DESCRIPTION

AUTHENTICATION SYSTEM, COMPUTER PROGRAM, ELECTRIC DEVICE, AND MOBILE TERMINAL

TECHNICAL FIELD

[0001] The present disclosure relates to an authentication system, a computer program, an electric device, and a mobile terminal.

BACKGROUND ART

[0002] There has been proposed a ceiling fan that is attached to a ceiling of a room and circulates indoor air, and includes a lighting device (see, for example, PTL 1).

[0003] In addition, in recent years, a ceiling fan that can be remotely controlled from a mobile terminal by being registered in a dedicated application of the mobile terminal has been provided.

Citation List

Patent Literature

[0004] PTL 1: Unexamined Japanese Patent Publication No. 2006-109580

SUMMARY

[0005] An electric device released as a model for a certain first country may be sold as a model for a second country different from the first country with a different product number. In this case, due to a difference in distribution costs, a difference occurs between selling price in the first country and selling price in the second country. In recent years, there has been a problem (so-called “in-flow problem”) that an unauthorized dealer imports the model for the first country to the second country and inexpensively sells the model. Thus, the sales of the model for the second country imported to the second country through a proper route are greatly affected.

[0006] The present disclosure is to provide a deterrent against selling an electric device in a place other than an original destination of the electric device by restricting control of the electric device by a mobile terminal in the place other than the original destination.

[0007] In one aspect, the present disclosure refers to an authentication system that

includes an electric device and a mobile terminal. The system includes a storage that stores a device identification (ID) of the electric device, an authentication unit that determines whether or not a destination of the electric device identified by the device ID is consistent with a user belonging place that is a region to which a user of the mobile terminal belongs, and a function restriction unit that differentiates control from the mobile terminal on a function provided by the electric device between a case where the destination of the electric device is not consistent with the user belonging place and a case where the destination of the electric device is consistent with the user belonging place.

[0008] Another aspect of the present disclosure is a computer program. This computer program causes a computer to execute acquiring a device identification (ID) of an electric device, acquiring information on a user belonging place that is a region to which a user of a mobile terminal belongs, determining whether or not a destination of the electric device identified by the device ID is consistent with the user belonging place, and differentiating control from the mobile terminal on a function provided by the electric device between a case where the destination of the electric device is not consistent with the user belonging place and a case where the destination of the electric device is consistent with the user belonging place.

[0009] Yet another aspect of the present disclosure is an electric device. This electric device provides a predetermined function based on a command transmitted in connection with an authentication system that includes the electric device and a mobile terminal. The authentication system includes a storage that stores a device identification (ID) of the electric device, an authentication unit that determines whether or not a destination of the electric device identified by the device ID is consistent with a user belonging place that is a region to which a user of the mobile terminal belongs, and a function restriction unit that differentiates control from the mobile terminal on a function provided by the electric device between a case where the destination of the electric device is not consistent with the user belonging place and a case where the destination of the electric device is consistent with the user belonging place.

[0010] Yet another aspect of the present disclosure is a mobile terminal. This mobile terminal is a mobile terminal that enables control of an electric device. The terminal includes a communicator that receives a device identification (ID) from the electric device, transmits the received device ID and user information to an outside, and receives an authentication result, and a display that differentiates contents to be displayed in

accordance with the authentication result received by the communicator.

[0011] Yet another aspect of the present disclosure is a computer program. The computer program causes a computer to execute receiving a device identification (ID) from an electric device, transmitting the received device ID and user information, receiving an authentication result, and differentiating contents to be displayed in accordance with the received authentication result.

[0012] According to the present disclosure, it is possible to provide a deterrent against selling an electric device in a place other than an original destination.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] Fig. 1 is a diagram illustrating a configuration of an authentication system according to an exemplary embodiment.

Fig. 2 is a diagram illustrating a configuration of a ceiling fan according to the exemplary embodiment.

Fig. 3 is a diagram illustrating an example of an App screen according to the exemplary embodiment.

Fig. 4 is a diagram illustrating an example of the App screen according to the exemplary embodiment.

Fig. 5 is a diagram illustrating an example of the App screen according to the exemplary embodiment.

Fig. 6 is a diagram illustrating a function comparison according to the exemplary embodiment.

Fig. 7 is a block diagram illustrating a functional block of each device of the authentication system according to the exemplary embodiment.

Fig. 8 is a sequence diagram illustrating an authentication operation in the authentication system according to the exemplary embodiment.

DESCRIPTION OF EMBODIMENT

[0014] The subject of devices or methods in the present disclosure includes a computer. This computer executes a program, and thus, functions of the subject of devices or methods in the present disclosure are realized.

[0015] The computer includes, as a main hardware configuration, a processor that operates according to the program. A type of the processor is not limited as long as the