We claim:

1. A method for a mobile station, the method comprising:

receiving over a wireless channel a request for a DBCCI (Data Block Combined with Control Information);

transmitting a DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI;

sending data blocks out of a particular order within at least one radio block period where the mobile station is responding to a request for DBCCI, wherein the particular order is the order to be applied to uplink data block transmission if there is no control information to be sent with a data block.

2. The method of claim 1 wherein transmitting a DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI comprises:

transmitting a BTTI block using an uplink slot having the same number as a downlink slot used for the request.

3. The method of claim 1 wherein transmitting a DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI comprises:

transmitting an RTTI block using an uplink slot pair corresponding with a downlink slot pair used for the request.

4. The method of claim 1 further comprising:

receiving at least one UADB (uplink allocation for data block), each UADB indicating an allocation of a respective uplink block;

transmitting within a given radio block period one or more uplink data blocks using the uplink timeslot(s) allocated by the at least one UADB other than the timeslot used to transmit the DBCCI, each such data block having a higher block sequence number than the block sequence number(s) of data block(s) being sent as part of the DBCCI.

5. The method of claim 1 wherein the particular order involves initial transmissions occurring in block sequence number order.

6. The method of claim 1 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block + PAN (piggy backed ACK/NACK).

7. The method of claim 2 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block + PAN (piggy backed ACK/NACK).

8. The method of claim 3 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block + PAN (piggy backed ACK/NACK).

9. The method of claim 4 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block + PAN (piggy backed ACK/NACK).

10. The method of claim 5 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block + PAN (piggy backed ACK/NACK).

11. The method of claim 4 wherein each UADB is a USF (uplink state flag).

12. The method of claim 6 wherein each UADB is a USF (uplink state flag).

13. A computer readable medium having computer executable instructions stored thereon for execution by a mobile station which when executed, cause the mobile station to perform a method comprising:

receiving over a wireless channel a request for a DBCCI (Data Block Combined with Control Information);

transmitting a DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI;

sending data blocks out of a particular order within at least one radio block period where the mobile station is responding to a request for DBCCI, wherein the particular order is the order to be applied to uplink data block transmission if there is no control information to be sent with a data block.

14. The computer readable medium of claim 13 wherein the method further comprises:

transmitting a DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI comprises:

transmitting a BTTI block using an uplink slot having the same number as a downlink slot used for the request.

15. The computer readable medium of claim 13 wherein transmitting a DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI comprises:

transmitting an RTTI block using an uplink slot pair corresponding with a downlink slot pair used for the request.

16. The computer readable medium of claim 13 further comprising:

receiving at least one UADB (uplink allocation for data block), each UADB indicating an allocation of a respective uplink block;

transmitting within a given radio block period one or more uplink data blocks using the uplink timeslot(s) allocated by the at least one UADB other than the timeslot used to transmit the DBCCI, each such data block having a higher block sequence number than the block sequence number(s) of data block(s) being sent as part of the DBCCI.

17. The computer readable medium of claim 13 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block + PAN (piggy backed ACK/NACK).

18. The computer readable medium of claim 16 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block + PAN (piggy backed ACK/NACK).

19. A mobile station comprising:

at least one antenna;

at least one wireless access radio;

a one or a combination of components configured to control the mobile station to:

receive over a wireless channel a request for a DBCCI (Data Block Combined with Control Information);

transmit a DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI;

send data blocks out of a particular order within at least one radio block period where the mobile station is responding to a request for DBCCI, wherein the particular order is the order to be applied to uplink data block transmission if there is no control information to be sent with a data block.

20. The mobile station of claim 19 wherein the one or a combination of components is further configure control the mobile station to:

transmit a DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI comprises:

transmit a BTTI block using an uplink slot having the same number as a downlink slot used for the request.

21. The mobile station of claim 19 wherein the one or a combination of components is further configured to control the mobile station to:

transmit the DBCCI in response to the request using at least one timeslot corresponding to the timeslot used for

the request for DBCCI comprises by transmitting an RTTI block using an uplink slot pair corresponding with a downlink slot pair used for the request.

22. The mobile station of claim 19 wherein the one or a combination of components is further configured to control the mobile station to:

receive at least one UADB (uplink allocation for data block), each UADB indicating an allocation of a respective uplink block;

transmit within a given radio block period one or more uplink data blocks using the uplink timeslot(s) allocated by the at least one UADB other than the timeslot used to transmit the DBCCI, each such data block having a higher block sequence number than the block sequence number(s) of data block(s) being sent as part of the DBCCI.

23. The mobile station of claim 19 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block + PAN (piggy backed ACK/NACK).

24. The mobile station of claim 21 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block + PAN (piggy backed ACK/NACK).

We claim:

1. A method for a mobile station, the method comprising:

receiving over a wireless channel a request for a DBCCI (Data Block Combined with Control Information);

upon receiving the request, encoding data blocks and the DBCCI prior to receiving Uplink Allocation for Data Blocks (UADBs) defining a particular order for transmitting the data blocks and DBCCI;

transmitting the DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI; and

transmitting the data blocks out of the particular order within at least one radio block period where the mobile station is responding to the request for the DBCCI.

2. The method of claim 1 wherein transmitting a DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI comprises:

transmitting a BTTI (Basic Transmit Time Interval) block using an uplink slot having the same number as a downlink slot used for the request.

3. The method of claim 1 wherein transmitting a DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI comprises:

transmitting an RTTI (Reduced Transmit Time Interval) block using an uplink slot pair corresponding with a downlink slot pair used for the request.

4. The method of claim 1 further comprising:

receiving at least one UADB (uplink allocation for data block), each UADB indicating an allocation of a respective uplink block;

transmitting within a given radio block period one or more uplink data blocks using the uplink timeslot(s) allocated by the at least one UADB other than the timeslot used to transmit the DBCCI, each such data block having a higher block sequence number than the block sequence number(s) of data block(s) being sent as part of the DBCCI.

5. The method of claim 1 wherein the particular order involves initial transmissions occurring in block sequence number order.

6. The method of claim 1 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block+PAN (piggy backed ACK/NACK).

7. The method of claim 2 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block+PAN (piggy backed ACK/NACK).

8. The method of claim 3 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block+PAN (piggy backed ACK/NACK).

9. The method of claim 4 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for

RLC (radio link control) data block+PAN (piggy backed ACK/NACK).

10. The method of claim 5 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block+PAN (piggy backed ACK/NACK).

11. The method of claim 4 wherein each UADB is a USF (uplink state flag).

12. A non-transitory, computer readable medium having computer executable instructions stored thereon for execution by a mobile station which when executed, cause the mobile station to perform a method comprising:

receiving over a wireless channel a request for a DBCCI (Data Block Combined with Control Information);

upon receiving the request, encoding data blocks and the DBCCI prior to receiving Uplink Allocation for Data Blocks (UADBs) defining a particular order for transmitting the data blocks and DBCCI;

transmitting the DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI; and

transmitting the data blocks out of the particular order within at least one radio block period where the mobile station is responding to the request for the DBCCI.

13. The computer readable medium of claim 12 wherein the method further comprises:

transmitting a DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI comprises:

transmitting a BTTI (Basic Transmit Time Interval) block using an uplink slot having the same number as a downlink slot used for the request.

14. The computer readable medium of claim 12 wherein transmitting a DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI comprises:

transmitting an RTTI (Reduced Transmit Time Interval) block using an uplink slot pair corresponding with a downlink slot pair used for the request.

15. The computer readable medium of claim 12 further comprising:

receiving at least one UADB (uplink allocation for data block), each UADB indicating an allocation of a respective uplink block;

transmitting within a given radio block period one or more uplink data blocks using the uplink timeslot(s) allocated by the at least one UADB other than the timeslot used to transmit the DBCCI, each such data block having a higher block sequence number than the block sequence number(s) of data block(s) being sent as part of the DBCCI.

16. The computer readable medium of claim 12 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block+PAN (piggy backed ACK/NACK).

17. The computer readable medium of claim 15 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block+PAN (piggy backed ACK/NACK).

18. A mobile station comprising:

at least one antenna;

at least one wireless access radio;

a one or a combination of components configured to control the mobile station to:

receive over a wireless channel a request for a DBCCI (Data Block Combined with Control Information);

upon receiving the request, encode data blocks and the DBCCI prior to receiving Uplink Allocation for Data Blocks (UADBs) defining a particular order for transmitting the data blocks and DBCCI;

transmit the DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI; and

transmit the data blocks out of the particular order within at least one radio block period where the mobile station is responding to the request for the DBCCI.

19. The mobile station of claim 18 wherein the one or a combination of components is further configure control the mobile station to:

transmit a DBCCI in response to the request using at least one timeslot corresponding to a timeslot used for the request for DBCCI comprises:

transmit a BTTI (Basic Transmit Time Interval) block using an uplink slot having the same number as a downlink slot used for the request.

20. The mobile station of claim 18 wherein the one or a combination of components is further configured to control the mobile station to:

transmit the DBCCI in response to the request using at least one timeslot corresponding to the timeslot used for the request for DBCCI comprises by transmitting an RTTI (Reduced Transmit Time Interval) block using an uplink slot pair corresponding with a downlink slot pair used for the request.

21. The mobile station of claim 18 wherein the one or a combination of components is further configured to control the mobile station to:

receive at least one UADB (uplink allocation for data block), each UADB indicating an allocation of a respective uplink block;

transmit within a given radio block period one or more uplink data blocks using the uplink timeslot(s) allocated by the at least one UADB other than the timeslot used to transmit the DBCCI, each such data block having a higher block sequence number than the block sequence number(s) of data block(s) being sent as part of the DBCCI.

22. The mobile station of claim 18 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block+PAN (piggy backed ACK/NACK).

23. The mobile station of claim 20 wherein the request for a DBCCI (Data Block Combined with Control Information) is a poll for RLC (radio link control) data block+PAN (piggy backed ACK/NACK).