[0010]

Thus, embodiments of the present disclosure provide a mechanism capable of sharing frequency resources and network resources while balancing each other.

SOLUTIONS TO PROBLEMS

[0011]

According to a first aspect of the present disclosure, there is provided a device including: a determination unit that determines one of a use setting of a frequency resource by a wireless communication device, and a use setting of a core network resource by a logical network deployed on a physical network to which the wireless communication device connects, for providing a wireless communication service by the wireless communication device; and a request unit that requests another device to determine a use setting of either the frequency resource or the core network resource that is not determined on a basis of a determination result of the use setting of the frequency resource or the core network resource by the determination unit, wherein when the determination unit determines the use setting of the core network resource, the request unit transmits information indicating the use setting of the core network resource determined, the use setting of the frequency resource recommended, and the wireless communication device in association with each other to the another device.

[0012]

According to a second aspect of the present disclosure, there is provided a device including: an acquisition unit that acquires information indicating a determination result of one of a use setting of a frequency resource by a wireless communication device, and a use setting of a core network resource by a logical network deployed on a physical network to which the wireless communication device connects, for providing a wireless communication service by the wireless communication device; and a determination unit that determines a use setting of either the frequency resource or the core

network resource that is not determined on a basis of information acquired by the acquisition unit.

[0013]

According to a third aspect of the present disclosure, there is provided a method including: determining, by a processor, one of a use setting of a frequency resource by a wireless communication device, and a use setting of a core network resource by a logical network deployed on a physical network to which the wireless communication device connects, for providing a wireless communication service by the wireless communication device; and requesting another device to determine a use setting of either the frequency resource or the core network resource that is not determined on a basis of a determination result of the use setting of the frequency resource or the core network resource by the determining step, the request step transmitting information indicating the use setting of the core network resource determined, the use setting of the frequency resource recommended, and the wireless communication device in association with each other to the another device when the determining step determines the use setting of the core network resource.

[0014]

According to a fourth aspect of the present disclosure, there is provided a method including: acquiring information indicating a determination result of one of a use setting of a frequency resource by a wireless communication device, and a use setting of a core network resource by a logical network deployed on a physical network to which the wireless communication device connects for providing a wireless communication service by the wireless communication device; and determining, by a processor, a use setting of either the frequency resource or the core network resource that is not determined on a basis of information acquired.

[0015]

According to a fifth aspect of the present disclosure,

there is provided a recording medium in which a program is recorded, the program causing a computer to function as: a determination unit that determines one of a use setting of a frequency resource by a wireless communication device, and a use setting of a core network resource by a logical network deployed on a physical network to which the wireless communication device connects, for providing a wireless communication service by the wireless communication device; anda request unit that requests another device to determine a use setting of either the frequency resource or the core network resource that is not determined on a basis of a determination result of the use setting of the frequency resource or the core network resource by the determination unit, the request unit transmitting information indicating the use setting of the core network resource determined, the use setting of the frequency resource recommended, and the wireless communication device in association with each other to the another device when the determination unit determines the use setting of the core network resource.

[0016]

According to a sixth aspect of the present disclosure, there is provided a recording medium in which a program is recorded, the program causing a computer to function as: an acquisition unit that acquires information indicating a determination result of one of a use setting of a frequency resource by a wireless communication device, and a use setting of a core network resource by a logical network deployed on a physical network to which the wireless communication device connects for providing a wireless communication service by the wireless communication device; and a determination unit that determines a use setting of either the frequency resource or the core network resource that is not determined on a basis of information acquired by the acquisition unit.

[0017]

According to embodiments of the present disclosure, one of the use setting of the frequency resource and the use

setting of the network resource for providing the wireless communication service by the wireless communication device is first determined. Then, the use setting of the another resource is determined on the basis of determination result of the one resource. As a result, the use settings of the frequency resource or the network resource are determined on the basis of the determination result of the use setting each other. In this way, it is possible to determine the use settings of the frequency resource and network resource balanced with each other.

EFFECTS OF THE INVENTION

[0018]

As described above, according to embodiments of the present disclosure, provided is a mechanism capable of sharing frequency resources and network resources while balancing each other. Note that the effect described above is not necessarily limitative, and any of the effects shown in the present specification or other effects that can be understood from the present specification may be exhibited together with the effect described above, or instead of the effect described above.

BRIEF DESCRIPTION OF DRAWINGS

[0019]

Fig. 1 is a diagram showing an example of a system architecture according to an embodiment of the present disclosure.

Fig. 2 is a diagram showing an example of a system architecture according to the same embodiment.

Fig. 3 is a diagram for explaining balance between frequency resources and core network resources.

Fig. 4 is a block diagram showing an example of a configuration of a frequency resource manager according to the same embodiment.

Fig. 5 is a block diagram showing an example of a configuration of a core network resource manager

CLAIMS

1. A device comprising:

a determination unit that determines one of a use setting of a frequency resource by a wireless communication device, and a use setting of a core network resource by a logical network deployed on a physical network to which the wireless communication device connects, for providing a wireless communication service by the wireless communication device; and

a request unit that requests another device to determine a use setting of either the frequency resource or the core network resource that is not determined on a basis of a determination result of the use setting of the frequency resource or the core network resource by the determination unit,

wherein when the determination unit determines the use setting of the core network resource, the request unit transmits information indicating the use setting of the core network resource determined, the use setting of the frequency resource recommended, and the wireless communication device in association with each other to the another device.

2. The device according to claim 1,

wherein the determination unit determines the use setting of the frequency resource, and

the request unit transmits information indicating the use setting of the frequency resource determined to the another device.

3. The device according to claim 2, wherein the request unit transmits the information indicating the use setting of the

frequency resource determined and information indicating the wireless communication service provided in association with each other to the another device.

4. The device according to claim 2, wherein the determination unit acquires information indicating the frequency resource that can be used by the wireless communication device from a frequency monitor database.

5. The device according to claim 1,

wherein the determination unit determines, in a case where a predetermined condition is satisfied, a change of one of the use setting of the frequency resource and the use setting of the core network resource, and

the request unit requests the another device to determine the change of the use setting of the resource that is not determined.

6. A device comprising:

an acquisition unit that acquires information indicating a determination result of one of a use setting of a frequency resource by a wireless communication device, and a use setting of a core network resource by a logical network deployed on a physical network to which the wireless communication device connects, for providing a wireless communication service by the wireless communication device; and

a determination unit that determines a use setting of either the frequency resource or the core network resource that is not determined on a basis of information acquired by the acquisition unit.

7. The device according to claim 6, wherein the determination unit determines an amount of resources that can be used for providing a wireless communication service by the wireless communication device.

8. The device according to claim 6, wherein the determination unit determines on a basis of an estimated value of a number of terminals that can be accommodated by the wireless communication device or the logical network.

9. The device according to claim 6, wherein the logical network is associated with each frequency used by the wireless communication device.

10. The device according to claim 6, wherein a plurality of frequencies used by the wireless communication device is associated with one of the logical networks.

11. The device according to claim 6, wherein a plurality of the wireless communication devices is associated with one of the logical networks.

12. The device according to claim 6, wherein the determination unit generates information in which the wireless communication device, the use setting of the frequency resource determined, and the use setting of the core network resource determined are associated.

13. A method comprising:

determining, by a processor, one of a use setting of a frequency resource by a wireless communication device, and a use setting of a core network resource by a logical network

deployed on a physical network to which the wireless communication device connects, for providing a wireless communication service by the wireless communication device; and

requesting another device to determine a use setting of either the frequency resource or the core network resource that is not determined on a basis of a determination result of the use setting of the frequency resource or the core network resource by the determining step, the request step transmitting information indicating the use setting of the core network resource determined, the use setting of the frequency resource recommended, and the wireless communication device in association with each other to the another device when the determining step determines the use setting of the core network resource.

14. A method comprising:

acquiring information indicating a determination result of one of a use setting of a frequency resource by a wireless communication device, and a use setting of a core network resource by a logical network deployed on a physical network to which the wireless communication device connects for providing a wireless communication service by the wireless communication device; and

determining, by a processor, a use setting of either the frequency resource or the core network resource that is not determined on a basis of information acquired.

15. A recording medium in which a program is recorded, the program causing a computer to function as:

a determination unit that determines one of a use setting of a frequency resource by a wireless communication device,

and a use setting of a core network resource by a logical network deployed on a physical network to which the wireless communication device connects, for providing a wireless communication service by the wireless communication device; and

a request unit that requests another device to determine a use setting of either the frequency resource or the core network resource that is not determined on a basis of a determination result of the use setting of the frequency resource or the core network resource by the determination unit, the request unit transmitting information indicating the use setting of the core network resource determined, the use setting of the frequency resource recommended, and the wireless communication device in association with each other to the another device when the determination unit determines the use setting of the core network resource.

16. A recording medium in which a program is recorded, the program causing a computer to function as:

an acquisition unit that acquires information indicating a determination result of one of a use setting of a frequency resource by a wireless communication device, and a use setting of a core network resource by a logical network deployed on a physical network to which the wireless communication device connects for providing a wireless communication service by the wireless communication device; and

a determination unit that determines a use setting of either the frequency resource or the core network resource that is not determined on a basis of information acquired by the acquisition unit.