CLAIMS

1. A communication method, comprising:

determining, by a transmit end, a quality of service flow (QoS) flow of a first vehicle to everything (V2X) service based on a frequency band of the first V2X service and a QoS requirement of the first V2X service;

determining, by the transmit end, a QoS flow of a second V2X service based on a frequency band of the second V2X service and a QoS requirement of the second V2X service, wherein if the frequency band of the first V2X service is different from the frequency band of the second V2X service, the QoS flow of the first V2X service is different from the QoS flow of the second V2X service; and

sending, by the transmit end, data of the first V2X service to a receive end by using the QoS flow of the first V2X service.

2. The method according to claim 1, wherein the QoS requirement of the first V2X service comprises a delay requirement of the first V2X service and a rate requirement of the first V2X service.

3. The method according to claim 1 or 2, wherein:

the frequency band of the first V2X service is different from the frequency band of the second V2X service, and the QoS flow of the first V2X service is different from the QoS flow of the second V2X service; and the method further comprises:

sending, by the transmit end, data of the second V2X service to the receive end by using the QoS flow of the second V2X service.

4. The method according to any one of claims 1 to 3, wherein the method further comprises:

sending, by the transmit end, a fourth correspondence to an access stratum of the transmit end by using a V2X layer of the transmit end, wherein the fourth correspondence is a correspondence between an identifier of a QoS flow of a V2X service and a frequency band of the V2X service; and

storing, by the transmit end, the fourth correspondence at the access stratum.

5. The method according to claim 4, wherein the method further comprises:

filtering, by the V2X layer of the transmit end, data of the first V2X service to the QoS flow of the first V2X service, and delivering the data of the QoS flow of the first V2X service and an identifier of the QoS flow of the first V2X service to the access stratum of the transmit end; and

determining, by the access stratum of the transmit end based on the identifier of the QoS flow of the first V2X service and the fourth correspondence, to send the data in the QoS flow of the first V2X service to the receive end on the frequency band of the first V2X service.

6. The method according to any one of claims 1 to 5, wherein the determining, by a transmit end, a QoS flow of a first V2X service based on a frequency band of the first V2X service and a QoS requirement of the first V2X service comprises:

if a QoS flow corresponding to the frequency band of the first V2X service and the QoS requirement of the first V2X service exists between the transmit end and the receive end, determining, by the transmit end, the QoS flow corresponding to the frequency band of the first V2X service and the QoS requirement of the first V2X service as the QoS flow of the first V2X service; or

if no QoS flow corresponding to the frequency band of the first V2X service and the QoS requirement of the first V2X service exists between the transmit end and the receive end, establishing, by the transmit end, the QoS flow of the first V2X service for the first V2X service.

7. The method according to any one of claims 1 to 6, wherein the method further comprises:

determining, by the transmit end, the frequency band of the first V2X service based on an identifier of the first V2X service and a third correspondence, wherein the third correspondence is a correspondence between an identifier of a V2X service and a frequency band of the V2X service.

8. The method according to claim 7, wherein the method further comprises:

receiving, by the transmit end, the third correspondence from a policy control network element.

9. The method according to claim 7 or 8, wherein the identifier of the first V2X service is a provider service identifier (PSID) or an intelligent transport system-application identifier (ITS-AID).

10. A communications apparatus, wherein the communications apparatus comprises at least one processor, and the at least one processor is configured to perform the communication method according to any one of claims 1 to 9.

11. A computer-readable storage medium, wherein the computer-readable storage medium storages computer instructions, and when the computer instructions are run on a computer, the computer is enabled to perform the communication method according to any one of claims 1 to 9.

12. A communications system, comprising a transmit end and a receive end, wherein

the transmit end is configured to: determine a quality of service flow (QoS) flow of a first vehicle to everything (V2X) service based on a frequency band of the first V2X service and a QoS requirement of the first V2X service; determine a QoS flow of a second V2X service based on a frequency band of the second V2X service and a QoS requirement of the second V2X service, wherein if the frequency band of the first V2X service is different from the frequency band of the second V2X service, the QoS flow of the first V2X service is different from the QoS flow of the second V2X service; and send data of the first V2X service to the receive end by using the QoS flow of the first V2X service; and

the receive end is configured to: receive the data of the first V2X service.

13. The system according to claim 12, wherein the frequency band of the first V2X service is different from the frequency band of the second V2X service, and the QoS flow of the first V2X service is different from the QoS flow of the second V2X service; and

the transmit end is further configured to: send data of the second V2X service to the receive end by using the QoS flow of the second V2X service, and

the receive end is further configured to: receive the data of the second V2X service.

14. The system according to claim 12 or 13, wherein the transmit end is further configured to:

if a QoS flow corresponding to the frequency band of the first V2X service and the QoS requirement of the first V2X service exists between the transmit end and the receive end, determine the QoS flow corresponding to the frequency band of the first V2X service and the QoS requirement of the first V2X service as the QoS flow of the first V2X service; or

if no QoS flow corresponding to the frequency band of the first V2X service and the QoS requirement of the first V2X service exists between the transmit end and the receive end, establish the QoS flow of the first V2X service for the first V2X service.

15. The system according to any one of claims 12 to 14, wherein the transmit end is further configured to:

determine the frequency band of the first V2X service based on an identifier of the first V2X service and a third correspondence, wherein the third correspondence is a correspondence between an identifier and a frequency band of a V2X service.

16. A communication method, comprising:

determining, by a transmit end, a quality of service flow (QoS) flow of a first vehicle to everything (V2X) service

based on a frequency band of the first V2X service and a QoS requirement of the first V2X service;

determining, by the transmit end, a QoS flow of a second V2X service based on a frequency band of the second V2X service and a QoS requirement of the second V2X service, wherein if the frequency band of the first V2X service is different from the frequency band of the second V2X service, the QoS flow of the first V2X service is different from the QoS flow of the second V2X service;

sending, by the transmit end, data of the first V2X service to a receive end by using the QoS flow of the first V2X service; and

receiving, by the receive end, the data of the first V2X service.

17. The method according to claim 16, wherein the QoS requirement of the first V2X service comprises a delay requirement of the first V2X service and a rate requirement of the first V2X service.

18. The method according to claim 16 or 17, wherein

the frequency band of the first V2X service is different from the frequency band of the second V2X service, and the QoS flow of the first V2X service is different from the QoS flow of the second V2X service; and the method further comprises:

sending, by the transmit end, data of the second V2X service to the receive end by using the QoS flow of the second V2X service.

19. The method according to any one of claims 16 to 18, wherein the method further comprises:

sending, by the transmit end, a fourth correspondence to an access stratum of the transmit end by using a V2X layer of the transmit end, wherein the fourth correspondence is a correspondence between an identifier of a QoS flow of a V2X service and a frequency band of the V2X service; and

storing, by the transmit end, the fourth correspondence at the access stratum.

20. The method according to any one of claims 16 to 19, wherein the determining, by a transmit end, a QoS flow of a first V2X service based on a frequency band of the first V2X service and a QoS requirement of the first V2X service comprises:

if a QoS flow corresponding to the frequency band of the first V2X service and the QoS requirement of the first V2X service exists between the transmit end and the receive end, determining, by the transmit end, the QoS flow corresponding to the frequency band of the first V2X service and the QoS requirement of the first V2X service as the QoS flow of the first V2X service; or

if no QoS flow corresponding to the frequency band of the first V2X service and the QoS requirement of the first V2X service exists between the transmit end and the receive end, establishing, by the transmit end, the QoS flow of the first V2X service for the first V2X service.