

the customer information, each of the parties can also audit the transactions and any agreements related to the customer information.

[0010] As a method, one embodiment of the present invention includes at least receiving an identity-authenticating password from the presenter and comparing the identity-authenticating password against a password previously designated for an account of the presenter. The method also includes notifying a requestor that the presenter is the actual owner of the account when the identity-authenticating password received from the presenter matches the password that was previously designated for the account. In this way, the trusted party authenticates for the benefit of the requestor that the presenter is the actual owner of the account. The method also includes sending presenter information to the value-adding party. In some embodiments, the method further involves evaluating the presenter information against a set of criteria and sending the presenter information to the value-adding party if the presenter information satisfies the set of criteria. This allows the value-adding party to receive desirable customer information. Also, each of the requestor and value-adding party can agree to a set of rights and obligations as a condition before the presenter information is sent to the value-adding party. Additionally, a transaction identifier can be used to track individual online transactions and the related customer information.

[0011] In one embodiment of the invention, the requester is a merchant and the value-adding party is a shipping company who can use the customer information to ship a product purchased from the merchant. The customer information assists the shipping company in deciding if and how it will ship a product to the customer.

[0012] In another embodiment of the invention, the requester is a merchant and the value-adding party is a follow-on merchant who can use the customer information to market its own goods or services to the customer. The customer information assists the follow-on merchant in deciding if and how it will correspond with the customer.

[0013] In another embodiment of the invention, the value-adding party is a security organization that can use the customer information to evaluate security concerns. The customer information assists the security organization in deciding if and how it will address possible security concerns.

[0014] These and other features and advantages of the present invention will be presented in more detail in the following specification of the invention and the accompanying figures, which illustrate by way of example the principles of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] The invention, together with further advantages thereof, may best be understood by reference to the following description taken in conjunction with the accompanying drawings in which:

[0016] **FIG. 1** illustrates one embodiment of a system architecture for implementing the account authentication service of the present invention for various types of account authentication applications.

[0017] **FIG. 2** schematically illustrates one embodiment of a system architecture that supports the authentication service of the present invention in payment transactions.

[0018] **FIG. 3** illustrates the process through which an account holder registers with the account authentication system according to one embodiment of the present invention.

[0019] **FIG. 4** illustrates one embodiment of an Internet web page in which an account holder can enter information during the account authentication system enrollment process.

[0020] **FIG. 5** describes an authenticated payment transaction on the account authentication system where an account holder uses a computer that is connected to the Internet.

[0021] **FIG. 6** illustrates an exemplary window that prompts the account holder for his or her password.

[0022] **FIG. 7** illustrates exemplary messages that are sent during the payment transaction superimposed over the account authentication system where a consumer uses a computer that is connected to the Internet.

[0023] **FIG. 8** illustrates an exemplary system architecture and a set of message flows involved with online account authentication that includes a value-adding aspect.

[0024] **FIG. 9** illustrates a telecommunications network suitable for implementing an embodiment of the present invention.

[0025] **FIG. 10** illustrates systems housed within an interchange center to provide online and offline transaction processing.

[0026] **FIG. 11** illustrates another view of the components of the telecommunications network.

[0027] **FIGS. 12A and 12B** illustrate a computer system suitable for implementing embodiments of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0028] The present invention will now be described in detail with reference to a few preferred embodiments thereof as illustrated in the accompanying drawings. In the following description, numerous specific details are set forth in order to provide a thorough understanding of the present invention. It will be apparent, however, to one skilled in the art, that the present invention may be practiced without some or all of these specific details. In other instances, well known operations have not been described in detail so not to unnecessarily obscure the present invention.

[0029] The present description, in **FIG. 1**, will begin with an overview of a generalized account authentication system and protocol according to the present invention. The account authentication system is provided as a service to participating issuers, account holders, and merchants. Then, in **FIGS. 2-7**, an embodiment of the account authentication system relating to online payment transactions is described. The description of online payment transactions covers the payment transaction itself, system setup, customer registration, and specific message flows. The description for online payment transactions is analogous to the description for non-payment transactions. Both payment and non-payment transactions involve the authentication of an account holder's identity.