SPECIFICATION

FACE AUTHENTICATION APPARATUS, CONTROL METHOD AND COMPUTER-READABLE STORAGE MEDIUM THEREFOR, FACE AUTHENTICATION GATE APPARATUS, AND CONTROL METHOD AND COMPUTER-READABLE STORAGE MEDIUM THEREFOR

This application is a National Stage Entry of PCT/JP2020/001242 filed on January 16. 2020, the contents of all of which are incorporated herein by reference, in their entirety.

TECHNICAL FIELD

[0001]

The present invention relates to a face authentication apparatus, a control method and a program therefor, a face authentication gate apparatus, and a control method and a program therefor

BACKGROUND ART

[0002]

With progress in the image recognition technology, practical application of an authentication apparatus using a facial image of a person at entry and exit into and from a facility or the like requiring security management has advanced in recent years, and various technologies for improving recognition precision of such an apparatus have been proposed.

[0003]

Patent Document 1 describes determining a backlighted scene, based on brightness of a face and an ambient environment and performing strobe light control, light emitting diode (LED) lighting control, parameter control of a camera, and image correction, based on the determination result of the scene.

[0004]

Patent Document 2 describes selecting a face of a walker suitable for authentication at a gate through which a moving person passes, by controlling a parameter of a camera, based on environmental information of a surrounding area.

RELATED DOCUMENTS

PATENT DOCUMENTS

[0005]

Patent Document 1: Japanese Patent Application Publication No. 2008-35480

Patent Document 2: Japanese Patent Application Publication No. 2007-148988

a face authentication processing means for causing the face authentication apparatus to execute face authentication by using the first image or the second image; and

a gate opening-closing control means for controlling opening and closing of a gate through which a person passes, by using a face authentication result of the face authentication executed by the face authentication apparatus by using the first image or the second image generated by capturing an image of the person passing through the gate.

47. The face authentication system according to 46., wherein

the face authentication processing means in the face authentication gate apparatus causes the face authentication apparatus to perform the face authentication by detecting a face of the person from the first image or the second image and determining a feature value of a face of the person, and

the criterion is that the feature value of a face of the person detected from the first image is determinable by the face authentication apparatus.

48. The face authentication system according to 46. or 47., wherein

the lighting includes a plurality of light sources being arranged in a height direction, and

the control means in the face authentication gate apparatus controls intensity of at least part of the plurality of light sources according to a position of a face of the person.

49. The face authentication system according to any one of 46. to 48., wherein

The face authentication processing unit in the image processing apparatus acquires color information of a face of the person and color information of an ambient environment from the face authentication apparatus, and

the control means in the face authentication gate apparatus controls the lighting by using acquired color information of a face of the person and acquired color information of the ambient environment.

50. The face authentication system according to 49., wherein

the face authentication gate apparatus further includes

a determination means for making determination on a light environment, based on a difference between acquired color information of a face of the person and acquired color information of the ambient environment,

the determination means in the face authentication gate apparatus

determines that the light environment is follow light when brightness of the face is equal to or greater than a certain value and a brightness difference between the face and the ambient environment is small,

determines that the light environment is a dark place when brightness of the face is less than a certain value and a brightness difference between the face and the ambient