[Patent Document 5] Japanese Unexamined Patent Application, First Publication No. 2013-012029

[Patent Document 6] Japanese Unexamined Patent Application, First Publication No. 2018-088966

[Patent Document 7] Japanese Unexamined Patent Application, First Publication No. 2006-349288

[Patent Document 8] Japanese Unexamined Patent Application, First Publication No. H9-140799

[Patent Document 9] Japanese Patent No. 6387173

SUMMARY

[0014]

However, even with use of the devices disclosed in Patent Document 1 to Patent Document 9, it is still not possible to realize an indoor environment that maintains a mental and physical state with high work performance. Therefore, it is desirable to control the arousal level on the basis of prediction, in order to improve work performance of the subject.

[0015]

The present disclosure has an object of providing an arousal level control apparatus, an arousal level control method, and a recording medium capable of solving the problems mentioned above.

[0016]

According to a first aspect, the present disclosure provides an arousal level control apparatus comprising:

a setting value calculation means for calculating, under a limitation related to a physical quantity that affects an arousal level of a subject, a setting value for controlling the arousal level of the subject by using a physical quantity prediction model for calculating the physical quantity based on a setting value of the physical quantity and an arousal level prediction model for calculating a prediction value of the arousal level based on the calculated physical quantity calculated; and

a setting means for setting the calculated setting value to a control target device that affects the physical quantity.

[0017]

According to a second aspect, the present disclosure provides an arousal level control method comprising:

calculating, under a limitation related to a physical quantity that affects an arousal level of a subject, a setting value for controlling the arousal level of the subject by using a physical quantity prediction model for calculating the physical quantity based on a setting value of the physical quantity and an arousal level prediction model for calculating a prediction value of the arousal level based on the calculated physical quantity calculated; and

setting the calculated setting value to a control target device that affects the physical quantity.

[0018]

According to a third aspect, the present disclosure provides a recording medium storing a program which causes a computer to execute steps of:

calculating, under a limitation related to a physical quantity that affects an arousal level of a subject, a setting value for controlling the arousal level of the subject by using a physical quantity prediction model for calculating the physical quantity based on a setting value of the physical quantity and an arousal level prediction model for calculating a prediction value of the arousal level based on the calculated physical quantity calculated; and

setting the calculated setting value to a control target device that affects the physical quantity.

[0019]

According to the present disclosure, it is possible to realize an indoor environment that maintains a mental and physical state for high work performance.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020]

FIG. 1 is a schematic block diagram showing an example of a device configuration of an arousal level control system according to an example embodiment.

FIG. 2 is a schematic block diagram showing an example of a functional configuration of an arousal level control apparatus according to an example embodiment.

FIG. 3 is a flowchart showing a first example of a processing procedure in which the setting value calculation unit according to the example embodiment calculates a device setting value and sets it in an environment control device.