[0026] Authorization system **10**, **FIG. 1**, includes programmed computer system **12** where account processing is performed. Computer system **12** is typically a large system or "mainframe" which operates a large data center. Computer system **12** is connected to a short message service (SMS) system **14**. SMS system **14** is typically implemented as a server or system that interfaces to a wireless network **16**. However, SMS system **12** can also be integrated into computer system **12**. SMS system **14** can also be operated either by the financial institution or the wireless provider. In this example, authorization requests are received via a merchant network **18**. Transaction information is generated by a card swipe device **20** or other means for entering credit card information, e.g., audibly over the handset. For security, merchant network **18** is typically implemented by a direct dial-up connection, or a dial-up connection with an intervening private digital network (not shown), such as a packet switched network. Also in this example, wireless network **16** transports approval requests and responses between SMS system **14** and a two-way wireless device **22**, e.g. pager, laptop, PDA or cell phone.

[0027] A PC or workstation **24** is shown connected to processing center computer **12** via a worldwide web interface **26**, for implementation of one of the optional features of the invention. Through this connection, a subscriber to the service can maintain an account profile. This profile contains specific parameters for the service as applied to the particular account and can be updated by the user over a World Wide Web interface, or possibly through software supplied to the user specifically for the purpose. The account profile contains information such as a dollar amount below which approval requests are not needed, list of approval devices, currently active approval device. This information can be maintained, for example, on a presence server that is readily accessible by the user in order to make any necessary updates.

[0028] The method performed at processing center **12** to implement the present invention is shown in **FIG. 2**. An authorization request is received at the processing center from a payee (Block **28**), typically a merchant. This authorization request is transmitted to the processing center over the merchant network and contains transaction information such as charge amount, card type, account number, etc. The standard tests and/or authorization checks are performed in response to the request (Block **30**). If these tests fail, a failure response is sent to the merchant immediately. If these tests are passed, a determination is made whether the credit cardholder has subscribed to the payment authorization service (Block **32**). If not, a response is sent immediately to the merchant. If it is determined that the card holder does subscribe, an optional check of the user profile can be made to determine if approval is required for this particular transaction (Block **34**), shown in phantom.

[0029] Otherwise, once it is determined that a cardholder subscribes to the service (Block **32**) an approval request is sent to the specified communication device (Block **36**). As will be discussed in more detail below, this request can be simple and use only native capabilities of a standard communication device, or it can further include an approval protocol. If an approval protocol is used optional security checks can be included. The cardholder then either approves or declines (Block **38**) the authorization request through the communication device **22**/**26** (**FIG. 1**). An approval response is then processed. In most cases this is a response from the specified communication device, optionally using an approval protocol. However, this step may include assuming a default response according to a set of predefined rules for one for more vendor types such as, for example, a default approval for predefined dollar amounts for purchases at gas stations, or denial if a specified period of time has elapsed, or other processing based in the optional user profile. Finally, an appropriate authorization response is sent to the payee or merchant (Block **40**). As with current systems, this authorization response includes an authorization number for future reference.

[0030] One method according to the present invention is preferably executed on a general purpose, programmed computer platform at processing center **12** (**FIG. 1**). This computing platform can be of any size or type. Mainframe computers provide significantly more connectivity of peripherals and significant on-line storage capacity, which is particularly useful in financial applications. Mainframes also offer greater reliability, information processing throughput, and data security. A suitable mainframe architecture may include, for example, IBM's System **360**/**370** architecture, most recently upgraded to the System **390**.

[0031] **FIG. 3** represents a block diagram of a typical single or "uni" processor mainframe computer system. Central processor complex **42** forms the heart of the system and includes a high-speed cache memory **44** for fast access to recently used data. Central processor **42** controls the execution of the method of the present invention. Central processor **42** is coupled to system bus **46** for access to main memory **48**. Access to system bus **46** is controlled by requests and grants, which are processed by system bus controller **50**. Service processor **52**, also coupled to system bus **46**, provides an operator console function for configuring the system and controlling the operational aspects of the system.

[0032] A key distinguishing feature of the mainframe is that it supports multiple, high throughput, input/output or "I/O" processors or complexes, which can be local or distributed. In the simplified diagram of **FIG. 3** these are shown as I/O processors **54** and **56**. Processors **54**/**56** offload I/O tasks from central processor **42** and transfer information to and from main memory **48** through direct access memory channels. In this example I/O processor **54** is connected to storage devices **58** and **60**, which store data and application programs associated with the functions of card processing center **12** (**FIG. 1**), including the implementation of the present invention. I/O processor **56** is connected to user terminals **62** such as a desktop computer. Terminals **62** may be local, or connected through a remote network, for example, the merchant network of the present invention.

[0033] As previously discussed, the present invention makes use of two way message transmission service currently offered by numerous telecommunication providers. The processing center includes or is connected to two way message transmission service system **14** (**FIG. 1**). Two way message transmission service system **14** converts the approval request and response messages to and from a format that can be exchanged with the telecommunication provider for use in two way message transmission service messages. Two way message transmission service system **14** is a store and forward system in which messages from a