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Lundgren et al.(10) **Pub. No.: US 2011/0302596 A1**(43) **Pub. Date: Dec. 8, 2011**(54) **METHOD AND SYSTEM FOR TRUSTED
RATINGS FOR CONTENT CONSUMPTION
VIA A BROADBAND GATEWAY****Publication Classification**(51) **Int. Cl.**
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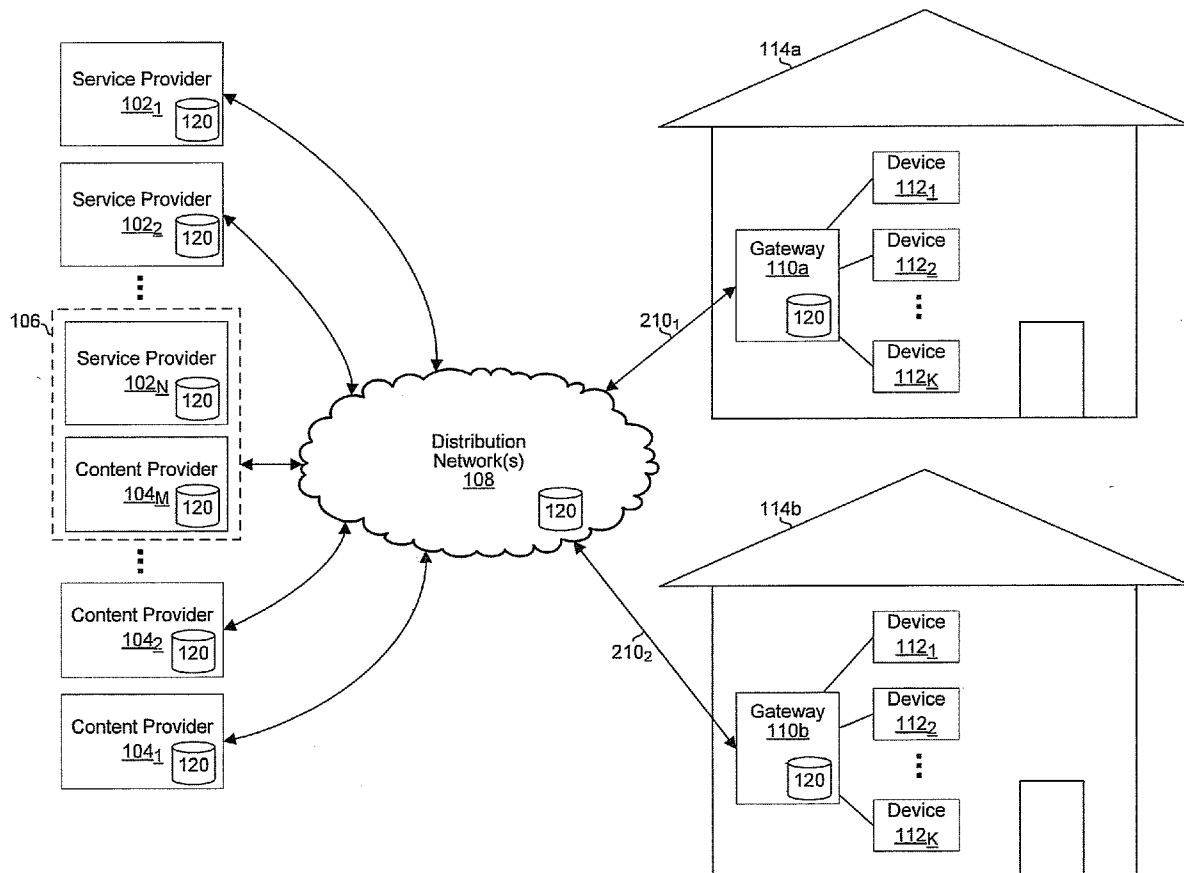
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(52) **U.S. Cl.** **725/9**(57) **ABSTRACT**

Aspects of a method and system for trusted ratings for content consumption via a broadband gateway are provided. A first broadband gateway may collect information regarding users of a first one or more electronic devices and information regarding content handled by the first broadband gateway. The first broadband gateway may utilize the collected information to generate ratings for content. The ratings may be customized for one or more users of the first electronic device(s). The first broadband gateway may be operable to restrict, promote, or otherwise govern access to content based on the generated ratings. The ratings may be generated based on criteria input by users of the first electronic device(s). The first electronic device(s) may be coupled to the first gateway. The first broadband gateway may also collect information from users of a second one or more electronic device(s) which may be coupled to a second broadband gateway.

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(60) Provisional application No. 61/351,696, filed on Jun. 4, 2010.



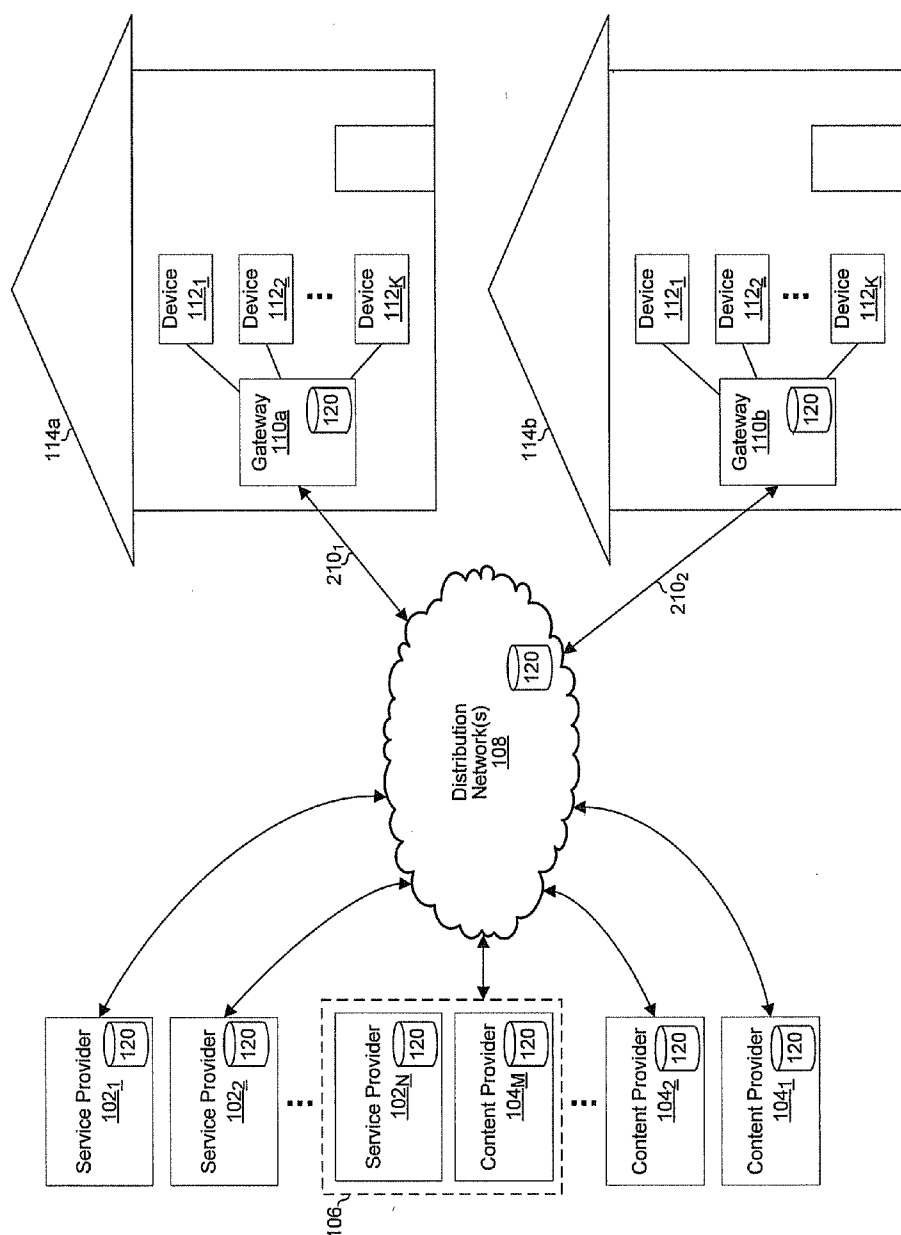


FIG. 1

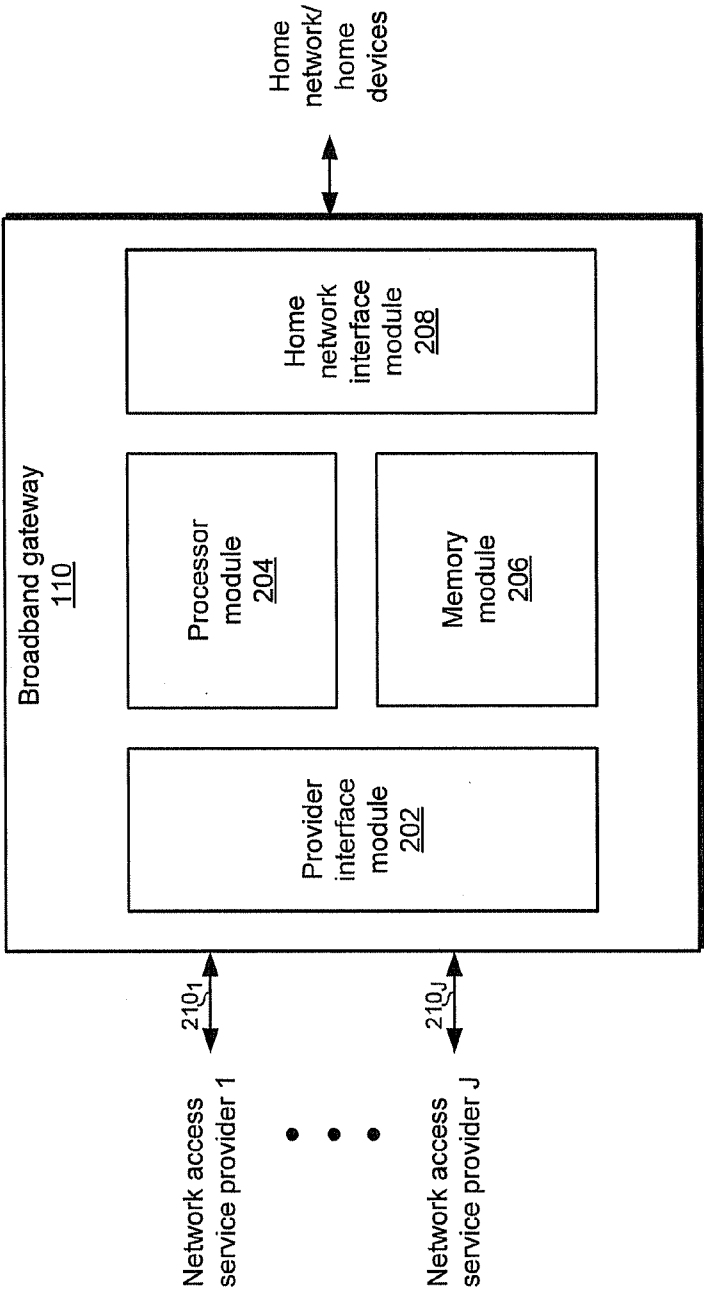
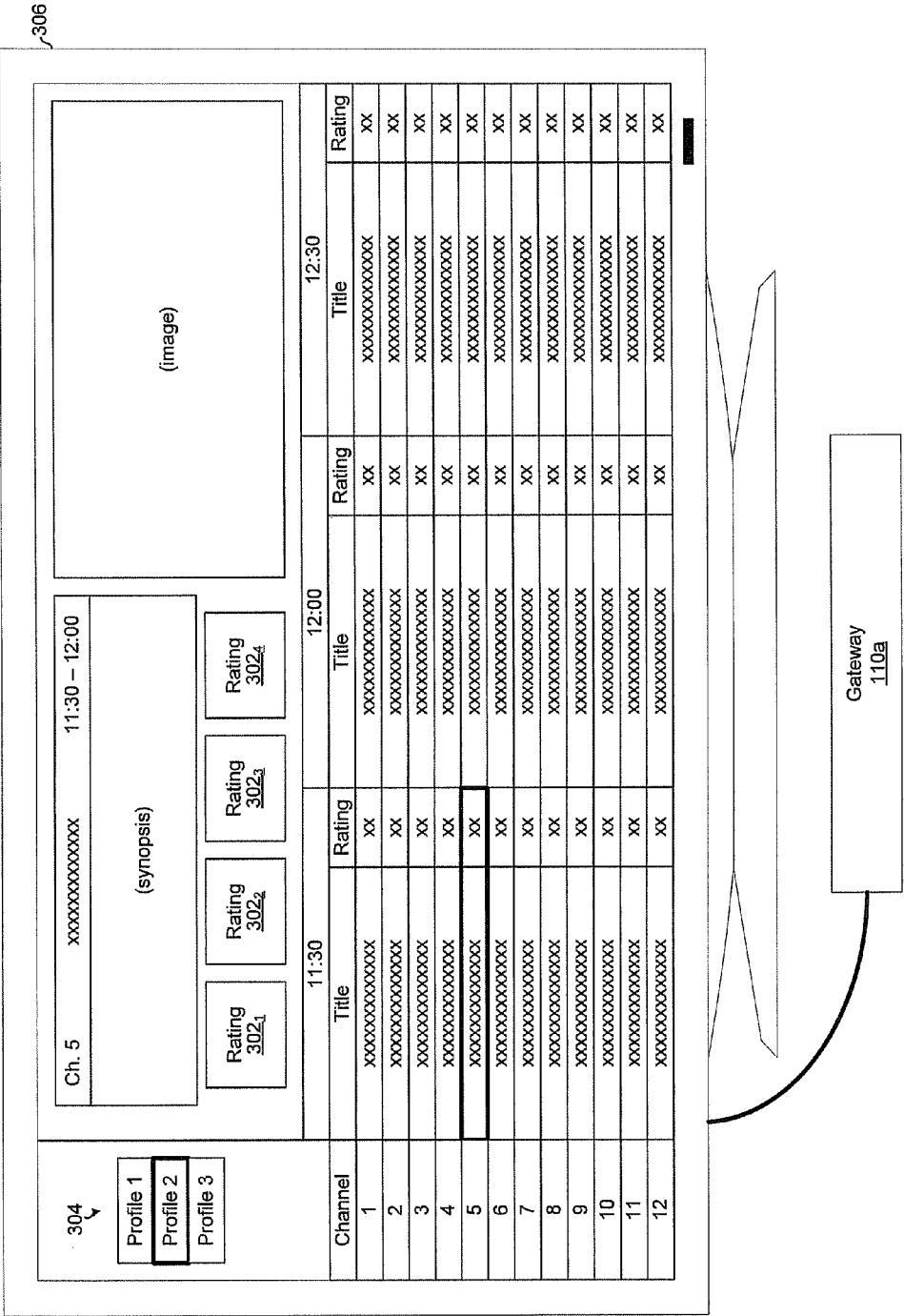


FIG. 2



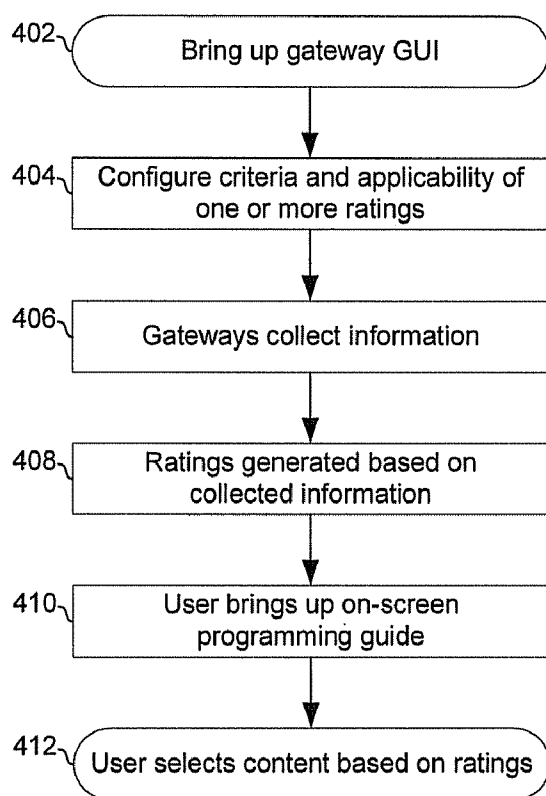


FIG. 4

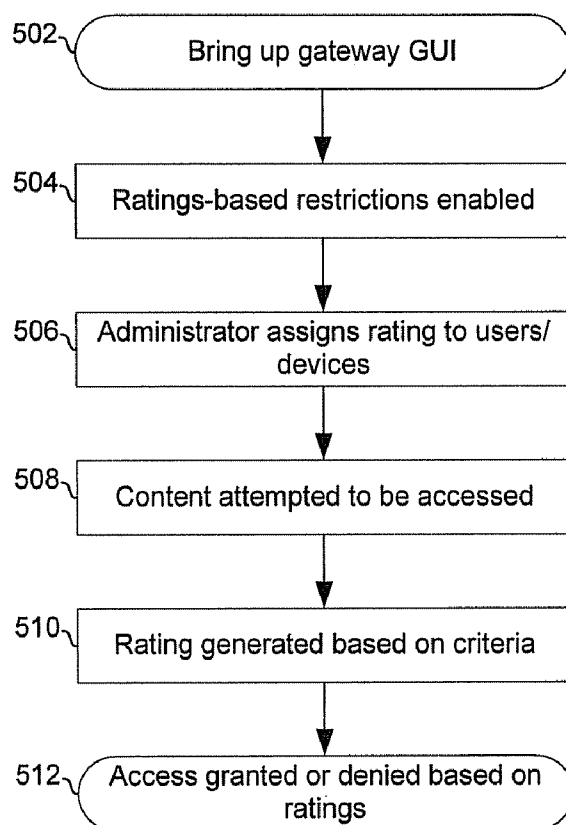


FIG. 5

METHOD AND SYSTEM FOR TRUSTED RATINGS FOR CONTENT CONSUMPTION VIA A BROADBAND GATEWAY

CLAIM OF PRIORITY

[0001] This patent application makes reference to, claims priority to and claims benefit from U.S. Provisional Patent Application Ser. No. 61/351,696 filed on Jun. 4, 2010.

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

INCORPORATION BY REFERENCE

[0003] This application also makes reference to U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23397U502) filed on even date herewith;

[0004] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23398U502) filed on even date herewith;

[0005] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23399U502) filed on even date herewith;

[0006] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23400U502) filed on even date herewith;

[0007] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23401 U502) filed on even date herewith;

[0008] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23402U502) filed on even date herewith;

[0009] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23403U502) filed on even date herewith;

[0010] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23404U502) filed on even date herewith;

[0011] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23405U502) filed on even date herewith;

[0012] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23406U502) filed on even date herewith;

[0013] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23407U502) filed on even date herewith;

[0014] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23408U502) filed on even date herewith;

[0015] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23409U502) filed on even date herewith;

[0016] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23410U502) filed on even date herewith;

[0017] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23411 U502) filed on even date herewith;

[0018] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23412U502) filed on even date herewith;

[0019] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23413U502) filed on even date herewith;

[0020] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23414U502) filed on even date herewith;

[0021] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23415U502) filed on even date herewith;

[0022] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23416U502) filed on even date herewith;

[0023] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23417U502) filed on even date herewith;

[0024] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23418U502) filed on even date herewith;

[0025] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23419U502) filed on even date herewith;

[0026] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23420U502) filed on even date herewith;

[0027] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23421 U502) filed on even date herewith;

[0028] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23422U502) filed on even date herewith;

[0029] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23423U502) filed on even date herewith;

[0030] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23424U502) filed on even date herewith;

[0031] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23425U502) filed on even date herewith;

[0032] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23426U502) filed on even date herewith;

[0033] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23427U502) filed on even date herewith;

[0034] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23428U502) filed on even date herewith;

[0035] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23429U502) filed on even date herewith;

[0036] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23430U502) filed on even date herewith;

[0037] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23431 U502) filed on even date herewith;

[0038] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23432U502) filed on even date herewith;

[0039] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23433U502) filed on even date herewith;

[0040] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23434U502) filed on even date herewith;

[0041] U.S. patent application Ser. No. xx/xxx,xxx (Attorney Docket No. 23435U502) filed on even date herewith;

[0042] Each of the above stated applications is hereby incorporated herein by reference in its entirety.

FIELD OF THE INVENTION

[0043] Certain embodiments of the invention relate to broadband gateways. More specifically, certain embodiments of the invention relate to a method and system for trusted ratings for content consumption via a broadband gateway.

BACKGROUND OF THE INVENTION

[0044] 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 TVs 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.

[0045] 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

[0046] A system and/or method is provided for trusted ratings for content consumption 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.

[0047] 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

[0048] FIG. 1 illustrates an exemplary communication system comprising one or more broadband gateways operable to provide trusted ratings, in accordance with an embodiment of the invention.

[0049] FIG. 2 is a diagram illustrating an example of a broadband gateway via which multiple service/content provider accounts may be managed, in accordance with an embodiment of the invention.

[0050] FIG. 3 illustrates an example of an electronic programming guide (EPG) that provides customized and/or trusted content ratings, in accordance with an embodiment of the invention.

[0051] FIG. 4 is a flow chart illustrating exemplary steps for a gateway providing trusted and/or customized content ratings, in accordance with an embodiment of the invention.

[0052] FIG. 5 is a flow chart illustrating exemplary steps for controlling access to content based on trusted and/or customized content ratings generated by a broadband gateway, in accordance with an embodiment of the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0053] Certain embodiments of the invention may be found in a method and system for trusted ratings for content consumption via a broadband gateway. In various embodiments of the invention, a first broadband gateway may collect information from users of a first one or more electronic devices, information regarding users of the first one or more electronic devices, and/or information regarding content handled by the first broadband gateway. The first broadband gateway may utilize the collected information to generate ratings for content. The ratings may be customized for one or more users of the first one or more electronic devices. The first broadband gateway may be operable to restrict, promote, or otherwise govern access to content based on the generated ratings. The ratings may be generated based on criteria input by users of the first one or more electronic devices. The first broadband gateway may generate a graphical user interface via which the criteria can be input.

[0054] The first broadband gateway may also collect information regarding the first one or more electronic devices, and the collected information regarding the first one or more electronic devices may be utilized in generating the ratings. The first broadband gateway may be operable to restrict, promote, or otherwise govern access to the content by the first one or more electronic devices based on the generated ratings. The first broadband gateway may be operable to restrict, promote, or otherwise govern access to the content by the first one or more electronic devices in instances that one or more of the generated ratings associated with the particular meets particular criteria. The first broadband gateway may also collect information from or regarding users of a second one or more electronic devices, such as the devices in the location. The first broadband gateway may also collect information regarding content handled by one or more second broadband gateways. The information regarding users of the second one or more electronic devices and the information regarding content handled by the second one or more broadband gateways may be utilized for generating the ratings.

[0055] Collected information may comprise feedback from users of the first one or more electronic devices and/or from the second one or more electronic devices. The first broadband gateway may be operable to restrict, promote, or otherwise govern access to particular content in instances that one or more users of the first one or more electronic devices and/or in instances that one or more users of the second one or more electronic devices have not provided feedback on the particular content. The first broadband gateway may be operable to generate a graphical user interface via which the users of the first one or more electronic devices can input feedback.

[0056] FIG. 1 illustrates an exemplary communication system comprising one or more broadband gateways operable to provide trusted and/or customized ratings, in accordance with an embodiment of the invention. Referring to FIG. 1 there is shown a broadband gateway **110a** in a location **114a** and a broadband gateway **110b** in a location **114b**. Each of the broadband gateways **110a** and **110b** are coupled to a plurality of electronic devices **112₁-112_K**, where K is an integer greater than or equal to 1. Each of the broadband gateways **110a** and **110b** is also coupled to one or more service providers **102₁-102_N** and/or one or more content providers **104₁-104_M** via one or more distribution networks **108**, where N and M are integers greater than or equal to 1.

[0057] The service providers **102₁-102_N** may comprise various entities which may provide various services to the devices **112** via the gateway **110** and/or to the gateway **110** itself. Some of the service providers **102₁-102_N** may comprise 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 **102₁-102_N**, 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.

[0058] The content providers **104₁-104_M** 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. For example, 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.” Content and/or services that are provided by a content provider and/or a service provider may be provided to the gateway 110 via a physical connection provided by a network access service provider.

[0059] The gateways 110a and 110b may each comprise suitable logic, circuitry, interfaces, and/or code that may be operable to implement various aspects of the invention. The gateways 110a and 110b may each may be operable to communicate with the content providers 104₁-104_M, the service providers 102₁-102_N, and the devices 112₁-112_K. In this manner, the gateways 110a and 110b may each enable bidirectional communication of content and/or other information between the content providers 104₁-104_M, the service providers 102₁-102_N, and the devices 112₁-112_K. Communications between the broadband gateways 110 and 110b and the content providers 104₁-104_M and service providers 102₁-102_N may be carried over optical, wired, and/or wireless links of the distribution network(s) 108. Similarly, communications between each of the broadband gateways 110a and 110b and devices 112 may be carried over optical, wired, and/or wireless links.

[0060] 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 102₁-102_N. 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.

[0061] The storage elements 120 depicted in various portions of the system of FIG. 1 may represent storage or memory utilized to collect information that may be utilized to generate trusted and/or customized content ratings. In this regard, information for generating trusted and/or customized content ratings may be stored in one or more places and not all of the storage elements 120 depicted in FIG. 1 are need to be present. For example, in one embodiment of the invention, information may be stored in the gateways 110a and 110b and each of the gateways 110a and 110b may collect information from each other and other gateways via gateway to gateway communications. In another embodiment of the invention, information collected by each of the gateways 110a and 110b may be communicated to one or more storage elements 120 residing in the network(s) 108 and/or in data centers of one or more of the content providers 104 and/or one or more of the service providers 102. In such an embodiment, the gateways

110a and 110b may collect information from each other and/or from other gateways (not shown) by retrieving the information from the storage element(s) 120 in the network and/or in the data centers.

[0062] The electronic devices 112₁-112_K in each of the locations 114a and 114b may comprise, for example, one or more instances of one or more of the following: a television, a laptop computer, a tablet of “pad” device, a computer and/or server, a personal media player, a digital video recorder, an optical media player, a mobile phone, a speaker, a AM/FM radio, a terrestrial phone, and an appliance. Each of the devices 112₁-112_K may also be referred to as a communication device.

[0063] In operation, the gateway 110a may collect information from the devices 112₁-112_K in location 114a and the collected information may be utilized to generate ratings for content handled by the gateway 110a. That is, content consumed by the device(s) 112₁-112_K via the gateway 110a. The gateway 110a may track which content is consumed by which users and/or which content is consumed via which of the devices 112₁-112_K. Additionally or alternatively, the gateway 110a may receive feedback from users of the devices 112₁-112_K in the location 114a regarding content they consume via the gateway 110a. In this regard, the gateway 110a may prompt users for feedback and/or allow users to enter feedback via a graphical user interface (GUI).

[0064] The gateway 110a may associate the received feedback with the user and/or device 112 from which the feedback was received. Feedback from various users may then be combined to generate customized and/or trusted ratings. Which feedback is utilized for generating a particular rating may be based on the particular users providing the feedback, based on characteristics of the users providing the feedback, the particular device 112 providing the feedback, and/or characteristics of the particular device providing the feedback.

[0065] The gateway 110a may also be operable to collect information from other gateways, such as the gateway 110b. In this manner, ratings generated by the gateway 110a may be based, not only on content handled by the gateway 110a and feedback provided via the gateway 110a, but also on content handled by the gateway 110b and feedback provided via the gateway 110b. That is, the gateway 110b may collect feedback from users of the devices 112₁-112_K in the location 110b. The gateways 110a and 110b may exchange the collected information such that each one of the gateways 110a and 110b is enabled to generate ratings based on feedback from users associated with the other one of the gateways 110a and 110b. In other words, ratings generated by the gateway 110a may be based on feedback provided to the gateway 110a from users in the location 114a and/or based on feedback provided to the gateway 110b from users in the location 114b. Ratings generated for content may be displayed to a user via an on-screen display (OSD), such as an electronic programming guide (EPG), and/or be available via a web-based interface. Ratings generated for content may be utilized to control access to content.

[0066] FIG. 2 is a diagram illustrating an example of a broadband gateway via which multiple service/content provider accounts may be managed, 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 one or more 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 local network in the location 114 in which the gateway is installed, which may comprise wired, optical, 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, and/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 202, a processor module 204, a memory module 206, and a home network interface module 208. 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 202 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 130₁-130_J may connect the gateway 110 to a different 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 130₁ may comprise a DSL over twisted-pair connection and the connection 130_J may comprise a CATV over coaxial cable connection.

[0070] The memory module 206 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 206 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 206 may comprise storage media integrated in the broadband gateway 110 and/or a removable storage device.

[0071] The processor module 204 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 this regard, data received from the service/content providers via one or more the physical layer connections 130₁-130_J 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 130₁-130_J. 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 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 112 in the location 114 via the local network. The client network interface module 128 may also be operable to receive data from one or more devices in the location 114 via the local network. The client network interface module 128 may be operable to support multiple communication protocols, standards, and/or data transport technologies. In this regard, the home network interface module 208 may handle one or more physical layer connections to one or more devices 112. For example, the home network interface module 208 may comprise, one or more wired and/or wireless Ethernet interfaces, one or more analog and/or digital audio outputs, one or more audio/video interfaces such as such as HDMI and DisplayPort, one or more USB interfaces, one or more IEEE 1394, and/or one or more telephone jacks.

[0073] The broadband gateway 110 may be operable to provide energy 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 for 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 service/content provider and obtain rewards/credits associated with the use of such certified devices. Moreover, overall network power consumption may be managed by sharing information among multiple interconnected broadband gateways.

[0074] 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.

[0075] 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.

[0076] 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.

[0077] 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.

[0078] 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.

[0079] The broadband gateway **110** may be utilized in connection with constrained network resources, such as time of day, traffic congestion, 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.

[0080] 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.

[0081] 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**.

[0082] 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.

[0083] 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.

[0084] 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.

[0085] The broadband gateway **110** may support a reduction in the cost of unwatched 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.

[0086] FIG. 3 illustrates an example of an electronic programming guide (EPG) that provides customized and/or trusted content ratings, in accordance with an embodiment of the invention. Referring to FIG. 3, there is shown the gateway **110a** displaying an EPG via a monitor **306**, where the monitor **306** corresponds to one of the devices **112₁-112_N** in the location **114a**. The exemplary EPG comprises control **304** which enables the user to customize the EPG to their user profile. In an embodiment of the invention, when a user attempts to select a different user profile, the gateway **110a** may prompt the user to enter a password or some other security information. This required entry of security information may ensure that a user, for example, a child, may consume only appropriately rated content. The EPG may comprise a list view which displays content available and also displays one or more customized and/or trusted ratings associated with that content. The EPG may also comprise a detail view which displays additional information, such as a synopsis of the content selected in the list view, and one or more ratings associated with the highlighted content. A user may utilize a remote control to navigate the list view and select particular content. In the example scenario depicted in FIG. 3, content on channel 5 at 11:30 is selected.

[0087] In an embodiment of the invention, the list view may display a default or composite rating and the details view may display additional ratings **302**. The additional ratings may, for example, break down ratings of the highlighted content into one or more sub-categories. For example, criteria for rating content for a particular user may be set up such that feedback regarding the highlighted content from the user's best friend, feedback from people in the user's neighborhood, feedback from people in the user's age bracket, and feedback from people the user is friends with on a social networking site are all factored into the composite rating. The details view may

then break down the ratings into the sub-groups that factored into the composite rating. That is, rating 302₁ may be a rating of the highlighted content based on feedback from the user's best friend, rating 302₂ may be a rating of the highlighted content based on feedback from people in the user's neighborhood, rating 302₃ may be a rating of the highlighted content based on feedback from people in the user's age bracket, and rating 302₄ may be a rating of the highlighted content based on feedback from social networking friends of the user.

[0088] FIG. 4 is a flow chart illustrating exemplary steps for a gateway providing trusted and/or customized content ratings, in accordance with an embodiment of the invention. Referring to FIG. 4, the exemplary steps begin with step 402 when an administrator of the broadband gateway 110a accesses a graphical user interface (GUI) of the gateway 110a. The user may access the GUI via an on-screen display (OSD) or a web-based interface.

[0089] In step 404, the administrator of the gateway 110a may interact with the GUI to reconfigure criteria of existing ratings and/or establish criteria for a new rating. Criteria for a rating may comprise, for example, characteristics of the content such as the source of the content and ratings given to the content by one or more regulatory or consumer interest bodies. Criteria for a rating may comprise, for example, which particular users of the gateway 110a or other gateways, such as the gateway 110b, contribute to the rating. Additionally or alternatively, criteria for a rating may comprise, for example, which categories of users of the devices 112 coupled to the gateway 110a and/or to other gateways contribute to the rating. That is, a particular rating may be determined based on input from one or more particular users and/or from users sharing particular characteristics. Examples of user characteristics comprise demographic information such as age, place of residence, whether the person is a parent, ethnicity, and religion. Other examples of user characteristics comprise whether the user is a friend of, family member of, member of the same community group, educational, or other institution, or is otherwise associated with the administrator of the gateway 110a.

[0090] In step 406, the gateway 110a and other gateways, such as the gateway 110b, may gather information pertaining to content consumed. In an embodiment of the invention, the information may be communicated to a network-based database such that information from one gateway may be accessible to other gateways. In step 408, the gateway 110a may generate the one or more ratings based on the criteria established in step 404. In an embodiment of the invention, the ratings may be generated by retrieving information collected by other gateways, such as the gateway 110b, and combining that information with information collected by the gateway 110a.

[0091] In step 410, a user of a device 112 coupled to the gateway 110a may bring up an EPG. The EPG may display what is playing on, or available from, various channels or content sources, and the generated ratings may be displayed in the EPG along with the content. In an embodiment of the invention, the EPG may be sorted and/or filtered based on the ratings. For example, content may be sorted from highest rating(s) to lowest rating(s). This may enable a user to quickly find desired content. As another example, content having particular ratings may be removed from the EPG and made inaccessible. In this regard, accessibility may depend on the user. For example, the ratings may be utilized to identify content which children are not permitted to watch.

[0092] FIG. 5 is a flow chart illustrating exemplary steps for controlling access to content based on trusted and/or customized content ratings generated by a broadband gateway, in

accordance with an embodiment of the invention. Referring to FIG. 5, the exemplary steps begin with step 502 when an administrator of the broadband gateway 110a accesses a graphical user interface (GUI) of the gateway 110a. The user may access the GUI via an on-screen display or a web-based interface. In step 504, the administrator may enable ratings-based content restrictions. With ratings-based content restrictions enabled, the gateway 110a may control access to content by various users and/or devices 112 based on a customized and/or trusted rating generated by the gateway 110a. In step 506, the administrator may configure the criteria utilized in determining what content a particular user and/or device is permitted to access. In this regard, the administrator may configure which rating or ratings are utilized to determine a particular user's access to content and which values of the utilized rating(s) correspond to accessible content. In step 508, a user may attempt to access content from a device 112 coupled to the gateway 110a. In step 510, a rating for the content being accessed may be generated based on criteria associated with the user and/or the device attempting to access the content. In step 512, the gateway 110a may grant or deny access based on the rating generated in step 510.

[0093] An example scenario is now described. In step 506 an administrator may configure the gateway 110a such that a child user's access to content is based on a rating that is determined by feedback from parent users. For example, the rating may correspond to an aggregate, average, or weighted average of ratings provided by parent users of the gateways 110a and 110b. Each parent may rate the content on a scale of 1 to 5 and the child may be allowed to access content having a rating of at least 3 out of 5. In step 508, a child user may attempt to access "show x" via the gateway 110a. In step 510, the gateway 110a may determine the average, aggregate, or weighted average rating that the parents gave to "show x." In step 512, if the rating of "show x" based on the parental feedback is below 3, the child user may be denied access to "show x." Additionally or alternatively, if one or more parents have not yet provided feedback on the show, the child user may be denied access to "show x" at least until the parents provide feedback on "show x."

[0094] Various aspects of a method and system for trusted ratings for content consumption via a broadband gateway are provided. In an example embodiment of the invention, a first broadband gateway 110a may collect information from users of a first one or more electronic devices 112₁-112_K, such as the devices 112₁-112_K in the location 114a. The first broadband gateway 110a may also collect information regarding users of the first one or more electronic devices 112₁-112_K, and/or information regarding content handled by the first broadband gateway 110a. The first broadband gateway 110a may utilize the collected information to generate ratings for content. The ratings may be customized for one or more users of the first one or more electronic devices 112₁-112_K. The first broadband gateway 110a may be operable to restrict, promote, or otherwise govern access to content based on the generated ratings. The ratings may be generated based on criteria input by users of the first one or more electronic devices 112₁-112_K. The first broadband gateway 110a may generate a graphical user interface via which the criteria can be input.

[0095] The first broadband gateway 110a may also collect information regarding the first one or more electronic devices 112₁-112_K, and the collected information regarding the first one or more electronic devices 112₁-112_K may be utilized in generating the ratings. The first broadband gateway 110a may be operable to restrict, promote, or otherwise govern access to the content by the first one or more electronic devices 112

based on the generated ratings. The first broadband gateway **110a** may be operable to restrict, promote, or otherwise govern access to the content by the first one or more electronic devices **112** in instances that one or more of the generated ratings associated with the particular meets particular criteria. The first broadband gateway **110a** may also collect information from or regarding users of a second one or more electronic devices **112₁-112_K**, such as the devices **112₁-112_K** in the location **114b**. The first broadband gateway **110a** may also collect information regarding content handled by one or more second broadband gateways **110b**. The information regarding users of the second one or more electronic devices **112₁-112_K** and the information regarding content handled by the second one or more broadband gateways **110b** may be utilized for generating the ratings.

[0096] Collected information may comprise feedback from users of the first one or more electronic devices **112₁-112_K** and/or from the second one or more electronic devices **112₁-112_K**. The first broadband gateway **110a** may be operable to restrict, promote, or otherwise govern access to particular content in instances that one or more users of the first one or more electronic devices **112₁-112_K** and/or in instances that one or more users of the second one or more electronic devices **112₁-112_K** have not provided feedback on the particular content. The first broadband gateway **110a** may be operable to generate a graphical user interface via which the users of the first one or more electronic devices **112₁-112_K** can input feedback.

[0097] 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 trusted ratings for content consumption via a broadband gateway.

[0098] 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.

[0099] 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.

[0100] 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 content distribution and consumption, the method comprising:

in a first broadband gateway that enables communication with a first one or more electronic devices, wherein said first broadband gateway is operable to handle at least one physical layer connection to at least one corresponding network access service provider:

collecting information from or regarding users of said first one or more electronic devices; and
collecting information regarding content handled by said first broadband gateway; and
generating ratings for content utilizing said collected information, wherein said ratings are customized for one or more users of said first one or more electronic devices.

2. The method according to claim 1, wherein said at least one physical layer connection comprises a plurality of physical layer connections and said at least one corresponding network access service provider comprises a plurality of corresponding access service providers, and wherein each of said plurality of physical layer connections corresponds to a respective one of said plurality of corresponding access service providers.

3. The method according to claim 1, comprising:

collecting information from or regarding users of a second one or more electronic devices coupled to one or more second broadband gateways; and
collecting information regarding content handled by said one or more second broadband gateways; and
generating said ratings for content utilizing:

said collected information from or regarding said users of said second one or more electronic devices; and
said collected information regarding content handled by said one or more second broadband gateways.

4. The method according to claim 3, wherein:

said collected information regarding content handled by said broadband gateway comprises feedback from said users of said first one or more electronic devices; and
said collected information regarding content handled by said one or more second broadband gateways comprises feedback from said users of said second one or more electronic devices.

5. The method according to claim 4, comprising restricting access to particular content by said users of said first one or more electronic devices in instances that:

one or more of said users of said first one or more electronic devices have not provided feedback on said particular content; or

one or more of said users of said second one or more electronic devices have not provided feedback on said particular content.

6. The method according to claim 4, comprising generating a graphical user interface via which said users of said one or more first electronic devices may input said feedback.

7. The method according to claim 1, comprising governing access to content by said users of said first one or more electronic devices based on said generated ratings.

8. The method according to claim **1**, comprising:
collecting information from or regarding said first one or more electronic devices; and
generating said ratings for content utilizing said collected information from or regarding said first one or more electronic devices.

9. The method according to claim **8**, comprising governing access to content by said first one or more electronic devices based on said generated ratings.

10. The method according to claim **8**, comprising governing access to content by said first one or more electronic devices in instances that one or more of said generated ratings associated with said particular content meets particular criteria.

11. The method according to claim **1**, comprising:
generating said ratings based on criteria input by users of said first one or more electronic devices; and
generating a user interface based on which of said users of said first one or more electronic devices may input said criteria.

12. A system for content distribution and consumption, the method comprising:

one or more circuits for use in a first broadband gateway that enables communication with a first one or more electronic devices, said one or more circuits being operable to:

handle at least one physical layer connection to at least one corresponding network access service provider;

collect information from or regarding users of said first one or more electronic devices; and

collect information regarding content handled by said first broadband gateway; and

generate ratings for content utilizing said collected information, wherein said ratings are customized for one or more users of said first one or more electronic devices.

13. The system according to claim **12**, wherein said at least one physical layer connection comprises a plurality of physical layer connections and said at least one corresponding network access service provider comprises a plurality of corresponding access service providers, and wherein each of said plurality of physical layer connections corresponds to a respective one of said plurality of corresponding access service providers.

14. The system according to claim **12**, wherein said one or more circuits are operable to:

collect information from or regarding users of a second one or more electronic devices coupled to one or more second broadband gateways; and

collect information regarding content handled by said one or more second broadband gateways; and

generate said ratings for content utilizing:
said collected information from or regarding said users of said second one or more electronic devices; and

said collected information regarding content handled by said one or more second broadband gateways.

15. The system according to claim **14**, wherein:
said collected information regarding content handled by said broadband gateway comprises feedback from said users of said first one or more electronic devices; and
said collected information regarding content handled by said one or more second broadband gateways comprises feedback from said users of said second one or more electronic devices.

16. The system according to claim **15**, wherein said one or more circuits are operable to restrict access to particular content by said users of said first one or more electronic devices in instances that:

one or more of said users of said first one or more electronic devices have not provided feedback on said particular content; or

one or more of said users of said second one or more electronic devices have not provided feedback on said particular content.

17. The system according to claim **15**, wherein said one or more circuits are operable to generate a graphical user interface via which said users of said one or more first electronic devices may input said feedback.

18. The system according to claim **12**, wherein said one or more circuits are operable to govern access to content by said users of said first one or more electronic devices based on said generated ratings.

19. The system according to claim **12**, wherein said one or more circuits are operable to:

collect information from or regarding said first one or more electronic devices; and

generate said ratings for content utilizing said collected information from or regarding said first one or more electronic devices.

20. The system according to claim **19**, wherein said one or more circuits are operable to govern access to content by said first one or more electronic devices based on said generated ratings.

21. The system according to claim **19**, wherein said one or more circuits are operable to govern access to content by said first one or more electronic devices in instances that one or more of said generated ratings associated with said particular content meets particular criteria.

22. The system according to claim **12**, wherein said one or more circuits are operable to:

generate said ratings based on criteria input by users of said first one or more electronic devices; and

generate a user interface based on which of said users of said first one or more electronic devices may input said criteria.

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