CLAIMS

1. A method of wireless communication, comprising:

detecting a mapping reconfiguration of a first Quality of Service (QoS) flow from a first data radio bearer (DRB) to a second DRB;

generating a Service Data Adaptation Protocol (SDAP) control protocol data unit (PDU) in response to the mapping reconfiguration, wherein the SDAP control PDU provides an indication that a final SDAP data PDU associated with the first QoS flow has been transmitted on the first DRB; and, wherein the SDAP control PDU includes a control identifier facilitating a distinction between the SDAP control PDU and an SDAP data PDU; and transmitting the SDAP control PDU via the first DRB to a receiver.

transmitting the SDAP control PDU via the first DRB to a receiver.

2. The method of claim 1, wherein detecting the mapping reconfiguration comprises:

detecting the mapping reconfiguration via a Radio Resource Control (RRC) message.

3. The method of claim 1, wherein detecting the mapping reconfiguration comprises:

detecting the mapping reconfiguration via reflective mapping, wherein the mapping reconfiguration is detected based on whether packets associated with the first QoS flow are received via the second DRB after being initially received via the first DRB.

4. The method of claim 1, wherein generating the SDAP control PDU comprises:

including a control identifier within the SDAP control PDU, the control identifier facilitating a distinction between the SDAP control PDU and an SDAP data PDU.

5. The method of claim 4, wherein including the control identifier comprises:

further comprising: including a data/control (D/C) bit in each of the SDAP control PDU and the SDAP data PDU, wherein the D/C bit facilitates the distinction between the SDAP control PDU and the SDAP data PDU.

6. 5. The method of claim 1, wherein generating the SDAP control PDU comprises:

including a QoS Flow Identifier (QFI) parameter within the SDAP control PDU, the QFI parameter identifying a particular QoS flow applicable to control information included in the SDAP control PDU.

7. 6. The method of claim 65, wherein generating the SDAP control PDU further comprises:

setting the QFI parameter within the SDAP control PDU to a value corresponding to the first QoS flow.

8. 7. The method of claim 1, wherein transmitting the SDAP control PDU comprises:

preserving an order in which a transmitter side SDAP layer transmits the SDAP control PDU after transmitting the final SDAP data PDU associated with the first QoS flow via the first DRB

to enable a receiver side SDAP layer to receive the SDAP control PDU after receiving the final SDAP data PDU associated with the first QoS flow via the first DRB.

~~9.~~ 8. The method of claim ~~8~~7, wherein preserving the order is performed by a Packet Data Convergence Protocol (PDCP) entity associated with the first DRB.

~~10.~~ 9. The method of claim 1, wherein generating the SDAP control PDU further comprises:

identifying whether a buffer comprises an un-transmitted SDAP data PDU associated with the first QoS flow;

including an end marker parameter in an SDAP header of the un-transmitted SDAP data PDU when the buffer comprises the un-transmitted SDAP data PDU associated with the first QoS flow, wherein the end marker parameter indicates that the un-transmitted SDAP data PDU is the final SDAP data PDU associated with the first QoS flow on the first DRB; and transmitting the un-transmitted SDAP data PDU to the receiver.

~~transmitting the un-transmitted SDAP data PDU to the receiver.~~

~~11.~~ 10. The method of claim ~~10~~9, wherein generating the SDAP control PDU further comprises:

generating the SDAP control PDU when the buffer does not comprise the un-transmitted SDAP data PDU associated with the first QoS flow.

~~12.~~ 11. A scheduled entity within a wireless communication network, comprising:

a processor;

a transceiver communicatively coupled to the processor;

a memory communicatively coupled to the processor, wherein the processor is configured to:

detect a mapping reconfiguration of a first Quality of Service (QoS) flow from a first data radio bearer (DRB) to a second DRB;

generate a Service Data Adaptation Protocol (SDAP) control protocol data unit (PDU) in response to the mapping reconfiguration, wherein the SDAP control PDU provides an indication that a final SDAP data PDU associated with the first QoS flow has been transmitted on the first DRB~~; and~~, wherein the SDAP control PDU includes a control identifier facilitating a distinction between the SDAP control PDU and an SDAP data PDU; and transmit the SDAP control PDU via the first DRB to a scheduling entity via the transceiver.

~~transmit the SDAP control PDU via the first DRB to a scheduling entity via the transceiver.~~

~~13. The scheduled entity of claim~~ 12. The scheduled entity of claim 11, wherein the processor is further configured to:

detect the mapping reconfiguration via a Radio Resource Control (RRC) message.

~~14.~~ 13. The scheduled entity of claim ~~12~~11, wherein the processor is further configured to:

detect the mapping reconfiguration via reflective mapping, wherein the mapping reconfiguration is detected based on whether packets associated with the first QoS flow are received via the second DRB after being initially received via the first DRB.

~~15.~~ 14. The scheduled entity of claim ~~12~~11, wherein the processor is further configured to:

~~include a control identifier within the SDAP control PDU, the control identifier facilitating a distinction between the SDAP control PDU and an SDAP data PDU.~~

~~16. The scheduled entity of claim 15, wherein the processor is further configured to:~~

include a data/control (D/C) bit in each of the SDAP control PDU and the SDAP data PDU, wherein the D/C bit facilitates the distinction between the SDAP control PDU and the SDAP data PDU.

~~17.~~ 15. The scheduled entity of claim ~~12~~11, wherein the processor is further configured to:

include a QoS Flow Identifier (QFI) parameter within the SDAP control PDU, the QFI parameter identifying a particular QoS flow applicable to control information included in the SDAP control PDU.

~~18.~~ 16. The scheduled entity of claim ~~17~~15, wherein the processor is further configured to:

set the QFI parameter within the SDAP control PDU to a value corresponding to the first QoS flow.

~~19.~~ 17. The scheduled entity of claim ~~12~~11, wherein the processor is further configured to:

preserve an order in which a transmitter side SDAP layer within the scheduled entity transmits the SDAP control PDU after transmitting the final SDAP data PDU associated with the first QoS flow via the first DRB to enable a receiver side SDAP layer within the scheduling entity to receive the SDAP control PDU after receiving the final SDAP data PDU associated with the first QoS flow via the first DRB.

~~20.~~ 18. The scheduled entity of claim ~~12~~11, wherein the processor is further configured to:

identify whether a buffer within the memory comprises an un-transmitted SDAP data PDU associated with the first QoS flow;

include an end marker parameter in an SDAP header of the un-transmitted SDAP data PDU when the buffer comprises the un-transmitted SDAP data PDU associated with the first QoS flow, wherein the end marker parameter indicates that the un-transmitted SDAP data PDU is the final SDAP data PDU associated with the first QoS flow on the first DRB; transmit the un-transmitted SDAP data PDU to the scheduling entity.

~~transmit the un-transmitted SDAP data PDU to the scheduling entity.~~

~~21.~~ 19. The scheduled entity of claim ~~20~~18, wherein the processor is further configured to:

generate the SDAP control PDU when the buffer does not comprise the un-transmitted SDAP data PDU associated with the first QoS flow.

~~22. A method of~~ 20. An apparatus configured for wireless communication, comprising:

~~receiving~~ means for detecting a ~~plurality~~mapping reconfiguration of a first Quality of Service ~~Data Adaptation Protocol (SDAP) data protocol data units (PDUs) associated with a first~~ (QoS) flow ~~via both~~from a first data radio bearer (DRB) ~~and~~to a second DRB ~~from a transmitter;~~

~~receiving an SDAP~~ ; means for generating a Service Data Adaptation Protocol (SDAP) control protocol data (PDU ~~applicable to the first QoS flow via the first DRB from the transmitter; and~~

~~forwarding the plurality of SDAP data PDU received via the second DRB to an upper layer~~) in response to ~~receiving the SDAP control PDU applicable to the first QoS flow via the first DRB;~~

the mapping reconfiguration, wherein the SDAP control PDU provides an indication that a final SDAP data PDU associated with the first QoS flow has been transmitted on the first DRB, wherein the SDAP control PDU includes a control identifier facilitating a distinction between the SDAP control PDU and an SDAP data PDU; and means for transmitting the SDAP control PDU via the first DRB to a receiver.

~~23. The method of claim 22, further comprising:~~

~~identifying the SDAP control PDU based on a control identifier within the SDAP control PDU, the control identifier facilitating a distinction between the SDAP control PDU and the at least one SDAP data PDU.~~

~~24. The method of claim 23, wherein identifying the SDAP control PDU further comprises:~~

~~ascertaining a value of a data/control (D/C) bit in each of the SDAP control PDU and the at least one SDAP data PDU, and wherein the D/C bit facilitates the distinction between the SDAP control PDU and the at least one SDAP data PDU.~~

~~25. The method of claim 22, further comprising:~~

~~identifying a QoS Flow Identifier (QFI) parameter in the SDAP control PDU; and~~

~~applying control information of the SDAP control PDU only to the first QoS flow identified by the QFI parameter in the SDAP control PDU.~~

~~26. A scheduling entity within a wireless communication network, comprising:~~

~~a processor;~~

~~a transceiver communicatively coupled to the processor;~~

~~a memory communicatively coupled to the processor, wherein the processor is configured to:~~

~~receive a plurality of Service Data Adaptation Protocol (SDAP) data protocol data units (PDUs) associated with a first QoS flow via both a first data radio bearer (DRB) and a second DRB from a scheduled entity via the transceiver;~~

~~receive an SDAP control PDU applicable to the first QoS flow via the first DRB from the scheduled entity via the transceiver; and~~

forward the plurality of SDAP data PDUs received via the second DRB to an upper layer in response to receiving the SDAP control PDU applicable to the first QoS flow via the first DRB;

wherein the SDAP control PDU provides an indication that a final SDAP data PDU associated with the first QoS flow has been transmitted on the first DRB.

27. The scheduling entity of claim 26, wherein the processor is further configured to:

identify the SDAP control PDU based on a control identifier within the SDAP control PDU, the control identifier facilitating a distinction between the SDAP control PDU and the at least one SDAP data PDU.

28. The scheduling entity of claim 27, wherein the processor is further configured to:

ascertaining a value of a data/control (D/C) bit in each of the SDAP control PDU and the at least one SDAP data PDU, and wherein the D/C bit facilitates the distinction between the SDAP control PDU and the at least one SDAP data PDU.

29. The scheduling entity of claim 26, wherein the processor is further configured to:

identify a QoS Flow Identifier (QFI) parameter in the SDAP control PDU; and

apply control information of the SDAP control PDU only to the first QoS flow identified by the QFI parameter in the SDAP control PDU.

30. A method of wireless communication, comprising:

detecting a mapping reconfiguration of a first Quality of Service (QoS) flow from a first data radio bearer (DRB) to a second DRB;

setting an end marker parameter in a Service Data Adaptation Protocol (SDAP) header of a first SDAP data protocol data unit (PDU) received from an upper layer after the mapping reconfiguration, wherein the end marker parameter provides an indication that the first SDAP data PDU is a final SDAP data PDU associated with the first QoS flow on the first DRB; and

transmitting the first SDAP data PDU and at least one subsequent SDAP data PDU associated with the first QoS flow to a receiver, the first SDAP data PDU transmitted via the first DRB and the at least one subsequent SDAP data PDU transmitted via the second DRB.

31. The method of claim 30, wherein detecting the mapping reconfiguration comprises:

detecting the mapping reconfiguration via a Radio Resource Control (RRC) message.

32. The method of claim 30, wherein detecting the mapping reconfiguration comprises:

detecting the mapping reconfiguration via reflective mapping, wherein the mapping reconfiguration is detected based on whether packets associated with the first QoS flow are received via the second DRB after being initially received via the first DRB.

33. A scheduled entity within a wireless communication network, comprising:

a processor;

a transceiver communicatively coupled to the processor;

a memory communicatively coupled to the processor, wherein the processor is configured to:

detect a mapping reconfiguration of a first Quality of Service (QoS) flow from a first data radio bearer (DRB) to a second DRB;

set an end marker parameter in a Service Data Adaptation Protocol (SDAP) header of a first SDAP data protocol data unit (PDU) received from an upper layer after the mapping reconfiguration, wherein the end marker parameter provides an indication that the first SDAP data PDU is a final SDAP data PDU associated with the first QoS flow on the first DRB; and

transmit the first SDAP data PDU and at least one subsequent SDAP data PDU associated with the first QoS flow to a scheduling entity via the transceiver, the first SDAP data PDU transmitted via the first DRB and the at least one subsequent SDAP data PDU transmitted via the second DRB.

34. The scheduled entity of claim 33, wherein the processor is further configured to: detect the mapping reconfiguration via a Radio Resource Control (RRC) message.

35. The scheduled entity of claim 33, wherein the processor is further configured to: detect the mapping reconfiguration via reflective mapping, wherein the mapping reconfiguration is detected based on whether packets associated with the first QoS flow are received via the second DRB after being initially received via the first DRB.