Claims

1. A method for channel resource allocation implemented in a wireless transmit/receive unit (WTRU) comprising:

sending, by the WTRU, an enhanced uplink (EU) channel allocation request via an uplink (UL) EU channel used for sending enhanced dedicated channel (E-DCH) data;

receiving, by the WTRU, channel allocation information via a downlink (DL) EU signaling channel in response to sending the channel allocation request; and

determining, by the WTRU, whether to ~~utilize~~ selectively enable the DL EU signaling channel according to at least one predetermined signaling procedure using at least one synchronous hybrid automatic repeat request (HARQ) process that enables reception of the DL EU signaling channel in accordance with a preconfigured schedule.

2. A method for channel resource allocation implemented in a wireless transmit/receive unit (WTRU), comprising:

sending, by the WTRU, an enhanced uplink (EU) channel allocation request including enhanced dedicated channel (E-DCH) data via at least one uplink (UL) channel;

receiving, by the WTRU, channel allocation information and data feedback information via respective downlink (DL) signaling channels in response to sending the channel allocation request including E-DCH data; and

determining, by the WTRU, whether to utilize at least one of the respective DL signaling channels according to at least one predetermined signaling procedure using at least one synchronous hybrid automatic repeat request (HARQ) process that enables reception of the at least one respective DL signaling channel in accordance with a preconfigured schedule.

3. A method for channel resource allocation implemented in a wireless transmit/receive unit (WTRU) comprising:

transmitting, by the WTRU, an enhanced uplink (EU) channel allocation request over an uplink (UL) EU channel, wherein the allocation request includes scheduling information;

monitoring, by the WTRU, a plurality of downlink (DL) EU signaling channels according to at least one predetermined signaling procedure;

receiving, by the WTRU, UL channel allocation information through at least one of the DL EU signaling channels; and

selectively ~~utilizing~~enabling, by the WTRU, at least one of the DL EU signaling channels according to the at least one predetermined signaling procedure using at least one synchronous hybrid automatic repeat request (HARQ) process that enables reception of the at least one DL EU signaling channel in accordance with a preconfigured schedule.

4. The method of claim 3 further comprising:

transmitting a plurality of UL signaling data; and

transmitting enhanced dedicated channel (E-DCH) data through the UL EU channel.

5. The method of claim 3 further comprising:

monitoring the DL EU signaling channels for enhanced dedicated channel (E-DCH) data feedback information; and

receiving E-DCH data feedback information through the DL EU signaling channels including either a positive acknowledgement (ACK) message or a negative acknowledgement (NACK) message.

23. A method performed by a wireless transmit/receive unit (WTRU) to selectively enable reception of at least one downlink (DL) signaling channel, the method comprising:

enabling reception of at least one DL signaling channel in order to receive expected data transmission feedback information in response to data sent by the WTRU; and

disabling reception of at least one DL signaling channel on at least one condition of that reception of data transmission feedback information is not expected or the DL signaling channel is not required.

24. A wireless communication device for use in a wireless communication system, the wireless communication device comprising:

a transmitter configured to transmit configuration information to a wireless transmit/receive unit (WTRU), wherein the configuration information indicates that the WTRU is to periodically receive channel scheduling information;

the transmitter further configured to transmit channel scheduling information over a downlink (DL) enhanced uplink (EU) signaling channel to the WTRU in time periods that the WTRU is to periodically receive the channel scheduling information; and

a receiver configured to receive a channel allocation request from the WTRU;

the transmitter further configured to transmit channel allocation information over the DL EU signaling channel in response to the received channel allocation request,

wherein the channel scheduling information is configured to enable the WTRU to selectively enable the DL EU signaling channel according to at least one predetermined signaling procedure using at least one synchronous hybrid automatic repeat request (HARQ) process that enables reception of the DL EU signaling channel in accordance with a preconfigured schedule.

25. The wireless communication device of claim 24, wherein the wireless communication device is a base station, a Node-B, or an Access Point (AP).