CLAIMS

What is claimed is:

1. A wireless communication apparatus, comprising a communication processor and an application processer, wherein the communication processor is configured to:

receive a first AT command sent by the application processor, wherein the first AT command is used to query a route selection descriptor, and the first AT command comprises a first parameter; and

send a first response to the application processor, the first response comprise at least one of the parameters of at least one of route selection descriptor in a target user route selection policy URSP rule, the at least one of the route selection descriptor in the target URSP rule matches with the first parameter; and

send a second request to a network device, wherein the second request is used to establish a session, and the second request comprises at least one parameter in the route selection descriptor.

2. The wireless communication apparatus according to claim 1, wherein the first parameter is the same as a parameter comprised in a traffic descriptor in the URSP rule; and

the route selection descriptor is a route selection descriptor in the target URSP rule.

3. The wireless communication apparatus according to claim 1 or 2, wherein the first parameter comprises at least one of the following parameters:

a destination address parameter of the to-be-transmitted data;

a data network parameter corresponding to the to-be-transmitted data;

an application descriptor corresponding to the to-be-transmitted data; or

a connection capability parameter corresponding to the to-be-transmitted data.

4. The wireless communication apparatus according to claim 1 or 2, wherein the traffic descriptor comprises at least one of the following parameters:

a destination address parameter;

a data network parameter;

an application descriptor; or

a connection capability parameter.

5. The wireless communication apparatus according to claim 3 or 4, wherein the destination

address parameter comprises at least one of the following parameters:

a domain descriptor corresponding to the to-be-transmitted data; an internet protocol IP descriptor corresponding to the to-be-transmitted data; or a non-IP descriptor corresponding to the to-be-transmitted data.

6. The wireless communication apparatus according to any one of claims 1 to 5, wherein a parameter in the route selection descriptor comprises a parameter that the session needs to meet;

a parameter of a network slice;

a data network name DNN; or

a session type.

7. The wireless communication apparatus according to claim 6, wherein the parameter of the network comprises at least one of the following parameters:

a session type, a data network name DNN, an access type precedence, or a non-seamless offload indication.

8. The wireless communication apparatus according to any one of claims 1 to 7, wherein the first AT command is further used to activate the session.

9. The wireless communication apparatus according to claim 8, wherein the first AT command comprises at least one of the following:

+CACTPDU; +CPSDIAL; +CPDUACT; +CPDUEST; or +CPDUCONN.

10. The wireless communication apparatus according to any one of claims 1 to 9, wherein the communication processor is further configured to:

after receiving the first AT command sent by the application processor and before sending the second request to the network device, return a first response to the application processor through the interface circuit, wherein the first response comprises the at least one parameter in the route selection descriptor.

11. The wireless communication apparatus according to claim 10, wherein the first AT command comprises at least one of the following:

+C5GRSDQRY; +C5GURSPQRY; +CURSPQRY; +CQRSD; +C5GQRSD; or +C5GRURSP.

12. The wireless communication apparatus according to claim 11, wherein the first response further comprises a precedence of the route selection descriptor.

13. The wireless communication apparatus according to claim 11 or 12, wherein after returning the first response and before sending the second request to the network device, the

communication processor is further configured to:

receive a third request sent by the application processor, wherein the third request is used to activate the session; and the third request comprises the at least one parameter in the route selection descriptor.

14. The wireless communication apparatus according to any one of claims 1 to 13, wherein the second request is a protocol data unit PDU session establishment request.

15. The wireless communication apparatus according to any one of claims 1 to 14, wherein the processing circuit is further configured to:

receive, through the interface circuit, at least one URSP rule that is delivered by the network device and that corresponds to the wireless communication apparatus, wherein a URSP rule in the at least one URSP rule comprises a traffic descriptor and at least one route selection descriptor; and

send a first message to the application processor, wherein the first message comprises a parameter in at least one traffic descriptor in the at least one URSP rule.

16. The wireless communication apparatus according to claim 15, wherein the first message comprises at least one of the following:

+C5GTDRPT; +CTDRPT; +CURSPRPT; or +C5GTD.

17. The wireless communication apparatus according to claim 15 or 16, further comprising the application processor, wherein the communication processor is coupled to the application processor, and the application processor is specifically configured to:

when it is determined that a traffic descriptor meeting a preset condition exists in the at least one received traffic descriptor, send the first AT command, wherein

the preset condition comprises: a parameter in the traffic descriptor matches the route information parameter.

18. A communication method, applicable to a wireless communication apparatus comprising a communication processor and an application processer, wherein the method comprises the following operations performed by the communication processor:

receiving a first AT command sent by the application processor, wherein the first AT command is used to query a route selection descriptor, and the first AT command comprises a first parameter; and

sending a first response to the application processor, the first response comprise at least one

of the parameters of at least one of route selection descriptor in a target user route selection policy URSP rule, the at least one of the route selection descriptor in the target URSP rule matches with the first parameter; and

sending a second request to a network device, wherein the second request is used to establish a session, and the second request comprises at least one parameter in the route selection descriptor;.

19. The method according to claim 18, wherein the first parameter is the same as a parameter comprised in a traffic descriptor in the URSP rule; and

the route selection descriptor is a route selection descriptor in the target URSP rule.

20. The method according to claim 18 or 19, wherein the first parameter comprises at least one of the following parameters:

a destination address parameter of the to-be-transmitted data;

a data network parameter corresponding to the to-be-transmitted data;

an application descriptor corresponding to the to-be-transmitted data; or

a connection capability parameter corresponding to the to-be-transmitted data.

21. The method according to any one of claims 18 to 20, wherein the traffic descriptor comprises at least one of the following parameters:

a destination address parameter;

a data network parameter;

an application descriptor; or

a connection capability parameter.

22. The method according to any one of claims 18 to 21, wherein a parameter in the route selection descriptor comprises

a parameter of a network slice;

a data network name DNN; or

a session type.

23. The method according to claim 22, wherein the parameter of the network comprises at least one of the following parameters:

a session type, a data network name DNN, an access type precedence, or a non-seamless offload indication.

24. The method according to any one of claims 18 to 23, wherein the first AT command is further used to activate the session.

25. The method according to claim 24, the first AT command comprises at least one of the following:

+C5GRSDQRY; +C5GURSPQRY; +CURSPQRY; +CQRSD; +C5GQRSD; or +C5GRURSP

26. The method according to claim 18, wherein the first response further comprises a preference of the route selection descriptor.

27. The method according to any one of claims 18 to 26, wherein before the receiving a first AT command sent by an application processor, the method further comprises:

receiving at least one URSP rule that is delivered by the network device and that corresponds to the method, wherein a URSP rule in the at least one URSP rule comprises a traffic descriptor and at least one route selection descriptor; and

sending a first message to the application processor, wherein the first message comprises a parameter in at least one traffic descriptor in the at least one URSP rule.

28. The method according to claim 27, wherein the wireless communication apparatus further comprises the application processor, and the method further comprises:

when the application processor determines that a traffic descriptor meeting a preset condition exists in the at least one received traffic descriptor, sending the first AT command, wherein

the preset condition comprises: a parameter in the traffic descriptor matches the route information parameter.

29. A communication apparatus, comprising:

a processor and a memory, wherein

the memory is configured to store program instructions; and

the processor is configured to execute the program instructions stored in the memory, to implement the method according to any one of claims 18 to 28.

30. A communication apparatus, comprising:

a processor and an interface circuit, wherein

the interface circuit is configured to access a memory, and the memory stores program instructions; and

the processor is configured to access the memory by using the interface circuit, and execute the program instructions stored in the memory, to implement the method according to any one of claims 18 to 28.

31. A communication system, comprising a wireless communication apparatus and a network

device, wherein

the wireless communication apparatus comprises a communication processor and an application processor, wherein the communication processor is configured to receive a first request from the application processor, the first request is used to query a route selection descriptor, and the first request comprises a route information parameter corresponding to to-be-transmitted data;

the wireless communication apparatus is configured to send a second request to the network device, wherein the second request is used to establish a session, and the second request comprises at least one parameter in the route selection descriptor; and the route selection descriptor matches the route information parameter; and

the network device is configured to receive the second request from the wireless communication apparatus.

32. The communication system according to claim 31, wherein the route information parameter is the same as a parameter comprised in a traffic descriptor in a target user route selection policy URSP rule; and

the route selection descriptor is a route selection descriptor in the target URSP rule.

33. The communication system according to claim 31 or 32, wherein the route information parameter comprises at least one of the following parameters:

a destination address parameter of the to-be-transmitted data;

a data network parameter corresponding to the to-be-transmitted data;

an application descriptor corresponding to the to-be-transmitted data; or

a connection capability parameter corresponding to the to-be-transmitted data.

34. The communication system according to claim 31 or 32, wherein the traffic descriptor comprises at least one of the following parameters:

a destination address parameter;

a data network parameter;

an application descriptor; or

a connection capability parameter.

35. The communication system according to claim 33 or 34, wherein the destination address parameter comprises at least one of the following parameters:

a domain descriptor corresponding to the to-be-transmitted data; an internet protocol IP descriptor corresponding to the to-be-transmitted data; or a non-IP descriptor corresponding to the

to-be-transmitted data.

36. The communication system according to any one of claims 31 to 35, wherein a parameter in the route selection descriptor comprises a parameter that the session needs to meet; and

the parameter that the session needs to meet comprises at least one of the following:

a parameter of a network required by the session;

a parameter of a network slice required by the session; or

a parameter of a session service required by the session.

37. The communication system according to claim 36, wherein the parameter of the network comprises at least one of the following parameters:

a session type, a data network name DNN, an access type precedence, or a non-seamless offload indication.

38. The communication system according to any one of claims 31 to 37, wherein the first request is further used to activate the session.

39. The communication system according to claim 38, wherein the first request comprises at least one of the following:

+CACTPDU; +CPSDIAL; +CPDUACT; +CPDUEST; or +CPDUCONN.

40. The communication system according to any one of claims 31 to 39, wherein the communication processor is further configured to:

after receiving the first request sent by the application processor and before sending the second request to the network device, return a first response to the application processor, wherein the first response comprises the at least one parameter in the route selection descriptor.

41. The communication system according to claim 40, wherein the first request comprises at least one of the following:

+C5GRSDQRY; +C5GURSPQRY; +CURSPQRY; +CQRSD; +C5GQRSD; or +C5GRURSP.

42. The communication system according to claim 41, wherein the first response further comprises a precedence of the route selection descriptor.

43. The communication system according to claim 41 or 42, wherein the communication processor is further configured to:

receive a third request from the application processor, wherein the third request is used to activate the session; and the third request comprises the at least one parameter in the route selection descriptor.

44. The communication system according to any one of claims 41 to 43, wherein the second request is a protocol data unit PDU session establishment request.

45. The communication system according to any one of claims 41 to 44, wherein

the network device is further configured to: send at least one URSP rule corresponding to the wireless communication apparatus to the wireless communication apparatus, wherein a URSP rule in the at least one URSP rule comprises a traffic descriptor and at least one route selection descriptor; and send a first message to the application processor, wherein the first message comprises a parameter in at least one traffic descriptor in the at least one URSP rule; and

the wireless communication apparatus is further configured to receive the at least one URSP rule.

46. The communication system according to claim 45, wherein the first message comprises at least one of the following:

+C5GTDRPT; +CTDRPT; +CURSPRPT; or +C5GTD.

47. The communication system according to claim 45 or 46, wherein the application processor is specifically configured to:

when it is determined that a traffic descriptor meeting a preset condition exists in the at least one received traffic descriptor, send the first request, wherein

the preset condition comprises: a parameter in the traffic descriptor matches the route information parameter.

48. A communication method, applicable to a communication system comprising a wireless communication apparatus and a network device, wherein the communication apparatus comprises a communication processor and an application processor, and the method comprises:

receiving, by the communication processor, a first request sent by the application processor, wherein the first request is used to query a route selection descriptor, and the first request comprises a route information parameter correspond to to-be-transmitted data; and

sending, by the wireless communication apparatus, a second request to the network device, wherein the second request is used to establish a session, and the second request comprises at least one parameter in the route selection descriptor; and the route selection descriptor matches the route information parameter.

49. The method according to claim 48, wherein the route information parameter is the same as a parameter comprised in a traffic descriptor in a target user route selection policy rule URSP

rule; and

the route selection descriptor is a route selection descriptor in the target URSP rule.

50. The method according to claim 48 or 49, wherein the route information parameter comprises at least one of the following parameters:

a destination address parameter of the to-be-transmitted data;

a data network parameter corresponding to the to-be-transmitted data;

an application descriptor corresponding to the to-be-transmitted data; or

a connection capability parameter corresponding to the to-be-transmitted data.

51. The method according to any one of claims 48 to 50, wherein the traffic descriptor comprises at least one of the following parameters:

a destination address parameter;

a data network parameter;

an application descriptor; or

a connection capability parameter.

52. The method according to any one of claims 48 to 51, wherein a parameter in the route selection descriptor comprises a parameter that the session needs to meet; and

the parameter that the session needs to meet comprises at least one of the following:

a parameter of a network required by the session;

a parameter of a network slice required by the session; or

a parameter of a session service required by the session.

53. The method according to claim 52, wherein the parameter of the network comprises at least one of the following parameters:

a session type, a data network name DNN, an access type precedence, or a non-seamless offload indication.

54. The method according to any one of claims 48 to 53, wherein the first request is further used to activate the session.

55. The method according to any one of claims 48 to 53, wherein after the receiving, by the communication processor, a first request sent by the application processor and before the sending, by the wireless communication apparatus, a second request to the network device, the method further comprises:

returning, by the communication processor, a first response to the application processor,

wherein

the first response comprises the at least one parameter in the route selection descriptor; or

the first response comprises the at least one parameter in the route selection descriptor and a precedence of the route selection descriptor.

56. The method according to claim 55, wherein after the returning, by the communication processor, a first response and before the sending, by the wireless communication apparatus, a second request to the network device, the method further comprises:

receiving, by the communication processor, a third request sent by the application processor, wherein the third request is used to activate the session, and the third request comprises the at least one parameter in the route selection descriptor.

57. The method according to any one of claims 48 to 56, wherein before the receiving, by the communication processor, a first request sent by the application processor, the method further comprises:

receiving, by the wireless communication apparatus, at least one URSP rule that is delivered by the network device and that corresponds to the method, wherein a URSP rule in the at least one URSP rule comprises a traffic descriptor and at least one route selection descriptor; and

sending, by the wireless communication apparatus, a first message to the application processor, wherein the first message comprises a parameter in at least one traffic descriptor in the at least one URSP rule.

58. The method according to claim 57, wherein the method further comprises:

when the application processor determines that a traffic descriptor meeting a preset condition exists in the at least one received traffic descriptor, sending the first request, wherein

the preset condition comprises: a parameter in the traffic descriptor matches the route information parameter.

59. A computer-readable storage medium, wherein the computer-readable storage medium stores program code, and when the program code is executed by a computer, the method according to any one of claims 18 to 28 is implemented.

60. A chip system, comprising a communication interface and a processor, wherein the communication interface is configured to input and/or output information, and when the processor runs, the method according to any one of claims 18 to 28 is performed.

61. A computer program product, wherein when program code comprised in the computer

program product is executed by a computer, the method according to any one of claims 18 to 28 is implemented.