[CLAIMS]

[Claim 1]

A communication control device comprising:

a communication unit configured to wirelessly communicate with a first device and upload information acquired from the first device to a second device via a network, wherein the communication unit is connected to the first device and a communication network and is configured to communicate with a second communication control device connected to the second device and the communication network;

a jamming control unit configured to allow jamming radio waves to be output to interfere with wireless communication between the first device and a device other than the communication control device, the device being configured to perform wireless communication in a communication band used by the first device;

a first authentication unit included in a card-type recording medium capable of being attached to or detached from the communication control device; and

a first control unit configured to:

request the first authentication unit to perform at least one of a mutual authentication process of performing mutual authentication using a secret key and a client certificate issued by a private certificate authority in communication with the second communication control device and an encryption/decryption process of encrypting information to be transmitted to the second device by the first device using a common key determined by the mutual authentication process and decrypting information transmitted to the first device by the second device,

transmit the encrypted information to the second communication control device, and

transmit the decrypted information to the first device.

[Claim 2]

The communication control device according to claim 1, wherein the jamming control unit is configured to allow the jamming radio waves to be output in all frequency bands of an available communication band of the first device at a radio wave intensity

with which the communication control device can communicate with the first device.

[Claim 3]

The communication control device according to claim 1 or 2, wherein the jamming control unit is configured to allow the jamming radio waves to be output in a band other than a communication band used by the communication control device among available communication bands of the first device.

[Claim 4]

The communication control device according to any one of claims 1 to 3, wherein the jamming control unit is configured to allow the jamming radio waves to be output in an available communication band of the first device at timing except for a period during which the first device communicates with the communication control device.

[Claim 5]

The communication control device according to any one of claims 1 to 4, wherein the jamming control unit is configured to instruct the first device to set a first communication band used by the first device among available communication bands of the first device as an available communication band of the first device and instruct the communication unit to communicate with the first device in the first communication band.

[Claim 6]

The communication control device according to claim 5, wherein the jamming control unit is configured to instruct the first device to change an available communication band of the first device to a second communication band and instruct the communication unit to communicate with the first device in the second communication band.

[Claim 7]

The communication control device according to any one of claims 1 to 6,

wherein the communication unit is configured to receive function information about a communication function of the first device from the first device, and

wherein the jamming control unit is configured to determine at least one of a frequency band of the jamming radio waves and an output period of the jamming radio waves on the basis of the function information.

[Claim 8]

A communication control device comprising:

a communication unit configured to wirelessly communicate with a first device and upload information acquired from the first device to a second device via a network, wherein the communication unit is connected to the first device and a communication network and is configured to communicate with a second communication control device connected to the second device and the communication network;

a jamming control unit configured to interfere with wireless communication between the first device and a device other than the communication control device, the device being configured to perform wireless communication in a communication band used by the first device, according to at least one of an operation of outputting jamming radio waves and an operation of restricting wireless communication between the first device and the device other than the communication control device;

a first authentication unit included in a card-type recording medium capable of being attached to or detached from the communication control device; and

a first control unit configured to:

request the first authentication unit to perform at least one of a mutual authentication process of performing mutual authentication using a secret key and a client certificate issued by a private certificate authority in communication with the second communication control device and an encryption/decryption process of encrypting information to be transmitted to the second device by the first device using a common key determined by the mutual authentication process and decrypting information transmitted to the first device by the second device,

transmit the encrypted information to the second communication control device, and

transmit the decrypted information to the first device.

[Claim 9]

A communication control system comprising a first communication control device and at least one jamming radio wave output device, the first communication control device being connected to a first device and a communication network,

wherein the first communication control device comprises:

a communication unit connected to the first device and the communication network and configured to communicate with a second communication control device connected to a second device and the communication network, wherein the communication unit is configured to wirelessly communicate with the first device and upload information acquired from the first device to the second device via a network;

a jamming control unit configured to allow the jamming radio wave output device to output jamming radio waves to interfere with wireless communication between the first device and a device other than the first communication control device, the device being configured to perform wireless communication in a communication band used by the first device;

a first authentication unit included in a card-type recording medium capable of being attached to or detached from the first communication control device; and

a first control unit configured to:

request the first authentication unit to perform at least one of a mutual authentication process of performing mutual authentication using a secret key and a first certificate issued by a private certificate authority in communication with the second communication control device and an encryption/decryption process of encrypting information to be transmitted to the second device by the first device using a common key determined by the mutual authentication process and decrypting information transmitted to the first device by the second device;

transmit the encrypted information to the second communication control device; and

transmit the decrypted information to the first device.

[Claim 10]

The communication control system according to claim 9, further comprising the second communication control device connected to the second device and the communication network,

wherein the second communication control device comprises:

a second authentication unit; and

a second control unit configured to:

request the second authentication unit to perform at least one of a mutual authentication process of performing mutual authentication using the secret key and a second certificate issued by the private certificate authority in communication with the first communication control device and an encryption/decryption process of encrypting information to be transmitted to the first device by the second device using a common key determined by the mutual authentication process and decrypting information transmitted to the second device by the first device;

transmit the encrypted information to the first communication control device; and

transmit the decrypted information to the second device.