

CLAIMS

1. A method for wireless communication at a user equipment, comprising:
 - identifying (1405) a configuration of acknowledgement/negative acknowledgement, ACK/NACK, resource sets across a plurality of sub-slots in a slot, the plurality of sub-slots associated with a hybrid automatic repeat request acknowledgement, HARQ-ACK, codebook;
 - receiving (1410) a first data transmission in a first data channel from a base station and a second data transmission in a second data channel from the base station;
 - receiving (1415) an indication of a first resource set of the ACK/NACK resource sets that is located completely within a first sub-slot of the plurality of sub-slots in the slot to use for providing feedback for the first data transmission and a second resource set of the ACK/NACK resource sets that is located completely in a second sub-slot of the plurality of sub-slots in the slot to use for providing feedback for the second data transmission, wherein the first resource set and the second resource set are each exclusive of each other in a time domain based at least in part on a configuration of the ACK/NACK resource sets or on the indication of the first and second resource sets; and
 - transmitting (1420) the feedback for the first data transmission on the first resource set and the feedback for the second data transmission on the second resource set.
2. The method of claim 1, wherein the ACK/NACK resource sets comprise HARQ-ACK resource sets for a physical uplink control channel, PUCCH.
3. The method of claim 1, wherein identifying the configuration of ACK/NACK resource sets across the plurality of sub-slots in the slot comprises:
 - identifying that each ACK/NACK resource set is completely within respective sub-slots of the plurality of sub-slots in the slot such that the first resource set and the second resource set are each exclusive of each other in the time domain based at least in part on the configuration of the ACK/NACK resource sets, and wherein resource sets are configured for providing feedback such that none of the resource sets overlap and collisions between feedback transmissions are avoided.
4. The method of claim 1, wherein receiving the indication of the first resource set and the second resource set comprises:

receiving one or more feedback timing parameters with the first data transmission and the second data transmission, the one or more feedback timing parameters indicating the first resource set and the second resource set such that the first resource set and the second resource set are each exclusive of each other in the time domain even if the configuration of ACK/NACK resource sets includes overlapping resource sets.

5. The method of claim 1, wherein identifying the configuration of the plurality of ACK/NACK resource sets comprises:

receiving, from the base station, the configuration of the plurality of ACK/NACK resource sets via radio resource control, RRC, signaling.

6. The method of claim 1, wherein receiving the indication of the first resource set and the second resource set comprises:

receiving one or more ACK/NACK resource indicators, ARIs.

7. A method for wireless communication at a base station, comprising:
transmitting (1505), to a user equipment, UE, a configuration of ACK/NACK resource sets across a plurality of sub-slots in a slot, the plurality of sub-slots associated with a hybrid automatic repeat request acknowledgement, HARQ-ACK, codebook;

transmitting (1510) a first data transmission in a first data channel to the UE and a second data transmission in a second data channel to the UE;

transmitting (1515) an indication of a first resource set of the ACK/NACK resource sets that is located completely within a first sub-slot of the plurality of sub-slots in the slot for the UE to use for providing feedback for the first data transmission and a second resource set of the ACK/NACK resource sets that is located completely within a second sub-slot of the plurality of sub-slots in the slot for the UE to use for providing feedback for the second data transmission, wherein the first resource set and the second resource set are each exclusive of each other in a time domain based at least in part on a configuration of the ACK/NACK resource sets or on the indication of the first and second resource sets; and

receiving (1520) the feedback for the first data transmission on the first resource set and the feedback for the second data transmission on the second resource set.

8. The method of claim 7, wherein the ACK/NACK resource sets comprise HARQ-ACK resource sets for a physical uplink control channel, PUCCH.

9. The method of claim 7, wherein the first resource set and the second resource set are each exclusive of each other in the time domain based at least in part on the configuration of the ACK/NACK resource sets, the method further comprising:

determining the configuration of the ACK/NACK resource sets such that none of the ACK/NACK resource sets overlap to avoid collisions between feedback transmissions.

10. The method of claim 7, wherein the first resource set and the second resource set are each exclusive of each other in the time domain based at least in part on the indication of the first and second resource sets, the method further comprising:

determining the first and second resource sets for the UE to use for providing feedback for the first and second data transmissions such that the first and second resource sets are exclusive of each other in the time domain to avoid collisions between feedback transmissions.

11. The method of claim 7, wherein transmitting the configuration of the ACK/NACK resource sets comprises:

transmitting the configuration of ACK/NACK resource sets via radio resource control, RRC, signaling.

12. The method of claim 7, wherein transmitting the indication of the first resource set and the second resource set comprises:

transmitting one or more acknowledgment, ACK, negative-acknowledgement, NACK, resource indicators, ARIs.

13. An apparatus for wireless communication at a user equipment, comprising:

means arranged to perform the steps of any one of claims 1 to 6.

14. An apparatus for wireless communication at a base station, comprising:

means arranged to perform the steps of any one of claims 7 to 12.