METHOD AND SYSTEM FOR ACCOUNT MAINTENANCE VIA A BROADBAND GATEWAY

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ABSTRACT
Aspects of a method and system for account maintenance via a broadband gateway are provided. In this regard, a subscriber associated with a gateway may have a plurality of subscriber accounts with a corresponding plurality of service/content providers. Information associated with the accounts may be stored in the gateway, and the gateway may present a user interface via which the subscriber may manage settings and balances associated with the accounts. The user interface may enable submitting a single payment such that funds from the single payment are applied to each of the accounts. Activity of the plurality of accounts may be displayed via the user interface. The gateway may be operable to monitor activity of one or more of the plurality of accounts. The gateway may be operable to generate one or more alerts based on the activity and based on criteria established for each of the plurality of accounts.
Menu

Summary xx/xx/xxxx – xx/xx/xxxx

TV $xx.xx See Details Acct. options
Internet $xx.xx See Details Acct options
Phone $xx.xx See Details Acct options
Cellular $xx.xx See Details Acct options
Media store $xx.xx See Details Acct options
Streaming $xx.xx See Details Acct options

Make payment Setup new account

Account Settings: TV

Set up Users
Set up devices
Set up limits / alerts
Set up notifications
Remove account

Gateway

FIG. 2B
302 User configures limits / alerts for account

304 Content and/or services associated with account consumed

306 Account activity triggers notification

308 Gateway sends notification to one or more devices

FIG. 3
402 Gateway installed

404 User brings up Account menu

406 One-time entry of account information

406 Account activity communicated to gateway

408 Payment and management of all accounts via gateway

FIG. 4
502 Gateway installed
504 Gateway owner sets up payment account
506 Content and service provider accounts linked with payment account via gateway
508 Rewards points accumulate in payment account for various activities
510 Rewards redeemed for cash used to pay content/service provider bills
METHOD AND SYSTEM FOR ACCOUNT MAINTENANCE VIA A BROADBAND GATEWAY

CLAIM OF PRIORITY


[0002] The above stated application is hereby incorporated herein by reference in its entirety.

INCORPORATION BY REFERENCE

[0003] This application also makes reference to:

[0004] U.S. patent application Ser. No. ____ (Attorney Docket No. 23397US02) filed on even date here with;

[0005] U.S. patent application Ser. No. ____ (Attorney Docket No. 23398US02) filed on even date here with;

[0006] U.S. patent application Ser. No. ____ (Attorney Docket No. 23399US02) filed on even date here with;

[0007] U.S. patent application Ser. No. ____ (Attorney Docket No. 23400US02) filed on even date here with;

[0008] U.S. patent application Ser. No. ____ (Attorney Docket No. 23401US02) filed on even date here with;

[0009] U.S. patent application Ser. No. ____ (Attorney Docket No. 23402US02) filed on even date here with;


[0012] U.S. patent application Ser. No. ____ (Attorney Docket No. 23405US02) filed on even date here with;

[0013] U.S. patent application Ser. No. ____ (Attorney Docket No. 23406US02) filed on even date here with;


[0015] U.S. patent application Ser. No. ____ (Attorney Docket No. 23408US02) filed on even date here with;

[0016] U.S. patent application Ser. No. ____ (Attorney Docket No. 23409US02) filed on even date here with;

[0017] U.S. patent application Ser. No. ____ (Attorney Docket No. 23410US02) filed on even date here with;


[0019] U.S. patent application Ser. No. ____ (Attorney Docket No. 23412US02) filed on even date here with;

[0020] U.S. patent application Ser. No. ____ (Attorney Docket No. 23413US02) filed on even date here with;

[0021] U.S. patent application Ser. No. ____ (Attorney Docket No. 23414US02) filed on even date here with;

[0022] U.S. patent application Ser. No. ____ (Attorney Docket No. 23415US02) filed on even date here with;

[0023] U.S. patent application Ser. No. ____ (Attorney Docket No. 23416US02) filed on even date here with;

[0024] U.S. patent application Ser. No. ____ (Attorney Docket No. 23417US02) filed on even date here with;

[0025] U.S. patent application Ser. No. ____ (Attorney Docket No. 23418US02) filed on even date here with;

[0026] U.S. patent application Ser. No. ____ (Attorney Docket No. 23419US02) filed on even date here with;

[0027] U.S. patent application Ser. No. ____ (Attorney Docket No. 23420US02) filed on even date here with;

[0028] U.S. patent application Ser. No. ____ (Attorney Docket No. 23421US02) filed on even date here with;

[0029] U.S. patent application Ser. No. ____ (Attorney Docket No. 23422US02) filed on even date here with;

[0030] U.S. patent application Ser. No. ____ (Attorney Docket No. 23423US02) filed on even date here with;

[0031] U.S. patent application Ser. No. ____ (Attorney Docket No. 23424US02) filed on even date here with;

[0032] U.S. patent application Ser. No. ____ (Attorney Docket No. 23425US02) filed on even date here with;

[0033] U.S. patent application Ser. No. ____ (Attorney Docket No. 23426US02) filed on even date here with;

[0034] U.S. patent application Ser. No. ____ (Attorney Docket No. 23427US02) filed on even date here with;

[0035] U.S. patent application Ser. No. ____ (Attorney Docket No. 23428US02) filed on even date here with;

[0036] U.S. patent application Ser. No. ____ (Attorney Docket No. 23429US02) filed on even date here with;

[0037] U.S. patent application Ser. No. ____ (Attorney Docket No. 23430US02) filed on even date here with;

[0038] U.S. patent application Ser. No. ____ (Attorney Docket No. 23431US02) filed on even date here with;

[0039] U.S. patent application Ser. No. ____ (Attorney Docket No. 23432US02) filed on even date here with;

[0040] U.S. patent application Ser. No. ____ (Attorney Docket No. 23433US02) filed on even date here with;

[0041] U.S. patent application Ser. No. ____ (Attorney Docket No. 23434US02) filed on even date here with;
U.S. patent application Ser. No. 23435US02 filed on even date herewith.

Each of the above stated applications is hereby incorporated herein by reference in its entirety.

FIELD OF THE INVENTION

Certain embodiments of the invention relate to broadband gateways. More specifically, certain embodiments of the invention relate to a method and system for account maintenance via a broadband gateway.

BACKGROUND OF THE INVENTION

With the continuous growth of digital television or broadcast multimedia, and/or broadband access, which may be used in conjunction with online businesses, social networks, and/or other online services and applications, users may desire having access to a larger number of providers and/or a broader range of content in a manner that is flexible and/or suits the users' lifestyles. Most users connect to the Internet using web browsers running on personal computers (PCs). Furthermore, most households may have one or more televisions that may be used to view television and/or multimedia broadcasts. Television broadcasts may include terrestrial TV, Cable-Television (CATV), satellite TV and/or Internet Protocol television (IPTV) based broadcasts. To ensure against unauthorized reception and/or use of TV and/or multimedia broadcast, service providers may require use of dedicated set-top boxes (STBs) that may be used to encrypt broadcast signals communicated from the service providers to generate suitable video and/or audio streams that may be played via televisions and/or other display/playback devices in the household. Furthermore, STBs and/or TV's may support Internet access. Thus, rather than using a computer to access the Internet, a user may find it more convenient to use the flat screen televisions and/or monitors in homes for the same purpose. To do so, for example, an STB connected to a flat screen television may be provided with web browsing software and protocols, and Internet connectivity, which may enable the user to easily access the Internet or check their electronic mail (email), for example, from a convenient and comfortable location such as their living room.

Further limitations and disadvantages of conventional and traditional approaches will become apparent to one of skill in the art, through comparison of such systems with some aspects of the present invention as set forth in the remainder of the present application with reference to the drawings.

BRIEF SUMMARY OF THE INVENTION

A system and/or method is provided for account maintenance via a broadband gateway, substantially as illustrated by and/or described in connection with at least one of the figures, as set forth more completely in the claims.

These and other advantages, aspects and novel features of the present invention, as well as details of an illustrated embodiment thereof, will be more fully understood from the following description and drawings.

BRIEF DESCRIPTION OF SEVERAL VIEWS OF THE DRAWINGS

FIG. 1A illustrates an exemplary communication system comprising a broadband gateway, in accordance with an embodiment of the invention.
network access service providers which provide physical layer connections to the gateway 110. Such physical layer connections may then be utilized to access content provided by the content providers 104, access services provided by other ones of the service providers 102,102x, and/or access an intranet or the Internet at-large. In this regard, “network access service provider” as utilized herein, is distinguished from the more generic term “service provider” which may encompass services other than providing physical layer access to a network. Cable television providers, plain old telephone service (POTS) providers, digital subscriber line (DSL) providers, cellular providers, WiMAX providers, and satellite providers are examples of network access service providers.

The content providers 104,-104x may comprise various entities and/or networks which provide, for example, audio, video, e-book, gaming, and/or other content via the network(s) 108. The content may be, for example, downloadable and/or streaming, rented and/or purchased. In some instances, a content provider and a service provider may be separate. In some instances, as indicated by the dashed line 106, a single provider may provide both content and services. That is, an entity that functions as a network access service provider may also provide content and/or services other than network access and, thus, that entity may also be accurately referred to as a “content provider” and/or a “service provider.” The content and/or services that are provided by the content provider and/or the service provider may be provided to the gateway 110 via a physical connection provided by a network access service provider.

The gateway 110 may comprise suitable logic, circuitry, interfaces, and/or code that may be operable to implement various aspects of the invention. The gateway 110 may be operable to communicate with the content providers 104,-104x, the service providers 102,102x, and the devices 112,-112x. In this manner, the gateway 110 may enable bidirectional communication of content and/or other information between the content providers 104,-104x, the service providers 102,102x, and the devices 112,-112x. Communications between the broadband gateway 110 and the content providers 104,-104x and service providers 102,102x may be carried over optical, wired, and/or wireless links of the distribution network(s) 108. Similarly, Communications between the broadband gateway 110 and the devices 112,-112x may be carried over optical, wired, and/or wireless links.

A single gateway 110 may be operable to handle multiple physical layer (i.e., layer 1 of the open-systems interconnection model (OSI)) connections to multiple ones, or portions, of the distribution network(s) 108, where different ones or portions of the distribution network(s) 108 are owned, operated, leased, or otherwise associated with different ones of the network access service providers 102,102x. For example, a first network access service provider may provide network access to the gateway 110 via a DSL connection over twisted-pair cabling, and a second network access service provider may provide network access to the gateway 110 via a cable television connection over coaxial cabling. In some instances, the gateway 110 may be operable to concurrently communicate over the multiple physical layer connections provided by the multiple network access service providers.

The electronic devices 112,-112x may comprise, for example, one or more instances of one or more of the following: a television, a laptop computer, a computer and/or server, a personal media player, a digital video recorder, an optical media player, a mobile phone, a speaker, an AM/FM radio, a terrestrial phone, and an appliance.

In operation, the gateway 110 may communicate with the service providers 102,102x and content providers 104,-104x to collect account billing, account balance, and/or other account information from the service providers 102,102x and content providers 104,-104x. The gateway 110 may generate a user interface that may enable a user to interact with the various accounts associated with the service providers 102,102x and content providers 104,-104x, all from the one user interface generated by the gateway 110. The user interface may enable a user to view account activity for the various accounts all at once. The user interface may enable a user to make payments to the various accounts, and may enable paying multiple accounts with a single payment. The user interface may enable a user to dispute charges appearing on the accounts.

The user interface may enable configuring various settings for the accounts. The user interface may enable enabling and disabling automatic payments for one or more of the accounts. The user interface may enable setting limits on account activity such that once a dollar, bandwidth, or time limit is reached for a current billing period, services and/or content may be suspended until the next billing cycle. The user interface may enable configuring access permissions for the devices 112,-112x, and/or users thereof, to the accounts. The user interface may enable setting up account notifications such that once an account reaches a certain dollar, bandwidth, or time amount for a billing cycle, the account holder may be notified. In this regard, the notification may be generated by or communicated to the gateway 110 and the gateway may communicate the notification to one or more of the devices 112,-112x.

In an embodiment of the invention, the service provider 102x may provide an account aggregation and bill payment service accessible via the gateway 110. In this regard, an account associated with the gateway 110 and/or associated with a user thereof (a “subscriber”), may be set up with the service provider 102x. The account may, for example, be set up via a user interface of the gateway 110. Once the account is established, bills, account notifications, and other information may be sent to the service provider 102x from service providers 102,-102x, and from the content providers 104,-104x. The service provider 102x may communicate the account information to the gateway 110 where the information may be securely stored. A user of the gateway 110 may review and interact with the accounts via the user interface generated by the gateway 110. Upon modifying information or submitting a payment, the gateway 110 may communicate the modifications and/or payment to the service provider 102x, which may, in turn, communicate the modifications and/or payment to the affected ones of the service providers 102,-102x, and/or content providers 104,-104x. The service provider 102x may also manage a rewards or incentives program whereby credits may be added to the account based on use of the gateway device 110 and/or based on input from a user of the gateway device 110. The credits may be redeemed for cash and utilized for making payments to the service providers 102,-102x, and/or content providers 104,-104x.

In an embodiment of the invention, the gateway 110 may occasionally and/or periodically communicate with the service providers 102,102x, and the content providers 104,104x to collect account balances, account activity, and/or
other account information. The gateway 110 may securely store the account information. The gateway 110 may be operable to generate a user interface that enables a user to view the account information, modify account settings, and pay account balances. Upon the user modifying an account setting and/or making a payment, the gateway 110 may communicate the settings and/or payment information to affected ones of the service providers 102, -102, X, and/or content providers 104, -104.

[0066] FIG. 1B is a diagram illustrating an exemplary broadband gateway, which may be operable to manage multiple service and/or content (service/content) provider accounts, in accordance with an embodiment of the invention. The broadband gateway 110 may comprise suitable logic, circuitry, code, and/or interfaces that may be operable to provide connectivity between a network, such as the Internet or other wide area network, for example, and one or more devices in a home. In this regard, the broadband gateway 110 may operate as an interface device that allows various devices in the home to access one or more networks, and to access various services and/or content via those one or more networks.

[0067] The broadband gateway 110 may communicate with the various devices in the home via a home network, which may comprise wired and/or wireless communication links. In this regard, the broadband gateway 110 may comprise suitable hardware and/or software to provide some or all of the functions and/or operations of one or more of a modem, a router, and a switch. The modem functions and/or operations may be those of a digital subscriber line (DSL) modem, a cable modem, or a wireless cable modem, for example. The router functions and/or operations may be those of a wireless router, for example. The switch functions and/or operations may be those of a network switch, or a local area network (LAN) switch, for example. In some instances, broadband gateway 110 may communicate with the various devices in the home via more than one home network.

[0068] The broadband gateway 110 may comprise one or more modules. Each of these modules may comprise hardware, software, or a combination thereof. In an embodiment of the invention, the broadband gateway 110 may comprise a provider interface module 122, a processor module 124, a memory module 126, and a client network interface module 128. In some instances, the broadband gateway 110 may be such that the various modules listed above may be distributed over multiple devices. Moreover, the modules listed above are provided by way of illustration and not of limitation. Other configurations and/or architectures of the broadband gateway 110 may be implemented. For example, the broadband gateway 110 may be a virtual gateway setup in a network by utilizing virtual machines (VMs) and/or next-generation (NG) data centers.

[0069] The provider interface module 122 may comprise suitable logic, circuitry, code, and/or interfaces that may be operable to receive data from and/or send data to one or more service/content providers via one or more physical layer connections 130 to one or more network access service providers. In this regard, each of the physical layer connections 130, -130, may connect the gateway 110 to a difference network access service provider. Each of the physical layer connections 130 may comprise a wired, optical, or wireless connection. Each of the physical layer connections 130 may utilize different physical media and/or different physical layer protocols. For example, the connection 130, -130, may comprise a DSL over twisted-pair connection and the connection 130, -130, may comprise a CATV over coaxial cable connection.

[0070] The memory module 126 may comprise suitable logic, circuitry, code, and/or interfaces that may be operable to store data utilized in the operations of the broadband gateway 110. For example, the memory module 126 may be utilized to store configuration data, parameters, device information, tracking and/or monitoring information, security information, and intermediate processing data, for example. The memory module 126 may comprise storage media integrated in the broadband gateway 110 and/or a removable storage device.

[0071] The processor module 124 may comprise suitable logic, circuitry, code, and/or interfaces that may be operable to process data received from the service/content providers and/or data received from one or more devices 112 in the home. In this regard, data received from the service/content providers via one or more the physical layer connections 130, -130, may be processed to make it suitable for communication to a device 112 and data from the one or more devices 112 may be processed to make it suitable for communication to the service/content providers via one or more the physical layer connections 130, -130. In this regard, the processor module 124 may comprise one or more portions that are suitable to handle certain types of data such as video data and/or audio data, for example. The processor module 124 may also be operable to generate a graphical user interface (GUI) which may be manipulated via input from a user. The GUI may be displayed as part of an OSD on a local device 112, such as a monitor or television, and may be manipulated via a remote control and/or other input device that communicates directly with the gateway 110. The GUI may be a web-based interface, and a user may interact with it via a computer and web browser. The processors module 124 may utilize the memory 126 in performing its functions.

[0072] The client network interface module 128 may comprise suitable logic, circuitry, code, and/or interfaces that may be operable to send data to one or more devices in the home via the home network. The client network interface module 128 may also be operable to receive data from one or more devices in the home via the home network. The client network interface module 128 may be operable to support multiple communication protocols, standards, and/or data transport technologies.

[0073] The broadband gateway 110 may be operable to provide communication management by varying the configuration of one or more devices in the home network. The broadband gateway 110 may collect and/or store energy-related information for one or more devices and/or the home network, and may utilize such information to control the operation of those devices. For example, the broadband gateway 110 may utilize channel capacity flexibility and content coding options to minimize and/or optimize power utilization. The broadband gateway 110 may also configure and/or manage the configuration of the network between the broadband gateway 110 and one or more service/content providers based on the energy-related information associated with the devices in the home. The broadband gateway 110 may be utilized to display energy-related metrics, including consumption trends and/or costs, for example, and to display any available credits/rewards that may be redeemed by a user. In some instances, when a device in the home network is a certified device, such as a California efficient display, for example, the broadband gateway 110 may be utilized to provide that information to a
The broadband gateway 110 may be operable to adapt and/or enable changes in a subscription model and/or in multimedia delivery characteristics based on the capabilities of the various devices in the home network. For example, high-definition video content may be delivered to certain type of devices, such as digital televisions (DTVs), while low-definition video content and/or text may be delivered to a different type of devices, such as personal mobile devices. In this regard, the broadband gateway 110 may be utilized to reduce bandwidth and/or processing power consumption in the home network. The broadband gateway 110 may also support and/or use multi-transport processing, which may be performed sequentially, in parallel, and/or utilizing distributed processing.

The gateway functionality associated with a user, such as security features, preferences, applications, electronic programming guides (EPGs), and user profile, for example, may be ported from the broadband gateway 110 to one or more other broadband gateways 110. In some instances, a visitor may be allowed access to their content outside their service/content provider service area by, for example, classifying the access level for different users and/or by providing limited access to content. Moreover, the broadband gateway 110 may allow multiple user interface software structures by, for example, standardizing an interface to service/content providers and devices in the home network.

The broadband gateway 110 may be operable to broker and/or arbitrate with service/content providers the consumption of certain services, such as music and video, for example. In some instances, the broadband gateway 110 may perform content search, transport discovery, ranking, and/or sorting. These operations may be performed based on content quality, price, quality-of-service (QoS), and network protocols supported by the devices in the home network, such as service level agreements (SLAs), for example.

Various emergency-related services in the home network may be supported by the broadband gateway 110. For example, the broadband gateway 110 may enable first responders to provide alerts to a select group of users by accessing the broadband gateway 110 via secure links provided by the service/content providers.

Customized graphical user interfaces (GUIs) may be generated by the broadband gateway 110, wherein the GUIs may be used to visually display and/or provide interaction with the customized content.

For peer-to-peer communication, the broadband gateway 110 may be utilized to allow enhanced content sharing in a service/content provider network. In this regard, the broadband gateway 110 may be utilized to construct a directory service for peer-to-peer connectivity with friends and family, for example. The broadband gateway 110 may be utilized to provide incentives to users who engage in peer-to-peer communication. Moreover, the broadband gateway 110 may be utilized to match the content coding to the service type being consumed by the user and to make the necessary allocations through the network with respect to peer-to-peer or conventional Internet programming or broadcast programming.

The broadband gateway 110 may be utilized in connection with constrained network resources, such as time of day, traffic congestion, energy consumption status, and the like, for example, to provide incentives for a user to accept a lower cost, lower quality of service that is dynamically configured for current network conditions. In some instances, the broadband gateway 110 may allow enhanced low latency service delivery to client devices in a home network.

The broadband gateway 110 may be operable to run or execute an agent to extract content, rating, copyright, language, privacy rules, and automatically add user generated content, for example. In some instances, the broadband gateway 110 may provide rating-related information or channel prediction to a service/content provider to assist with fast channel change.

Bandwidth optimization by, for example, placing future requests for bandwidth to a service/content provider and accepting the best timeslots provided in return may be enabled by the broadband gateway 110.

The broadband gateway 110 may be operable to combine and/or blend multiple contents for use as single content in the home network. For example, the broadband gateway 110 may blend different video and audio contents for an event by accessing one or more service/content providers and providing automatic and/or manual content synchronization.

The protection, management, and/or tracking of confidential data, such as health and financial records, for example, by tagging the data may be provided by the broadband gateway 110. Only when a user authorizes the transfer of the confidential data will such data be stored and/or aggregated. The broadband gateway 110 may be operable to create a trusted rating mechanism for content. The broadband gateway 110 may be secure against external threats that may be downloaded from outside the home network and may provide a secure domain distribution in the home network. Automated and secured billing and payment services may also be provided by the broadband gateway 110. Moreover, the broadband gateway 110 may be operable to filter and/or block specific content or portions thereof, and may also be utilized to govern client content access, which may be based on controlled user profiles and/or authorization requests to one or more additional client devices.

The broadband gateway 110 may be operable to utilize client profile information to select layered video service(s) and/or transmission. In some instances, the programming and/or enhanced video layers received by the broadband gateway 110 may be aggregated midstream by one or more network or routing nodes.

The broadband gateway 110 may support a reduction in the cost of unwanted content by using multi-tier billing for downloaded content, such as video content. The broadband gateway 110 may be utilized to provide a unified payment portal for collecting and/or aggregating charges from multiple service and/or content providers.

FIGS. 2A-2C are figures that each illustrate an exemplary graphical user interface (GUI) generated by a broadband gateway for managing multiple service provider and/or content provider accounts, in accordance with an embodiment of the invention. The GUI of FIGS. 2A-2C may, for example, be displayed as part of an on-screen menu accessible via a “menu” button of a remote control. The exemplary GUI may comprise frames 202 and 204. Referring to FIG. 2A, the frame 202 may display a summary of the various
content and/or service provider accounts. Each account may be listed along with a current balance. Associated with each account may be a button 206 that, upon selection by a user, may bring up activity for the account in the frame 204. In the exemplary scenario depicted in FIG. 2A, the account activity button 206 for the media store account has been selected. Accordingly account activity for the media store account is displayed in frame 204. Account activity may comprise, for example, the date of the activity, a description of the activity, and the charge for the activity. Also shown in the frame 204 is a button 214 which, upon selection, may enable a user to dispute a charge appearing on the media store account.

Referring to FIG. 2B, associated with each account in the frame 202 may be a button 208 that, upon selection by a user, may bring up account settings for the account. In the exemplary scenario depicted in FIG. 2B, the account settings button 208 for the television account has been selected. Accordingly, the account settings information for the television account is displayed in the frame 204. The button 222 may, upon selection, bring up a window that enables a user to add users to the television account and/or remove users from the television account. The button 224 may, upon selection, bring up a window that enables a user to add or remove devices 112 to the television account and remove devices 112 from the television account. The button 226, upon selection, may bring up a window that enables a user to set up dollar, bandwidth, and/or time limits for the television account. The limits may be for all devices and/or users, or for particular devices and/or users. The button 230 may enable removing the account, that is, disabling management of the account via the gateway 110. The button 228, upon selection, may bring up a window that enables a user to configure notifications that are to be generated based on activity in the television account.

Configuration of notifications may comprise configuring when to send a notification. For example, a notification may be sent upon, for example, the television bill reaching a certain dollar amount or upon someone attempting to bill a pay-per-view event to the account. Additionally or alternatively, configuration of notifications may comprise configuring how to send the notification to an account holder. For example, the devices 112, -112x, coupled to the gateway 110 may comprise one or more televisions and the notification may be displayed on one or more of the televisions. As another example, the devices 112, -112x, coupled to the gateway 110 may comprise one or more cellular phones and the notification may be sent via text message to one or more of the cellular phones. As another example, the notification may be sent via email over the distribution network(s) 108.

The frame 202 may also comprise a button 212 that, upon selection, may enable the user to add a new service/content provider account to be managed via the gateway 110. In the exemplary scenario depicted in FIG. 2C, the button 212 has been selected. Accordingly, an exemplary interface for adding an account is displayed in the frame 204. The interface for adding an account may comprise a selection box 232 for selecting from a list of supported providers, text boxes 234, 236, and 238 for entering account information, and a button 240 that, upon selection, may send the account information to the provider to register for account maintenance via the gateway 110.

The frame 210 may also comprise a button 210 that, upon selection, brings up an interface for making bill payments. In the exemplary scenario depicted in FIG. 2D, the button 210 has been selected. Accordingly, the payment interface is displayed in the frame 204. The payment interface may comprise a plurality of controls 240 that enable selecting which bills to pay. In the exemplary gateway 110 may enable submitting one payment to pay all outstanding balances for multiple service/content providers. The payment interface also comprises buttons 252, 254, and 256 which enable selecting the source of funding for a payment. The payment interface may also comprise a button 258 that, upon selection, may bring up a window that may enable setting up automatic payments for one or more of the service/content provider accounts managed via the gateway 110.

FIG. 3 is a flow chart illustrating exemplary steps for managing account notifications for multiple providers, in accordance with an embodiment of the invention. Referring to FIG. 3 the exemplary steps may begin in step 302 when a user accesses a GUI, such as the GUI described with respect to FIGS. 2A-2D, and configures one or more notifications for one or more service/content provider accounts managed via the broadband gateway 110. In step 304, one or more users and/or devices may consume content via the broadband gateway 110 and/or utilize services provided via the gateway 110, where the content and services are provided by providers. In step 306, the account activity may trigger a notification. For example, the notification may be triggered based on the amount of content consumed, the amount of services utilized, on the type of content consumed, on the type of services utilized, on the devices from which the content is consumed, on the devices from the services are utilized, on the time at which the content is consumed, the time at which the services are utilized, on the user consuming the content, and/or on the user utilizing the services. In step 308, the broadband gateway 110 may send the notification to one or more of the devices 112, to other broadband gateways, and/or to other destinations via the distribution network(s) and/or the Internet. The devices to which the notification is sent may depend on, for example, what the notification is and/or why the notification was generated.

FIG. 4 is a flow chart illustrating exemplary steps for managing multiple service/content provider accounts via a broadband gateway, in accordance with an embodiment of the invention. Referring to FIG. 4, the exemplary steps may be begin with step 402 in which a gateway 110 may be installed to interface with the devices 112 and the service/content providers via the distribution network(s) 108. In step 404 a user may access a GUI, such as the GUI described with respect to FIGS. 2A-2D, and may navigate to the Account/Billing portion of the GUI. In step 408 the user may enter account information into the gateway 110. Such information may be securely stored in the gateway 110 such that the user does not need to enter it each time and such that the gateway 110 can access the account information from the service/content providers. In step 408, the gateway 110 may occasion ally and/or periodically receive information, such as account activity, billing, and notifications, from the service/content providers. In step 410, a user of the gateway 110 can bring up the GUI to review the account information, make payments, and/or otherwise manage the service/content provider accounts.

FIG. 5 is a flow chart illustrating exemplary steps for managing multiple service/content provider accounts via a broadband gateway, in accordance with an embodiment of the invention. Referring to FIG. 5, the
exemplary steps may begin with step 502, in which a gateway 110 may be installed to interface with the devices 112 and the service/content providers via the distribution network(s) 108. In step 504, a user/account holder associated with the gateway 110 may setup a payment account with a payment service provider, such as service provider 102, described with respect to FIG. 1A, that provides unified management of multiple service/content provider accounts. In step 506, various service/content provider accounts associated with the gateway 110 may be linked in the gateway 110 to the payment account. In step 508, as content is consumed and/or as services are utilized via the gateway 110, credits may be added to the payment account. Example of ways in which credits may be earned comprise users providing input, such as filling out electronic questionnaires, via the gateway 110, users consuming particular content via the gateway 110, users agreeing to defer consumption of content until a later time. In step 510, accumulated credits may be utilized to pay service/content provider bills via the gateway 110 and the payment account.

[0095] Various aspects of a method and system for account maintenance via a broadband gateway are provided. In an exemplary embodiment of the invention, a subscriber associated with a gateway 110 may have a plurality of subscriber accounts with a corresponding plurality of service/content providers 102/104. Information associated with the subscribers service/content provider accounts may be stored in the gateway 110, and the gateway 110 may present a user interface via which the subscriber may manage settings and balances associated with the plurality of accounts. The user interface may enable submitting a single payment and funds from the single payment may be applied to each of the plurality of accounts. Activity for each of the plurality of accounts may be displayed via the user interface. The gateway 110 may be operable to monitor activity of one or more of the plurality of accounts. The gateway 110 may be operable to generate one or more alerts based on the activity and based on criteria established for the one or more of the plurality of accounts. The gateway 110 may display the one or more alerts in the user interface. The alerts may be communicated to a plurality of electronic devices 112 communicatively coupled to the broadband gateway 110. The account settings may determine which users and/or devices 112 are permitted to access one or more of the plurality of accounts. The account settings may determine usage limits for one or more of the plurality of accounts. Credits may be added to a payment account based on one or both of use of the broadband gateway 110 and input provided by a user of the broadband gateway 110. The credits may be utilized to pay down a balance of one or more of the plurality of accounts.

[0096] Other embodiments of the invention may provide a non-transitory computer readable medium and/or storage medium, and/or a non-transitory machine readable medium and/or storage medium, having stored thereon, a machine code and/or a computer program having at least one code section executable by a machine and/or a computer, thereby causing the machine and/or computer to perform the steps as described herein for account maintenance via a broadband gateway.

[0097] Accordingly, the present invention may be realized in hardware, software, or a combination of hardware and software. The present invention may be realized in a centralized fashion in at least one computer system, or in a distributed fashion where different elements are spread across several interconnected computer systems. Any kind of computer system or other apparatus adapted for carrying out the methods described herein is suited. A typical combination of hardware and software may be a general-purpose computer system with a computer program that, when being loaded and executed, controls the computer system such that it carries out the methods described herein.

[0098] The present invention may also be embedded in a computer program product, which comprises all the features enabling the implementation of the methods described herein, and which when loaded in a computer system is able to carry out these methods. Computer program in the present context means any expression, in any language, code or notation, of a set of instructions intended to cause a system having an information processing capability to perform a particular function either directly or after either or both of the following: a) conversion to another language, code or notation; b) reproduction in a different material form.

[0099] While the present invention has been described with reference to certain embodiments, it will be understood by those skilled in the art that various changes may be made and equivalents may be substituted without departing from the scope of the present invention. In addition, many modifications may be made to adapt a particular situation or material to the teachings of the present invention without departing from its scope. Therefore, it is intended that the present invention not be limited to the particular embodiment disclosed, but that the present invention will include all embodiments falling within the scope of the appended claims.

What is claimed is:

1. A method for networking, the method comprising:
   in a broadband gateway that is operable to handle a plurality of physical layer connections to a corresponding plurality of network access service providers:
   storing information associated with a plurality of subscriber accounts, wherein:
   said plurality of subscriber accounts are associated with a corresponding plurality of providers that are accessed via one or more of said physical layer connections; and
   said plurality of providers comprises: a plurality of service providers, a plurality of content providers, or a combination of one or more service providers and one or more content providers; and
   presenting a user interface that a subscriber may interact with to manage financial transactions associated with said plurality of subscriber accounts.

2. The method according to claim 1, wherein:
   said user interface enables submitting a single payment and funds from said single payment are applied to balances of each of said plurality of subscriber accounts.

3. The method according to claim 1, comprising displaying activity of each of said plurality of subscriber accounts via said user interface.

4. The method according to claim 1, comprising:
   monitoring activity of one or more of said plurality of subscriber accounts; and
   generating one or more alerts based on said activity and based on criteria established for said one or more of said plurality of subscriber accounts.

5. The method according to claim 4, comprising displaying said one or more alerts in said user interface.
6. The method according to claim 4, comprising communicating said alerts to a plurality of electronic devices communicatively coupled to said broadband gateway.

7. The method according to claim 1, wherein said user interface enables said subscriber to manage settings for each of said plurality of subscriber accounts.

8. The method according to claim 7, wherein said settings determine one or more of:
   - which electronic devices coupled to said broadband gateway are permitted access to said one or more of said plurality of accounts;
   - which users of said electronic devices are permitted access to said one or more of said plurality of accounts; and
   - usage limits for said one or more of said plurality of accounts.

9. The method according to claim 1, comprising adding credits to a payment account based on one or both of: use of said broadband gateway, and input provided by a user of one of said electronic devices coupled said broadband gateway.

10. The method according to claim 9, wherein said credits are utilized to pay down a balance of one or more of said plurality of accounts.

11. A system for networking, the system comprising:
   - one or more circuits for use in a broadband gateway, said one or more circuits being operable to:
     - handle a plurality of physical layer connections to a corresponding plurality of network access service providers;
     - store information associated with a plurality of subscriber accounts associated with each of a plurality of providers that are accessed via one or more of said physical layer connections, wherein said plurality of providers comprises: a plurality of service providers, a plurality of content providers, or a combination of one or more service providers and one or more content providers; and
     - present a user interface that a subscriber may interact with to manage financial transactions associated with said plurality of subscriber accounts.

12. The system according to claim 1, wherein:
   - said user interface enables submitting a single payment; and
   - funds from said single payment are applied to balances of each of said plurality of subscriber accounts.

13. The system according to claim 1, wherein said one or more circuits are operable to display activity of each of said plurality of subscriber accounts via said user interface.

14. The system according to claim 1, wherein said one or more circuits are operable to:
   - monitor activity of one or more of said plurality of subscriber accounts; and
   - generate one or more alerts based on said activity and based on criteria established for said one or more of said plurality of subscriber accounts.

15. The system according to claim 4, wherein said one or more circuits are operable to:
   - submit a single payment; and
   - said user interface enables said subscriber to manage settings for each of said plurality of subscriber accounts.

16. The system according to claim 4, wherein said one or more circuits are operable to communicate said alerts to a plurality of electronic devices communicatively coupled to said broadband gateway.

17. The system according to claim 1, wherein said user interface enables said subscriber to manage settings for each of said plurality of subscriber accounts.

18. The system according to claim 7, wherein said settings determine one or more of:
   - which electronic devices coupled to said broadband gateway are permitted access to said one or more of said plurality of accounts;
   - which users of said electronic devices are permitted access to said one or more of said plurality of accounts; and
   - usage limits for said one or more of said plurality of accounts.

19. The system according to claim 1, wherein said one or more circuits are operable to add credits to a payment account based on one or both of: use of said broadband gateway, and input provided by a user of one of said electronic devices coupled said broadband gateway.

20. The system according to claim 19, wherein said credits are utilized to pay down a balance of one or more of said plurality of accounts.

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