

Claims

1. A wireless transmit/receive unit (WTRU) comprising:
 - circuitry configured to receive a downlink control message, the message including modulation and uplink scheduling information, including coding set (MCS) information and transmit power control (TPC) information;
 - the circuitry further configured to measure pathloss based on a received signal;
 - the circuitry further configured to determine a transmit power level for a physical uplink channel based on the measured pathloss, the TPC information, the MCS information, and a predetermined weighting factor; and
 - the circuitry further configured to output a signal based on the uplink scheduling information and the determined transmit power level for transmission on a physical uplink channel.
2. The WTRU of claim 1, wherein the predetermined weighting factor has a value from 0 to 1.
3. The WTRU of claim 1, wherein the predetermined weighting factor is multiplied to the measured pathloss.
4. The WTRU according to claim 1, wherein the physical uplink channel is a physical uplink shared channel (PUSCH).
5. The WTRU according to claim 1, wherein the determined transmit power level is based on a closed loop power control factor.
6. The WTRU according to claim 1, wherein the determined transmit power level is based on a maximum transmit power level.
7. The WTRU according to claim 1, wherein the physical uplink channel is a physical uplink control channel (PUCCH) and the determined transmit power level is further based on a quality factor associated with channel quality indicator (CQI) information of the PUCCH.
8. A method, implemented in a wireless transmit/receive unit (WTRU), the method comprising:

receiving a downlink control message, including modulation and uplink scheduling information, wherein the uplink scheduling information including coding set (MCS) information and transmit power control (TPC) information;

measuring pathloss based on a received signal;

determining a transmit power level for a physical uplink channel based on the measured pathloss, the TPC information, the MCS information, and a predetermined weighting factor; and

outputting a signal based on the uplink scheduling information and the determined transmit power level for transmission on a physical uplink channel.

9. The method of claim 8, wherein the predetermined weighting factor has a value from 0 to 1.

10. The method of claim 8, wherein the predetermined weighting factor is multiplied to the measured pathloss.

11. The method of claim 8, wherein the physical uplink channel is a physical uplink shared channel (PUSCH).

12. The method of claim 8, wherein the determined transmit power level is based on a closed loop power control factor.

13. The method of claim 8, wherein the determined transmit power level is based on a maximum transmit power level.

14. The method of claim 8, wherein the physical uplink channel is a physical uplink control channel (PUCCH) and the determined transmit power level is further based on a quality factor associated with channel quality indicator (CQI) information of the PUCCH.

CLAIMS

1. A wireless transmit/receive unit (WTRU) comprising:
circuitry configured to receive a downlink control message, the downlink control message comprising uplink scheduling information, wherein the uplink scheduling information comprises modulation and coding set (MCS) information and transmit power control (TPC) information;
the circuitry further configured to measure pathloss based on a received signal;
the circuitry further configured to determine a transmit power level for a physical uplink channel based on at least the measured pathloss, the TPC information, the MCS information, and a predetermined weighting factor, wherein the predetermined weighting factor has a value from 0 to 1; and
the circuitry further configured to output a signal based on the uplink scheduling information and the determined transmit power level for transmission on a physical uplink channel.
2. The WTRU of claim 1, wherein the predetermined weighting factor has a value of 0 or 1.
3. The WTRU of claim 1, wherein the predetermined weighting factor is multiplied to the measured pathloss.
4. The WTRU according to claim 1, wherein the physical uplink channel is a physical uplink shared channel (PUSCH).
5. The WTRU according to claim 1, wherein the determined transmit power level is based on a closed loop power control factor.
6. The WTRU according to claim 1, wherein the determined transmit power level is based on a maximum transmit power level.
7. The WTRU according to claim 1, wherein the physical uplink channel is a physical uplink control channel (PUCCH) and the determined transmit power level is further based on a quality factor associated with channel quality indicator (CQI) information of the PUCCH.
8. A method, implemented in a wireless transmit/receive unit (WTRU), the method comprising:
the WTRU receiving a downlink control message, the downlink control message comprising uplink scheduling information, wherein the uplink scheduling information comprises modulation and coding coding set (MCS) information and transmit power control (TPC) information;

the WTRU measuring pathloss based on a received signal;

the WTRU determining a transmit power level for a physical uplink channel based on the measured pathloss, the TPC information, the MCS information, and a predetermined weighting factor, wherein the predetermined weighting factor has a value from 0 to 1; and

the WTRU outputting a signal based on the uplink scheduling information and the determined transmit power level for transmission on a physical uplink channel.

9. The method of claim 8, wherein the predetermined weighting factor has a value of 0 or 1.

10. The method of claim 8, wherein the predetermined weighting factor is multiplied to the measured pathloss.

11. The method of claim 8, wherein the physical uplink channel is a physical uplink shared channel (PUSCH).

12. The method of claim 8, wherein the determined transmit power level is based on a closed loop power control factor.

13. The method of claim 8, wherein the determined transmit power level is based on a maximum transmit power level.

14. The method of claim 8, wherein the physical uplink channel is a physical uplink control channel (PUCCH) and the determined transmit power level is further based on a quality factor associated with channel quality indicator (CQI) information of the PUCCH.