CLAIMS

1. A method for wireless communication, comprising:

receiving a configuration of a bearer to support packet duplication by a packet data convergence protocol (PDCP) entity;

determining an activation status of the packet duplication for the bearer;

duplicating a first PDCP packet to create a second PDCP packet that is a copy of the first PDCP packet based at least in part on the activation status of the packet duplication for the bearer;

forwarding the first PDCP packet to a first radio link control (RLC) entity and the second PDCP packet to a second RLC entity for transmission;

receiving, via the first RLC entity, an acknowledgement (ACK) indicating that the first PDCP packet was received by a receiving device;

refraining from transmitting the second PDCP packet via the second RLC entity based at least in part on receiving the ACK;

transmitting a first buffer status report (BSR) for the first RLC entity; and

transmitting a second BSR for the second RLC entity, wherein the second BSR is different from the first BSR.

2. The method of claim 1, further comprising:

determining that a dynamic duplication parameter satisfies an activation threshold, the dynamic duplication parameter comprising a link parameter; and

activating the packet duplication by the PDCP entity based at least in part on the dynamic duplication parameter satisfying the activation threshold.

3. The method of claim 2, wherein the dynamic duplication parameter includes, a packet loss rate associated with the first RLC entity, a packet loss rate associated with the second RLC entity, a data rate associated with the first RLC entity, a data rate associated with the second RLC entity, a channel quality indicator associated with the first RLC entity, a channel quality indicator associated with the second RLC entity, an application packet type, a transport block size associated with the first RLC entity, a transport block size associated with the second RLC entity, or combinations thereof.

4. The method of claim 1, wherein at least one of the first PDCP packet of the first RLC entity or the second PDCP packet of the second RLC entity includes a logical channel identifier (LCID), a logical channel group identifier (LCG ID), a buffer size of the first RLC entity, a buffer size of the second RLC entity, padding, or combinations thereof.

5. The method of claim 1, further comprising:

identifying a current left edge and a next sequence number of the first RLC entity; and

determining a state variable for the second RLC entity based at least in part on the current left edge and the next sequence number of the first RLC entity.

6. The method of claim 1, further comprising:

adjusting a state variable of the second RLC entity based at least in part on an updated state variable of the first RLC entity; and

discarding packets stored in a buffer of the second RLC entity based at least in part on adjusting the state variable of the second RLC entity.

7. The method of claim 6, wherein:

the updated state variable of the first RLC entity is indicated to the second RLC entity by an indication from the PDCP entity, the first RLC entity, or a radio resource control (RRC) entity.

8. The method of claim 1, further comprising:

activating a timer based at least in part on forwarding the first PDCP packet to the first RLC entity.

9. The method of claim 8, further comprising:

receiving the ACK prior to the timer expiring.

10. The method of claim 8, wherein forwarding the second PDCP packet to the second RLC entity for transmission is based at least in part on the timer expiring prior to receiving the ACK.

11. The method of claim 1, further comprising:

transmitting the first PDCP packet using a first component carrier having a first frequency spectrum band, the first component carrier being mapped to the first RLC entity.

12. The method of claim 11, further comprising:

receiving a message indicating the mapping of the first RLC entity to the first component carrier and the second RLC entity to the second component carrier, wherein transmitting the first PDCP packet is based at least in part on the mapping.

13. The method of claim 1, further comprising:

identifying a first buffer status for a first buffer of the first RLC entity and a second buffer status for a second buffer of the second RLC entity; and

transmitting a single BSR that includes the first buffer status and the second buffer status.

14. The method of claim 1, further comprising:

selecting the first RLC entity or the second RLC entity as a default RLC entity; and

transmitting an identification of the default RLC entity to a receiving device.

15. The method of claim 1, wherein the first RLC entity and the second RLC entity are associated with carrier aggregation for communicating with a same base station.

16. The method of claim 1, wherein the first RLC entity is associated with a first base station and the second RLC entity is associated with a second base station different from the first base station for dual connectivity communication.

17. The method of claim 1, wherein the packet duplication includes a plurality of procedures for processing data at the PDCP entity that are different from procedures specified by other modes of operation of the PDCP entity.

18. The method of claim 1, further comprising:

coordinating a forwarding of the first PDCP packet to the first RLC entity and the

second PDCP packet to the second RLC entity based at least in part on a status of the first RLC entity and a status of the second RLC entity.

19. The method of claim 18, further comprising:

configuring the status of the first RLC entity and the status of the second RLC entity based at least in part on activating the packet duplication, deactivating the packet duplication, or reactivating the packet duplication.

20. The method of claim 18, wherein:

the coordinating of the forwarding of the first PDCP packet and the second PDCP packet is based at least in part on using a timer.

21. An apparatus for wireless communication, comprising:

a processor;

memory in electronic communication with the processor; and

instructions stored in the memory and operable, when executed by the processor, to cause the apparatus to:

receive a configuration of a bearer to support packet duplication by a packet data convergence protocol (PDCP) entity;

determine an activation status of the packet duplication bearer;

duplicate a first PDCP packet to create a second PDCP packet that is a copy of the first PDCP packet based at least in part on the activation status of the packet duplication for the bearer;

forward the first PDCP packet to a first radio link control (RLC) entity and the second PDCP packet to a second RLC entity for transmission;

receive, via the first RLC entity, an acknowledgement (ACK) indicating that the first PDCP packet was received by a receiving device;

refrain from transmitting the second PDCP packet via the second RLC entity based at least in part on receiving the ACK;

transmit a first buffer status report (BSR) for the first RLC entity; and

transmit a second BSR for the second RLC entity, wherein the second BSR is different from the first BSR.

22. A method for wireless communication by a user equipment (UE), comprising:

receiving, at the UE from a base station, a condition for activating packet duplication, the condition including an indication of an activation parameter and an activation threshold;

measuring the activation parameter associated with packet duplication;

determining that the activation parameter satisfies the activation threshold; and

transmitting, by the UE to the base station, an activation message indicating that duplicated packets are to be communicated by the UE based at least in part on determining that the activation parameter satisfies the activation threshold, the activation message being transmitted prior to a transmission of the duplicated packets.

23. The method of claim 22, further comprising:

duplicating, by a packet data convergence protocol (PDCP) entity of the UE, a first PDCP packet to create a second PDCP packet that is a copy of the first PDCP packet based at least in part on determining that the activation parameter satisfies the activation threshold.

24. The method of claim 23, further comprising:

forwarding the first PDCP packet to a first RLC entity and the second PDCP packet to a second RLC entity different from the first RLC entity.

25. The method of claim 23, further comprising:

transmitting the first PDCP packet and the second PDCP packet to the base station based at least in part on determining that the activation parameter satisfies the activation threshold.

26. The method of claim 22, wherein:

the activation parameter is a packet loss rate or a channel quality indicator associated with a communication link between the base station and the UE.

27. The method of claim 22, further comprising:

receiving an identification of a default RLC entity from the base station.

28. An apparatus for wireless communication, comprising:

a processor;

memory in electronic communication with the processor; and

instructions stored in the memory and operable, when executed by the processor, to cause the apparatus to:

receive, at a user equipment (UE) from a base station, a condition for activating packet duplication, the condition including an indication of an activation parameter and an activation threshold;

measure the activation parameter associated with packet duplication;

determine the activation parameter satisfies the activation threshold; and

transmit, by the UE to the base station, an activation message indicating that duplicated packets are to be communicated by the UE based at least in part on determining that the activation parameter satisfies the activation threshold, the activation message being transmitted prior a transmission of the duplicated packets.