According to a first aspect of the present disclosure, there is provided a communication control device including: a height difference calculation unit configured to calculate a difference between an altitude of a reference point for calculating interference power including information regarding a height in a first wireless system and an altitude of one wireless communication device in a second wireless system including a plurality of wireless communication devices sharing a frequency allocated to the first wireless system; and a power calculation unit configured to decide maximum allowable transmission power of the second wireless system so that an aggregate interference level due to communication of an interference source that can occur at the reference point satisfies an allowable interference level of the first wireless system, using one or more of the wireless communication devices for which the difference is less than a predetermined value as the interference source, wherein the second wireless system includes a master wireless communication device and a slave wireless communication device connected to the master wireless communication device, and wherein the height difference calculation unit calculates a difference between the altitude of the reference point and an altitude of the master wireless communication device.

[0008a]

According to a second aspect of the present disclosure, there is provided a communication control device including: a height difference calculation unit configured to calculate a difference between an altitude of a reference point for calculating interference power including information regarding a height in a first wireless system and an altitude of one wireless communication device in a second wireless system including a plurality of wireless communication devices sharing a frequency allocated to the first wireless system; and a power calculation unit configured to decide maximum allowable transmission power of the second wireless system so that an aggregate interference level due to communication of an interference source that can occur at the reference point satisfies an allowable interference level of the first wireless system, using one or more of the wireless communication devices for which the difference is less than a predetermined value as the interference source, wherein the height difference calculation unit calculates a difference between a first altitude and a second altitude of a first geographic region and a second geographic region, respectively, in which one of the wireless communication devices is located, the power calculation unit sets the wireless communication device for which the difference is less than a predetermined value as an interference source, and the power calculation unit further determines whether to set the wireless communication device for which the difference is less than a predetermined value as the interference source, using information regarding an altitude of a geographic region between the first geographic region and the second geographic region.

[0009]

According to a third aspect of the present disclosure, there is provided a communication control method including: calculating a difference between an altitude of a reference point for calculating interference power including information regarding a height in a first wireless system and an altitude of one wireless communication device in a second wireless system including a plurality of wireless communication devices sharing a frequency allocated to the first wireless system; and deciding maximum allowable transmission power of the second wireless system so that an aggregate interference level due to communication of an interference source that can occur at the reference point satisfies an allowable interference level of the first wireless system, using one or more of the wireless communication devices

for which the difference is less than a predetermined value as the interference source, wherein the second wireless system includes a master wireless communication device and a slave wireless communication device connected to the master wireless communication device, and wherein the height difference calculation step calculates a difference between the altitude of the reference point and an altitude of the master wireless communication device.

[0010]

According to a fourth aspect of the present disclosure, there is provided a computer program causing a computer to perform: calculating a difference between an altitude of a reference point for calculating interference power including information regarding a height in a first wireless system and an altitude of one wireless communication device in a second wireless system including a plurality of wireless communication devices sharing a frequency allocated to the first wireless system; and deciding maximum allowable transmission power of the second wireless system so that an aggregate interference level due to communication of an interference source that can occur at the reference point satisfies an allowable interference level of the first wireless system, using one or more of the wireless communication devices for which the difference is less than a predetermined value as the interference source, wherein the second wireless system includes a master wireless communication device and a slave wireless communication device connected to the master wireless communication device, and wherein the height difference calculation step calculates a difference between the altitude of the reference point and an altitude of the master wireless communication device.

Advantageous Effects of Invention

[0011]

According to embodiments of the present disclosure, as described above, it is possible to provide a novel and improved communication control device, communication control method, and computer program capable of calculating maximum allowable transmission power appropriately and with a small calculation load.

[0012]

Note that the effects described above are not necessarily limitative. With or in the place of the above effects, there may be achieved any one of the effects described in this specification or other effects that may be grasped from this specification.

Brief Description of Drawings

[0013]

[FIG. 1] FIG. 1 is an explanatory diagram illustrating a logical architecture assumed according to an embodiment of the present disclosure.

[FIG. 2] FIG. 2 is an explanatory diagram illustrating a mounting example based on the logical architecture illustrated in FIG. 1.

[FIG. 3] FIG. 3 is an explanatory diagram illustrating a mounting example based on the logical architecture illustrated in FIG. 1.

[FIG. 4] FIG. 4 is an explanatory diagram illustrating a mounting example based on the logical architecture illustrated in FIG. 1.

[FIG. 5] FIG. 5 is an explanatory diagram illustrating a mounting example based on

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A communication control device comprising:

a height difference calculation unit configured to calculate a difference between an altitude of a reference point for calculating interference power including information regarding a height in a first wireless system and an altitude of one wireless communication device in a second wireless system including a plurality of wireless communication devices sharing a frequency allocated to the first wireless system; and

a power calculation unit configured to decide maximum allowable transmission power of the second wireless system so that an aggregate interference level due to communication of an interference source that can occur at the reference point satisfies an allowable interference level of the first wireless system, using one or more of the wireless communication devices for which the difference is less than a predetermined value as the interference source,

wherein the second wireless system includes a master wireless communication device and a slave wireless communication device connected to the master wireless communication device, and

wherein the height difference calculation unit calculates a difference between the altitude of the reference point and an altitude of the master wireless communication device.

2. The communication control device according to claim 1, wherein the power calculation unit sets the master wireless communication device and the slave wireless communication device as interference sources in a case in which the difference is less than a predetermined value.

3. A communication control device comprising:

a height difference calculation unit configured to calculate a difference between an altitude of a reference point for calculating interference power including information regarding a height in a first wireless system and an altitude of one wireless communication device in a second wireless system including a plurality of wireless communication devices sharing a frequency allocated to the first wireless system; and

a power calculation unit configured to decide maximum allowable transmission power of the second wireless system so that an aggregate interference level due to communication of an interference source that can occur at the reference point satisfies an

allowable interference level of the first wireless system, using one or more of the wireless communication devices for which the difference is less than a predetermined value as the interference source,

wherein the height difference calculation unit calculates a difference between a first altitude and a second altitude of a first geographic region and a second geographic region, respectively, in which one of the wireless communication devices is located,

the power calculation unit sets the wireless communication device for which the difference is less than a predetermined value as an interference source, and

the power calculation unit further determines whether to set the wireless communication device for which the difference is less than a predetermined value as the interference source, using information regarding an altitude of a geographic region between the first geographic region and the second geographic region.

4. The communication control device according to claim 3, wherein the power calculation unit further determines whether to set the wireless communication device for which the difference is less than a predetermined value as the interference source, using information regarding a distance between the reference point and one of the wireless communication devices.

5. A communication control method comprising:

calculating a difference between an altitude of a reference point for calculating interference power including information regarding a height in a first wireless system and an altitude of one wireless communication device in a second wireless system including a plurality of wireless communication devices sharing a frequency allocated to the first wireless system; and

deciding maximum allowable transmission power of the second wireless system so that an aggregate interference level due to communication of an interference source that can occur at the reference point satisfies an allowable interference level of the first wireless system, using one or more of the wireless communication devices for which the difference is less than a predetermined value as the interference source,

wherein the second wireless system includes a master wireless communication device and a slave wireless communication device connected to the master wireless communication device, and

wherein the height difference calculation step calculates a difference between the altitude of the reference point and an altitude of the master wireless communication device.

6. A computer program causing a computer to perform:

calculating a difference between an altitude of a reference point for calculating interference power including information regarding a height in a first wireless system and an altitude of one wireless communication device in a second wireless system including a plurality of wireless communication devices sharing a frequency allocated to the first wireless system; and

deciding maximum allowable transmission power of the second wireless system so that an aggregate interference level due to communication of an interference source that can occur at the reference point satisfies an allowable interference level of the first wireless system, using one or more of the wireless communication devices for which the difference is less than a predetermined value as the interference source,

wherein the second wireless system includes a master wireless communication device and a slave wireless communication device connected to the master wireless communication device, and

wherein the height difference calculation step calculates a difference between the altitude of the reference point and an altitude of the master wireless communication device.