Claims

[Claim 1] An authentication system comprising:
a smart mobile terminal having a flash which emits light;
a light receiver receiving the light emitted from the smart mobile terminal and converting the received light to data, the light receiver is associated with one of a credit card, a bank or a member store; and
an authentication server generating authentication information from the data received from the light receiver and transmitting the authentication information to the smart mobile terminal,
wherein the light emitted from the smart mobile terminal is for one-time use such that the light is used as a one-time password that is discarded after the light is used to generate the authentication information, and
wherein a speed and a number of light emission from the flash of the smart mobile terminal are controlled such that light is emitted differently each time when the light is emitted from the flash of the smart mobile terminal for authentication.

[Claim 2] The authentication system of claim 1, further comprising:
a recognition module recognizing the light convertible to the data among a plurality of lights emitted from the smart mobile terminal such that the recognized light is received by the light receiver,
wherein the plurality of lights comprise light used for capturing a picture or a moving picture or light used for lighting up a dark place.

[Claim 3] The authentication system of claim 1, further comprising:
a selection module selecting the light emitted from the smart mobile terminal among a plurality of lights comprising lights emitted from sources other than the smart mobile terminal.

[Claim 4] The authentication system of claim 1, wherein an emission range of the light emitted from the smart mobile terminal is controllable.

[Claim 5] The authentication system of claim 1, wherein an emission distance of the light emitted from the smart mobile terminal is controllable.

[Claim 6] The authentication system of claim 1, wherein the authentication server is applicable to an authentication for a transaction or an authentication for a person.

[Claim 7] A method of authentication using a flash of a smart mobile terminal, the method comprising:
emitting light, by the flash;

receiving, by a light receiver, the light emitted from the smart mobile terminal and converting the received light to data; and

receiving, by an authentication server the data from the light receiver; and

generating, by the authentication server, authentication information from the received data and transmitting the authentication information to the smart mobile terminal,

wherein the light emitted from the smart mobile terminal is for one-time use such that the light is used as a one-time password that is discarded after the light is used to generate the authentication information,

wherein a speed and a number of light emission from the flash of the smart mobile terminal are controlled such that light is emitted differently each time when the light is emitted from the flash of the smart mobile terminal for authentication; and

wherein the light receiver is associated with one of a credit card, a bank or a member store.

[Claim 8] The method of claim 7, further comprising:

recognizing the light convertible to the data among a plurality of lights emitted from the smart mobile terminal such that the recognized light is received by the light receiver,

wherein the plurality of lights comprise light used for capturing a picture or moving picture or light used for lighting up a dark place.

[Claim 9] The method of claim 7, further comprising:

selecting the light emitted from the smart mobile terminal among a plurality of lights comprising lights emitted from sources other than the smart mobile terminal.

[Claim 10] An authentication system comprising:

a smart mobile terminal having a flash which emits light;

a light receiver receiving the light emitted from the smart mobile terminal and converting the received light to data;

an authentication server generating authentication information from the data received from the light receiver and transmitting the authentication information to the smart mobile terminal;

a recognition module recognizing the light convertible to the data among a plurality of lights emitted from the smart mobile terminal such that the recognized light is received by the light receiver; and

a selection module selecting the light emitted from the smart mobile terminal among a plurality of lights comprising lights emitted from sources other than the smart mobile terminal,

wherein the light receiver is associated with one of a credit card, a bank or a member store