

Title: Authentication apparatus, authentication method, and program
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ABSTRACT

A generating section generates a presentation symbol string for receiving a next authentication request to an authenticated ID, a storing section stores a transformation rule and a sending destination of the presentation symbol string to be associated with each ID, a sending section sends "the generated presentation symbol string" to a display terminal, which is "the sending destination of the presentation symbol string stored in the storing section to be associated with the authenticated ID", an updating section causes the storing section to further store the presentation symbol string sent to be associated with the authenticated ID to perform update, a receiving section receives an authentication request that designates an ID and a transformed symbol string from an access terminal, and an authenticating section causes authentication of the ID to succeed when a condition is satisfied where "the received transformed symbol string matches a transformation result obtained by applying 'the transformation rule stored to be associated with the ID designated by the received authentication request' to 'the presentation symbol string stored to be associated with the ID'."

BACKGROUND OF THE INVENTION

1 Field of the Invention

The present invention relates to an authentication apparatus and authentication method that are suitable for simplifying the use of a password to perform safe authentication, and a program for implementing the above apparatus and method by a computer.

2 Description of the Related Art

When users desire to gain access to various resources placed in the Internet and to receive Internet connection service by a dial-up connection, passwords are widely used at the present time as a method for determining whether such users can receive the resource and service.

The user inputs an ID (Identifier) allocated to the resource and service that the user desires to use, and further inputs a password corresponding to the ID. When this password matches a password stored at the side that provides the resource and service, authentication succeeds and the relevant resource and service are provided to the user.

IDs are provided for each user in some cases, and the same IDs are provided in other cases. Moreover, in some instances, an authentication side stores a result, which is obtained by applying a predetermined one-way function to the password, instead of storing the password itself. Then, authentication succeeds when a calculation result, which is obtained by applying the one-way function to the password input by the user, matches the stored application result.

However, when the password is input as it is and transmitted through a computer communication network directly, there is a high possibility that the password will be stolen, resulting in a fear that a security problem will occur.

While, a simple and safe technique is required to send information on receiving the resource and service to the user from the authentication side when the user forgets

his/her password.

The present invention has been made to solve the aforementioned problems, and an object of the present invention is to provide an authentication apparatus and authentication method that are suitable for simplifying the use of password to perform safe authentication, and a program for implementing the above apparatus and method by a computer.