and

wherein the user equipment transmits new data in correspondence with the UL Grant signal received on the PDCCH.

5.   (Original) The method according to claim 1, wherein the data stored in the Msg3 buffer is a Medium Access Control Protocol Data Unit (MAC PDU) including a user equipment identifier.

6.   (Original) The method according to claim 5, wherein the data stored in the Msg3 buffer further includes information about a buffer status report (BSR) if the user equipment starts a random access procedure for the BSR.

7.   (Currently Amended) A user equipment, comprising:

a reception module adapted to receive an uplink grant (UL Grant) signal from a base station on a specific message;

a transmission module adapted to transmit data to the base station using the UL Grant signal received on the specific message;

a message 3 (Msg3) buffer adapted to store UL data to be transmitted in a random access procedure; [[and]]

a Hybrid Automatic Repeat Request (HARQ) entity adapted to determine whether there is data stored in the Msg3 buffer when the reception module receives the UL Grant signal and the specific message is a random access response message, acquiring the data stored in the Msg3 buffer if there is data stored in the Msg3 buffer when the reception module receives the UL Grant signal and the specific message is the random access response message, and controlling the transmission module to transmit the data stored in the Msg3 buffer to the base station using the UL Grant signal received by the reception module on the specific message; and

a multiplexing and assembly entity used for transmission of new data,

wherein the HARQ entity acquires the new data to be transmitted from the multiplexing and assembly entity if there is no data stored in the Msg3 buffer when the reception module receives the UL Grant signal on the specific message or the received message is not the random access response message, and controls the transmission module to transmit the new data acquired from the multiplexing and assembly entity using the UL Grant signal received by the reception module on the specific message.

8.   (Cancelled)

9.   (Currently Amended) The user equipment according to ~~claim 8~~claim 7, further comprising:

one or more HARQ processes; and

HARQ buffers respectively corresponding to the one or more HARQ processes,

wherein the HARQ entity transfers the data acquired from the multiplexing and assembly entity or the Msg3 buffer to a specific HARQ process of the one or more HARQ processes and

controls the specific HARQ process to transmit the data acquired from the multiplexing and assembly entity or the Msg3 buffer through the transmission module.

10.   (Original) The user equipment according to claim 9, wherein, when the specific HARQ process transmits the data stored in the Msg3 buffer through the transmission module, the data stored in the Msg3 buffer is controlled to be copied into a specific HARQ buffer corresponding to the specific HARQ process, and the data copied into the specific HARQ buffer is controlled to be transmitted through the transmission module.

11.   (Currently Amended) The user equipment according to ~~claim 8~~claim 7, wherein the UL Grant signal received by the reception module on the specific message is a UL Grant signal received on a Physical Downlink Control Channel (PDCCH), and

wherein the HARQ entity controls new data to be transmitted in correspondence with the received UL Grant signal received on the PDCCH.

12.   (Original) The user equipment according to claim 7, wherein the UL Grant signal received by the reception module on the specific message is a UL Grant signal received on a random access response message received on Physical Downlink Shared Channel (PDSCH), and

wherein the HARQ entity controls the data stored in the Msg3 buffer to be transmitted using the UL Grant signal received on the random access response message if there is data stored in the Msg3 buffer when the reception module receives the UL Grant signal on the random access response message.

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