CLAIMS

1. An Application Function (AF) for wireless communication, the AF comprising: at least one memory; and at least one processor coupled with the at least one memory and configured to cause the AF to:

send, to a second network function, a request to establish an application session, the application session comprising a plurality of media flows, the request comprising:

a protocol session indication;

a plurality of packet flow descriptors of a protocol session; and

a plurality of media flow descriptors within the protocol session.

2. The AF of claim 1, wherein the request further comprises a QoS requirement and a protocol description in respect of each of the plurality of media flows.

3. The AF of claim 1 or 2, wherein each media flow descriptor of the plurality of media flow descriptors is associated with at least one identifier.

4. A Policy Control Function (PCF) for wireless communication, the PCF comprising: at least one memory; and at least one processor coupled with the at least one memory and configured to cause the PCF to:

receive from an Application Function (AF) a request to establish an IP flow session to a User Equipment (UE), the IP flow session comprising a plurality of media flows, the request including 5-tuple information and, for each media flow within the IP flow session: at least one QoS requirement and a protocol description of the media flow;

determine QoS rules for each media flow within the IP flow session and associating each determined QoS rule with a respective range of identifiers; and

send the QoS rules to a Session Management Function (SMF).

5. The PCF of claim 4, wherein the respective range of identifiers are received from the AF.

6. The PCF of claim 4 or 5, wherein the respective range of identifiers are received in the IP flow session.

7. The PCF of any of claims 4, 5 or 6, wherein each identifier is associated with the IP flow session.

8. The PCF of claim 4 or 5, wherein the QoS rule for each media flow includes 5-tuple of a protocol session between the UE and a User Plane Function.

9. The PCF of any of claims 4, 5 or 8, wherein the range of identifiers associated with the QoS rule identify a protocol session between the UE and a UPF.

10. A Session Management Function (SMF), for wireless communication, comprising: at least one memory; and at least one processor coupled with the at least one memory and configured to cause the SMF to:

receive from a Policy Control Function (PCF), one or more QoS rules for a User Equipment (UE), each QoS rules associated with an identifier; and

determine configuration rules for a User Plane Function (UPF), wherein the configuration rules provide assistance to the UPF to route media flow packets encapsulated in a protocol session to a QoS flow towards a Radio Access Network (RAN) based on the identifier.

11. The SMF of claim 10, further configured to determine uplink QoS rules for the UE wherein the uplink QoS rules provide assistance to the UE to route at least one uplink packet to a QoS flow towards the RAN based on the identifier.

12. The SMF of claim 10, further configured to determine downlink QoS rules for the RAN wherein the downlink QoS rules provide assistance to the RAN to route at least one downlink packet to a QoS flow towards the UE based on the identifier.

13. A User Plane Function (UPF) for wireless communication, comprising: at least one memory; and at least one processor coupled with the at least one memory and configured to cause the UPF to:

receive first configuration rules;

receive second configuration rules received from a Session Management Function (SMF);

receive a downlink packet;

determine to route the downlink packet over a particular protocol session of a plurality of protocol sessions to a first User Equipment (UE) based on the first configuration rules;

select a stream identifier of a particular stream connection based on the first configuration rules;

encapsulate the received downlink packet within the particular protocol session; and

route the downlink packet over a corresponding QoS flow based on the second configuration rules.

14. The UPF of claim 13, wherein the first configuration rules each comprise a mapping of a protocol description to a protocol session and an identifier.

15. The UPF of claim 13, wherein the second configuration rules each comprise a stream identifier mapping to the corresponding QoS flow.