



- (51) **International Patent Classification:**
G06Q 30/02 (2012.01) *A61B 5/16* (2006.01)
H04N 21/40 (2011.01)
- (21) **International Application Number:**
PCT/US2015/027222
- (22) **International Filing Date:**
23 April 2015 (23.04.2015)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
61/985,149 28 April 2014 (28.04.2014) US
14/502,623 30 September 2014 (30.09.2014) US
14/502,468 30 September 2014 (30.09.2014) US
14/502,476 30 September 2014 (30.09.2014) US
14/502,017 30 September 2014 (30.09.2014) US
14/502,148 30 September 2014 (30.09.2014) US
14/502,094 30 September 2014 (30.09.2014) US
14/501,520 30 September 2014 (30.09.2014) US
- (71) **Applicant:** ROVI GUIDES, INC. [US/US]; 2830 De La Cruz Boulevard, Santa Clara, CA 95050 (US).
- (72) **Inventors:** HOCTOR, John; 50 Concord Street, Newton, MA 02462 (US). EMANS, Matthew; 73 Dartmouth Street, #4, Boston, MA 02116 (US).
- (74) **Agents:** FEUSTEL, Richard, M. et al.; ROPES & GRALY LLP, Prudential Tower, 800 Boylston Street, Boston, MA 02199 (US).
- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE,

[Continued on next page]

(54) **Title:** SYSTEMS AND METHODS FOR DETERMINING A LIKELIHOOD OF USER TERMINATION OF SERVICES

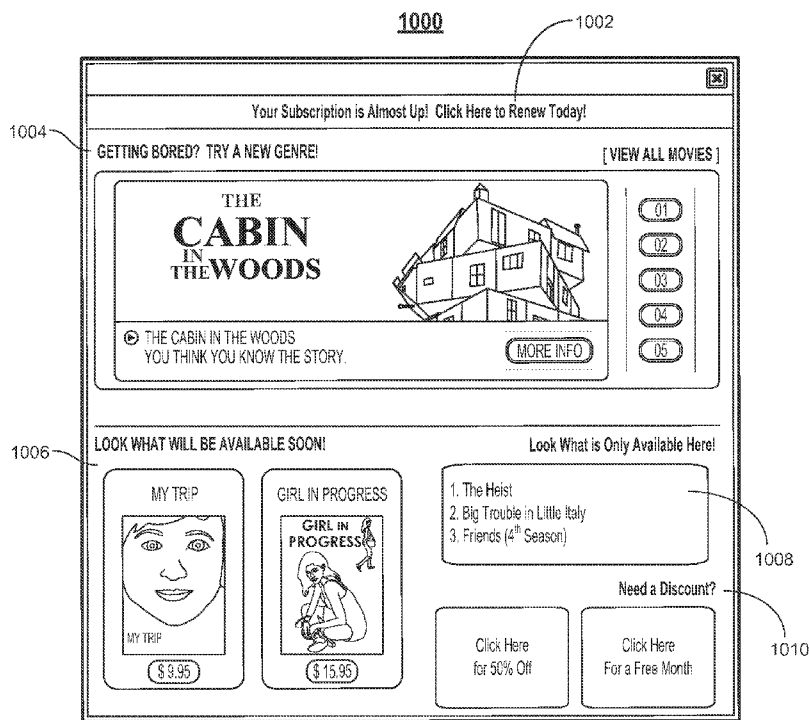


FIG. 10

(57) **Abstract:** Systems and methods are described herein for determining a likelihood that a user will change a service. A media guidance application may identify a first service to which a user is subscribed. The media guidance application may receive information from a third-party data source corresponding to the user and identify, based on the information from the third-party data source, data indicating a negative interest in the first service. Based on the identified data, the media guidance application may calculate a likelihood that the user will change the first service.



DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, **Published:**

LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE,

SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, — *with international search report (Art. 21(3))*

GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

SYSTEMS AND METHODS FOR DETERMINING A LIKELIHOOD OF USER TERMINATION OF SERVICES

Cross-Reference to Related Applications

5 [0001] This application claims priority benefit under 35 U.S.C. § 119(e) from U.S. provisional application No. 61/985,149, filed on April 28, 2014; U.S. non-provisional application No. 14/502,468, filed on September 30, 2014; U.S. non-provisional application No. 14/502,476, filed on September 30, 2014; U.S. non-provisional application No. 14/502,623, filed on September 30, 2014; U.S. non-provisional application No. 14/502,094, filed on September 30, 2014; U.S. non-provisional application No. 10 14/502,148, filed on September 30, 2014; U.S. non-provisional application No. 14/501,520, filed on September 30, 2014; and U.S. non-provisional application No. 14/502,017, filed on September 30, 2014. The aforementioned, earlier-filed applications are hereby incorporated by reference herein in their entireties.

Background

15 [0002] Users have access to content from a variety of sources (e.g., various cable providers, various satellite providers, various Internet sources, etc.). Some of these sources offer a variety of services (e.g., premium services such as on-demand content purchasing, premium channels, higher speed Internet access, telephone services, etc.). Because of the variety of services available and the availability of content from various 20 sources, users are often disconnecting or switching sources and/or services. Traditional systems lack a way to determine the likelihood a user is about to disconnect or switch

sources/services to try to prevent the user from doing so (e.g., by providing discounts and/or advertisements).

[0003] Additionally, users have a plethora of content and a plethora of services offering to provide that content at their disposal. To enjoy the content, users may access one or more services, which typically feature a separate price for each item or a fixed-priced, short-term subscription for unlimited access to the entire content portfolio of the service. However, due to the competition between content providers, users may easily and frequently stop using one service in favor of another. Therefore, encouraging users to stay with a current service is a high priority to the current service providers.

Summary

[0004] Viewer data (e.g., subscriber analytics) helps service providers attract and retain customers by identifying those who may have a propensity to add products and services or who may churn based on viewing behaviors and subscription information. The media guidance application may match viewership data with subscriber billing records to model and evaluate the likely behavior of subscribers and assign a propensity score. These scores are useful for identifying cross-sell and up-sell opportunities as well as focusing marketing activities on the most high-value subscribers.

[0005] Accordingly, systems and methods are described herein for determining a likelihood that a user will change a service. In some aspects, a media guidance application may perform a method for determining a likelihood that a user will change a service. The media guidance application may identify a first service to which a user is subscribed. In some embodiments, the media guidance application may identify the first service by accessing user subscription data or a user profile. The media guidance application may receive information from a third-party data source corresponding to the user. In some embodiments, the third-party data source may be a social media data source, such as a social media website, and the information from the third-party data source corresponding to the user may comprise data from the user's social media profile. The media guidance application may identify, based on the information from the third-party data source, data indicating a negative interest in the first service, and based on the identified data, the media guidance application may calculate a likelihood that the user will change the first service.

[0006] In some embodiments, the media guidance application may identify negative interest in the first service by identifying negative feedback of the first service made by the user. For example, the user may post a negative review on a social media website or provide negative comments to a market survey. The media guidance application may also
5 identify negative interest in the first service by identifying a relative lack of comments about the first service. For example, the media guidance application may identify, from the information from the third-party data source, comments made by the user that include the first service, determine a first time period based on the identified comments, and calculate a first frequency of the identified comments during the first time period. The
10 media guidance application may then identify, from the information from the third-party data source, comments made by the user in a second time period subsequent to the first time period, calculate a second frequency of the identified comments made by the user in the second time period, and determine that the second frequency is less than the first frequency. Thus, the media guidance application may detect whether a user stops
15 commenting about the service or posts comments less frequently than before.

[0007] In some embodiments, the media guidance application may identify negative interest in the first service through individuals connected to the user through a social network maintained by the third-party data source (e.g., Facebook friends). The media guidance application may identify an individual connected to the user through a social
20 network maintained by the third-party data source and identify, from the information from the third-party data source, negative feedback of the first service made by the individual. The media guidance application may also identify a relative lack of comments by the individual connected to the user through the social network. For example, the media guidance application may identify an individual connected to the user through a social
25 network maintained by the third-party data source, identify, from the information from the third-party data source, comments made by the individual that include the first service, determine a first time period based on the identified comments, and calculate a first frequency of the identified comments during the first time period. The media guidance application may further identify, from the information from the third-party data source,
30 comments made by the individual in a second time period subsequent to the first time period, calculate a second frequency of the identified comments made by the individual in the second time period, and determine that the second frequency is less than the first

frequency. In this manner, the media guidance application may detect whether individuals in the user's social circle have stopped commenting or are commenting less frequently about the service.

5 [0008] In some embodiments, the media guidance application may transmit the likelihood that the user will change the first service to a service provider of the first service. The media guidance application and/or the service provider may determine whether the user has a relative high likelihood of changing or terminating the first service. For example, the media guidance application or the service provider may determine whether the calculated likelihood exceeds a threshold, indicating that the user will likely
10 change or terminate the service in the near future. The service provider and/or the media guidance application may transmit to the user at least one of an advertisement for the first service or an offer for a discount for the first service. The advertisement or offer may be transmitted and/or presented in response to calculating the likelihood that the user will change the first service.

15 [0009] In some embodiments, the media guidance application may further identify a second service to which the user is not subscribed, identify, based on the information from the third-party data source, data indicating a positive interest in the second service, and update the likelihood that the user will change the first service based on the identified data indicating a positive interest in the second service. For example, the media guidance
20 application may determine that interest in the second service is rising, and may determine that the user has a higher likelihood of changing or terminating the first service.

[0010] In another aspect, systems and methods are described herein for generating a model to determine a likelihood that a user will change a service. A media guidance application may identify a first service to which a plurality of users are subscribed, receive
25 information from a third-party data source for each of the plurality of users, identify, based on the respective information from the third-party data source, a user action performed by each of the plurality of users in relation to the first service, and identify for at least one of the plurality of users, based on the respective information from the third-party data source, a request to change the first service. Based on the identified user action and the identified
30 request to change the first service, the media guidance application may generate a model to determine a likelihood that a user will change the first service.

[0011] In some embodiments, the media guidance application may generate the model by calculating a probability that the identified user action is followed by the identified request to change the first service. In some embodiments, the request to change the first service may follow the identified user action after a user-identified amount of time. As an illustrative example, the media guidance application may identify a plurality of users who posted negative comments about a service. At least one user of the plurality of users requested to terminate the service. Based on this data, the media guidance application may calculate a probability that an action of posting negative comments about a service is followed by a request to terminate the service.

[0012] In some embodiments, the media guidance application may identify, based on the respective information from the third-party data source, a second user action performed by each of the plurality of users in relation to the first service, determine a pattern of action based on the first user action and the second user action, and calculate a probability that the determined pattern of action is followed by the identified request to change the first service. Continuing the illustrative example from above, the plurality of users may each exhibit a pattern of posting negative comments/feedback about the service. Based on this information, the media guidance application may calculate the probability that several negative comments are followed by a request to terminate the first service. In some embodiments, the user action is one of a playback action, negative feedback for the first service, a negative comment made about the first service, or a lack of user action for a period of time.

[0013] In some embodiments, the media guidance application may use the model to determine the likelihood that a user will change a service. The media guidance application may receive information from the third-party data source for the user, identify, based on the information from the third-party data source for the user, a user action performed by the user in relation to the first service, and compare the user action performed by the user to the user action performed by each of the plurality of users. The media guidance application may calculate, based on the comparison, a correlation factor that indicates a similarity between the user and one of the plurality of users. The media guidance application may determine, based on the correlation factor, a probability that the user will request to change the first service. For example, the media guidance application may determine that the user and the one of the plurality of users have executed one or more

similar actions in a similar timeframe, and thus are likely to request similar changes to the service in the near future. In some embodiments, the media guidance application may transmit the correlation factor to a service provider of the first service.

[0014] In another aspect, methods and systems are described herein for a media guidance application that generates for display content associated with preventing a user from terminating a service in response to determining, based on a biometric state of the user, that a user is likely to terminate the service. For example, in response to determining that a user is unhappy, not attentive, or bored when accessing content provided by the service, the media guidance application may generate for display discounts or other promotions for the service.

[0015] In some aspects, the media guidance application may determine (e.g., using control circuitry) a user is accessing a service. For example, the media guidance application may receive an indication that a user is accessing a service via a user device that monitors the activity of the user. For example, a wearable user device may receive brain activity data that is associated with the user of a particular service. In another example, the media guidance application may receive a message from the service provider that the particular user has logged into his or her account or has otherwise accessed the service.

[0016] The media guidance application may determine (e.g., using the control circuitry) a biometric state of the user while the user is accessing the service. For example, the media guidance application may determine that the user has a particular heart rate, a particular brain state, etc. based on information received from a user device (e.g., a wearable electronic device) that monitors and/or records biometric data.

[0017] The media guidance application may cross-reference (e.g., via control circuitry) the biometric state with a database (e.g., stored on storage circuitry) listing biometric states indicative of a desire to terminate the service to determine whether the biometric state indicates the user desires to terminate the service. For example, the media guidance application may record particular brain activity (e.g., a particular brain wave frequency, amplitude, etc.). The media guidance application may then compare that brain activity to the brain activity of other users (e.g., as recorded in the database) prior to those users terminating the same or similar services. In another example, the media guidance application may record particular brain activity and compare that brain activity to a

database that indicates a particular emotional state (e.g., happy, sad, angry, etc.) of the user to determine whether or not the user is currently unhappy with his or her service. In yet another example, the media guidance application may determine the amount of time that the eyes of a user are fixated on a display device presenting media assets accessed through the service. The media guidance application may compare the amount of time to a threshold amount of time to determine whether or not the user has a particular attentiveness level.

[0018] In response to determining that the biometric state indicates the user desires to terminate the service (e.g., in response to determining that the brain activity of the user is similar to that of users that previously terminated their service or in response to determining that the brain activity of the user is unhappy), the media guidance application may generate for display (e.g., on a display device) content associated with preventing the user from terminating the service. For example, in response to determining that the brain activity of the user is similar to the brain activity of other users prior to those users terminating the same or similar services, in response to determining that the user has an unhappy emotional state (e.g., an upset user indicates that the user will likely terminate the service), and/or in response to determining that the user is not attentive when media assets accessible from the service are presented (e.g., a bored user indicates that the user will likely terminate the service), the media guidance application may generate a promotion for the service that urges the user (or gives the user a reason) to retain the service. For example, the content may include a discount for the service, may include a list of media assets accessible through (or accessible only through) the service.

[0019] In some embodiments, the media guidance application may further determine a length of time the user has the biometric state. For example, the media guidance application may determine an average biometric state of the user over a period of time (e.g., in order to normalize random fluctuations). The media guidance application may then compare the length of time to a threshold length of time and cross-reference the biometric state in the database in response to determining that the length of time corresponds to the threshold length of time. For example, the media guidance application may only perform actions if the media guidance application determines that the user has a particular biometric state for a particular amount of time.

[0020] Additionally, methods and systems are described herein for a media guidance application that generates for display content associated with preventing a user from terminating a service. For example, in response to determining that a user, currently subscribed to a first service, has subscribed to a second service, the media guidance application may compare the content accessible from each service. In response to determining that the services offer similar content, the media guidance application may generate for display discounts or other promotions for the first service. For example, the media guidance application may prevent the user from terminating a service by offering discounts for a service or alerting the user to current or future content that is only accessible through one of the services.

[0021] In some aspects, the media guidance application may determine (e.g., using control circuitry) a user is subscribed to a first service. For example, the media guidance application may retrieve a list (e.g., from storage circuitry) that indicates one or more services are currently subscribed to by the user or otherwise used to access media assets.

[0022] The media guidance application may detect (e.g., using the control circuitry) that the user has subscribed to a second service. For example, the media guidance application may receive inputs from the user (e.g., describing services to which the user subscribes), authorization data from the second service (e.g., granting access to the user to media assets available from the second service), and/or information from third parties (e.g., online transactions, credit card statements, etc., related to the second service) that indicate the user has subscribed to the second service.

[0023] In response to detecting that the user has subscribed to the second service, the media guidance application may compare (e.g., using the control circuitry) media assets accessible through the first service to media assets accessible through the second service to determine whether a media asset is accessible through both the first service and the second service. For example, the media guidance application may cross-reference a database (e.g., stored on storage circuitry) that lists content providers for each media asset (or series of media assets) available from the first service to determine whether the second service provides a respective media asset. Alternatively or additionally, the media guidance application may query each service for a list of media assets (or series of media assets) currently available (or available in the future) and compare the results of the queries.

[0024] In response to determining the media asset is accessible through both the first service and the second service, the media guidance application may generate for display, on a display device, content associated with preventing the user from terminating the first service. For example, the media guidance application may generate for display discounts to the price of the first service or alert the user to media assets that are only accessible (currently or in the future) through one of the services.

[0025] In some embodiments, the media guidance application may determine not to generate for display the content associated with preventing the user from terminating the service in response to determining the media asset is not accessible through the service.

For example, in response to determining that one or more media assets are not accessible through the second service, the media guidance application may determine that generating the content is not needed in order to prevent the user from terminating a subscription to the service (e.g., the ability to access the media assets is itself an incentive to retain the user of the first service).

[0026] In some embodiments, the media guidance application may compare the price for the first service to a price for the second service and determine not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the price for the first service is less than the price for the second service based on the comparison. For example, in response to determining that the price for accessing one or more media assets from the second service, the media guidance application may determine that generating the content is not needed in order to prevent the user from terminating a subscription to the service (e.g., the lower costs of the media assets is itself an incentive to retain the user of the first service).

[0027] In some embodiments, the media guidance application may compare a first date when the media asset is accessible through the first service to a second date when the media asset is accessible through the second service and determine not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first date is before the second date. For example, in response to determining that the user may access one or more media assets through the first service before the second service, the media guidance application may determine that generating the content is not needed in order to prevent the

user from terminating a subscription to the service (e.g., the ability to access media assets sooner is itself an incentive to retain the user of the first service).

[0028] In some embodiments, the media guidance application may perform one or more actions in response to determining that a subscription period for the first service is ending. For example, in response to determining that a subscription period for the first service is ending, the media guidance application may detect whether or not the user has subscribed to a second service, whether or not the second service has similar media assets, etc.

[0029] Methods and systems are also described herein for a media guidance application that generates for display content associated with preventing a user from terminating a service based on whether or not the user has purchased a particular number of media assets that are available only through the service. For example, in response to determining that a user, currently subscribed to a first service, has purchased a threshold number of media assets from the first service, the media guidance application may determine that it is unlikely that the user will terminate the use of the first service. Accordingly, the media guidance application may determine that generating for display content associated with preventing the user from terminating the first service is unnecessary.

[0030] For example, the media guidance application may determine that the purchase of media assets from the first service indicates that a user prefers those media assets, and if a threshold number of media assets that are preferred by the user are not accessible from another source (e.g., the second service), the media guidance application determines that the user is unlikely to terminate the use of the first service.

[0031] In some aspects, the media guidance application may retrieve (e.g., using control circuitry) a media asset purchase history for a user, in which the media asset purchase history indicates media assets purchased by the user from a first service. For example, the media guidance application may track in a user profile (e.g., stored on storage circuitry) the media asset purchases of a user. In some embodiments, the media asset purchase history may further indicate the purchases during a particular time period, the rate of purchases, etc.

[0032] The media guidance application may determine (e.g., using the control circuitry) a number of media assets that were purchased by the user from the first service that are not accessible through a second service. For example, the media guidance application may cross-reference a database listing content providers for the media assets purchased by the

user from the first service to determine the number of media assets (or the number of different media asset series) that were purchased by the user from the first service that are not accessible through the second service. Alternatively or additionally, the media guidance application may query each service for a list of media assets (or series of media assets) currently available (or available in the future) and compare the results of the queries.

[0033] The media guidance application compares (e.g., using the control circuitry) the number of media assets that were purchased by the user from the first service to a threshold number. For example, the threshold number may represent a particular number of media assets the purchase of which indicates that a user is unlikely to terminate the user of the first service. The media guidance application may determine the particular number based on the prior history of the user (e.g., the number of media assets the user purchased before previously renewing a subscription to the first service and/or the number of media assets the user purchased prior to terminating the use of another service), a group or users (e.g., industry standards, market research, and/or customer feedback), etc.

[0034] In response to determining that the number does not exceed the threshold number, the media guidance application may generate for display, on a display device, content associated with preventing the user from terminating the first service. For example, the media guidance application may generate for display discounts to the price of the first service or alert the user to media assets that are only accessible (currently or in the future) through one of the services. Alternatively, the media guidance application may not generate for display, on the display device, the content associated with preventing the user from terminating the service in response to determining that the number does exceed the threshold number. For example, the media guidance application may determine that a user is unlikely to terminate the use of the first service. Therefore, the media guidance application determines that generating the content associated with preventing the user from terminating the first service is unnecessary.

[0035] In some embodiments, the media guidance application may determine a media asset that was purchased by the user from the first service is accessible through the second service and compare a first date when the media asset was accessible through the first service to a second date when the media asset was accessible through the second service.

In response to determining that the first date is before the second date, the media guidance application may increase the number by one.

[0036] For example, the media guidance application may determine that because the date of accessibility of the media asset from the first service is before the date of accessibility of the media asset from the second service, the user likely chose to purchase the media asset from the first service even though the media asset was accessible from the second service. Therefore, because the user chose to purchase the media asset from the first service instead of the second service, the purchase of the media asset should be counted towards the number (e.g., as it indicates that the user is unlikely to prefer to access that media asset from the second service). For example, if the user prefers to obtain a threshold number of media assets, even if some of them are accessible from a second service, from a first service, the media guidance application determines that the user is unlikely to terminate the use of the first service.

[0037] In some embodiments, the media guidance application may determine a media asset that was purchased by the user from the first service is accessible through the second service and compare a first price of the media asset, in which the first price indicates a price of accessing the media asset through the first service, to a second price of the media asset, in which the second price indicates a price of accessing the media asset through the second service. In response to determining that the first price is less than the second price, the media guidance application increases the number by one.

[0038] For example, the media guidance application may determine that because the cost of the media from the first service is less than the cost of the media asset from the second service, the user likely chose to purchase the media asset from the first service even though the media asset was accessible from the second service. Therefore, because the user chose to purchase the media asset from the first service instead of the second service, the purchase of the media asset should be counted towards the number (e.g., as it indicates that the user is unlikely to prefer to access that media asset from the second service). For example, if the user prefers to obtain a threshold number of media assets, even if some of them are accessible from a second service, from a first service, the media guidance application determines that the user is unlikely to terminate the use of the first service.

[0039] In some embodiments, the media guidance application may compare the price for the first service to a price for the second service and determine not to generate for display,

on the display device, the content associated with preventing the user from terminating the first service in response to determining that the price for the first service is less than the price for the second service based on the comparison. For example, in response to determining that the price for accessing one or more media assets from the second service, the media guidance application may determine that generating the content is not needed in order to prevent the user from terminating a subscription to the service (e.g., the lower cost of the media assets is itself an incentive to retain the user of the first service).

[0040] In some embodiments, the media guidance application may perform one or more actions in response to determining that a subscription period for the first service is ending. For example, in response to determining that a subscription period for the first service is ending, the media guidance application may determine the number of media assets that were purchased by the user from the first service that are not accessible through the second service, whether or not the user has subscribed to a second service, whether or not the second service has similarly priced media assets, etc.

[0041] Methods and systems are also described herein for preventing a user from terminating a service. Specifically, the media guidance application may generate for display content aimed at preventing the user from terminating a service in response to determining that a user is likely to terminate the service. For example, in response to determining that a particular media asset preferred by a user is accessible through another service, the media guidance application generates the content associated with preventing the user from terminating his or her current service (e.g., discounts to the cost of the current service, promotion or lists of media content available through the current service, etc.).

[0042] For example, the media guidance application may compare the media content accessible from a first service (e.g., currently subscribed to by the user) to a second service. If the media content is accessible by both services, the media guidance application determines that there is a likelihood that the user may terminate the first service (e.g., in favor of the second service). Moreover, in order to reduce false positives (e.g., determining a user is likely to terminate the first service when in fact the user is not likely to terminate the service), the media guidance application may limit the media that is compared to only media assets that are preferred by the user.

[0043] In some aspects, the media guidance application may determine a user is subscribed to a first service. For example, the media guidance application may store (e.g., in a user profile) a list of services subscribed to by the user. In another example, the media guidance application may determine services subscribed to by the user based on data related to the services (e.g., billing statements received by the user, authorization data transmitted by the service, user inputs identifying subscribed-to services, etc.). The media guidance application may then determine media assets accessible through the first service. For example, in response to determining the user subscribes to the first service, the media guidance application may retrieve a list of media assets accessible from that media asset.

[0044] The media guidance application may retrieve a viewing history for the user from a user profile and identify a preferred media asset of the media assets accessible from the first service based on the viewing history. For example, the media guidance application may determine media assets (or a particular series of media assets) that are viewed with a greater frequency by the user relative to other media assets.

[0045] For example, the media guidance application may determine a media asset is part of a series of media assets of which the user has been consuming. The media guidance application may also receive an indication from the viewing history of a rate at which the user has consumed the series of media assets over a time period. The media guidance application may then identify a preferred media asset of the media assets by comparing the rate at which the user has consumed the series of media assets to a threshold rate (e.g., indicate an average rate at which the user consumes media assets). The media guidance application may then determine the preferred media asset in response to determining whether or not the rate exceeds the threshold rate. For example, in response to determining that a user is binge watching a particular television series, the media guidance application may determine that the television series (or an episode of the television series) is a preferred media asset.

[0046] The media guidance application may then determine whether the preferred media asset is accessible through a second service. For example, the media guidance application may cross-reference a database listing services that provide the preferred media asset to determine whether the second service provides the preferred media asset.

[0047] In response to determining whether the preferred media asset is accessible through the second service, the media guidance application may generate for display, on a

display device, content associated with preventing the user from terminating the service. For example, the media guidance application may generate for display content that offers a discount to the cost of the first service. In another example, the media guidance application may generate for display content that lists media assets that are accessible (either currently or in the future) through the first service that may not be accessible through the second service. In yet another example, the media guidance application may determine whether the preferred media asset is accessible through a second service in response to determining that a subscription period for the first service is ending, and generate content featuring offers to renew the subscription of the user.

[0048] In some embodiments, the media guidance application may compare additional information about the first and second service in order to determine whether or not to generate for display the content associated with preventing the user from terminating the service. For example, the media guidance application may compare the price or release date of a preferred media asset, and only generate the content in response to determining whether the price or release date of the media asset from the second service is superior to that of the first service.

[0049] For example, the media guidance application may compare a first price for accessing the preferred media asset through the first service to a second price for accessing the preferred media asset through the second service. The media guidance application may then determine not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first price is less than the second price. For example, the media guidance application may determine that the lower price is itself an incentive to remain with the first service.

[0050] In another example, the media guidance application may compare a first date when the preferred media asset is accessible through the first service to a second date when the preferred media asset is accessible through the second service. The media guidance application may then determine not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first date is before the second date. For example, the media guidance application may determine that the earlier release date is itself an incentive to remain with the first service.

[0051] Additionally, methods and systems are described herein for a media guidance application that prevents a user from terminating a service by broadening criteria used for user recommendations in response to determining that a user is getting bored with the media content already consumed through the service. For example, the media guidance application may determine that the rate at which a user consumes media assets (e.g., accessible through the service) is declining (e.g., indicating the user is losing interest). In response, the media guidance application recommends new media assets with characteristics (e.g., genre, subject matter, media asset series affiliation) that differ from the media assets previously consumed by the user.

[0052] For example, in response to determining that a user is losing interest in media content of a particular genre (e.g., science fiction) that is accessible through a subscription service, the media guidance application may recommend media content of a different genre (e.g., action) that is accessible through the subscription service in hopes of sparking the interest of the user in that type of media content and preventing the user from terminating the service. In another example, in response to determining that a user is nearing the end of a media asset series (e.g., a television series) that is accessible through a subscription service, the media guidance application may recommend a different media asset series in hopes of sparking the interest of the user in that media asset series and preventing the user from terminating the service.

[0053] In some aspects, the media guidance application may retrieve (e.g., using control circuitry) a viewing history for a user, in which the viewing history indicates a rate at which the user consumed media assets over a first time period. For example, the media guidance application may track the frequency at which a user accessed a media asset from a service that provides media assets during a particular length of time. In some embodiments, the media guidance application may also store (e.g., in storage circuitry) other information about the media assets. For example, the media guidance application may store characteristics (e.g., genre, subject matter, media asset series affiliation, etc.) of the media assets for use in presenting user recommendations.

[0054] The media guidance application may compare (e.g., using control circuitry) the rate to a threshold rate. For example, the media guidance application may compare the rate at which the user consumed media assets over a first time period to a threshold rate to determine whether or not the user is losing (or gaining) interest in media assets provided

by the service. For example, the threshold rate may correspond to a rate that corresponds to a level of interest associated with a user (e.g., based on market research prior user history, etc.) not terminating the use of a service (and/or renewing a subscription to the service). In another example, the threshold rate may correspond to the rate at which the user consumed media assets over a second time period (e.g., a period of time preceding the first period of time).

[0055] The media guidance application may determine (e.g., using control circuitry) a characteristic not associated with the media assets consumed over the first time period in response to determining that the rate does not exceed the threshold rate. For example, if the rate at which the user consumed media assets over the first time period is less than or equal to the threshold rate, the media guidance application may determine that a user is losing interest in the media content accessible through the service (and is therefore likely to terminate the service). In response, the media guidance application may broaden the criteria at which user recommendations are made to the user in an attempt to spark the interest of the user in other content (and prevent the user from terminating the service).

[0056] The media guidance application may then recommend (e.g., using the control circuitry) a media asset associated with the characteristic. For example, in response to determining that a favorite television series of the user will no longer be accessible through a subscription service, the media guidance application may recommend a different television series that is accessible through the service in an attempt to prevent the user from terminating the service.

[0057] In some embodiments, the media guidance application may determine (e.g., using control circuitry) whether to generate for display, on a display device, content associated with preventing the user from terminating the first service based on whether the rate exceeds the threshold rate. For example, in response to determining that the user is likely to terminate the service (e.g., the comparison of the rate and the threshold rate indicates the user is losing interest), the media guidance application may generate user recommendations, discounts for the service, and/or lists of media assets that are accessible through the service (e.g., both currently and in the future).

[0058] It should be noted that the systems and/or methods described above may be applied to, or used in accordance with, other systems, methods and/or apparatuses.

Brief Description of the Drawings

[0059] The above and other objects and advantages of the disclosure will be apparent upon consideration of the following detailed description, taken in conjunction with the accompanying drawings, in which like reference characters refer to like parts throughout, and in which:

[0060] FIG. 1 shows an illustrative example of a display screen for use in accessing media content in accordance with some embodiments of the disclosure;

[0061] FIG. 2 shows another illustrative example of a display screen used to access media content in accordance with some embodiments of the disclosure;

[0062] FIG. 3 is a block diagram of an illustrative user equipment device in accordance with some embodiments of the disclosure;

[0063] FIG. 4 is a block diagram of an illustrative media system in accordance with some embodiments of the disclosure;

[0064] FIG. 5 is an illustrative system for generating an indicator of the likelihood that a user will terminate access to a service or source in accordance with some embodiments of the disclosure;

[0065] FIG. 6 is a flowchart of illustrative steps for determining a likelihood that a user will change a service in accordance with some embodiments of the disclosure;

[0066] FIG. 7 is a flowchart of another set of illustrative steps for determining a likelihood that a user will change a service in accordance with some embodiments of the disclosure;

[0067] FIG. 8 is a flowchart of illustrative steps for generating a model to determine a likelihood that a user will change a service in accordance with some embodiments of the disclosure;

[0068] FIG. 9 is a flowchart of another set of illustrative steps for generating a model to determine a likelihood that a user will change a service in accordance with some embodiments of the disclosure;

[0069] FIG. 10 shows an illustrative example of a display screen generated by a media guidance application presenting content associated with preventing a user from terminating a service in accordance with some embodiments of the disclosure;

[0070] FIG. 11 is an illustrative example of a component used to determine the attentiveness of a user in accordance with some embodiments of the disclosure;

[0071] FIG. 12 is a flowchart of illustrative steps for generating for display content associated with preventing the user from terminating the service in accordance with some embodiments of the disclosure;

5 [0072] FIG. 13 is a flowchart of illustrative steps for selecting content associated with preventing a user from terminating the service in accordance with some embodiments of the disclosure;

[0073] FIG. 14 is a flowchart of illustrative steps for generating for display content associated with preventing the user from terminating the service in response to determining a media asset is accessible through both a first service and a second service in accordance with some embodiments of the disclosure;

10 [0074] FIG. 15 is a flowchart of illustrative steps for generating for display content associated with preventing the user from terminating the service in response to determining that the number does not exceed the threshold number in accordance with some embodiments of the disclosure;

15 [0075] FIG. 16 is a flowchart of illustrative steps for determining a number to compare to a threshold number in accordance with some embodiments of the disclosure;

[0076] FIG. 17 is a flowchart of illustrative steps for generating for display content associated with preventing the user from terminating the service in response to determining a media asset is accessible through both a first service and a second service in accordance with some embodiments of the disclosure;

20 [0077] FIG. 18 is a flowchart of illustrative steps for recommending a media asset in accordance with some embodiments of the disclosure; and

[0078] FIG. 19 is a flowchart of illustrative steps for selecting a media asset to recommend in accordance with some embodiments of the disclosure.

Detailed Description of the Drawings

25 [0079] The amount of content available to users in any given content delivery system can be substantial. Consequently, many users desire a form of media guidance through an interface that allows users to efficiently navigate content selections and easily identify
30 content that they may desire. An application that provides such guidance is referred to herein as an interactive media guidance application or, sometimes, a media guidance application or a guidance application.

[0080] Systems and methods are described herein for determining a likelihood that a user will change a service. In some aspects, a media guidance application may perform a method for determining a likelihood that a user will change a service. The media guidance application may identify a first service to which a user is subscribed. In some
5 embodiments, the media guidance application may identify the first service by accessing user subscription data or a user profile. The media guidance application may receive information from a third-party data source corresponding to the user. In some embodiments, the third-party data source may be a social media data source, such as a social media website, and the information from the third-party data source corresponding
10 to the user may comprise data from the user's social media profile. The media guidance application may identify, based on the information from the third-party data source, data indicating a negative interest in the first service, and based on the identified data, the media guidance application may calculate a likelihood that the user will change the first service.

[0081] Interactive media guidance applications may take various forms depending on the content for which they provide guidance. One typical type of media guidance application is an interactive television program guide. Interactive television program guides (sometimes referred to as electronic program guides) are well-known guidance
15 applications that, among other things, allow users to navigate among and locate many types of content or media assets. Interactive media guidance applications may generate graphical user interface screens that enable a user to navigate among, locate and select content. As referred to herein, the terms "media asset" and "content" should be understood to mean an electronically consumable user asset, such as television programming, as well as pay-per-view programs, on-demand programs (as in video-on-demand (VOD) systems),
20 Internet content (e.g., streaming content, downloadable content, Webcasts, etc.), video clips, audio, content information, pictures, rotating images, text documents, playlists, websites, articles, books, electronic books, blogs, advertisements, chat sessions, social media, applications, games, and/or any other media or multimedia and/or combination of the same. Guidance applications also allow users to navigate among and locate content.
25 As referred to herein, the term "multimedia" should be understood to mean content that utilizes at least two different content forms described above, for example, text, audio,

images, video, or interactivity content forms. Content may be recorded, played, displayed or accessed by user equipment devices, but can also be part of a live performance.

[0082] The media guidance application and/or any instructions for performing any of the embodiments discussed herein may be encoded on computer readable media. Computer readable media includes any media capable of storing data. The computer readable media may be transitory, including, but not limited to, propagating electrical or electromagnetic signals, or may be non-transitory including, but not limited to, volatile and non-volatile computer memory or storage devices such as a hard disk, floppy disk, USB drive, DVD, CD, media cards, register memory, processor caches, Random Access Memory ("RAM"), etc.

[0083] As referred to herein, the term "biometric state" should be understood to mean a metric or measure indicative of a physiological state of a user (e.g., measurements of chemical content in body fluids (e.g., salt electrolyte concentration in perspiration, blood alcohol level, hormonal levels in blood, glucose level in blood, oxygen content of blood), measurements of circulation (e.g., pulse, heart rate), body temperature, brain activity (e.g., measured via electroencephalograms), or any other suitable measurements) or psychological state of a user (e.g., angry, sad, depressed, happy, agitated, bored, or any other suitable state).

[0084] In some embodiments, a detection module, incorporated into or accessible by the user device upon which the media guidance application is implemented may be configured to monitor brain activity. For example, based on brain activity information, the media guidance application may determine whether or not to generate for display content associated with preventing a user from terminating a service.

[0085] In some embodiments, the detection module may incorporate and/or have access to an electroencephalogram unit ("EEG"). An EEG measures electrical activity associated with a brain of a user. For example, an EEG may measure voltage fluctuations and/or the frequency or frequency range of voltage fluctuations generated by the brain of a user.

[0086] For example, an EEG may describe rhythmic brain activity. Rhythmic activity (e.g., activity associated with neural oscillation) also known as brain waves may be described in terms of frequency bands or frequency ranges. For example, a delta band includes a frequency range of up to about 4 Hz with a typical amplitude of 20-200 microvolts. Delta bands are, in some circumstances, associated with a sleeping state of a

user. Theta bands include a frequency range of 4 to 8 Hz with a typical amplitude of 10 microvolts. Theta bands are, in some circumstances, associated with drowsiness. Alpha bands include a frequency range of 8 to 13 Hz with a typical amplitude of 20-200 microvolts. Alpha bands are, in some circumstances, associated with a relaxed state and/or the blinking of a user's eyes. Beta bands include frequencies of 13 to 30 Hz with a typical amplitude of 5-10 microvolts. Beta bands are, in some circumstances, associated with alertness, concentration, and/or anxiety. Gamma bands include a frequency range of 30 to 100 Hz and may have various amplitudes. Gamma bands are, in some circumstances, associated with combinations of senses of a user (e.g., sight, smell, sound, touch, taste) and/or short term memory. Frequency bands and frequency ranges as well as the symmetry of these bands and ranges across the brain of a user are also associated with various moods, which is discussed in detail in Rybak, "Frontal Alpha Power Asymmetry in Aggressive Children and Adolescents With Mood and Disruptive Behavior Disorders," Clinical EEL and Neuroscience, Vol. 3, 2006, which is hereby incorporated by reference herein in its entirety.

[0087] Additional discussion about the use of EEG's to detect a level of attention, engagement, frustration, anxiety, emotional state, and comprehension are discussed in detail in Wyczesany, Mirosław et al., "Subjective mood estimation co-varies with spectral power EEG characteristics," Department of Psychophysiology, Jagiellonian University, Krakow, Poland, Acta Neurobiol Exp, 68: 180-192, 2008, Tan, Bao Hong, "Using a Low-Cost EEG Sensor to Detect Mental States, CMU-CS-12-134, School of Computer Science, Carnegie Mellon University, August 2012, Hamadicharef et al., "Learning EEG-based Spectral-Spatial Patterns for Attention Level Measurement," Institute for Infocomm Research, 2009, Bos, Danny Oude, "EEG-based Emotion Recognition, The Influence of Visual and Auditory Stimuli," Department of Computer Science, University of Twente, 2006, and Pradeep et al., U.S. Patent No. 8,392,250, issued March 5, 2013, which are hereby incorporated by reference herein in their entirety.

[0088] In some embodiments, the user device incorporates and/or has access to an electromyogram unit ("EMG"). An EMG measures the electrical activity of muscles at rest and during contraction. The use of EMG and EEG for providing biofeedback is discussed in detail in Frank et al., "Biofeedback in medicine: who, when, why and how?" Ment. Health Fam. Med., June 2010, and Wartena et al., U.S. Patent Application

Publication No. 2012/0029322, filed March 24, 2010, which is hereby incorporated by reference herein in its entirety. In some embodiments, the user device may include additional components for detecting brain activity, moods, and attentiveness of a user as discussed in detail in Lee et al., U.S. Patent No. 8,332,883, issued December 11, 2012, and
5 Bill, U.S. Patent No. 8,373,768, issued February 12, 2013, which are hereby incorporated by reference herein in their entirety.

[0089] In some embodiments, the media guidance application may determine whether or not the brain activity of a user corresponds to a threshold range. As referred to herein, a “threshold range” refers to a frequency range and/or amplitude of brain activity that
10 defines the boundaries of a brain state. For example, a threshold range may be defined as a particular frequency range (in Hz) associated with a brain state of a user, may be defined as frequency bands associated with a brain state of a user, and/or may be defined according to any other measurement that describes the current, preferred, past, and/or future brain state of a user. In some embodiments, a threshold range may account for any
15 transient variations and amplitudes in brain state. For example, a threshold range may be defined as an average amplitude, frequency, frequency range, and/or frequency band over a particular period of time. In addition, a threshold range may refer to a composite range that includes one or more amplitudes and/or frequencies associated with one or more waves. For example, in some embodiments, a particular brain state may correspond to
20 brain activity corresponding to theta bands with a first amplitude and delta bands at a second amplitude.

[0090] It should also be noted that in some embodiments, a threshold range may itself include one or more threshold ranges. For example, a threshold range associated with one brain state (e.g., a user being awake) may itself include numerous other threshold ranges
25 (e.g., a mood of the user, an attentiveness level of the user, etc.).

[0091] As referred to herein, a “brain state” refers to a qualitative assessment of the mood, level of anxiety, level of attentiveness, level of comprehension, level of proficiency associated with one or more functions (e.g., reading text on a screen, hearing audio, etc.) of a user, and/or a combination thereof associated with the brain activity of the user. A
30 brain state can be quantified as corresponding to a particular threshold range, and different brain states may be compared based on their corresponding threshold ranges.

[0092] Brain states may be identified by a detection module (e.g., incorporated into or accessible to a user device upon which a media guidance application is implemented) that incorporates and/or have access to a device for monitoring brain waves (e.g., an EEG, EMG, and/or any other device discussed herein). The media guidance application may monitor the brain activity (e.g., brain waves) of a user and determine a first brain state of the user based on the brain activity. The first brain state (e.g., the current frequency range of voltage fluctuations in the brain, electrical activity of muscles near the brain at rest and during contraction, and/or threshold range) may correspond to a first mood of the user. The media guidance application may also select a second brain state (e.g., a preferred frequency range of voltage fluctuations in the brain, electrical activity of muscles near the brain at rest and during contraction, and/or threshold range) that corresponds to a second mood of the user. The media guidance application may compare the first brain state to the second brain state (e.g., compare the frequency range of voltage fluctuations in the brain, electrical activity of muscles near the brain at rest and during contraction, and/or threshold range associated with the first state to the frequency range of voltage fluctuations in the brain, electrical activity of muscles near the brain at rest and during contraction, and/or threshold range associated with the second state) to determine whether two states correspond (e.g., indicate the same frequency range of voltage fluctuations in the brain, electrical activity of muscles near the brain at rest and during contraction, and/or threshold range). In response to determining the first brain state does not correspond to the second brain state, the media guidance application may generate a display of content associated with preventing a user from terminating a service.

[0093] In some embodiments, to determine a mood corresponding to a brain state, the media guidance application may cross-reference data associated with the brain state of the user (e.g., a frequency range, an electrical activity of the muscles near the brain, and/or a threshold range) with a database associated with data related to brain states and corresponding moods. For example, based on the cross-reference, the media guidance application may determine that the data associated with the brain state of the user indicates that the user is bored, excited, etc.

[0094] The media guidance application may also calibrate and/or perform a training/setup mode. For example, the media guidance application may receive information from the user, in which the user describes and/or rates current brain states of the user. For example,

during calibration, the media guidance application may detect a brain state and ask the user to describe the brain (e.g., designate the state as associated with a particular mood). The current brain state of the user (e.g., the current threshold range) will then be designated as corresponding to the particular mood. Additionally or alternatively, the media guidance application may receive instructions designating a particular brain state as corresponding to a particular mood. For example, the media guidance application may retrieve/receive instructions that indicate that a threshold range of 8 to 10 Hz indicates that the particular user is in a happy mood. Additionally, the media guidance application may retrieve/receive instructions that indicate that a threshold range of 10 to 13 Hz indicates that the particular user is in a sad mood. In another example, if the average amplitude of a threshold range is 50 microvolts and an average frequency range is 7 Hz, the media guidance application may determine that the threshold range indicates that a user is currently anxious.

[0095] In some embodiments, the media guidance application may determine (e.g., using control circuitry) a user is accessing a service. For example, the media guidance application may receive an indication that a user is accessing a service via a user device that monitors the activity of the user. For example, a wearable user device may receive brain activity data that is associated with the user of a particular service. In another example, the media guidance application may receive a message from the service provider that the particular user has logged into his or her account or has otherwise accessed the service.

[0096] As referred to herein, a “wearable user device” includes any device that is worn, attached, or otherwise situated on the body of a user. For example, a wearable user device may include electronic or computer eyewear, headbands, armbands, watches, etc. In many cases, such device may incorporate a detection module capable of determining particular biometric states of a user.

[0097] In some embodiments, the media guidance application may determine (e.g., using the control circuitry) a biometric state of the user while the user is accessing the service. For example, the media guidance application may determine that the user has a particular heart rate, a particular brain state, etc. based on information received from a user device (e.g., a wearable electronic device) that monitors and/or records biometric data.

[0098] The media guidance application may cross-reference (e.g., via control circuitry) the biometric state with a database (e.g., stored on storage circuitry) listing biometric states indicative of a desire to terminate the service to determine whether the biometric state indicates the user desires to terminate the service. For example, the media guidance application may record particular brain activity (e.g., a particular brain wave frequency, amplitude, etc.). The media guidance application may then compare that brain activity to the brain activity of other users (e.g., as recorded in the database) prior to those users terminating the same or similar services. In another example, the media guidance application may record particular brain activity and compare that brain activity to a database that indicates a particular emotional state (e.g., happy, sad, angry, etc.) of the user to determine whether or not the user is currently unhappy with his or her service. In yet another example, the media guidance application may determine the amount of time that the eyes of a user are fixated on a display device presenting media assets accessed through the service. The media guidance application may compare the amount of time to a threshold amount of time to determine whether or not the user has a particular attentiveness level.

[0099] In some embodiments, in response to determining that the biometric state indicates the user desires to terminate the service (e.g., in response to determining that the brain activity of the user is similar to that of users that previously terminated their service or in response to determining that the brain activity of the user is unhappy), the media guidance application may generate for display (e.g., on a display device) content associated with preventing the user from terminating the service. For example, in response to determining that the brain activity of the user is similar to the brain activity of other users prior to those users terminating the same or similar services, in response to determining that the user has an unhappy emotional state (e.g., an upset user indicates that the user will likely terminate the service), and/or in response to determining that the user is not attentive when media assets accessible from the service are presented (e.g., a bored user indicates that the user will likely terminate the service), the media guidance application may generate a promotion for the service that urges the user (or gives the user a reason) to retain the service. For example, the content may include a discount for the service, may include a list of media assets accessible through (or accessible only through) the service.

[0100] In some embodiments, the media guidance application may further determine a length of time the user has the biometric state. For example, the media guidance application may determine an average biometric state of the user over a period of time (e.g., in order to normalize random fluctuations). The media guidance application may then compare the length of time to a threshold length of time and cross-reference the biometric state in the database in response to determining that the length of time corresponds to the threshold length of time. For example, the media guidance application may only perform actions if the media guidance application determines that the user has a particular biometric state for a particular amount of time.

[0101] In some embodiments, the media guidance application may determine one or more media assets that are accessible to a user through a service. As referred to herein a service is a source, direct or indirect, of media content. For example, a service may be any entity that provides media assets and/or provides access to media assets. For example, a service may include any entity that creates, sells, distributes, and/or facilitates the creation, selling and/or distribution of media assets. For example, a service may include an entity that streams media content to user or may include an entity that provides Internet services through which the user can stream media content. In another example, an entity may include a content provider (e.g., a broadcast television station) that broadcasts television programs to a user or may include a broker through which the user may rent or buy copies of the television programs.

[0102] As referred to herein, “terminating access to service,” “terminating use of service,” or “terminating a service” means that the service was disconnected by the user, requested by the user to be removed from the user’s subscription plan, or is other wise no longer accessible (or media content offered by the service is no longer accessible) to the user. For example, after terminating access to a given service a user has to re-subscribe (repay) to the service to resume access to media content from the service.

[0103] As referred to herein, a media asset is “accessible” from a service based on whether or not a user may obtain a media asset for consumption on a permanent or temporary basis at one or more points in the future as a result, directly or indirectly, of subscribing to, paying for, or otherwise using the service. In some embodiments, the media guidance application may use additional criteria to determine whether or not a media asset is accessible from a service.

[0104] In some embodiments, the media guidance application may determine in which formats a media asset is accessible which services provide such various formats. The media guidance application may use this information to determine whether or not a media asset is accessible from a service. For example, the media guidance application may determine that a movie is accessible from one service (e.g., a service that provides media content streamed over the Internet) via downloading the movie over the Internet. The media guidance application may also determine that the same movie is accessible through another service (e.g., a commercial establishment that sells DVD's) by purchasing a DVD of the movie.

[0105] For example, in some embodiments, the media guidance application may distinguish between the different formats. For example, to determine whether or not a media asset (accessible by streaming the media asset over the Internet from one service) is accessible from other services, the media guidance application may only determine if the other services allow a user to stream the particular media asset. Alternatively, in some embodiments, the media guidance application may not distinguish between different formats. For example, to determine whether or not a media asset (accessible by streaming the media asset over the Internet from one service) is accessible from other services, the media guidance application may determine if the other services allow a user to stream the particular media asset, buy a DVD of the media asset, view the media asset over broadcast television, access a transcript of the media asset, etc.

[0106] In another example, to determine whether or not a media asset (accessible in high definition from one service) is accessible from other services, the media guidance application may only determine if the other services allow a user to access the media asset in high-definition. Alternatively, in some embodiments, the media guidance application may not distinguish between resolution, file type, file size, etc. For example, to determine whether or not a media asset (accessible from one service in high-definition) is accessible from other services, the media guidance application may determine if the other services allow a user to access the media asset in high-definition or standard definition.

[0107] For example, the media guidance application may compare a first format of a media asset that is accessible through a first service to a second format of the media asset that is accessible through a second service. The media guidance application may then determine whether or not to generate for display content associated with preventing the

user from terminating the first service in response to determining the relationship (e.g., same, different, etc.) of the first format to the second format.

[0108] In some embodiments, the media guidance application may determine when a media asset is accessible and may determine particular times and/or dates that the media asset is accessible from the different services. The media guidance application may use this information to determine whether or not a media asset is accessible from a service. For example, the media guidance application may determine that a movie is accessible from one service (e.g., a service that provides media content streamed over the Internet) at a particular point in the future (e.g., during the month of July). The media guidance application may also determine that the same movie is accessible from another service (e.g., a commercial establishment that sells DVD's) at any time in the future.

[0109] For example, in some embodiments, the media guidance application may consider times or dates of accessibility when determining whether or not a media asset is accessible from a particular service. For example, to determine whether or not a media asset (accessible during July from one service) is accessible from other services, the media guidance application may only determine if the other services allow a user to access the media asset during July. Alternatively, in some embodiments, the media guidance application may not consider times or dates of accessibility when determining whether or not a media asset is accessible from a particular service. For example, to determine whether or not a media asset (accessible during July from one service) is accessible from other services, the media guidance application may determine if the other services allow a user to access the media asset at the same time, at different times, etc.

[0110] For example, the media guidance application may compare a first period of time when a media asset is accessible through a first service to a second period of time when the media asset is accessible through a second service. The media guidance application may then determine whether or not to generate for display content associated with preventing the user from terminating the first service in response to determining the relationship (e.g., before, after, equal, longer than, shorter than, etc.) of the first period of time to the second period of time.

[0111] In some embodiments, the media guidance application may determine at what price a media asset is accessible and may determine the particular prices that the media asset is accessible from the different services. The media guidance application may use

this information to determine whether or not a media asset is accessible from a service. For example, the media guidance application may determine that an eBook is accessible from one service at a cost of ten dollars. The media guidance application may also determine that the same eBook is accessible from another service at a cost of twelve dollars.

[0112] For example, in some embodiments, the media guidance application may consider the price of accessibility when determining whether or not a media asset is accessible from a particular service. For example, to determine whether or not a media asset (accessible for a cost of ten dollars from one service) is accessible from other services, the media guidance application may only determine if the other services grant access for ten dollars. Alternatively, in some embodiments, the media guidance application may not consider the price of accessibility when determining whether or not a media asset is accessible from a particular service. For example, to determine whether or not a media asset (accessible for a price of ten dollars from one service) is accessible from other services, the media guidance application may determine if the other services grant access to the media asset for more, less, or the same cost.

[0113] For example, the media guidance application may compare a price for a first service (or the price of access to a media asset through the first service) to a price for the second service (or the price of access to the media asset through the second service). The media guidance application may then determine whether or not to generate for display content associated with preventing the user from terminating the first service in response to determining the relationship (e.g., more, less, equal) of the price of the first service to the price of the second service.

[0114] In some embodiments, the media guidance application may determine a type of pricing structure from which a media asset is accessible and may determine the pricing structure from which the media asset is accessible from the different services. The media guidance application may use this information to determine whether or not a media asset is accessible from a service. For example, the media guidance application may determine that a television program is accessible from one service on a per item basis. The media guidance application may also determine that the same television program (as well as other television programs) is accessible from another service for a flat monthly fee.

[0115] For example, in some embodiments, the media guidance application may consider the pricing structure of the service when determining whether or not a media asset is accessible from a particular service. For example, to determine whether or not a media asset (accessible for a one-time payment upon delivery fee of ten dollars from one service) is accessible from other services, the media guidance application may only determine if the other services grant access in return from a one-time, upfront fee. Alternatively, in some embodiments, the media guidance application may not consider the pricing structure of the service when determining whether or not a media asset is accessible from a particular service. For example, to determine whether or not a media asset (accessible for a one-time payment upon delivery fee of ten dollars from one service) is accessible from other services, the media guidance application may determine if the other services grant access to the media asset for a fixed monthly fee (irrespective of whether more or less media assets are accessed), through a deferred payment plan, bundled as part of a package of content, and/or included in a subscription to the service.

[0116] For example, the media guidance application may compare a first pricing structure for accessing a media asset through a first service to a second pricing structure for accessing the media asset through a second service. The media guidance application may then determine whether or not to generate for display content associated with preventing the user from terminating the first service in response to determining the relationship (e.g., same, different, longer, shorter, greater total cost, greater per item cost, etc.) between the first and second pricing structures.

[0117] In some embodiments, the media guidance application may determine whether or not a media asset is part of a series of media assets. For example, the media guidance application may determine whether or not a media assets is accessible based on whether a series of media asset of which that media assets is a part is accessible and may determine whether or not a media asset is accessible from the different services based on whether a series of media assets of which that media asset is a part is accessible. As referred to herein, a series of media assets is a group or a number of related media assets that are arranged in a sequence and/or share common characteristics (e.g., plot lines, characters, settings, cast and/or crew, producers, etc.) that distinguish them from other media assets. For example, a series of media asset may include a television program series (e.g.,

featuring one or more episodes), a movie series (e.g., featuring one or more individual movies), etc.

[0118] For example, the media guidance application may determine that an episode of a television series is accessible from one service based on the television series being accessible from that service. In some embodiments, the media guidance application bases the determination of whether the episode is accessible from other sources based on whether or not the television series is accessible. Alternatively, in some embodiments, the media guidance application may not base the determination of whether the episode is accessible from other sources based on whether or not the television series is accessible. For example, to determine whether or not a media asset (accessible as part of a series of media assets that are accessible through one service) is accessible from other services, the media guidance application may determine if the other services grant access to the entire series or just the single episode.

[0119] In some embodiments, the media guidance application may determine a rate at which the media asset (or a series of media assets) is accessible from the different services. The media guidance application may use this information to determine whether or not a media asset is accessible from a service. For example, the media guidance application may determine that a television series is accessible from one service at a rate of one episode a week. The media guidance application may also determine that the same television series is accessible from another service at a rate of two episodes a week.

[0120] For example, in some embodiments, the media guidance application may consider the rate at which media assets can be consumed when determining whether or not a media asset is accessible from a particular service. For example, to determine whether or not a media asset (accessible at a first rate) is accessible from other services, the media guidance application may only determine if the other services grant access at the same rate. Alternatively, in some embodiments, the media guidance application may not consider the rate at which media assets can be consumed when determining whether or not a media asset is accessible from a particular service. For example, to determine whether or not a media asset (accessible at a first rate) is accessible from other services, the media guidance application may determine if the other services grant access to the media asset (irrespective of whether or not the rate at which a user can consume the media asset is greater than, less than, or equal to the first rate).

[0121] For example, the media guidance application may compare a first rate at which a user may consume media assets through a first service to a second rate at which a user may consume media assets through a second service. The media guidance application may then determine whether or not to generate for display content associated with preventing the user from terminating the first service in response to determining the relationship (e.g., greater than, less than, or equal to the first rate) between the first and second rates.

[0122] In some embodiments, the media guidance application may determine a rate at which a user consumes media content. The media guidance application may express the rate of consumption in corresponding units. As referred to herein, a “rate of consumption” refers to an average rate at which a user consumes media assets during a period of time. In some embodiments, the “average” may be determined based on a mean, median, mode, or other statistical tool. In some embodiments, the media guidance application may compare the rate of consumption to a threshold rate. For example, a threshold rate may correspond to a rate of consumption of media content from a service at which the media guidance application determines (e.g., with a particular likelihood) that the user is likely to terminate his use of the service. For example, the rate of consumption of the user may correspond to an amount of content consumed (e.g., a number of media assets, a number of hours during which the user viewed programming, a number of episodes, season, series, etc., and/or any other measure of content consumed) over a period of time (e.g., hours, days, weeks, etc.) to a threshold rate (e.g., in the same units of measure). If the media guidance application determines that the rate of consumption of the user is less than the threshold rate, the media guidance application may determine the user is likely to terminate the service from which the user accesses the media content.

[0123] Throughout this disclosure, various thresholds are discussed. It should be noted that a threshold is a measurement, typically in the same units of measure as the measurement against which it is compared. Furthermore, the value of the threshold (as well as the units of measure) may be determined based on numerous sources. For example, the media guidance application may determine a value of a threshold based on data related to a user or based on industry data, market research, etc. For example, a threshold that determines when a user is likely to terminate a service may be based on the prior actions of one or more users.

[0124] In some embodiments, the rate of consumption may be indicated by a viewing history. As referred to herein, “a viewing history” refers to a collection of information related to media content consumed by a user. For example, the viewing history may indicate an amount of media content consumed by the user, the rate of media content consumed by the user, particular times when a user consumed media content, user preferences for media content consumed by the user, and/or any other information related to the consumption of media content by the user. In some embodiments, the viewing history may indicate user preference or characteristics of media content preferred by the user. As used herein, a “characteristic” refers to any attribute of a media asset, series of media asset, and/or type of media asset that distinguishes the media asset, series of media asset, and/or type of media asset from other media assets, series, and/or types.

[0125] For example, the viewing history may indicate that a user prefers (or does not prefer) a particular genre of media assets or series of media assets, assets featuring a particular actor. In some embodiments, the viewing history and characteristics in the viewing history may be used as criteria for recommending media content to a user. For example, the media guidance application may determine the characteristics of media assets that a user has already consumed and recommend other media assets with similar characteristics. For example, in some embodiments, the media guidance application may filter available media assets based on whether or not the available media assets have characteristics indicated by the viewing history as favorable to the user.

[0126] The media guidance application may generate the viewing history and the list of characteristics preferred by the user in the viewing history based on active (e.g., querying the user regarding his or her likes and dislikes) or passive (e.g., tracking the media asset selections of the user without notifying the user) monitoring. In some embodiments, the media guidance application may allow a user to enter information (e.g., preferred characteristics) into the viewing history.

[0127] The media guidance application may determine whether or not a media asset is accessible (as well as the price, format, etc., stated above) based on information received from one or more services. For example, the media guidance application may receive media guidance data (e.g., scheduling information, available media assets, etc.) as well as information regarding price, format, etc., from a database associated with a service. Alternatively or additionally, the media guidance application may compile information

about various services (e.g., based on publicly available information, market research, known contractual relationship between content providers and services, etc.).

[0128] For example, the media guidance application may search for alternative sources of a media asset (or a series of media assets of which the media asset is included) in response to determining that the user prefers the media asset, the media asset was purchased by the user, the media asset is accessible via a service to which a user is nearing an ending date of a subscription, etc. For example, the media guidance application may query a database (e.g., associated with each service) listing media guidance data such as scheduled broadcast times, on-demand programming, product or service offerings, supply contracts, etc., for each content source regarding media assets accessible from that service.

[0129] In some embodiments, the media guidance application may filter media guidance data in the database based on whether or not the media guidance data relates to the media asset. The media guidance application may then receive an output of all media guidance data (e.g., including scheduling and accessibility information for the media asset). The media guidance application may then use the outputted media guidance data to determine whether the media asset will be accessible to the user from that service.

[0130] In some embodiments, the media guidance application may receive user inputs identifying alternative services to which the user subscribes. For example, a user may enter the various services from which the user has authorization or a desire to receive media content as well as service that facilitate the user access to media content. The media guidance application may store the services available to, or authorized by, the user. The media guidance application may then retrieve the stored services and search them for scheduling and accessibility information.

[0131] Alternatively or additionally, the media guidance application may automatically aggregate authorization and/or subscription data for various services from which a user may access media content. For example, the media guidance application may store password, login, payment, and/or other subscription data for the user for one or more services. In response to determining a need for determining scheduling and/or accessibility information (e.g., in response to a user subscribing to a new service), the media guidance application may access the data to the one or more services to determine whether or not a user is likely to terminate its relationship with an existing service.

[0132] In some embodiments, the media guidance application may generate for display content associated with preventing the user from terminating the service. As used herein, such “content” is any media asset or media content (as described herein) aimed at preventing the user from terminating a service (whether or not the media asset or media content is successful in preventing a user from terminating a service). For example, in response to determining that a user is likely to terminate his use of or subscription to a service, the media guidance application may generate for display content selected to urge the user to not terminate services such as discounts, special offers, upcoming promotions or media assets available through the service, etc.

[0133] With the advent of the Internet, mobile computing, and high-speed wireless networks, users are accessing media on user equipment devices on which they traditionally did not. As referred to herein, the phrase “user equipment device,” “user equipment,” “user device,” “electronic device,” “electronic equipment,” “media equipment device,” or “media device” should be understood to mean any device for accessing the content described above, such as a television, a Smart TV, a set-top box, an integrated receiver decoder (IRD) for handling satellite television, a digital storage device, a digital media receiver (DMR), a digital media adapter (DMA), a streaming media device, a DVD player, a DVD recorder, a connected DVD, a local media server, a BLU-RAY player, a BLU-RAY recorder, a personal computer (PC), a laptop computer, a tablet computer, a WebTV box, a personal computer television (PC/TV), a PC media server, a PC media center, a hand-held computer, a stationary telephone, a personal digital assistant (PDA), a mobile telephone, a portable video player, a portable music player, a portable gaming machine, a smart phone, or any other television equipment, computing equipment, or wireless device, and/or combination of the same. In some embodiments, the user equipment device may have a front facing screen and a rear facing screen, multiple front screens, or multiple angled screens. In some embodiments, the user equipment device may have a front facing camera and/or a rear facing camera. On these user equipment devices, users may be able to navigate among and locate the same content available through a television. Consequently, media guidance may be available on these devices, as well. The guidance provided may be for content available only through a television, for content available only through one or more of other types of user equipment devices, or for content available both through a television and one or more of the other types of user equipment devices.

The media guidance applications may be provided as on-line applications (i.e., provided on a web-site), or as stand-alone applications or clients on user equipment devices. Various devices and platforms that may implement media guidance applications are described in more detail below.

5 **[0134]** One of the functions of the media guidance application is to provide media guidance data to users. As referred to herein, the phrase “media guidance data” or “guidance data” should be understood to mean any data related to content or data used in operating the guidance application. For example, the guidance data may include program information, guidance application settings, user preferences, user profile information, 10 media listings, media-related information (e.g., broadcast times, broadcast channels, titles, descriptions, ratings information (e.g., parental control ratings, critic's ratings, etc.), genre or category information, actor information, logo data for broadcasters' or providers' logos, etc.), media format (e.g., standard definition, high definition, 3D, etc.), advertisement information (e.g., text, images, media clips, etc.), on-demand information, blogs, websites, 15 and any other type of guidance data that is helpful for a user to navigate among and locate desired content selections.

[0135] FIGS. 1-2 show illustrative display screens that may be used to provide media guidance data and media assets. The display screens shown in FIGS. 1-2 may be implemented on any suitable user equipment device or platform. While the displays of 20 FIGS. 1-2 are illustrated as full screen displays, they may also be fully or partially overlaid over content being displayed. A user may indicate a desire to access content information by selecting a selectable option provided in a display screen (e.g., a menu option, a listings option, an icon, a hyperlink, etc.) or pressing a dedicated button (e.g., a GUIDE button) on a remote control or other user input interface or device. In response to the user's 25 indication, the media guidance application may provide a display screen with media guidance data organized in one of several ways, such as by time and channel in a grid, by time, by channel, by source, by content type, by category (e.g., movies, sports, news, children, or other categories of programming), or other predefined, user-defined, or other organization criterion.

30 **[0136]** FIG. 1 shows illustrative grid program listings display 100 arranged by time and channel that also enables access to different types of content in a single display. Display 100 may include grid 102 with: (1) a column of channel/content type identifiers 104,

where each channel/content type identifier (which is a cell in the column) identifies a different channel or content type available; and (2) a row of time identifiers 106, where each time identifier (which is a cell in the row) identifies a time block of programming. Grid 102 also includes cells of program listings, such as program listing 108, where each listing provides the title of the program provided on the listing's associated channel and time. With a user input device, a user can select program listings by moving highlight region 110. Information relating to the program listing selected by highlight region 110 may be provided in program information region 112. Region 112 may include, for example, the program title, the program description, the time the program is provided (if applicable), the channel the program is on (if applicable), the program's rating, and other desired information.

[0137] In addition to providing access to linear programming (e.g., content that is scheduled to be transmitted to a plurality of user equipment devices at a predetermined time and is provided according to a schedule), the media guidance application also provides access to non-linear programming (e.g., content accessible to a user equipment device at any time and is not provided according to a schedule). Non-linear programming may include content from different content sources including on-demand content (e.g., VOD), Internet content (e.g., streaming media, downloadable media, etc.), locally stored content (e.g., content stored on any user equipment device described above or other storage device), or other time-independent content. On-demand content may include movies or any other content provided by a particular content provider (e.g., HBO On Demand providing "The Sopranos" and "Curb Your Enthusiasm"). HBO ON DEMAND is a service mark owned by Time Warner Company L.P. et al. and THE SOPRANOS and CURB YOUR ENTHUSIASM are trademarks owned by the Home Box Office, Inc. Internet content may include web events, such as a chat session or Webcast, or content available on-demand as streaming content or downloadable content through an Internet web site or other Internet access (e.g. FTP).

[0138] Grid 102 may provide media guidance data for non-linear programming including on-demand listing 114, recorded content listing 116, and Internet content listing 118. A display combining media guidance data for content from different types of content sources is sometimes referred to as a "mixed-media" display. Various permutations of the types of media guidance data that may be displayed that are different than display 100 may

be based on user selection or guidance application definition (e.g., a display of only recorded and broadcast listings, only on-demand and broadcast listings, etc.). As illustrated, listings 114, 116, and 118 are shown as spanning the entire time block displayed in grid 102 to indicate that selection of these listings may provide access to a display dedicated to on-demand listings, recorded listings, or Internet listings, respectively. In some embodiments, listings for these content types may be included directly in grid 102. Additional media guidance data may be displayed in response to the user selecting one of the navigational icons 120. (Pressing an arrow key on a user input device may affect the display in a similar manner as selecting navigational icons 120.)

[0139] Display 100 may also include video region 122, advertisement 124, and options region 126. Video region 122 may allow the user to view and/or preview programs that are currently available, will be available, or were available to the user. The content of video region 122 may correspond to, or be independent from, one of the listings displayed in grid 102. Grid displays including a video region are sometimes referred to as picture-in-guide (PIG) displays. PIG displays and their functionalities are described in greater detail in Satterfield et al. U.S. Patent No. 6,564,378, issued May 13, 2003 and Yuen et al. U.S. Patent No. 6,239,794, issued May 29, 2001, which are hereby incorporated by reference herein in their entireties. PIG displays may be included in other media guidance application display screens of the embodiments described herein.

[0140] Advertisement 124 may provide an advertisement for content that, depending on a viewer's access rights (e.g., for subscription programming), is currently available for viewing, will be available for viewing in the future, or may never become available for viewing, and may correspond to or be unrelated to one or more of the content listings in grid 102. Advertisement 124 may also be for products or services related or unrelated to the content displayed in grid 102. Advertisement 124 may be selectable and provide further information about content, provide information about a product or a service, enable purchasing of content, a product, or a service, provide content relating to the advertisement, etc. Advertisement 124 may be targeted based on a user's profile/preferences, monitored user activity, the type of display provided, or on other suitable targeted advertisement bases.

[0141] While advertisement 124 is shown as rectangular or banner shaped, advertisements may be provided in any suitable size, shape, and location in a guidance

application display. For example, advertisement 124 may be provided as a rectangular shape that is horizontally adjacent to grid 102. This is sometimes referred to as a panel advertisement. In addition, advertisements may be overlaid over content or a guidance application display or embedded within a display. Advertisements may also include text,
5 images, rotating images, video clips, or other types of content described above.

Advertisements may be stored in a user equipment device having a guidance application, in a database connected to the user equipment, in a remote location (including streaming media servers), or on other storage means, or a combination of these locations. Providing advertisements in a media guidance application is discussed in greater detail in, for
10 example, Knudson et al., U.S. Patent Application Publication No. 2003/0110499, filed January 17, 2003; Ward, III et al. U.S. Patent No. 6,756,997, issued June 29, 2004; and Schein et al. U.S. Patent No. 6,388,714, issued May 14, 2002, which are hereby incorporated by reference herein in their entireties. It will be appreciated that advertisements may be included in other media guidance application display screens of the
15 embodiments described herein.

[0142] Options region 126 may allow the user to access different types of content, media guidance application displays, and/or media guidance application features. Options region 126 may be part of display 100 (and other display screens described herein), or may be invoked by a user by selecting an on-screen option or pressing a dedicated or assignable
20 button on a user input device. The selectable options within options region 126 may concern features related to program listings in grid 102 or may include options available from a main menu display. Features related to program listings may include searching for other air times or ways of receiving a program, recording a program, enabling series recording of a program, setting program and/or channel as a favorite, purchasing a
25 program, or other features. Options available from a main menu display may include search options, VOD options, parental control options, Internet options, cloud-based options, device synchronization options, second screen device options, options to access various types of media guidance data displays, options to subscribe to a premium service, options to edit a user's profile, options to access a browse overlay, or other options.

[0143] The media guidance application may be personalized based on a user's
30 preferences. A personalized media guidance application allows a user to customize displays and features to create a personalized "experience" with the media guidance

application. This personalized experience may be created by allowing a user to input these customizations and/or by the media guidance application monitoring user activity to determine various user preferences. Users may access their personalized guidance application by logging in or otherwise identifying themselves to the guidance application.

5 Customization of the media guidance application may be made in accordance with a user profile. The customizations may include varying presentation schemes (e.g., color scheme of displays, font size of text, etc.), aspects of content listings displayed (e.g., only HDTV or only 3D programming, user-specified broadcast channels based on favorite channel selections, re-ordering the display of channels, recommended content, etc.), desired

10 recording features (e.g., recording or series recordings for particular users, recording quality, etc.), parental control settings, customized presentation of Internet content (e.g., presentation of social media content, e-mail, electronically delivered articles, etc.) and other desired customizations.

[0144] The media guidance application may allow a user to provide user profile

15 information or may automatically compile user profile information. The media guidance application may, for example, monitor the content the user accesses and/or other interactions the user may have with the guidance application. Additionally, the media guidance application may obtain all or part of other user profiles that are related to a particular user (e.g., from other web sites on the Internet the user accesses, such as

20 www.allrovi.com, from other media guidance applications the user accesses, from other interactive applications the user accesses, from another user equipment device of the user, etc.), and/or obtain information about the user from other sources that the media guidance application may access. As a result, a user can be provided with a unified guidance application experience across the user's different user equipment devices. This type of

25 user experience is described in greater detail below in connection with FIG. 4. Additional personalized media guidance application features are described in greater detail in Ellis et al., U.S. Patent Application Publication No. 2005/0251827, filed July 11, 2005, Boyer et al., U.S. Patent No. 7,165,098, issued January 16, 2007, and Ellis et al., U.S. Patent Application Publication No. 2002/0174430, filed February 21, 2002, which are hereby

30 incorporated by reference herein in their entirety.

[0145] Another display arrangement for providing media guidance is shown in FIG. 2. Video mosaic display 200 includes selectable options 202 for content information

organized based on content type, genre, and/or other organization criterion. In display 200, television listings option 204 is selected, thus providing listings 206, 208, 210, and 212 as broadcast program listings. In display 200 the listings may provide graphical images including cover art, still images from the content, video clip previews, live video from the content, or other types of content that indicate to a user the content being described by the media guidance data in the listing. Each of the graphical listings may also be accompanied by text to provide further information about the content associated with the listing. For example, listing 208 may include more than one portion, including media portion 214 and text portion 216. Media portion 214 and/or text portion 216 may be selectable to view content in full-screen or to view information related to the content displayed in media portion 214 (e.g., to view listings for the channel that the video is displayed on).

[0146] The listings in display 200 are of different sizes (i.e., listing 206 is larger than listings 208, 210, and 212), but if desired, all the listings may be the same size. Listings may be of different sizes or graphically accentuated to indicate degrees of interest to the user or to emphasize certain content, as desired by the content provider or based on user preferences. Various systems and methods for graphically accentuating content listings are discussed in, for example, Yates, U.S. Patent Application Publication No. 2010/0153885, filed December 29, 2005, which is hereby incorporated by reference herein in its entirety.

[0147] Users may access content and the media guidance application (and its display screens described above and below) from one or more of their user equipment devices. FIG. 3 shows a generalized embodiment of illustrative user equipment device 300. More specific implementations of user equipment devices are discussed below in connection with FIG. 4. User equipment device 300 may receive content and data via input/output (hereinafter "I/O") path 302. I/O path 302 may provide content (e.g., broadcast programming, on-demand programming, Internet content, content available over a local area network (LAN) or wide area network (WAN), and/or other content) and data to control circuitry 304, which includes processing circuitry 306 and storage 308. Control circuitry 304 may be used to send and receive commands, requests, and other suitable data using I/O path 302. I/O path 302 may connect control circuitry 304 (and specifically processing circuitry 306) to one or more communications paths (described below). I/O

functions may be provided by one or more of these communications paths, but are shown as a single path in FIG. 3 to avoid overcomplicating the drawing.

[0148] Control circuitry 304 may be based on any suitable processing circuitry such as processing circuitry 306. As referred to herein, processing circuitry should be understood to mean circuitry based on one or more microprocessors, microcontrollers, digital signal processors, programmable logic devices, field-programmable gate arrays (FPGAs), application-specific integrated circuits (ASICs), etc., and may include a multi-core processor (e.g., dual-core, quad-core, hexa-core, or any suitable number of cores) or supercomputer. In some embodiments, processing circuitry may be distributed across multiple separate processors or processing units, for example, multiple of the same type of processing units (e.g., two Intel Core i7 processors) or multiple different processors (e.g., an Intel Core i5 processor and an Intel Core i7 processor). In some embodiments, control circuitry 304 executes instructions for a media guidance application stored in memory (i.e., storage 308). Specifically, control circuitry 304 may be instructed by the media guidance application to perform the functions discussed above and below. For example, the media guidance application may provide instructions to control circuitry 304 to generate the media guidance displays. In some implementations, any action performed by control circuitry 304 may be based on instructions received from the media guidance application.

[0149] In client-server based embodiments, control circuitry 304 may include communications circuitry suitable for communicating with a guidance application server or other networks or servers. The instructions for carrying out the above mentioned functionality may be stored on the guidance application server. Communications circuitry may include a cable modem, an integrated services digital network (ISDN) modem, a digital subscriber line (DSL) modem, a telephone modem, Ethernet card, or a wireless modem for communications with other equipment, or any other suitable communications circuitry. Such communications may involve the Internet or any other suitable communications networks or paths (which is described in more detail in connection with FIG. 4). In addition, communications circuitry may include circuitry that enables peer-to-peer communication of user equipment devices, or communication of user equipment devices in locations remote from each other (described in more detail below).

[0150] Memory may be an electronic storage device provided as storage 308 that is part of control circuitry 304. As referred to herein, the phrase "electronic storage device" or "storage device" should be understood to mean any device for storing electronic data, computer software, or firmware, such as random-access memory, read-only memory, hard drives, optical drives, digital video disc (DVD) recorders, compact disc (CD) recorders, BLU-RAY disc (BD) recorders, BLU-RAY 3D disc recorders, digital video recorders (DVR, sometimes called a personal video recorder, or PVR), solid state devices, quantum storage devices, gaming consoles, gaming media, or any other suitable fixed or removable storage devices, and/or any combination of the same. Storage 308 may be used to store various types of content described herein as well as media guidance data described above. Nonvolatile memory may also be used (e.g., to launch a boot-up routine and other instructions). Cloud-based storage, described in relation to FIG. 4, may be used to supplement storage 308 or instead of storage 308. Storage 308 may include a logger which stores one or more user actions and/or a timestamp corresponding to each action. Control circuitry 304 may use communication circuitry to periodically transmit this data using I/O path 302. For example, control circuitry 304 may transmit logs of user actions to media content source 416 or media guidance data source 418, discussed further below in relation to FIG. 4.

[0151] Control circuitry 304 may include video generating circuitry and tuning circuitry, such as one or more analog tuners, one or more MPEG-2 decoders or other digital decoding circuitry, high-definition tuners, or any other suitable tuning or video circuits or combinations of such circuits. Encoding circuitry (e.g., for converting over-the-air, analog, or digital signals to MPEG signals for storage) may also be provided. Control circuitry 304 may also include scaler circuitry for upconverting and downconverting content into the preferred output format of the user equipment 300. Circuitry 304 may also include digital-to-analog converter circuitry and analog-to-digital converter circuitry for converting between digital and analog signals. The tuning and encoding circuitry may be used by the user equipment device to receive and to display, to play, or to record content. The tuning and encoding circuitry may also be used to receive guidance data. The circuitry described herein, including for example, the tuning, video generating, encoding, decoding, encrypting, decrypting, scaler, and analog/digital circuitry, may be implemented using software running on one or more general purpose or specialized

processors. Multiple tuners may be provided to handle simultaneous tuning functions (e.g., watch and record functions, picture-in-picture (PIP) functions, multiple-tuner recording, etc.). If storage 308 is provided as a separate device from user equipment 300, the tuning and encoding circuitry (including multiple tuners) may be associated with storage 308.

[0152] A user may send instructions to control circuitry 304 using user input interface 310. User input interface 310 may be any suitable user interface, such as a remote control, mouse, trackball, keypad, keyboard, touch screen, touchpad, stylus input, joystick, voice recognition interface, or other user input interfaces. Display 312 may be provided as a stand-alone device or integrated with other elements of user equipment device 300. For example, display 312 may be a touchscreen or touch-sensitive display. In such circumstances, user input interface 310 may be integrated with or combined with display 312. Display 312 may be one or more of a monitor, a television, a liquid crystal display (LCD) for a mobile device, amorphous silicon display, low temperature poly silicon display, electronic ink display, electrophoretic display, active matrix display, electro-wetting display, electrofluidic display, cathode ray tube display, light-emitting diode display, electroluminescent display, plasma display panel, high-performance addressing display, thin-film transistor display, organic light-emitting diode display, surface-conduction electron-emitter display (SED), laser television, carbon nanotubes, quantum dot display, interferometric modulator display, or any other suitable equipment for displaying visual images. In some embodiments, display 312 may be HDTV-capable. In some embodiments, display 312 may be a 3D display, and the interactive media guidance application and any suitable content may be displayed in 3D. A video card or graphics card may generate the output to the display 312. The video card may offer various functions such as accelerated rendering of 3D scenes and 2D graphics, MPEG-2/MPEG-4 decoding, TV output, or the ability to connect multiple monitors. The video card may be any processing circuitry described above in relation to control circuitry 304. The video card may be integrated with the control circuitry 304. Speakers 314 may be provided as integrated with other elements of user equipment device 300 or may be stand-alone units. The audio component of videos and other content displayed on display 312 may be played through speakers 314. In some embodiments, the audio may be distributed to a receiver (not shown), which processes and outputs the audio via speakers 314.

[0153] The guidance application may be implemented using any suitable architecture. For example, it may be a stand-alone application wholly implemented on user equipment device 300. In such an approach, instructions of the application are stored locally (e.g., in storage 308), and data for use by the application is downloaded on a periodic basis (e.g., from an out-of-band feed, from an Internet resource, or using another suitable approach). Control circuitry 304 may retrieve instructions of the application from storage 308 and process the instructions to generate any of the displays discussed herein. Based on the processed instructions, control circuitry 304 may determine what action to perform when input is received from input interface 310. For example, movement of a cursor on a display up/down may be indicated by the processed instructions when input interface 310 indicates that an up/down button was selected.

[0154] In some embodiments, the media guidance application is a client-server based application. Data for use by a thick or thin client implemented on user equipment device 300 is retrieved on-demand by issuing requests to a server remote to the user equipment device 300. In one example of a client-server based guidance application, control circuitry 304 runs a web browser that interprets web pages provided by a remote server. For example, the remote server may store the instructions for the application in a storage device. The remote server may process the stored instructions using circuitry (e.g., control circuitry 304) and generate the displays discussed above and below. The client device may receive the displays generated by the remote server and may display the content of the displays locally on equipment device 300. This way, the processing of the instructions is performed remotely by the server while the resulting displays are provided locally on equipment device 300. Equipment device 300 may receive inputs from the user via input interface 310 and transmit those inputs to the remote server for processing and generating the corresponding displays. For example, equipment device 300 may transmit a communication to the remote server indicating that an up/down button was selected via input interface 310. The remote server may process instructions in accordance with that input and generate a display of the application corresponding to the input (e.g., a display that moves a cursor up/down). The generated display is then transmitted to equipment device 300 for presentation to the user.

[0155] In some embodiments, the media guidance application is downloaded and interpreted or otherwise run by an interpreter or virtual machine (run by control circuitry

304). In some embodiments, the guidance application may be encoded in the ETV Binary Interchange Format (EBIF), received by control circuitry 304 as part of a suitable feed, and interpreted by a user agent running on control circuitry 304. For example, the guidance application may be an EBIF application. In some embodiments, the guidance application may be defined by a series of JAVA-based files that are received and run by a local virtual machine or other suitable middleware executed by control circuitry 304. In some of such embodiments (e.g., those employing MPEG-2 or other digital media encoding schemes), the guidance application may be, for example, encoded and transmitted in an MPEG-2 object carousel with the MPEG audio and video packets of a program.

[0156] User equipment device 300 of FIG. 3 can be implemented in system 400 of FIG. 4 as user television equipment 402, user computer equipment 404, wireless user communications device 406, or any other type of user equipment suitable for accessing content, such as a non-portable gaming machine. For simplicity, these devices may be referred to herein collectively as user equipment or user equipment devices, and may be substantially similar to user equipment devices described above. User equipment devices, on which a media guidance application may be implemented, may function as a standalone device or may be part of a network of devices. Various network configurations of devices may be implemented and are discussed in more detail below.

[0157] A user equipment device utilizing at least some of the system features described above in connection with FIG. 3 may not be classified solely as user television equipment 402, user computer equipment 404, or a wireless user communications device 406. For example, user television equipment 402 may, like some user computer equipment 404, be Internet-enabled allowing for access to Internet content, while user computer equipment 404 may, like some television equipment 402, include a tuner allowing for access to television programming. The media guidance application may have the same layout on various different types of user equipment or may be tailored to the display capabilities of the user equipment. For example, on user computer equipment 404, the guidance application may be provided as a web site accessed by a web browser. In another example, the guidance application may be scaled down for wireless user communications devices 406.

[0158] In system 400, there is typically more than one of each type of user equipment device but only one of each is shown in FIG. 4 to avoid overcomplicating the drawing. In addition, each user may utilize more than one type of user equipment device and also more than one of each type of user equipment device.

5 [0159] In some embodiments, a user equipment device (e.g., user television equipment 402, user computer equipment 404, wireless user communications device 406) may be referred to as a "second screen device." For example, a second screen device may supplement content presented on a first user equipment device. The content presented on the second screen device may be any suitable content that supplements the content
10 presented on the first device. In some embodiments, the second screen device provides an interface for adjusting settings and display preferences of the first device. In some embodiments, the second screen device is configured for interacting with other second screen devices or for interacting with a social network. The second screen device can be located in the same room as the first device, a different room from the first device but in
15 the same house or building, or in a different building from the first device.

[0160] The user may also set various settings to maintain consistent media guidance application settings across in-home devices and remote devices. Settings include those described herein, as well as channel and program favorites, programming preferences that the guidance application utilizes to make programming recommendations, display
20 preferences, and other desirable guidance settings. For example, if a user sets a channel as a favorite on, for example, the web site www.allrovi.com on their personal computer at their office, the same channel would appear as a favorite on the user's in-home devices (e.g., user television equipment and user computer equipment) as well as the user's mobile devices, if desired. Therefore, changes made on one user equipment device can change
25 the guidance experience on another user equipment device, regardless of whether they are the same or a different type of user equipment device. In addition, the changes made may be based on settings input by a user, as well as user activity monitored by the guidance application.

[0161] The user equipment devices may be coupled to communications network 414.
30 Namely, user television equipment 402, user computer equipment 404, and wireless user communications device 406 are coupled to communications network 414 via communications paths 408, 410, and 412, respectively. Communications network 414

may be one or more networks including the Internet, a mobile phone network, mobile voice or data network (e.g., a 4G or LTE network), cable network, public switched telephone network, or other types of communications network or combinations of communications networks. Paths 408, 410, and 412 may separately or together include one or more communications paths, such as, a satellite path, a fiber-optic path, a cable path, a path that supports Internet communications (e.g., IPTV), free-space connections (e.g., for broadcast or other wireless signals), or any other suitable wired or wireless communications path or combination of such paths. Path 412 is drawn with dotted lines to indicate that in the exemplary embodiment shown in FIG. 4 it is a wireless path and paths 408 and 410 are drawn as solid lines to indicate they are wired paths (although these paths may be wireless paths, if desired). Communications with the user equipment devices may be provided by one or more of these communications paths, but are shown as a single path in FIG. 4 to avoid overcomplicating the drawing.

[0162] Although communications paths are not drawn between user equipment devices, these devices may communicate directly with each other via communication paths, such as those described above in connection with paths 408, 410, and 412, as well as other short-range point-to-point communication paths, such as USB cables, IEEE 1394 cables, wireless paths (e.g., Bluetooth, infrared, IEEE 802-11x, etc.), or other short-range communication via wired or wireless paths. BLUETOOTH is a certification mark owned by Bluetooth SIG, INC. The user equipment devices may also communicate with each other directly through an indirect path via communications network 414.

[0163] System 400 includes content source 416 and media guidance data source 418 coupled to communications network 414 via communication paths 420 and 422, respectively. Paths 420 and 422 may include any of the communication paths described above in connection with paths 408, 410, and 412. Communications with the content source 416 and media guidance data source 418 may be exchanged over one or more communications paths, but are shown as a single path in FIG. 4 to avoid overcomplicating the drawing. In addition, there may be more than one of each of content source 416 and media guidance data source 418, but only one of each is shown in FIG. 4 to avoid overcomplicating the drawing. (The different types of each of these sources are discussed below.) If desired, content source 416 and media guidance data source 418 may be integrated as one source device. Although communications between sources 416 and 418

with user equipment devices 402, 404, and 406 are shown as through communications network 414, in some embodiments, sources 416 and 418 may communicate directly with user equipment devices 402, 404, and 406 via communication paths (not shown) such as those described above in connection with paths 408, 410, and 412.

5 **[0164]** Content source 416 may include one or more types of content distribution equipment including a television distribution facility, cable system headend, satellite distribution facility, programming sources (e.g., television broadcasters, such as NBC, ABC, HBO, etc.), intermediate distribution facilities and/or servers, Internet providers, on-demand media servers, and other content providers. NBC is a trademark owned by the
10 National Broadcasting Company, Inc., ABC is a trademark owned by the American Broadcasting Company, Inc., and HBO is a trademark owned by the Home Box Office, Inc. Content source 416 may be the originator of content (e.g., a television broadcaster, a Webcast provider, etc.) or may not be the originator of content (e.g., an on-demand content provider, an Internet provider of content of broadcast programs for downloading,
15 etc.). Content source 416 may include cable sources, satellite providers, on-demand providers, Internet providers, over-the-top content providers, or other providers of content. Content source 416 may also include a remote media server used to store different types of content (including video content selected by a user), in a location remote from any of the user equipment devices. Systems and methods for remote storage of content, and
20 providing remotely stored content to user equipment are discussed in greater detail in connection with Ellis et al., U.S. Patent No. 7,761,892, issued July 20, 2010, which is hereby incorporated by reference herein in its entirety.

[0165] Media guidance data source 418 may provide media guidance data, such as the media guidance data described above. Media guidance data may be provided to the user
25 equipment devices using any suitable approach. In some embodiments, the guidance application may be a stand-alone interactive television program guide that receives program guide data via a data feed (e.g., a continuous feed or trickle feed).

Program schedule data and other guidance data may be provided to the user equipment on a television channel sideband, using an in-band digital signal, using an out-of-band digital
30 signal, or by any other suitable data transmission technique. Program schedule data and other media guidance data may be provided to user equipment on multiple analog or digital television channels. In some embodiments, media guidance data source 418 may

be a social media data source that maintains a social network. The social media data source may maintain profiles of each of a plurality of users and may allow the users to post comments, indicate status updates, or post any other activity.

[0166] In some embodiments, guidance data from media guidance data source 418 may be provided to users' equipment using a client-server approach. For example, a user equipment device may pull media guidance data from a server, or a server may push media guidance data to a user equipment device. In some embodiments, a guidance application client residing on the user's equipment may initiate sessions with source 418 to obtain guidance data when needed, e.g., when the guidance data is out of date or when the user equipment device receives a request from the user to receive data. Media guidance may be provided to the user equipment with any suitable frequency (e.g., continuously, daily, a user-specified period of time, a system-specified period of time, in response to a request from user equipment, etc.). Media guidance data source 418 may provide user equipment devices 402, 404, and 406 the media guidance application itself or software updates for the media guidance application.

[0167] In some embodiments, the media guidance data may include viewer data. For example, the viewer data may include current and/or historical user activity information (e.g., what content the user typically watches, what times of day the user watches content, whether the user interacts with a social network, at what times the user interacts with a social network to post information, what types of content the user typically watches (e.g., pay TV or free TV), mood, brain activity information, etc.). The media guidance data may also include subscription data. For example, the subscription data may identify to which sources or services a given user subscribes and/or to which sources or services the given user has previously subscribed but later terminated access (e.g., whether the user subscribes to premium channels, whether the user has added a premium level of services, whether the user has increased Internet speed). In some embodiments, the viewer data and/or the subscription data may identify patterns of a given user for a period of more than one year. The media guidance data may include a model (e.g., a survivor model) used for generating a score that indicates a likelihood a given user will terminate access to a service/source. For example, the media guidance application may process the viewer data with the subscription data using the model to generate a value or score that indicates a likelihood of whether the given user will terminate access to a particular service or source.

In particular, a higher score may indicate a higher level of confidence that the user will terminate access to a particular service or source. Based on the score, the media guidance application may generate promotions and advertisements that entice the user to keep the particular service or source indicated by the score as one to which the user will likely terminate access.

[0168] Media guidance applications may be, for example, stand-alone applications implemented on user equipment devices. For example, the media guidance application may be implemented as software or a set of executable instructions which may be stored in storage 308, and executed by control circuitry 304 of a user equipment device 300. In some embodiments, media guidance applications may be client-server applications where only a client application resides on the user equipment device, and server application resides on a remote server. For example, media guidance applications may be implemented partially as a client application on control circuitry 304 of user equipment device 300 and partially on a remote server as a server application (e.g., media guidance data source 418) running on control circuitry of the remote server. When executed by control circuitry of the remote server (such as media guidance data source 418), the media guidance application may instruct the control circuitry to generate the guidance application displays and transmit the generated displays to the user equipment devices. The server application may instruct the control circuitry of the media guidance data source 418 to transmit data for storage on the user equipment. The client application may instruct control circuitry of the receiving user equipment to generate the guidance application displays.

[0169] Content and/or media guidance data delivered to user equipment devices 402, 404, and 406 may be over-the-top (OTT) content. OTT content delivery allows Internet-enabled user devices, including any user equipment device described above, to receive content that is transferred over the Internet, including any content described above, in addition to content received over cable or satellite connections. OTT content is delivered via an Internet connection provided by an Internet service provider (ISP), but a third party distributes the content. The ISP may not be responsible for the viewing abilities, copyrights, or redistribution of the content, and may only transfer IP packets provided by the OTT content provider. Examples of OTT content providers include YOUTUBE, NETFLIX, and HULU, which provide audio and video via IP packets. Youtube is a

trademark owned by Google Inc., Netflix is a trademark owned by Netflix Inc., and Hulu is a trademark owned by Hulu, LLC. OTT content providers may additionally or alternatively provide media guidance data described above. In addition to content and/or media guidance data, providers of OTT content can distribute media guidance applications (e.g., web-based applications or cloud-based applications), or the content can be displayed by media guidance applications stored on the user equipment device.

[0170] Media guidance system 400 is intended to illustrate a number of approaches, or network configurations, by which user equipment devices and sources of content and guidance data may communicate with each other for the purpose of accessing content and providing media guidance. The embodiments described herein may be applied in any one or a subset of these approaches, or in a system employing other approaches for delivering content and providing media guidance. The following four approaches provide specific illustrations of the generalized example of FIG. 4.

[0171] In one approach, user equipment devices may communicate with each other within a home network. User equipment devices can communicate with each other directly via short-range point-to-point communication schemes described above, via indirect paths through a hub or other similar device provided on a home network, or via communications network 414. Each of the multiple individuals in a single home may operate different user equipment devices on the home network. As a result, it may be desirable for various media guidance information or settings to be communicated between the different user equipment devices. For example, it may be desirable for users to maintain consistent media guidance application settings on different user equipment devices within a home network, as described in greater detail in Ellis et al., U.S. Patent Application No. 11/179,410, filed July 11, 2005. Different types of user equipment devices in a home network may also communicate with each other to transmit content. For example, a user may transmit content from user computer equipment to a portable video player or portable music player.

[0172] In a second approach, users may have multiple types of user equipment by which they access content and obtain media guidance. For example, some users may have home networks that are accessed by in-home and mobile devices. Users may control in-home devices via a media guidance application implemented on a remote device. For example, users may access an online media guidance application on a website via a personal

computer at their office, or a mobile device such as a PDA or web-enabled mobile telephone. The user may set various settings (e.g., recordings, reminders, or other settings) on the online guidance application to control the user's in-home equipment. The online guide may control the user's equipment directly, or by communicating with a media guidance application on the user's in-home equipment. Various systems and methods for user equipment devices communicating, where the user equipment devices are in locations remote from each other, is discussed in, for example, Ellis et al., U.S. Patent No. 8,046,801, issued October 25, 2011, which is hereby incorporated by reference herein in its entirety.

[0173] In a third approach, users of user equipment devices inside and outside a home can use their media guidance application to communicate directly with content source 416 to access content. Specifically, within a home, users of user television equipment 402 and user computer equipment 404 may access the media guidance application to navigate among and locate desirable content. Users may also access the media guidance application outside of the home using wireless user communications devices 406 to navigate among and locate desirable content.

[0174] In a fourth approach, user equipment devices may operate in a cloud computing environment to access cloud services. In a cloud computing environment, various types of computing services for content sharing, storage or distribution (e.g., video sharing sites or social networking sites) are provided by a collection of network-accessible computing and storage resources, referred to as "the cloud." For example, the cloud can include a collection of server computing devices, which may be located centrally or at distributed locations, that provide cloud-based services to various types of users and devices connected via a network such as the Internet via communications network 414. These cloud resources may include one or more content sources 416 and one or more media guidance data sources 418. In addition or in the alternative, the remote computing sites may include other user equipment devices, such as user television equipment 402, user computer equipment 404, and wireless user communications device 406. For example, the other user equipment devices may provide access to a stored copy of a video or a streamed video. In such embodiments, user equipment devices may operate in a peer-to-peer manner without communicating with a central server.

[0175] The cloud provides access to services, such as content storage, content sharing, or social networking services, among other examples, as well as access to any content described above, for user equipment devices. Services can be provided in the cloud through cloud computing service providers, or through other providers of online services. For example, the cloud-based services can include a content storage service, a content sharing site, a social networking site, or other services via which user-sourced content is distributed for viewing by others on connected devices. These cloud-based services may allow a user equipment device to store content to the cloud and to receive content from the cloud rather than storing content locally and accessing locally-stored content.

[0176] A user may use various content capture devices, such as camcorders, digital cameras with video mode, audio recorders, mobile phones, and handheld computing devices, to record content. The user can upload content to a content storage service on the cloud either directly, for example, from user computer equipment 404 or wireless user communications device 406 having content capture feature. Alternatively, the user can first transfer the content to a user equipment device, such as user computer equipment 404. The user equipment device storing the content uploads the content to the cloud using a data transmission service on communications network 414. In some embodiments, the user equipment device itself is a cloud resource, and other user equipment devices can access the content directly from the user equipment device on which the user stored the content.

[0177] Cloud resources may be accessed by a user equipment device using, for example, a web browser, a media guidance application, a desktop application, a mobile application, and/or any combination of access applications of the same. The user equipment device may be a cloud client that relies on cloud computing for application delivery, or the user equipment device may have some functionality without access to cloud resources. For example, some applications running on the user equipment device may be cloud applications, i.e., applications delivered as a service over the Internet, while other applications may be stored and run on the user equipment device. In some embodiments, a user device may receive content from multiple cloud resources simultaneously. For example, a user device can stream audio from one cloud resource while downloading content from a second cloud resource. Or a user device can download content from multiple cloud resources for more efficient downloading. In some embodiments, user

equipment devices can use cloud resources for processing operations such as the processing operations performed by processing circuitry described in relation to FIG. 3.

[0178] FIG. 5 is an illustrative system 500 for generating an indicator of the likelihood that a user will terminate access to a service or source. The components and operation of system 500 may be implemented by circuitry or by software (e.g., the media guidance application). System 500 includes a predictive attributes engine 520, a history of billing data memory 530, a learning model engine 540, and a trained model engine 550.

Predictive attributes engine 520 receives data (e.g., content attributes data 510, user equipment viewer data 512 which includes indications about what live and recorded content a user watches, on-demand data 514, online activity data 516, social network activity 518, current user attributes 526, and data from memory 530). On-demand data 514 may indicate which non-linear content the user has previously consumed or purchased. Online activity data 516 indicates what content the user consumed online (e.g., from a streaming source).

[0179] Predictive attributes engine 520 processes one or more of the data it receives to generate attributes that represent a population of users with similar activity. The generated attributes 522 are output to learning model engine 540. Learning model engine 540 receives historical outcomes 524 from history billing data memory 530. Historical outcomes 524 indicate what sources or services the user has previously subscribed to and to which sources or services the user has previous terminated access a period of time after subscribing to them. Learning model engine 540 may correlate historical attributes 522 of various users with historical outcomes 524 of those users to determine patterns that resulted in termination of access to sources or services. Historical outcomes 524 may be stored as a database for various users. The database may indicate for each user what sources or services the user has previously subscribed to and to which sources or services the user has previous terminated access a period of time after subscribing to them.

[0180] For example, learning model engine 540 may process historical outcomes 524 of a first user to identify a point at which the first user has terminated access to a source or service (e.g., unsubscribed from a premium channel). In some embodiments, the first user may be a former subscriber to a source or service (e.g., a user who completely disconnected service from a particular source, such as a former cable subscriber that switched to satellite). In such circumstances, learning model engine 540 may analyze

behavior of the former subscriber corresponding to the viewing activity and subscription activity the former subscriber had before becoming the former subscriber. In particular, learning model engine 540 may process the viewing activity and subscription activity of a former cable subscriber to determine what cable services the former subscriber subscribed to and/or terminated service from before disconnecting from cable and switching to satellite.

[0181] Learning model engine 540 may retrieve historical attributes 522 for that first user for a period of time before the user terminated access and/or a period of time after the user terminated access to detect a change in viewing activity that may have resulted in the user terminating access to the source or service. Learning model engine 540 may perform the same analysis for each other user for which data is available (e.g., in a database for historical outcomes 524) and who terminated access to the same source or service. After processing the data for each user who terminated access to the particular source or service, learning model engine 540 may identify similarities in attributes 522 of those users during the period preceding and/or following each respective user's termination of access to the source or service. Learning model 540 may store a correlation factor between the similar attributes and the particular source or service. The correlation factor indicates when a subsequent user who is a subscriber to the same source or service exhibits at least some of the similar attributes, the user will likely terminate access to the source or service. The greater the number of similar attributes that the user exhibits, the larger the score that results from the correlation factor indicating a greater likelihood that the user will terminate access to the source or service. Learning model engine 540 may generate a different correlation factor for each source or service to which a set of users terminated access.

[0182] In some embodiments, learning model engine 540 may be trained on an ongoing, continuous basis. In particular, learning model engine 540 may continuously process information (e.g., user activity, historical outcomes 524, and subscription information) for each subscriber or user and adapt or change the correlation factor for a given service. The updated correlation factor may be then provided to trained model engine 550. In some implementations, learning model engine 540 may update a previously determined correlation factor each time a given user or set of users terminate access to a particular source or service. For example, each time new information is stored

to a database of historical outcomes 524 (e.g., each time a given user unsubscribes or disconnects from a given source or service), a signal identifying the source or service associated with the new information may be transmitted to learning model engine 540 indicating a need to re-compute or update a correlation factor corresponding to the identified source or service.

[0183] As referred to herein, the phrase “terminate access” or “termination of access” means that the source or service was disconnected by the user or requested by the user to be removed from the user’s subscription plan. After terminating access to a given source or service a user has to re-subscribe (repay) for the source or service to resume access.

[0184] After a predetermined amount of time and/or after a data from a predetermined number of users has been processed by learning model engine 540, the model may be provided to trained model engine 550. Trained model engine 550 may process current attributes 526 of a given user with each of the correlation factors provided by learning model engine 540 that is associated with a source or service to which the user is a subscriber. Trained model engine 550 may output a score that represents how closely correlated the current user’s attributes are with the correlation factor. The score output by trained model engine 550 may be source/service specific. A larger score indicates a greater likelihood that the user will terminate access to the source or service.

[0185] The media guidance application may process the score for a given user to target advertisements and promotions. For example, in response to determining that the score of a given user exceeds a first threshold, the media guidance application may identify the source or service associated with the score. The media guidance application may provide a promotion to the user for the source or service (e.g., allow the user to keep the subscription to the source or service at a discounted price). Alternatively, the media guidance application may provide an advertisement for content available on the source or service to the user. In some implementations, in response to determining that the score of a given user exceeds a second threshold higher than the first threshold, the media guidance application may provide a different set of promotions and/or advertisements. If the score is below a threshold, the media guidance application may avoid presenting promotions or advertisements for the source or service.

[0186] In some embodiments, in response to determining that the score of a given user is below a threshold, the media guidance application may instruct a subscriber management

system to initiate a process for retaining the given user. In some embodiments, in response to determining that the score of a given user is below a threshold, the media guidance application may provide a visual alert to an operator of source or service associated with the score. The visual alert may include information that identifies the user, the source or service, and/or the score. For example, the subscriber management system may, based on the instruction from the media guidance application and the score, contact the given user (e.g., place a phone call, send a text message or email) to offer a new offer, discount on other services (e.g., packages of programming), or reduction in price of current services. The offer may be specific to the source or service for which the score is below the threshold or generic. In particular, if the score indicates that the user is likely to terminate access to a premium channel, the subscriber management system may contact the given user offering any combination of: a reduction in the current price the given user is paying for the premium channel, a discount on a new service (e.g., phone service for a cable subscriber), or a discount on a new premium channel not currently subscribed to by the given user. In some implementations, the subscriber management system may apply different offers to different users who have the same scores. The subscriber management system may determine what level of offer to a given user not only based on the score of the user but also based on information stored in historical outcomes 524 for the user and/or currently subscribed to services. For example, if first and second users have the same score for a particular service (e.g., cable) but the first user is not a subscriber to premium channels, the subscriber management system may offer the premium channels (or a set of premium channels that meet a user profile for the first user) at a discount. The second user may already be a subscriber to the premium channels and accordingly the subscriber management system may offer alternate services to the second user at a discount (e.g., phone services if the second user does not currently have phone service).

[0187] In some embodiments, trained model engine 550 may receive subscription information for a given user and user activity information. The subscription information may indicate that the user is a subscriber to a premium channel on the source (e.g., HBO on cable) and the user activity information may indicate that the given user has not viewed content from the premium channel in more than a threshold period of time (e.g., more than 2 weeks). In response, trained model engine 550 may identify a correlation factor

associated with the premium channel and generate a score indicating that the user is likely to terminate access to the premium channel. The value of the score may be higher or lower based on other user activity and subscription information. For example, if the user watches content from an affiliate of the premium channel (e.g., Cinemax) which is tied to the subscription of the primary channel (e.g., HBO), then the score may be reduced.

[0188] In some embodiments, the subscription information may indicate that the user is a subscriber to a premium channel on the source (e.g., HBO on cable) and the user activity information may indicate that the given user has increased the speed of their Internet connection. In response, trained model engine 550 may identify a correlation factor associated with the premium channel and generate a score indicating that the user is likely to terminate access to the premium channel. In particular, the user may have increased Internet speed because they intend to access more content online and may not need the premium channel anymore. The score may be further increased if the above determination is made that the user has not viewed content from the premium source in more than a threshold period of time (e.g., more than 2 weeks).

[0189] In some embodiments, the subscription information may indicate that the user has purchased a predetermined number of movies from a source (e.g., a certain cable provider) and the activity information may indicate that the user watches non-premium content sources (e.g., free TV). In response, the score output by trained model engine 550 may be reduced as the user is less likely to terminate access to the source (e.g., disconnect service from the cable provider). In some implementations, the subscription information may indicate that the user is a subscriber to a cable provider and the user activity information may indicate that the given user watches new releases on-demand from the cable provider. In response, the score corresponding to the cable provider output by trained model engine 550 may be decreased as the user is unlikely to terminate access to the cable provider as there may not be an alternate source from which the user can obtain access to the new releases. In some implementations, the subscription information may indicate that the user is a subscriber to a cable provider and the user activity information may indicate that the given user does not watch many live events (e.g., linear content) and has increased the Internet speed. In response, the score corresponding to the cable provider output by trained model engine 550 may be increased as the user is likely to terminate access to the cable provider as the user may be looking to stream more content

from an online source. In some implementations, the subscription information may indicate that the user is a subscriber to a cable provider and the user activity information may indicate that the given user watches many live events (e.g., linear content) and comments on a social network about the live events. In response, the score corresponding to the cable provider output by trained model engine 550 may be decreased as the user is unlikely to terminate access to the cable provider. In some implementations, the subscription information may indicate that the user is a subscriber to a cable provider and the user activity information may indicate that the given user watches a variety of content. In response, the score corresponding to the cable provider output by trained model engine 550 may be decreased as the user is unlikely to terminate access to the cable provider.

[0190] In some implementations, the subscription information may indicate that the user is a subscriber to a premium channel on the source (e.g., HBO on cable) and the user activity information may indicate that the given user has subscribed to a different premium channel (e.g., Showtime on cable). In response, the score corresponding to the HBO premium channel output by trained model engine 550 may be increased as the user is likely to terminate access to the HBO premium channel given that the user will consume content from the other premium channel. In some implementations, the subscription information may indicate that the user is a subscriber to a premium channel on the source (e.g., HBO on cable) and the user activity information may indicate that the given user only watches a certain show on the premium channel that has recently ended (e.g., the season of the show has finished). In response, the score corresponding to the HBO premium channel output by trained model engine 550 may be increased as the user is likely to terminate access to the HBO premium channel given that the user will no longer have content to consume from the premium channel.

[0191] FIG. 6 is a flowchart of illustrative steps for determining a likelihood that a user will change a service in accordance with some embodiments of the disclosure. Process 600 includes identifying a first service to which a user is subscribed at step 602, receiving information from a third-party data source corresponding to the user at step 604, identifying, based on the information from the third-party data source, data indicating a negative interest in the first service at step 606, and calculating a likelihood that the user will change the first service based on the identified data at step 608.

[0192] At step 602, a media guidance application may identify (e.g., via control circuitry 304 (FIG. 3)) a first service to which a user is subscribed. The first service may be any subscription service, including, but not limited to television services, media delivery services, premium services such as on-demand content purchasing or premium channels, Internet access, or telephone services. The media guidance application may identify a user's subscription status using any suitable method. For example, the media guidance application may store or access information associated with a user, such as a user profile, which includes information on services to which the user is subscribed. The media guidance application may also query a remote server to determine whether a user is subscribed to the first service. As discussed above in relation to FIG. 5, a user's subscription information may be stored in a memory such as history billing data memory 530, which sends the subscription information to learning model engine 540.

[0193] At step 604, the media guidance application may receive (e.g., through communication network 414 (FIG. 4) using control circuitry 304 (FIG. 3)) information from a third-party data source corresponding to the user. The third-party data source may be any suitable data source for storing information corresponding to the user. For example, the third-party data source may be a media guidance data source, such as media guidance data source 418 depicted in FIG. 4, that stores a user profile. The third-party data source may also be a social network data source that maintains a social networking application for connecting the user to other individuals in the social network. The social network data source may provide a user profile associated with the user, comments or posts that the user has uploaded onto the social network, profiles associated with individuals connected to the user via the social network, comments or posts that those associated individuals have uploaded onto the social network, or any other information associated with the user.

[0194] At step 606, the media guidance application may identify (e.g., via control circuitry 304 (FIG. 3)), based on the information from the third-party data source, data indicating a negative interest in the first service. The media guidance application may identify negative interest in any number of ways. For example, the media guidance application may identify negative feedback or comments made about the service. As an illustrative example, the media guidance application may search a user's social media comments and posts for keywords associated with the first service, such as the name or

type of the first service. The media guidance application may cross-reference these words with words associated with negative feedback (e.g., “bad,” “horrible,” “never again,” etc.). The media guidance may identify negative interest in the service by identifying one or more of the words associated with negative feedback. The media guidance application may maintain statistics on the frequency of each of the keywords and words associated with negative feedback. The media guidance application may also determine the proximity of the keywords associated with the first service and the words associated with negative feedback. The media guidance application may determine whether the words associated with negative feedback occur with a frequency greater than a frequency threshold, or if the words associated with negative feedback occur within a predetermined number of words of the keywords associated with the first service. The media guidance application may identify negative interest based on either determination.

[0195] The media guidance application may also identify negative interest in the first service by identifying a relative lack of comments or feedback about a first service during a period of time. For example, the media guidance application may search a user’s comments or posts for occurrences of keywords associated with the first service (e.g., the name of the service, the type of service, posts about the service, etc.) within a first time period. The media guidance application may determine a first frequency of occurrence of the keywords during the first period of time. The media guidance application may then search a user’s comments or posts for keywords associated with the first service during a second time period and calculate a corresponding frequency of occurrence for the second time period. A second frequency which is less than the first frequency indicates that the user is mentioning the first service with decreasing frequency. As an illustrative example, the user may comment feverishly about a new cable service that they have just subscribed to, but gradually become less enthralled with the service. This loss of interest may be indicated by a decrease in the number of comments about the new service as time moves on.

[0196] At step 608, the media guidance application may calculate (e.g., via control circuitry 304 (FIG. 3)) a likelihood that the user will change the first service based on the identified data indicating a negative interest in the first service. The media guidance application may calculate the likelihood based on a type of the negative interest. For example, the media guidance application may initialize the likelihood that the user will

change the first service to zero and increment the likelihood based on identifying occurrences of words associated with negative feedback, as discussed above in relation to step 606. Some types of negative feedback may be more or less heavily weighted when calculating the likelihood. For example, an overt statement, such as “I should probably cancel HBO” may receive a heavier weighting and thus increase the likelihood by a greater amount than a more subtle statement, such as “HBO is boring.” The media guidance application may determine the severity of a negative statement by cross-referencing keywords with a database of pre-determined words and phrases. For example, as discussed above in relation with FIG. 5, historical outcomes database 524 may store the historical actions and patterns of several users that result in the termination of services for those users. The media guidance application may compare the actions and/or statement of the user to the historical data in historical outcomes database 524 to determine that likelihood that the user’s actions will result in a change in the first service. In some embodiments, the likelihood that the user will change the first service may be in relation to a time period. For instance, the likelihood that the user will change the first service may be provided as a percentage likelihood of termination in the next six months.

[0197] FIG. 7 is a flowchart of another set of illustrative steps for determining a likelihood that a user will change a service in accordance with some embodiments of the disclosure. Process 700 includes initializing the likelihood that the user will change a service to zero at step 702, receiving information from a third-party data source corresponding to the user at step 704, and identifying individuals connected to the user through a social network maintained by the third-party data source at step 706. One of the identified individuals is selected at step 708, and a determination is made whether negative feedback or comments have been received from the selected individual at step 710. If negative feedback or comments have been received from the selected individual, then the likelihood that the user will change the service is increased at step 712 and the process 700 continues to step 714. If negative feedback or comments have been received from the selected individual, then the process 700 continues directly to step 714. The process 700 further comprises determining a first frequency of comments during a first period and a second frequency of comments during a second period at step 714 and determining whether the second frequency is less than the first frequency at step 716. If the second frequency is less than the first frequency, then the likelihood that the

user will change the service is increased at step 718. If the second frequency is not less than the first frequency, then the process 700 continues directly to step 720. The process 700 further includes determining whether unselected individuals remain, and if they do, then selecting another user of the identified individuals connected to the user through a social network maintained by the third-party data source at step 708. The process 700 further includes determining whether the likelihood that the user will change the service exceeds a threshold at step 722. If the likelihood exceeds the threshold, then at least one of an advertisement or an offer for a discount for the service may be transmitted to the user at step 724. If the likelihood does not exceed the threshold, then the process 700 ends at step 726.

[0198] At step 702, the media guidance application may initialize (e.g., via control circuitry 304 (FIG. 3)) a likelihood that the user will change a service to zero, and at step 704, the media guidance application may receive (e.g., via control circuitry 304 (FIG. 3)) information from a third-party data source corresponding to the user. Step 704 may be substantially similar to step 604 discussed above in relation to FIG. 6. At step 706, the media guidance application may identify (e.g., via control circuitry 304 (FIG. 3)) individuals connected to the user through a social network maintained by the third-party data source. For instance, the media guidance application may identify “friends” of the user connected through the social network. The media guidance application may identify individuals connected through the user through any number of links (e.g., “friends of friends”) or within a pre-determined number of links. At step 708, the media guidance application may select (e.g., via control circuitry 304 (FIG. 3)) either the user or one of the identified individuals connected to the user through the social network. At step 710, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) whether negative feedback or comments have been received from the selected individual. Step 710 may be substantially similar to step 606 discussed above in relation to FIG. 6. For example, the media guidance application may identify comments, posts, or activity that indicate negative interest in the first service. The media guidance application may also identify a relative lack of comments or a decrease in the frequency of commenting about a first service. If such negative feedback or comments is detected, then the media guidance may increase the likelihood that the user will change the service at step 712. If negative

feedback is not detected, then the media guidance application may determine a first frequency of comments

during a first period and a second frequency of comments during a second period at step 714. The media guidance application compares the second frequency to the first

5 frequency at step 716, and if the second frequency is less than the first frequency, then the media guidance application increases the likelihood that the user will change the service at step 718. If the second frequency is not less than the first frequency, then the media guidance application continues to step 720, where it determines (e.g., via control circuitry 304 (FIG. 3)) whether unselected individuals remain. If unselected individuals remain,
10 then the media guidance application selects another individual at step 708.

[0199] If all individuals connected to the user have been analyzed, then the media guidance application determines whether the likelihood that the user will change the first service exceeds a threshold at step 720 (e.g., via control circuitry 304 (FIG. 3)). The threshold may be a pre-determined threshold set by a service provider of the first service.

15 If the likelihood that the user will change the first service is greater than this threshold, then the media guidance application may transmit (e.g., via control circuitry 304 (FIG. 3) over communications network 414 (FIG. 4)) to the user at least one of an advertisement or an offer for a discount for the service. If the likelihood does not exceed the threshold, then the process 700 ends at step 726.

20 **[0200]** FIG. 8 is a flowchart of illustrative steps for generating a model to determine a likelihood that a user will change a service in accordance with some embodiments of the disclosure. Process 800 includes identifying a service to which a plurality of users are subscribed at step 802, receiving information from a third-party data source for each of the plurality of users at step 804, identifying, based on the information from the third-party
25 data source, a user action performed by each of the plurality of users in relation to the service at step 806, identifying for at least one of the plurality of users, based on the respective information from the third-party data source, a request to change the first service at step 808, and generating a model to determine a likelihood that a user will change the first service based on the identified user action and the identified request to
30 change the first service at step 810.

[0201] At step 802, a media guidance application may identify (e.g., via control circuitry 304 (FIG. 3)) a service to which a plurality of users are subscribed. The media guidance

application may identify the service in step 802 in substantially the same way as in step 602 described above in relation to FIG. 6. At step 804, the media guidance application may receive (e.g., via control circuitry 304 (FIG. 3)) information from a third-party data source for each of the plurality of users at step 804. The media guidance application may receive the information from any suitable data source for storing information corresponding to the plurality of users. For example, the third-party data source may be a media guidance data source, such as media guidance data source 418 depicted in FIG. 4, that stores user profiles. The third-party data source may also be a social network data source that maintains a social networking application for connecting users to one another in the social network. The social network data source may provide user profiles associated with the users, comments or posts that the users have uploaded onto the social network, profiles associated with individuals connected to the users via the social network, comments or posts that those associated individuals have uploaded onto the social network, or any other information associated with the users.

[0202] At step 806, the media guidance application may identify (e.g., via control circuitry 304 (FIG. 3)), based on the information from the third-party data source, a user action performed by each of the plurality of users in relation to the service. For example, each of the plurality of users may have posted a bad review of the service to their social media profile. The user action may be any user action performed in relation to the service, including, but not limited to, using the service, providing feedback for the service, providing a comment about the service, upgrading a service, or terminating a service. At step 808, the media guidance application may identify (e.g., via control circuitry 304 (FIG. 3) for at least one of the plurality of users, based on the respective information from the third-party data source, a request to change the first service. The request to change the first service may comprise any change regarding the first service, including, but not limited to, subscribing to the first service, upgrading the first service, downgrading the first service, or terminating the first service. In this manner, the media guidance application may identify a plurality of users, each of which has performed a particular user action in relation to a service, and wherein at least one of the plurality of users (but perhaps not all) has requested a change to the service.

[0203] At step 808, the media guidance application may generate (e.g., via control circuitry 304 (FIG. 3)) a model to determine a likelihood that a user will change the first

service based on the identified user action and the identified request to change the first service. The media guidance application may generate the model by calculating the probability that the identified user action is followed by a request to change the service. As an illustrative example, suppose 100 users posted a bad review of HBO, and of those 100 users, 50 of them terminated HBO within the next three months. The media guidance application, based on this data, may calculate that for a 101st user that posts a bad review of HBO, the probability of that 101st user terminating HBO within the next three months is 50%. In this manner, the media guidance application may maintain statistics and a database of user actions and historic subscription activity (e.g., new subscriptions, upgrades, downgrades, terminations, etc.) and analyze the historic subscription activity to determine correlations between user actions and historic subscription activity.

[0204] FIG. 9 is a flowchart of another set of illustrative steps for generating a model to determine a likelihood that a user will change a service in accordance with some embodiments of the disclosure. Process 900 includes receiving information from a third-party data source for each of a plurality of users at step 902, identifying actions performed by each of the plurality of users in relation to a service at step 904, determining a pattern of action based on the identified actions at step 906, identifying a request to change the service for at least one of the plurality of users at step 908, and generating a model to determine a likelihood that an action or a pattern of action is followed by a request to change the service at step 910. The process 900 further includes selecting one of the plurality of users at step 912, comparing actions performed by a current user to the actions performed by the selected user at step 914, based on the comparison, calculating a correlation factor that indicates a similarity between the current user and the selected user at step 916, and determining whether the correlation factor exceeds a threshold at step 918. If the correlation factor exceeds the threshold, then the process 900 includes using the model, determining a likelihood that the user will request to change the service at step 920 and transmitting the likelihood that the user will request to change the service to a service provider at step 922. The process 900 further includes determining whether unselected users remain, and if they do remain, selecting another user of the plurality of users at step 926. If unselected users do not remain, the process 900 ends at step 928.

[0205] At step 902, the media guidance application may receive (e.g., via control circuitry 304 (FIG. 3)) information from a third-party data source for each of a plurality of

users. The step 902 may be substantially similar to the step 804 described above in relation to FIG. 8. At step 904, the media guidance application may identify actions performed by each of the plurality of users in relation to a service. The media guidance application may identify actions in step 904 in substantially the same manner as the identification in step 806 described above in relation to FIG. 8. At step 906, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) a pattern of action based on the identified actions at step 906. The pattern of action may be any group of two or more user actions that the plurality of users have performed. The two or more user actions may be performed in sequence or out of sequence. At step 908, the media guidance application may identify (e.g., via control circuitry 304 (FIG. 3)) a request to change the service for at least one of the plurality of users. The step 908 may be substantially similar to step 808 described above in relation to FIG. 8. As an illustrative example, a several users may exhibit a pattern of posting a series of negative comments about a service, then terminating the service. The media guidance application, based on this data, may determine that the series of negative comments constitutes a pattern of action that leads to a higher probability of terminating the service.

[0206] At step 910, the media guidance application may generate (e.g., via control circuitry 304 (FIG. 3)) a model to determine a likelihood that an action or a pattern of action is followed by a request to change the service. The step 910 may be substantially similar to the step 810 described above in relation to FIG. 8. In steps 912 – 916, the media guidance application may analyze a new user based on the data used to generate the model. The media guidance application may compare the actions of the new user to the actions of the plurality of users to determine a user of the plurality of users that closely matches the new user. At step 912, the media guidance application may select (e.g., via control circuitry 304 (FIG. 3)) one of the plurality of users. At step 914, the media guidance application may compare (e.g., via control circuitry 304 (FIG. 3)) actions performed by a current user to the actions performed by the selected user. For example, the historic actions of the current user (i.e., new user, user being analyzed) in relation to the service may be stored by historic billing data memory 530. The historic billing data memory 530 and/or the generated model may also store historic actions of the selected user of the plurality of users. Both sets of actions may be compared to determine any similar actions or pattern of actions. At step 916, the media guidance application may,

based on the comparison, calculate (e.g., via control circuitry 304 (FIG. 3)) a correlation factor that indicates a similarity between the current user and the selected user. The correlation factor may be calculated in any suitable manner to provide a normalized value indicating the similarity between the current user and the selected user of the plurality of users. For example, the correlation factor may calculate a percentage of the number of total actions performed that were common to both the current user and the selected user of the plurality of users. The correlation factor may be calculated by weighting different user actions differently. For example, a bad review of the service may be weighted more heavily than a negative comment of the service.

[0207] At step 918, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) whether the correlation factor exceeds a threshold. The threshold may be a pre-determine threshold set by a service provider of the service. If the correlation factor exceeds the threshold, then the process media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) using the model, a likelihood that the user will request to change the service. The media guidance may determine the likelihood that the current user will request to change the service based at least in part on whether the selected user of the plurality of users changed the service and the correlation factor. In some embodiments, the media guidance application determine whether the selected user requested a change to the service, and if the selected user did request a change to the service, then the media guidance application may apply the correlation factor as the likelihood that the current user will change the service. For example, if a first user exhibits similar behavior (evidenced by common actions or pattern of actions) as a second user, resulting in a relatively high correlation factor, and the second user terminated the service, then the first user has a relatively high likelihood of also terminating the service. In some embodiments, the media guidance application may combine the correlation factors of the plurality of users, either as a weighted or unweighted average, to compute the likelihood that the user will request to change the service. At step 922, the media guidance application may transmit (e.g., via control circuitry 304 (FIG. 3) through network 414 (FIG. 4)) the likelihood that the user will request to change the service to a service provider. The service provider may use this information to determine users at high-risk of terminating or downgrading the service, and may respond by sending advertisements or discount offers to the these users. At step 924, the media guidance

application may determine (e.g., via control circuitry 304 (FIG. 3)) whether unselected users remain. If unselected users remain, then the media guidance application may select another user of the plurality of users at step 926 and loop back to step 914. If no unselected users remain, then the process 900 ends at step 928.

5 **[0208]** FIG. 10 includes an illustrative example of a display that has generated for display, content associated with preventing the user from terminating the service. For example, in response to determining that a user is likely to terminate his use of or subscription to a service, the media guidance application may generate for display content selected as to urge the user to not terminate the service. For example, in response to
10 determining that a subscription of the user to the service is about to expire, the media guidance application may generate for display one or more portions of the content presented in display 1000. In another example, in response to determining that a user may terminate the use of the service and begin using a different service, the media guidance application may generate for display one or more portions of the content presented in
15 display 1000.

[0209] In some embodiments, the media guidance application may determine that a particular series of media assets is a favorite of the user. For example, the media guidance application may determine that the user has consumed media assets of that series at a rate higher than the rate at which the user consumed other media assets or has not consumed
20 any media assets other than those in the series during a particular time period. In response to determining that the user has consumed all of those media assets or is about to consume all of those media assets, the media guidance application may generate content associated with preventing the user from terminating the service. In another example, the media guidance application may determine that the user has consumed media assets of that series
25 at a rate higher than the rate at which the user consumed other media assets or has not consumed any media assets other than those in the series during a particular time period. Moreover, the media guidance application may determine that a media asset (or the entire series of media assets) is accessible from another service. In response, the media guidance application may generate content associated with preventing the user from terminating the
30 service (and using the other service).

[0210] Additionally or alternatively, the media guidance application may track the rate at which a user consumes media assets from the service in a viewing history of the user.

The media guidance application may determine that the rate has decreased over a particular amount of time. For example, the media guidance application may determine that during the first month of the service, the user consumed media assets at a rate of five per week. The media guidance application may also determine that during the second month of the service, the user consumed media assets at a rate of three per week. Finally, the media guidance application may also determine that during the third month of the service, the user consumed media assets at a rate of one or less media assets a week. The media guidance application may cross-reference this data in a database that indicates that such behavior (e.g., the decreasing rate of use of the service) indicates that a user is getting bored with the service and is therefore more likely to terminate the user of the service. In response, the media guidance application may generate content associated with preventing the user from terminating the service.

[0211] For example, the media guidance may generate for display content aimed at causing the user to re-engage the service and thus prevent the user from terminating his service. In some embodiments, the media guidance application, in response to determining that the current rate does not correspond to the threshold rate (e.g., a rate at which the media guidance application determines a user is likely to terminate the use of the service), may determine a characteristic not associated with media assets previously consumed by a user and recommend a media asset associated with the characteristic.

[0212] In another example, the media guidance application may determine that the rate change is due to the user using another service (e.g., the time period of the rate change corresponds to time period corresponding to the using beginning the use of the other service). In response, the media guidance application may generate content associated with preventing the user from terminating the service (or terminating the use of the other service).

[0213] Additionally or alternatively, the media guidance application may monitor the brain state or attentiveness of the user. For example, the media guidance application may monitor for an occurrence (e.g., particular brainwave frequency ranges, particular eye blinking patterns, a particular level of eye content, particular emotional responses, etc.) or a series of occurrences over a period of time that indicates that a user is losing interest in the media asset offered by the service, dislikes the media assets offered by the service, is not attentive when using the service, is growing sleepy when using the service, etc. In

response to detecting such occurrences, the media guidance application may generate for display content associated with preventing the user from terminating the service.

[0214] In another example, the media guidance application may determine that the brain state indicates that a user prefers another service (e.g., the mood, attentiveness, eye content, etc., of the user is higher when the user is using the other service). In response, the media guidance application may generate content associated with preventing the user from terminating the service (or terminating the use of the other service).

[0215] Additionally or alternatively, the media guidance application may determine that a particular media asset that is accessible to the first user using the first service (e.g., a cable television channel) is also accessible to the user using a second service (e.g., an Internet provider that provides increased bandwidth that may be used by the user to stream the media asset from a separate content provider). In response to determining the media asset is accessible through both the first service and the second service, the media guidance application may generate for display, on a display device, content associated with preventing the user from terminating the first service.

[0216] Additionally or alternatively, the media guidance application may determine, based on a purchase history for a user that indicates media assets purchased by a user, that a number of media assets that were purchased by the user from a current service that are not accessible through a second service. The media guidance application may then compare the number of media assets to a threshold number. For example, the media guidance application may determine whether or not the number of media assets purchased from the current service that are not accessible from another service indicates that the user is likely to remain with the current service. For example, if the user purchases numerous media assets from the current service that are not accessible from another service, the user is less likely to stop using the current service (in lieu of the other service) than if the user purchases only a few media assets from the current service that are not accessible from another service.

[0217] Display 1000 includes numerous types of content associated with preventing the user from terminating the service. For example, display 1000 includes numerous media assets aimed at providing one or more reasons for the user to retain the use of the service or to renew a subscription to the service. For example, display 1000 includes icon bar 1002. Icon bar 1002 notifies the user (e.g., via a textual message) that the subscription of

the user to the service is almost expired. Furthermore, icon bar 1002 urges the user to select icon bar 1002 to renew his subscription. For example, in some embodiments, selection of icon bar 1002 may direct the user to an order form, which the user can use to renew the subscription. Alternatively, selection of icon bar 1002 may automatically
5 authorize the service to charge the user and renew the subscription of the user to the service.

[0218] Display 1000 also includes recommendation 1004. Recommendation 1004 is content associated with preventing a user from terminating the service. For example, in response to determining that a user is increasingly becoming bored with the media assets
10 offered by the service, the media guidance application may offer recommendations for other media assets. Furthermore, as the user has likely already perused the media assets in a favorite category or genre (or consumed all the media assets in a particular series), the media guidance application may recommend media assets in a category or genre that is not a favorite of the user (e.g., in order to raise awareness to the user of available media assets
15 that are not known or were previously discounted by the user). Likewise, in response to determining that a user has consumed all the media assets in a particular series, the media guidance application may recommend media assets in a different series.

[0219] Accordingly, the media guidance application may determine particular characteristics (e.g., genre, subject matter, series affiliation) of the media assets consumed
20 by the user and recommend media assets that do not share (or share only some of) those characteristics. Additionally or alternatively, the media guidance application may determine which available media assets have not yet been consumed by the user and limit the recommendations to those media assets.

[0220] Display 1000 also includes recommendation notification 1006. Notification 1006
25 may alert a user to media assets that, while not currently accessible to a user (e.g., have not yet been released) will soon be accessible to a user. In some embodiments, notification 1006 may also include additional information (e.g., price and scheduling data). Additionally or alternatively, notification 1006 may indicate to a user one or more media assets that are only accessible through a current service as well as indicate one or more
30 media assets (e.g., favorite media assets of the user) that are not accessible from other services.

[0221] Display 1000 may also include media listings 1008. Media listings 1008 may indicate to a user one or more media assets that are available through a current service (e.g., in order to entice a user to remain with the service) or one or more media assets that are not available through another service (e.g., in order to entice a user to not use or stop using that service). In some embodiments, media listings 1008 may also include additional information (e.g., price and scheduling data) about media assets accessible from the current service. Additionally or alternatively, the media guidance application may include additional information about media assets available from another service. For example, media listings 1008 may include information that may be used by a user to compare the price and schedule (e.g., date when a media asset is accessible to the user via each service).

[0222] In some embodiments, the media guidance application may list all media assets accessible through the first service in media listings 1008. Alternatively, the media guidance application may select the media listings presented in media listings 1008 based on one or more criteria. For example, the media guidance application may select the media listings in response to determining that a user has not consumed those media assets, that the media assets are highly rated, that the media assets match user preferences of the user, that the price and/or scheduling data for each of those media assets is more favorable than the price and/or scheduling data from another service, etc. For example, the media guidance application may select media assets that are available to a user and/or at a lower price from a current service of the user than another service (e.g., one recently subscribed to by the user).

[0223] Display 1000 may also include advertisements 1010. For example, advertisements 1010 may provide discounts, coupons, and/or other special offers. In some embodiments, advertisements 1010 may be linked to a user not terminating a service. For example, the media guidance application may offer a user a discount on the price of a service in response to a user signing up for a new subscription to the service. In some embodiments, the media guidance application may target advertisements 1010 to the user based on the viewing history of the user. For example, the media guidance application may determine that the user prefers a particular genre of media assets and may present the user with an offer associated with that genre of media assets.

[0224] FIG. 11 is an illustrative example of one component of a detection module (e.g., detection module 316 (FIG. 3)), which may be accessed by a media guidance application in accordance with some embodiments of the disclosure. FIG. 11 shows eye contact detection component 1100, which may be used to identify the gaze point of a user of user device 300, in order to determine the attentiveness level of the user. For example, the location upon which a user's eyes are focused may indicate whether or not a user is paying (or an amount a user is paying) attention to the media guidance application. For example, eye contact detection component 1100 may determine whether one or both eyes of the user are focused on the display (e.g., display 312 (FIG. 3)) associated with the media guidance application (e.g., indicating that a user is attentive) or focused on a location that is not on the display (e.g., indicating that a user is not attentive).

[0225] Eye contact detection component 1100 includes processor 1102, light source 1104, and optical sensor 1106. Light source 1104 transmits light that reaches at least one eye of a user, and optical sensor 1106 is directed at the user to sense reflected light.

Optical sensor 1106 transmits collected data to processor 1102, and based on the data received from optical sensor 1106, processor 1102 determines a user's gaze point.

[0226] In some embodiments, eye contact detection component 1100 is configured for determining a gaze point of a single user. In other embodiments, eye contact detection component 1100 may determine gaze points for a plurality of users. Eye contact detection component 1100 may identify multiple users of user devices (e.g., user equipment device 300 (FIG. 3)).

[0227] Processor 1102 may be integrated with one or more light sources 1104 and one or more optical sensors 1106 in a single device. Additionally or alternatively, one or more light sources 1104 and one or more optical sensors 1106 may be housed separately from processor 1102 and in wireless or wired communication with processor 1102. One or more of processors 1102, light sources 1104, and optical sensors 1106 may be integrated into a user device (e.g., user equipment device 300 (FIG. 3)).

[0228] Processor 1102 may be similar to processing circuitry 306 (FIG. 3) described above. In some embodiments, processor 1102 may be processing circuitry 306 (FIG. 3), with processing circuitry 306 in communication with light source 1104 and optical sensor 1106. In other embodiments, processor 1102 may be separate from but optionally in communication with processing circuitry 306.

[0229] Light source 1104 transmits light to one or both eyes of one or more users. Light source 1104 may emit, for example, infrared (IR) light, near infrared light, or visible light. The light emitted by light source 1104 may be collimated or non-collimated. The light is reflected in a user's eye, forming, for example, the reflection from the outer surface of the cornea (i.e., a first Purkinje image), the reflection from the inner surface of the cornea (i.e., a second Purkinje image), the reflection from the outer (anterior) surface of the lens (i.e., a third Purkinje image), and/or the reflection from the inner (posterior) surface of the lens (i.e., a fourth Purkinje image).

[0230] Optical sensor 1106 collects visual information, such as an image or series of images, of one or both of one or more users' eyes. Optical sensor 1106 transmits the collected image(s) to processor 1102, which processes the received image(s) to identify a glint (i.e., corneal reflection) and/or other reflection in one or both eyes of one or more users. Processor 1102 may also determine the location of the center of the pupil of one or both eyes of one or more users. For each eye, processor 1102 may compare the location of the pupil to the location of the glint and/or other reflection to estimate the gaze point. Processor 1102 may also store or obtain information describing the location of one or more light sources 1104 and/or the location of one or more optical sensors 1106 relative to a display (e.g., display 312 (FIG. 3)). Using this information, processor 1102 may determine a user's gaze point on a display (e.g., display 312 (FIG. 3)), or processor 1102 may determine whether or not a user's gaze point is the display (e.g., display 312 (FIG. 3)).

[0231] In some embodiments, eye contact detection component 1100 performs best if the position of a user's head is fixed or relatively stable. In other embodiments, eye contact detection component 1100 is configured to account for a user's head movement, which allows the user a more natural viewing experience than if the user's head were fixed in a particular position.

[0232] In some embodiments accounting for a user's head movement, eye contact detection component 1100 includes two or more optical sensors 1106. For example, two cameras may be arranged to form a stereo vision system for obtaining a 3D position of the user's eye or eyes; this allows processor 1102 to compensate for head movement when determining the user's gaze point. The two or more optical sensors 1106 may be part of a single unit or may be separate units. For example, a user device (e.g., user equipment

device 300 (FIG. 3)) may include two cameras used as optical sensors 1106, or eye contact detection component 1100 in communication with the user device (e.g., user equipment device 300 (FIG. 3)) may include two optical sensors 1106. In other embodiments, each of the user device (e.g., user equipment device 300 (FIG. 3)) and eye contact detection component 1100 may include an optical sensor, and processor 602 receives image data from the optical sensor of the user device and the optical sensor of eye contact detection component 1100. Processor 1102 may receive data identifying the location of optical sensor 1106 relative to a display (e.g., display 312 (FIG. 3)) and/or relative to each other and use this information when determining the gaze point.

[0233] In other embodiments accounting for a user's head movement, eye contact detection component 1100 includes two or more light sources for generating multiple glints. For example, two light sources 1104 may create glints at different locations of an eye; having information on the two glints allows the processor to determine a 3D position of the user's eye or eyes, allowing processor 1102 to compensate for head movement. Processor 1102 may also receive data identifying the location of light sources 1104 relative to a display (e.g., display 312 (FIG. 3)) and/or relative to each other and use this information when determining the gaze point.

[0234] In some embodiments, other types of eye contact detection components that do not utilize a light source may be used. For example, optical sensor 1106 and processor 1102 may track other features of a user's eye, such as the retinal blood vessels or other features inside or on the surface of the user's eye, and follow these features as the eye rotates. Any other equipment or method for determining one or more users' gaze point(s) not discussed above may be used in addition to or instead of the above-described embodiments of eye contact detection component 1100.

[0235] It should be noted that eye contact detection component 1100 is but one type of component that may be incorporated into or accessible by detection module 316 (FIG. 3) or the media application. Other types of components, which may generate other types of data (e.g., video, audio, textual, etc.), are fully within the bounds of this disclosure.

[0236] FIG. 12 is a flowchart of illustrative steps for generating for display content associated with preventing the user from terminating the service. It should be noted that process 1200 or any step thereof could be performed on, or provided by, any of the devices shown in FIGS. 3-4. For example, process 1200 may be executed by control

circuitry 304 (FIG. 3) as instructed by a media guidance application implemented on a user device (e.g., user equipment devices 402, 404, and/or 406 (FIG. 4)) in order to generate for display content associated with preventing the user from terminating the service. In addition, one or more steps of process 1200 may be incorporated into or
5 combined with one or more steps of any other process or embodiment (e.g., as described in relation to FIG. 13)).

[0237] In step 1202, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) a user is accessing a service (e.g., a streaming media content provider). For example, the media guidance application may receive an indication that a
10 user is accessing a service via a user device (e.g., detection module 316 (FIG. 3)) that monitors the activity of the user. For example, a wearable user device (e.g., a headset, armband, optical device, etc.) may receive brain activity data that is associated with the user of a particular service. In another example, the media guidance application may receive (e.g., via I/O path 302 (FIG. 3)) a message from the service provider that the
15 particular user has logged into his or her account or has otherwise accessed the service.

[0238] At step 1204, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) a biometric state of the user while the user is accessing the service. For example, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that the user has a particular heart rate, a particular brain state, etc., based on
20 information received from a user device that monitors and/or records biometric data (e.g., via detection module 316 (FIG. 3)).

[0239] At step 1206, the media guidance application cross-references (e.g., via control circuitry 304 (FIG. 3)) the biometric state with a database (e.g., stored locally at storage 308 (FIG. 3) and/or remotely at any location accessible via communications network 414
25 (FIG. 4)) listing biometric states indicative of a desire to terminate the service to determine whether the biometric state indicates the user desires to terminate the service. For example, the media guidance application may record (e.g., in storage 308 (FIG. 3)) particular brain activity (e.g., a particular brain wave frequency, amplitude, etc.). The media guidance application may then compare (e.g., via control circuitry 304 (FIG. 3))
30 that brain activity to the brain activity of other users (e.g., as recorded in the database) prior to those users terminating the same or similar services. For example, the media guidance application may receive information (e.g., industry standards, market research,

etc.) that indicates average brain activity of a group of users prior to users in that group terminating their service.

[0240] In another example, the media guidance application may record (e.g., at storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)) particular brain activity and compare that brain activity to a database that indicates a particular emotional state (e.g., happy, sad, angry, etc.) of the user to determine whether or not the user is currently unhappy with his or her service. For example, the media guidance application may receive information (e.g., industry standards, market research, etc.) that indicates both the particular brain activity of a group of users that corresponds to an emotional state as well as emotional states that those users have prior to terminating their service.

[0241] In yet another example, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) the amount of time that the eyes of a user are fixated on (e.g., a gaze point of the user is located on) a display device presenting media assets accessed through the service. The media guidance application may compare (e.g., via control circuitry 304 (FIG. 3)) the amount of time to a threshold amount of time to determine whether or not the user has a particular attentiveness level. For example, the media guidance application may receive information (e.g., industry standards, market research, etc.) that indicates the threshold amount of time or the attentiveness level that users have prior to terminating their service.

[0242] At step 1208, in response to determining (e.g., via control circuitry 304 (FIG. 3)) that the biometric state indicates the user desires to terminate the service (e.g., in response to determining that the brain activity of the user is similar to that of users that previously terminated their service, in response to determining that the brain activity of the user is unhappy, and/or in response to determining that the user has a low attentiveness level), the media guidance application may generate (e.g., via control circuitry 304 (FIG. 3)) for display (e.g., on display 312 (FIG. 3)) content associated with preventing the user from terminating the service.

[0243] For example, in response to determining (e.g., via control circuitry 304 (FIG. 3)) that the brain activity of the user is similar to the brain activity of other users prior to those users terminating the same or similar services, in response to determining (e.g., via control circuitry 304 (FIG. 3)) that the user has an unhappy emotional state (e.g., an upset user

indicates that the user will likely terminate the service), and/or in response to determining (e.g., via control circuitry 304 (FIG. 3)) that the user is not attentive when media assets accessible from the service are presented (e.g., a bored user indicates that the user will likely terminate the service), the media guidance application may generate a promotion for the service that urges the user (or gives the user a reason) to retain the service.

[0244] For example, the content may include a discount for the service such as coupons for the service, discounted media content offerings, or other price-lowering materials.

Alternatively or additionally, the media guidance application may present a list of media assets accessible through (or accessible only through) the service. For example, in

response to determining that a user is likely to terminate the use of the service, the media guidance application may point out particular content (e.g., favored by the user) that is accessible through the service and/or is exclusively accessible through the service.

[0245] In some embodiments, the media guidance application may further determine (e.g., via control circuitry 304 (FIG. 3)) a length of time the user has the biometric state.

For example, the media guidance application may determine an average biometric state (e.g., stored in storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)) of the user over a period of time (e.g., in order to normalize random fluctuations). The media guidance application may then compare (e.g., via control circuitry 304 (FIG. 3)) the length of time to a threshold length of time and cross-reference the biometric state in the database (e.g., located at storage 308 (FIG. 3) and/or any location accessible via communication network 414 (FIG. 4)) in response to determining that the length of time corresponds to the threshold length of time. For example, the media guidance application may only perform actions if the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that the user has a particular biometric state for a particular amount of time.

[0246] It is contemplated that the steps or descriptions of FIG. 12 may be used with any other embodiment of this disclosure. In addition, the steps and descriptions described in relation to FIG. 12 may be done in alternative orders or in parallel to further the purposes of this disclosure. For example, each of these steps may be performed in any order or in parallel or substantially simultaneously to reduce lag or increase the speed of the system or method. Furthermore, it should be noted that any of the devices or equipment discussed in relation to FIGS. 3-4 could be used to perform one or more of the steps in FIG. 12.

[0247] FIG. 13 is a flowchart of illustrative steps for selecting content associated with preventing a user from terminating the service. It should be noted that process 1300 or any step thereof could be performed on, or provided by, any of the devices shown in FIGS. 3-4. For example, process 1300 may be executed by control circuitry 304 (FIG. 3) as
5 instructed by a media guidance application implemented on a user device (e.g., user equipment devices 402, 404, and/or 406 (FIG. 4)) in order to generate for display content associated with preventing the user from terminating the service. In addition, one or more steps of process 1300 may be incorporated into or combined with one or more steps of any other process or embodiment (e.g., as described in relation to FIG. 12)).

10 [0248] At step 1302, the media guidance application determines that a user is likely to terminate a service. For example, the media guidance application may determine that a user is likely to terminate a service as described below in relation to FIG. 10. In another example, as described above in relation to step 1206 (FIG. 12), the media guidance application may cross-reference (e.g., via control circuitry 304 (FIG. 3)) the biometric
15 state with a database (e.g., stored locally at storage 308 (FIG. 3) and/or remotely at any location accessible via communications network 414 (FIG. 4)) listing biometric states indicative of a desire to terminate the service to determine whether the biometric state indicates the user desires to terminate the service. For example, the media guidance application may record (e.g., in storage 308 (FIG. 3)) particular brain activity (e.g., a
20 particular brain wave frequency, amplitude, etc.). The media guidance application may then compare (e.g., via control circuitry 304 (FIG. 3)) that brain activity to the brain activity of other users (e.g., as recorded in the database) prior to those users terminating the same or similar services. For example, the media guidance application may receive information (e.g., industry standards, market research, etc.) that indicates average brain
25 activity of a group of users prior to users in that group terminating their service. The media guidance application may then compare the brain activity of the group of users prior to the users in that group terminating their service to the brain activity of the user. Based on the brain activity of the user matching the brain activity of users that terminated their service, the media guidance application may determine (e.g., via control circuitry 304
30 (FIG. 3)) that the user is likely to terminate his or her service.

[0249] In another example, the media guidance application may record (e.g., at storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4))

particular brain activity and compare that brain activity to a database that indicates a particular emotional state (e.g., happy, sad, angry, etc.) of the user to determine whether or not the user is currently unhappy with his or her service. For example, the media guidance application may receive information (e.g., industry standards, market research, etc.) that indicates both the particular brain activity of a group of users that corresponds to an emotional state as well as emotional states that those users have prior to terminating their service. If the user is unhappy, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that the user is likely to terminate his or her service.

[0250] In yet another example, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) the amount of time that the eyes of a user are fixated on (e.g., a gaze point of the user is located on) a display device presenting media assets accessed through the service. The media guidance application may compare (e.g., via control circuitry 304 (FIG. 3)) the amount of time to a threshold amount of time to determine whether or not the user has a particular attentiveness level. For example, the media guidance application may receive information (e.g., industry standards, market research, etc.) that indicates the threshold amount of time or the attentiveness level that users have prior to terminating their service. Based on the attentiveness level of the user, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that the user is likely to terminate his or her service.

[0251] At step 1304, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) whether or not a subscription of the user is ending. For example, the media guidance application may determine that the user is subscribed to the service for a particular amount of time (e.g., a month, year, etc.) and that amount of time is coming to an end. If so, the media guidance application proceeds to step 1306 and selects (e.g., via control circuitry 304 (FIG. 3)) criteria corresponding to renewing a subscription of the user before proceeding to step 1308. For example, if the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that the subscription of the user is ending, the media guidance application may generate content associated with renewing the subscription of the user (e.g., icon bar 1002 (FIG. 10)).

[0252] If the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that a subscription of the user is not ending at step 1304, the media guidance application proceeds to step 1308. For example, if the subscription of the user is not

nearing an end, then the media guidance application determines not to generate content associated with renewing the subscription of the user (e.g., icon bar 1002 (FIG. 10)).

[0253] At step 1308, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) whether or not the decision to terminate the use of the service is related to a lack of content. For example, the media guidance application may determine that the user has watched a large portion of the content accessible from the service, has watched the most popular portions of the content accessible from the service (e.g., based on the preferences of the user, critical reviews, ratings, and/or editorial recommendations), etc. If so, the media guidance application proceeds to step 810 and selects (e.g., via control circuitry 304 (FIG. 3)) criteria corresponding to presenting other content accessible to the user using the service before proceeding to step 1312. For example, if the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that the user has watched a large portion of content, the media guidance application may generate content associated with presenting other content available to the user (e.g., notification 1006 (FIG. 10)) and media listings 1008 (FIG. 10)).

[0254] If the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that the decision to terminate the use of the service is not related to a lack of content at step 1308, the media guidance application proceeds directly to step 1312. For example, if the decision to terminate the use of the service is not related to a lack of content, then the media guidance application may determine not to present other content available to the user (e.g., notification 1006 (FIG. 10) and media listings 1008 (FIG. 10)).

[0255] At step 1312, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) whether or not the decision to terminate the use of the service is related to competition. For example, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that content the user enjoys is accessible from another content provider. In another example, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that a user recently signed up for another service that directly or indirectly provides media content. If not, the media guidance application proceeds to step 1320.

[0256] If so, the media guidance application proceeds to step 1314 and retrieves additional information on the competition before proceeding to step 1316. For example, if the decision of the user to terminate his or her service is based on competition, the media

guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) the price and accessibility information (e.g., what media assets are available and when) for the competition. In some embodiments, the media guidance application may determine the price and/or scheduling data for each media asset that is more favorable with the current provider than the price and/or scheduling data for the competition. For example, the media guidance application may select media assets that are available to a user and/or at a lower price from the current service of the user than another service (e.g., one recently subscribed to by the user).

[0257] At step 1316, the media guidance application determines whether or not the decision of the user to terminate the service was based on price. For example, if some media content (or the media content preferred by the user) is accessible from another service at a lower price, the media guidance application may determine that the decision of the user to terminate the service was based on price. If so, the media guidance application proceeds to step 818 and selects (e.g., via control circuitry 304 (FIG. 3)) criteria corresponding to a price discount. For example, if the price of content from the current service is an issue for the user, the media guidance application may determine to generate for display content that offers a discount in price (e.g., advertisements 1010 (FIG. 10)).

[0258] At step 1320, the media guidance application determines whether any criteria was selected. For example, the media guidance application may access a database (e.g., located locally at storage 308 (FIG. 3) or remotely at any location accessible via communications network 414 (FIG. 4)) of content associated with preventing a user from terminating the use of the service. The media guidance application may filter (e.g., via control circuitry 304 (FIG. 3)) the available content based on the criteria and retrieve (e.g., via control circuitry 304 (FIG. 3)) the content associated with the criteria at step 1324.

[0259] Alternatively, if the media guidance application determines that no criteria was selected, the media guidance application may select default content associated with preventing the user from terminating the use of the service at step 1322. In some embodiments, the default content may be randomly selected or may be selected based on additional factors. For example, while not based on any selected criteria, the content may still be targeted to a user based on information about the user found in a user profile (e.g., located at storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)).

[0260] It is contemplated that the steps or descriptions of FIG. 13 may be used with any other embodiment of this disclosure. In addition, the steps and descriptions described in relation to FIG. 13 may be done in alternative orders or in parallel to further the purposes of this disclosure. For example, each of these steps may be performed in any order or in parallel or substantially simultaneously to reduce lag or increase the speed of the system or method. Furthermore, it should be noted that any of the devices or equipment discussed in relation to FIGS. 3-4 could be used to perform one or more of the steps in FIG. 13.

[0261] FIG. 14 is a flowchart of illustrative steps for generating for display content associated with preventing the user from terminating the service in response to determining that a media asset is accessible through both a first service and a second service. It should be noted that process 1400 or any step thereof could be performed on, or provided by, any of the devices shown in FIGS. 3-4. For example, process 1400 may be executed by control circuitry 304 (FIG. 3) as instructed by a media guidance application implemented on a user device (e.g., user equipment devices 402, 404, and/or 406 (FIG. 4)) in order to generate for display content associated with preventing the user from terminating the service in response to determining a media asset is accessible through both a first service and a second service. In addition, one or more steps of process 1400 may be incorporated into or combined with one or more steps of any other process or embodiment (e.g., as described in relation to FIGS. 15-19)).

[0262] At step 1402, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) a user is subscribed to a first service. For example, the media guidance application may retrieve a list (e.g., from storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)) that indicates one or more services currently subscribed to or otherwise used to access media assets.

[0263] At step 1404, the media guidance application may detect (e.g., via control circuitry 304 (FIG. 3)) that the user has subscribed to a second service. For example, the media guidance application may receive inputs (e.g., via user input interface 310 (FIG. 3)) from the user (e.g., describing services to which the user subscribes), authorization data (e.g., received via I/O path 302 (FIG. 3)) from the second service (e.g., granting access to the user to media assets available from the second service), and/or information (e.g., received via I/O path 302 (FIG. 3)) from third parties (e.g., online transactions, credit card

statements, etc., related to the second service) that indicate the user has subscribed to the second service.

[0264] At step 1406, in response to detecting that the user has subscribed to the second service, the media guidance application may compare (e.g., via control circuitry 304 (FIG. 3)) media assets accessible through the first service to media assets accessible through the second service to determine whether a media asset is accessible through both the first service and the second service. For example, the media guidance application may cross-reference a database (e.g., located at storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)) that lists content providers for each media asset (or series of media assets) available from the first service to determine whether the second service provides a respective media asset. Alternatively or additionally, the media guidance application may query (e.g., via control circuitry 304 (FIG. 3)) each service for a list of media assets (or series of media assets) currently available (or available in the future) and compare (e.g., via control circuitry 304 (FIG. 3)) the results of the queries.

[0265] At step 1408, in response to determining (e.g., via control circuitry 304 (FIG. 3)) the media asset is accessible through both the first service and the second service, the media guidance application may (e.g., via control circuitry 304 (FIG. 3)) generate for display, on a display device (e.g., display 312 (FIG. 3)), content associated with preventing the user from terminating the first service. For example, the media guidance application may (e.g., via control circuitry 304 (FIG. 3)) generate for display discounts to the price of the first service or alert the user to media assets that are only accessible (currently or in the future) through one of the services.

[0266] In some embodiments, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) not to generate for display the content associated with preventing the user from terminating the service in response to determining the media asset is not accessible through the service. For example, in response to determining (e.g., via control circuitry 304 (FIG. 3)) that one or more media assets are not accessible through the second service, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that generating the content is not needed in order to prevent the user from terminating a subscription to the service (e.g., the ability to access the media assets is itself an incentive to retain the user of the first service).

[0267] In some embodiments, the media guidance application may compare (e.g., via control circuitry 304 (FIG. 3)) the price for the first service to a price for the second service and determine (e.g., via control circuitry 304 (FIG. 3)) not to generate for display, on the display device (e.g., display 312 (FIG. 3)), the content associated with preventing the user from terminating the first service in response to determining (e.g., via control circuitry 304 (FIG. 3)) that the price for the first service is less than the price for the second service based on the comparison. For example, in response to determining (e.g., via control circuitry 304 (FIG. 3)) that the price for accessing one or more media assets from the second service, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that generating the content is not needed in order to prevent the user from terminating a subscription to the service (e.g., the lower costs of the media assets is itself an incentive to retain the user of the first service).

[0268] In some embodiments, the media guidance application may compare (e.g., via control circuitry 304 (FIG. 3)) a first date when the media asset is accessible through the first service to a second date when the media asset is accessible through the second service and determine (e.g., via control circuitry 304 (FIG. 3)) not to generate for display, on the display device (e.g., display 312 (FIG. 3)), the content associated with preventing the user from terminating the first service in response to determining (e.g., via control circuitry 304 (FIG. 3)) that the first date is before the second date. For example, in response to determining (e.g., via control circuitry 304 (FIG. 3)) that the user may access one or more media assets through the first service before the second service, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that generating the content is not needed in order to prevent the user from terminating a subscription to the service (e.g., the ability to access media assets sooner is itself an incentive to retain the user of the first service).

[0269] In some embodiments, the media guidance application may perform one or more actions in response to determining (e.g., via control circuitry 304 (FIG. 3)) that a subscription period for the first service is ending. For example, in response to determining (e.g., via control circuitry 304 (FIG. 3)) that a subscription period for the first service is ending, the media guidance application may detect (e.g., via control circuitry 304 (FIG. 3)) whether or not the user has subscribed to a second service, whether or not the second service has similar media assets, etc.

[0270] It is contemplated that the steps or descriptions of FIG. 14 may be used with any other embodiment of this disclosure. In addition, the steps and descriptions described in relation to FIG. 14 may be done in alternative orders or in parallel to further the purposes of this disclosure. For example, each of these steps may be performed in any order or in parallel or substantially simultaneously to reduce lag or increase the speed of the system or method. Furthermore, it should be noted that any of the devices or equipment discussed in relation to FIGS. 3-4 could be used to perform one or more of the steps in FIG. 14.

[0271] FIG. 15 is a flowchart of illustrative steps for generating for display content associated with preventing the user from terminating the service in response to determining that the number does not exceed the threshold number. It should be noted that process 1500 or any step thereof could be performed on, or provided by, any of the devices shown in FIGS. 3-4. For example, process 1500 may be executed by control circuitry 304 (FIG. 3) as instructed by a media guidance application implemented on a user device (e.g., user equipment devices 402, 404, and/or 406 (FIG. 4)) in order to generate for display content associated with preventing the user from terminating the service in response to determining that the number does not exceed the threshold number. In addition, one or more steps of process 1500 may be incorporated into or combined with one or more steps of any other process or embodiment (e.g., as described in relation to FIGS. 14 and 16-19)).

[0272] At step 1502, the media guidance application may retrieve (e.g., via control circuitry 304 (FIG. 3)) a media asset purchase history for a user, in which the media asset purchase history indicates media assets purchased by the user from a first service. For example, the media guidance application may track (e.g., via control circuitry 304 (FIG. 3)) in a user profile (e.g., located at storage 308 (FIG. 3) and/or communications network 414 (FIG. 4)) the media asset purchases of a user. In some embodiments, the media asset purchase history may further indicate the purchases during a particular time period, the rate of purchases, etc.

[0273] At step 1504, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) a number of media assets that were purchased by the user from the first service that are not accessible through a second service. For example, the media guidance application may cross-reference (e.g., via control circuitry 304 (FIG. 3)) a database (e.g., located at storage 308 (FIG. 3) and/or communications network 414 (FIG.

4)) listing content providers for the media assets purchased by the user from the first service to determine (e.g., via control circuitry 304 (FIG. 3)) the number of media assets (or the number of different media asset series) that were purchased by the user from the first service that are not accessible through the second service. Alternatively or
5 additionally, the media guidance application may query (e.g., via control circuitry 304 (FIG. 3)) each service for a list of media assets (or series of media assets) currently available (or available in the future) and compare (e.g., via control circuitry 304 (FIG. 3)) the results of the queries.

[0274] At step 1506, the media guidance application compares (e.g., via control circuitry
10 304 (FIG. 3)) the number of media assets that were purchased by the user from the first service to a threshold number. For example, the threshold number may represent a particular number of media assets, the purchase of which indicates that a user is unlikely to terminate the use of the first service. The media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) the particular number based on the prior history of
15 the user (e.g., the number media assets the user purchased before previously renewing a subscription to the first service and/or the number of media assets the user purchased prior to terminating the use of another service), a group or users (e.g., industry standards, market research, and/or customer feedback), etc.

[0275] At step 1508, in response to determining (e.g., via control circuitry 304 (FIG. 3))
20 that the number does not exceed the threshold number, the media guidance application may (e.g., via control circuitry 304 (FIG. 3)) generate for display, on a display device (e.g., display 312 (FIG. 3)), content associated with preventing the user from terminating the first service. For example, the media guidance application may generate for display discounts to the price of the first service or alert the user to media assets that are only
25 accessible (currently or in the future) through one of the services. Alternatively, the media guidance application may (e.g., via control circuitry 304 (FIG. 3)) not generate for display, on the display device (e.g., display 312 (FIG. 3)), the content associated with preventing the user from terminating the service in response to determining (e.g., via control circuitry 304 (FIG. 3)) that the number does exceed the threshold number. For example, the media
30 guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that a user is unlikely to terminate the use of the first service. Therefore, the media guidance

application determines (e.g., via control circuitry 304 (FIG. 3)) that generating the content associated with preventing the user from terminating the first service is unnecessary.

[0276] In some embodiments, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) a media asset that was purchased by the user from the first service is accessible through the second service and compare (e.g., via control circuitry 304 (FIG. 3)) a first date when the media asset was accessible through the first service to a second date when the media asset was accessible through the second service. In response to determining (e.g., via control circuitry 304 (FIG. 3)) that the first date is before the second date, the media guidance application may increase the number by one.

[0277] For example, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that because the date of accessibility of the media asset from the first service is before the date of accessibility of the media asset from the second service, the user likely chose to purchase the media asset from the first service even though the media asset was accessible from the second service. Therefore, because the user chose to purchase the media asset from the first service instead of the second service, the purchase of the media asset should be counted towards the number (e.g., as it indicates that the user is unlikely to prefer to access that media asset from the second service). For example, if the user prefers to obtain a threshold number of media assets, even if some of them are accessible from a second service, from a first service, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that the user is unlikely to terminate the use of the first service.

[0278] In some embodiments, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) a media asset that was purchased by the user from the first service is accessible through the second service and compare a first price of the media asset, in which the first price indicates a price of accessing the media asset through the first service, to a second price of the media asset, in which the second price indicates a price of accessing the media asset through the second service. In response to determining (e.g., via control circuitry 304 (FIG. 3)) that the first price is less than the second price, the media guidance application increases the number by one.

[0279] For example, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that because the cost of the media from the first service is less than the cost of the media asset from the second service, the user likely chose to purchase the

media asset from the first service even though the media asset was accessible from the second service. Therefore, because the user chose to purchase the media asset from the first service instead of the second service, the purchase of the media asset should be counted towards the number (e.g., as it indicates that the user is unlikely to prefer to access that media asset from the second service). For example, if the user prefers to obtain a threshold number of media assets, even if some of them are accessible from a second service, from a first service, the media guidance application determines that the user is unlikely to terminate the use of the first service.

[0280] In some embodiments, the media guidance application may compare (e.g., via control circuitry 304 (FIG. 3)) the price for the first service to a price for the second service and determine (e.g., via control circuitry 304 (FIG. 3)) not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the price for the first service is less than the price for the second service based on the comparison. For example, in response to determining (e.g., via control circuitry 304 (FIG. 3)) that the price for accessing one or more media assets from the second service, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that generating the content is not needed in order to prevent the user from terminating a subscription to the service (e.g., the lower costs of the media assets is itself an incentive to retain the user of the first service).

[0281] In some embodiments, the media guidance application may perform one or more actions in response to determining (e.g., via control circuitry 304 (FIG. 3)) that a subscription period for the first service is ending. For example, in response to determining (e.g., via control circuitry 304 (FIG. 3)) that a subscription period for the first service is ending, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) the number of media assets that were purchased by the user from the first service that are not accessible through the second service, whether or not the user has subscribed to a second service, whether or not the second service has similarly priced media assets, etc.

[0282] It is contemplated that the steps or descriptions of FIG. 15 may be used with any other embodiment of this disclosure. In addition, the steps and descriptions described in relation to FIG. 15 may be done in alternative orders or in parallel to further the purposes of this disclosure. For example, each of these steps may be performed in any order or in

parallel or substantially simultaneously to reduce lag or increase the speed of the system or method. Furthermore, it should be noted that any of the devices or equipment discussed in relation to FIGS. 3-4 could be used to perform one or more of the steps in FIG. 15.

[0283] FIG. 16 is a flowchart of illustrative steps for determining a number to compare to a threshold number. It should be noted that process 1600 or any step thereof could be performed on, or provided by, any of the devices shown in FIGS. 3-4. For example, process 1600 may be executed by control circuitry 304 (FIG. 3) as instructed by a media guidance application implemented on a user device (e.g., user equipment devices 402, 404, and/or 406 (FIG. 4)) in order to determine a number to compare to a threshold number. In addition, one or more steps of process 1600 may be incorporated into or combined with one or more steps of any other process or embodiment (e.g., as described in relation to FIGS. 12-15 and 17-19).

[0284] Process 1600 illustrates the quantification of reasons that a user is likely to retain his or her subscription to a service. For example, each media asset that was purchased by the user (e.g., an indication that the user prefers that media asset or has an interest in that media asset) that is not accessible from another service is another reason that the user is not likely to terminate the user of the first service. The amount of the number of media assets that were purchased by the user from the first service that are not accessible through a second service is therefore a quantified reflection of these reasons.

[0285] At step 1602, the media guidance application determines the number of media assets that were purchased by the user from the first service that are not accessible through a second service. For example, the media guidance application may retrieve (e.g., from storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)) a media asset purchase history for a user that indicates the number of media assets that were purchased by the user. The media guidance application may then determine (e.g., via control circuitry 304 (FIG. 3)) the number of the media assets that were purchased and that are not accessible through a second service. For example, the media guidance application may determine whether or not a particular purchased media asset is available from a second service by cross-referencing a database (e.g., located at storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)) that lists content providers for each media asset (or series of media assets) that was purchased. Alternatively or additionally, the media guidance application may query

(e.g., via control circuitry 304 (FIG. 3)) each service for a list of media assets (or series of media assets) currently available (or available in the future) and compare (e.g., via control circuitry 304 (FIG. 3)) the results of the queries to the purchased media assets to determine the number of media assets that were purchased and were not accessible through the second service. The media guidance application may then store (e.g., in storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)) the number.

[0286] At step 1604, the media guidance application retrieves (e.g., from storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)) a list of media assets that were purchased by the user from the first service that are accessible through a second service. For example, as described above, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) whether or not a second service provides access to a purchased media asset. In response to determining (e.g., via control circuitry 304 (FIG. 3)) that a second service does provide access to a purchased media asset, the media guidance application records (e.g., in storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)) the media asset in a list of media assets.

[0287] At step 1606, the media guidance application retrieves a media asset from the list. For example, the media guidance application may retrieve a first media asset from the list and determine at step 1608 whether or not the media asset costs less from the first service than the second service. For example, in addition to retrieving information about whether or not the media asset is accessible from another service, the media guidance application may determine additional information (e.g., the price of the media asset from the other service, the date on which the media asset is accessible, the format in which the media asset is accessible, etc.) for the second service (as well as the additional information for the first service). If the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that the media asset cost less from the first service than the second service, the media guidance application proceeds to step 1614 and increases the number (e.g., stored in storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)).

[0288] For example, in response to determining that the media asset cost less from the first service than the second service, the media guidance application determines that there is another reason for the user to retain his or her subscription for the first service. For

example, while the media asset is accessible from another service, the media asset is only accessible at a higher price. Therefore, the stored number is incremented (e.g., via control circuitry 304 (FIG. 3)) to reflect this.

[0289] If the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that the media asset from the first service does not cost less than the media asset from the second service (e.g., the media asset costs the same amount, costs more than, or is not accessible), the media guidance application proceeds to step 1610.

[0290] At step 1610, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) whether or not the media asset is accessible from the first service before the media asset is accessible from the second service. If the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that the media asset is accessible from the first service before the media asset is accessible from the second service, the media guidance application proceeds to step 914 and increments the number (e.g., stored in storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)) by one. For example, while the media asset is accessible from another service, the media asset is only accessible at a later date. Therefore, the stored number is incremented (e.g., via control circuitry 304 (FIG. 3)) to reflect this.

[0291] If the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that the media asset is not accessible from the first service before the media asset is accessible from the second service (e.g., the media asset is accessible from the second service on the same date or before), the media guidance application proceeds to step 1612.

[0292] At step 1612, the media guidance application determines whether or not the media asset format from the first service is better than the media asset format from the second service. If the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that the media asset format from the first service is better than the media asset format from the second service, the media guidance application proceeds to step 1614 and increments the number (e.g., stored in storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)) by one. For example, while the media asset is accessible from another service, the media asset is only accessible in a less desirable format (e.g., while the first service may provide the media asset in high definition, the second service provides the media asset in only standard definition).

Therefore, the stored number is incremented (e.g., via control circuitry 304 (FIG. 3)) to reflect this.

[0293] If the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that the media asset format from the first service is not better than the media asset format from the second service (e.g., the formats are the same), the media guidance application proceeds to step 1616. At step 1616, the media guidance application determines whether or not there are additional media assets in the list. If so, the media guidance application returns to step 1606 and retrieves a different media asset from the list. For example, the media guidance application may perform multiple iterations of process 1600 until each media asset in the list has been processed.

[0294] If the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that there are no additional media assets in the list, the media guidance application proceeds to step 1618. At step 1618, the media guidance application compares the number to a threshold number. For example, the media guidance application may compare (e.g., via control circuitry 304 (FIG. 3)) the number of media assets that were purchased by the user from the first service to a threshold number. For example, the threshold number may represent a particular number of media assets the purchase of which indicates that a user is unlikely to terminate the user of the first service. The media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) the particular number based on the prior history of the user (e.g., the number of media assets the user purchased before previously renewing a subscription to the first service and/or the number of media assets the user purchased prior to terminating the use of another service) or a group or users (e.g., industry standards, market research, and/or customer feedback), etc.

[0295] It is contemplated that the steps or descriptions of FIG. 16 may be used with any other embodiment of this disclosure. In addition, the steps and descriptions described in relation to FIG. 16 may be done in alternative orders or in parallel to further the purposes of this disclosure. For example, each of these steps may be performed in any order or in parallel or substantially simultaneously to reduce lag or increase the speed of the system or method. Furthermore, it should be noted that any of the devices or equipment discussed in relation to FIGS. 3-4 could be used to perform one or more of the steps in FIG. 16.

[0296] FIG. 17 is a flowchart of illustrative steps for generating for display content aimed at preventing the user from terminating a service. It should be noted that process

1700 or any step thereof could be performed on, or provided by, any of the devices shown in FIGS. 3-4. For example, process 1700 may be executed by control circuitry 304 (FIG. 3) as instructed by a media guidance application implemented on a user device (e.g., user equipment devices 402, 404, and/or 406 (FIG. 4)) in order to generate for display content aimed at preventing the user from terminating a service. In addition, one or more steps of process 1700 may be incorporated into or combined with one or more steps of any other process or embodiment (e.g., as described in relation to FIGS. 12-15 and 18-19)).

[0297] At step 1702, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) a user is subscribed to a first service. For example, the media guidance application may store (e.g., in a user profile at storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)) a list of services subscribed to by the user. In another example, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) services subscribed to by the user based on data related to the services.

[0298] For example, the media guidance application may receive (e.g., via I/O path 302 (FIG. 3)) billing or credit cards statements addressed to the user. The media guidance application may then determine (e.g., via control circuitry 304 (FIG. 3)), based on the received statements, the services that correspond to the statements (e.g., the services subscribed to by the user). In another example, the media guidance application may receive (e.g., via I/O path 302 (FIG. 3)) authorization data transmitted by the service. For example, the media guidance application may detect particular services that grant access to an account of the user. In some embodiments, the media guidance application may periodically query the various services to determine whether or not access is granted. In yet another embodiment, the media guidance application may receive user inputs (e.g., via user input interface 310 (FIG. 3)) that identify one or more services subscribed to by the user.

[0299] At step 1704, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) media assets accessible through the first service. For example, in response to determining the user subscribes to the first service, the media guidance application may retrieve (e.g., from media content source 416 (FIG. 4)) a list of media assets accessible from that media asset. For example, the media guidance application may poll the service or a database of listings accessible from the service (e.g., located at any

location accessible via communications network 414 (FIG. 4)) for media assets that are currently (or in the future) accessible to the user.

[0300] At step 1706, the media guidance application retrieves a viewing history for the user from a user profile (e.g., located at storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)). For example, the media guidance application may monitor (e.g., as discussed in relation to FIG. 6) the media assets consumed by the user, the length of time that media assets were consumed, the rate at which media assets were consumed, etc. The media guidance application may then compile the monitored information into a viewing history.

[0301] At step 1708, the media guidance application identifies (e.g., via control circuitry 304 (FIG. 3)) a preferred media asset of the media assets accessible from the first service based on the viewing history. For example, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) media assets (or a particular series of media assets) that are viewed with a greater frequency by the user relative to other media assets. The media guidance application may also determine if episodes of a series are watched continuously (e.g., back-to-back without a break in between episodes) at a greater rate than other series of media assets, different media assets, etc.

[0302] For example, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) a media asset is part of a series of media assets (e.g., serial programming) of which the user has been consuming. The media guidance application may also receive an indication from the viewing history of a rate at which the user has consumed the series of media assets over a time period. For example, the rate may indicate the number of media assets of a particular series that have been consumed over a period of time. Additionally or alternatively, the rate may indicate a ratio of the amount of time spent by a user consuming media assets of the series to the amount of time between the user consuming media assets of the series.

[0303] For example, the media guidance application may use the rates discussed above to determine whether or not a user is “hooked” on a particular television series. If the media guidance application determines that a user is “hooked,” the media guidance application may base a determination of whether or not a user is likely to terminate a service based on whether or not the service (or other services) provides the user access to the television series.

[0304] In some embodiments, the media guidance application may compare (e.g., via control circuitry 304 (FIG. 3)) the rate of the user to threshold rates (e.g., indicating an average time, ratio, etc., at which the user normally consumes media assets, and at which other users normally consume media assets, etc.). The media guidance application may retrieve the threshold rates from memory (e.g., storage 308 (FIG. 3) and/or any location accessible to communications network 414 (FIG. 4)). For example, the media guidance application may determine the threshold rates based on the prior viewing history of the user or may retrieve the threshold rate from another source that bases the rate on industry standards, market research, etc.

[0305] In some embodiments, the media guidance application identifies (e.g., via control circuitry 304 (FIG. 3)) a preferred media asset of the media assets by comparing the rate at which the user has consumed the series of media assets to a threshold rate (e.g., indicate an average rate at which the user consumes media assets). The media guidance application may then determine (e.g., via control circuitry 304 (FIG. 3)) the preferred media asset in response to determining whether the rate exceeds the threshold rate. For example, in response to determining that a user is binge watching a particular television series, the media guidance application may determine that the television series (or an episode of the television series) is a preferred media asset.

[0306] At step 1710, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) whether the preferred media asset is accessible through a second service. For example, the media guidance application may cross-reference (e.g., via control circuitry 304 (FIG. 3)) a database (e.g., located at storage 308 (FIG. 3) and/or communications network 414 (FIG. 4)) listing services that provide the preferred media asset to determine (e.g., via control circuitry 304 (FIG. 3)) whether the preferred media asset is accessible through a second service. Alternatively or additionally, the media guidance application may query (e.g., via control circuitry 304 (FIG. 3)) each service for a list of media assets (or series of media assets) currently available (or available in the future) and compare (e.g., via control circuitry 304 (FIG. 3)) the results of the queries.

[0307] In response to determining whether the preferred media asset is accessible through the second service, the media guidance application may generate for display, on a display device, content associated with preventing the user from terminating the service. For example, the media guidance application may (e.g., via control circuitry 304 (FIG. 3))

generate for display, on a display device (e.g., display 312 (FIG. 3)), content associated with preventing the user from terminating the first service. For example, the media guidance application may generate for display discounts to the price of the first service or alert the user to media assets that are only accessible (currently or in the future) through one of the services.

[0308] Alternatively, the media guidance application may (e.g., via control circuitry 304 (FIG. 3)) not generate for display, on the display device (e.g., display 312 (FIG. 3)), the content associated with preventing the user from terminating the service in response to determining (e.g., via control circuitry 304 (FIG. 3)) that preferred media asset is not accessible on the second service. For example, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that a user is unlikely to terminate the use of the first service. Therefore, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that generating the content associated with preventing the user from terminating the first service is unnecessary. In yet another example, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) whether the preferred media asset is accessible through a second service in response to determining that a subscription period for the first service is ending, and generate content featuring offers to renew the subscription of the user.

[0309] In some embodiments, the media guidance application may compare (e.g., via control circuitry 304 (FIG. 3)) additional information about the first and second service in order to determine (e.g., via control circuitry 304 (FIG. 3)) whether or not to generate for display the content associated with preventing the user from terminating the service. For example, the media guidance application may compare (e.g., via control circuitry 304 (FIG. 3)) the price or release date of a preferred media asset, and only generate the content in response to determining whether the price or release date of the media asset from the second service is superior to that of the first service.

[0310] For example, the media guidance application may compare (e.g., via control circuitry 304 (FIG. 3)) a first price for accessing the preferred media asset through the first service to a second price for accessing the preferred media asset through the second service. The media guidance application may then determine (e.g., via control circuitry 304 (FIG. 3)) not to generate for display, on the display device, the content associated with preventing the user from terminating the first service, in response to determining that the

first price is less than the second price. For example, the media guidance application may determine that the lower price is itself an incentive to remain with the first service.

[0311] In another example, the media guidance application may compare (e.g., via control circuitry 304 (FIG. 3)) a first date when the preferred media asset is accessible through the first service to a second date when the preferred media asset is accessible through the second service. The media guidance application may then determine (e.g., via control circuitry 304 (FIG. 3)) not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first date is before the second date. For example, the media guidance application may determine that the earlier release date is itself an incentive to remain with the first service.

[0312] It is contemplated that the steps or descriptions of FIG. 17 may be used with any other embodiment of this disclosure. In addition, the steps and descriptions described in relation to FIG. 17 may be done in alternative orders or in parallel to further the purposes of this disclosure. For example, each of these steps may be performed in any order or in parallel or substantially simultaneously to reduce lag or increase the speed of the system or method. Furthermore, it should be noted that any of the devices or equipment discussed in relation to FIGS. 3-4 could be used to perform one or more of the steps in FIG. 17.

[0313] FIG. 18 is a flowchart of illustrative steps for recommending a media asset. It should be noted that process 1800 or any step thereof could be performed on, or provided by, any of the devices shown in FIGS. 3-4. For example, process 1800 may be executed by control circuitry 304 (FIG. 3) as instructed by a media guidance application implemented on a user device (e.g., user equipment devices 402, 404, and/or 406 (FIG. 4)) in order to recommend a media asset. In addition, one or more steps of process 1800 may be incorporated into or combined with one or more steps of any other process or embodiment (e.g., as described in relation to FIGS. 12-17 and 19).

[0314] At step 1802, the media guidance application may retrieve (e.g., from storage 308 (FIG. 3) and/or communications network 414 (FIG. 4)) a viewing history for a user, in which the viewing history indicates a rate at which the user consumed media assets over a first time period. For example, the media guidance application may track (e.g., via control circuitry 304 (FIG. 3)) the frequency at which a user accessed a media asset from a service that provides media assets during a particular length of time. In some embodiments, the

media guidance application may also store (e.g., at storage 308 (FIG. 3) and/or communications network 414 (FIG. 4)) other information about the media assets. For example, the media guidance application may store (e.g., in storage 308 (FIG. 3) and/or communications network 414 (FIG. 4)) characteristics (e.g., genre, subject matter, media asset series affiliation, etc.) of the media assets for use in presenting user recommendations.

[0315] At step 1804, the media guidance application compares (e.g., via control circuitry 304 (FIG. 3)) the rate to a threshold rate. For example, the media guidance application may compare (e.g., via control circuitry 304 (FIG. 3)) the rate at which the user consumed media assets over a first time period (e.g., a week, month, year, etc.) to a threshold rate (e.g., retrieved from storage 308 (FIG. 3) and/or communications network 414 (FIG. 4)) to determine whether or not the user is losing (or gaining) interest in media assets provided by the service. For example, the threshold rate may correspond to a rate that corresponds to a level of interest associated with a user (e.g., based on market research, prior user history, etc.) not terminating the use of a service (and/or renewing a subscription to the service). For example, the rate of consumption may equal three media assets a month, and the media guidance application may determine based on market research that users who only watch three media assets or less a month are likely to terminate the service.

[0316] In another example, the threshold rate may correspond to the rate at which the user consumed media assets over a second time period (e.g., a period of time preceding the first period of time). For example, if the media guidance application determines that the rate of consumption of the user decreases each month (e.g., over a three-month span), the media guidance application may determine the user is losing interest.

[0317] At step 1806, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) a characteristic not associated with the media assets consumed over the first time period in response to determining that the rate does not exceed the threshold rate. For example, if the rate at which the user consumed media assets over the first time period is less than or equal to the threshold rate, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that a user is losing interest in the media content accessible through the service (and is therefore likely to terminate the service). In response, the media guidance application may broaden the criteria at which

user recommendations are made to the user in an attempt to spark the interest of the user in other content (and prevent the user from terminating the service).

[0318] For example, if the media guidance application currently recommends media assets of the science fiction genre. The media guidance application may broaden the criteria to include media assets of the fantasy genre. Accordingly, the media guidance application may generate for display recommendations for media assets that are in the science fiction and/or fantasy genre.

[0319] At step 1808, the media application recommends (e.g., via control circuitry 304 (FIG. 3)) a media asset associated with the characteristic. For example, in response to determining that a favorite television series of the user will no longer be accessible through a subscription service, the media guidance application may recommend (e.g., via control circuitry 304 (FIG. 3)) a different television series that is accessible through the service in an attempt to prevent the user from terminating the service. In another example, in response to determining that a user is losing interest in media content of a particular genre (e.g., science fiction) that is accessible through a subscription service, the media guidance application may recommend media content of a different genre (e.g., action) that is accessible through the subscription service in hopes of sparking the interest of the user in that type of media content and preventing the user from terminating the service. In another example, in response to determining that a user is nearing the end of a media asset series (e.g., a television series) that is accessible through a subscription service, the media guidance application may recommend a different media asset series in hopes of sparking the interest of the user in that media asset series and preventing the user from terminating the service.

[0320] In some embodiments, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) whether to generate for display, on a display device, content associated with preventing the user from terminating the first service based on whether the rate exceeds the threshold rate. For example, in response to determining that the user is likely to terminate the service (e.g., the comparison of the rate and the threshold rate indicates the user is losing interest), the media guidance application may generate (e.g., via control circuitry 304 (FIG. 3)) user recommendations, discounts for the service, and/or lists of media assets that are accessible through the service (e.g., both currently and in the future).

[0321] It is contemplated that the steps or descriptions of FIG. 18 may be used with any other embodiment of this disclosure. In addition, the steps and descriptions described in relation to FIG. 18 may be done in alternative orders or in parallel to further the purposes of this disclosure. For example, each of these steps may be performed in any order or in parallel or substantially simultaneously to reduce lag or increase the speed of the system or method. Furthermore, it should be noted that any of the devices or equipment discussed in relation to FIGS. 3-4 could be used to perform one or more of the steps in FIG. 18.

[0322] FIG. 19 is a flowchart of illustrative steps for selecting a media asset to recommend. It should be noted that process 1900 or any step thereof could be performed on, or provided by, any of the devices shown in FIGS. 3-4. For example, process 1900 may be executed by control circuitry 304 (FIG. 3) as instructed by a media guidance application implemented on a user device (e.g., user equipment devices 402, 404, and/or 406 (FIG. 4)) in order to select a media asset to recommend. In addition, one or more steps of process 1900 may be incorporated into or combined with one or more steps of any other process or embodiment (e.g., as described in relation to FIGS. 12-18)).

[0323] At step 1902, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that a rate of consumption does not exceed a threshold rate. For example, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) that a rate of consumption of the user (e.g., retrieved from storage 308 (FIG. 3) and/or communications network 414 (FIG. 4)) does not exceed a threshold rate (e.g., receive via I/O path 302 (FIG. 3) from any location accessible via communications network 414 (FIG. 4)). For example, the rate of consumption of the user may only equal two media assets a week whereas the threshold rate is equal to three media assets a week.

[0324] At step 1904, the media guidance application identifies (e.g., via control circuitry 304 (FIG. 3)) media assets consumed by the user. For example, in response to determining that the rate of consumption of the user does not exceed the threshold rate, the media guidance application may identify (e.g., via control circuitry 304 (FIG. 3)) the media assets that were consumed by the user through a service. In some embodiments, the media guidance application may only identify a subset (e.g., corresponding to a particular time period) of all the media assets ever consumed by the user through the service. In such cases, the subset that is identified may be based on the units of measure used to calculate the rate. For example, if the rate of consumption is based on the number of

media assets consumed during the last month, the media guidance application may only identify (e.g., via control circuitry 304 (FIG. 3)) the media assets that were consumed last month.

5 [0325] At step 1906, the media guidance application retrieves (e.g., from storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)) a characteristic. For example, the media guidance application may store a list of characteristics in a database. The characteristic may correspond to a genre, subject matter, media asset series affiliation, cast and/or crew, and/or any other feature that may be used to distinguish one media asset from another.

10 [0326] At step 1908, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) whether or not a threshold number of the media assets consumed by the user correspond to the characteristic. For example, the media guidance application may determine (e.g., via control circuitry 304 (FIG. 3)) whether a majority of the media assets consumed by the user are of a particular genre or belong to a particular television series. In some embodiments, the number of media assets that constitutes the threshold number may be retrieved from storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)). The threshold number may equal a finite number (e.g., one) or may be relative to the number of media assets consumed (e.g., the threshold number may correspond to all of the media assets consumed or a fraction thereof).

15 20 [0327] If the media guidance application determines that a threshold number of the media asset does not correspond to the characteristic, the media guidance application proceeds to step 1910. At step 1910, the media guidance application retrieves a different characteristic (e.g., from storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)). If the media guidance application determines that a threshold number of media assets does correspond to the characteristic, the media guidance application proceeds to step 1912.

25 30 [0328] At step 1912, the media guidance application identifies (e.g., via control circuitry 304 (FIG. 3)) media assets that were not consumed by the user. For example, the media guidance application may retrieve a list (e.g., from storage 308 (FIG. 3) and/or any location accessible via communications network 414 (FIG. 4)) of all the media assets accessible to the user through the service and remove any media asset from the list that was determined to have already been viewed by the user.

[0329] At step 1914, the media guidance application retrieves (e.g., via control circuitry 304 (FIG. 3)) a media asset from the list of media assets that were not consumed by the user. For example, in some embodiments, process 1900 may be performed in multiple iterations, in which particular steps (e.g., step 1914) are performed multiple times (e.g., for each media asset in the list of media assets). Alternatively or additionally, the media guidance application may perform step 1914 for each media asset in the list simultaneously.

[0330] At step 1916, the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) whether or not the media asset corresponds to the characteristic. For example, the media guidance application may store (e.g., at storage 308 (FIG. 3)) and/or any location accessible via communications network 414 (FIG. 4)) information about each media asset in a database (e.g., the characteristics of each media asset). The media guidance application may cross-reference each media asset in the database to determine the characteristics of the media asset. For example, the media guidance application may input the title of the media asset and receive an output of the characteristics of the media asset. The media guidance application may then compare (e.g., via control circuitry 304 (FIG. 3)) the characteristics of the media asset to the character to determine whether or not they match.

[0331] If the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that the media asset corresponds to the characteristic, the media guidance application proceeds to step 1918 and retrieves (e.g., via control circuitry 304 (FIG. 3)) a different media asset of the media assets not consumed by the user. If the media guidance application determines (e.g., via control circuitry 304 (FIG. 3)) that the media asset does not correspond to the characteristic, the media guidance application proceeds to step 1920 and recommends (e.g., via control circuitry 304 (FIG. 3)) the media asset. For example, the media guidance application may recommend the media asset in display 1000 (FIG. 10)).

[0332] It is contemplated that the steps or descriptions of FIG. 19 may be used with any other embodiment of this disclosure. In addition, the steps and descriptions described in relation to FIG. 19 may be done in alternative orders or in parallel to further the purposes of this disclosure. For example, each of these steps may be performed in any order or in parallel or substantially simultaneously to reduce lag or increase the speed of the system or

method. Furthermore, it should be noted that any of the devices or equipment discussed in relation to FIGS. 3-4 could be used to perform one or more of the steps in FIG. 19.

[0333] The above-described embodiments of the present disclosure are presented for purposes of illustration and not of limitation, and the present disclosure is limited only by the claims that follow. Furthermore, it should be noted that the features and limitations described in any one embodiment may be applied to any other embodiment herein, and flowcharts or examples relating to one embodiment may be combined with any other embodiment in a suitable manner, done in different orders, or done in parallel. In addition, the systems and methods described herein may be performed in real time. It should also be noted that the systems and/or methods described above may be applied to, or used in accordance with, other systems and/or methods.

What is Claimed is:

1. A method for determining a likelihood that a user will change a service, the method comprising:
 - identifying a first service to which a user is subscribed;
 - receiving information from a third-party data source corresponding to the user;
 - identifying, based on the information from the third-party data source, data indicating a negative interest in the first service; and
 - calculating a likelihood that the user will change the first service based on the identified data.
2. The method of claim 1, wherein identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises identifying, from the information from the third-party data source, negative feedback of the first service made by the user.
3. The method of claim 1, wherein identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises:
 - identifying, from the information from the third-party data source, comments made by the user that include the first service;
 - determining a first time period based on the identified comments;
 - calculating a first frequency of the identified comments during the first time period;
 - identifying, from the information from the third-party data source, comments made by the user in a second time period subsequent to the first time period;
 - calculating a second frequency of the identified comments made by the user in the second time period; and
 - determining that the second frequency is less than the first frequency.

4. The method of claim 1, wherein the third-party data source is a social media data source.

5. The method of claim 4, wherein identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises:

identifying an individual connected to the user through a social network maintained by the third-party data source; and

identifying, from the information from the third-party data source, negative feedback of the first service made by the individual.

6. The method of claim 4, wherein identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises:

identifying an individual connected to the user through a social network maintained by the third-party data source;

identifying, from the information from the third-party data source, comments made by the individual that include the first service;

determining a first time period based on the identified comments;

calculating a first frequency of the identified comments during the first time period;

identifying, from the information from the third-party data source, comments made by the individual in a second time period subsequent to the first time period;

calculating a second frequency of the identified comments made by the individual in the second time period; and

determining that the second frequency is less than the first frequency.

7. The method of claim 1, further comprising transmitting the likelihood that the user will change the first service to a service provider of the first service.

8. The method of claim 1, further comprising, transmitting to the user at least one of an advertisement for the first service or an offer for a discount for the first service.

9. The method of claim 8, wherein transmitting to the user at least one of the advertisement for the first service or the offer for the discount for the first service is performed in response to calculating the likelihood that the user will change the first service.

10. The method of claim 1, further comprising:
identifying a second service to which the user is not subscribed;
identifying, based on the information from the third-party data source, data indicating a positive interest in the second service; and
updating the likelihood that the user will change the first service based on the identified data indicating a positive interest in the second service.

11. A system for determining a likelihood that a user will change a service, the system comprising:
control circuitry configured to:
identify a first service to which a user is subscribed;
receive information from a third-party data source
corresponding to the user;
identify, based on the information from the third-party data source, data indicating a negative interest in the first service; and
calculate a likelihood that the user will change the first service based on the identified data.

12. The system of claim 11, wherein the control circuitry is configured to identify, based on the information from the third-party data source, data indicating a negative interest in the first service by identifying, from the information from the third-party data source, negative feedback of the first service made by the user.

13. The system of claim 11, wherein the control circuitry is configured to identify, based on the information from the third-party data source, data indicating a negative interest in the first service by:

identifying, from the information from the third-party data source, comments made by the user that include the first service;

determining a first time period based on the identified comments;

calculating a first frequency of the identified comments during the first time period;

identifying, from the information from the third-party data source, comments made by the user in a second time period subsequent to the first time period;

calculating a second frequency of the identified comments made by the user in the second time period; and

determining that the second frequency is less than the first frequency.

14. The system of claim 11, wherein the third-party data source is a social media data source.

15. The system of claim 14, wherein the control circuitry is configured to identify, based on the information from the third-party data source, data indicating a negative interest in the first service by:

identifying an individual connected to the user through a social network maintained by the third-party data source; and

identifying, from the information from the third-party data source, negative feedback of the first service made by the individual.

16. The system of claim 14, wherein the control circuitry is configured to identify, based on the information from the third-party data source, data indicating a negative interest in the first service by:

identifying an individual connected to the user through a social network maintained by the third-party data source;

- 112 -

identifying, from the information from the third-party data source, comments made by the individual that include the first service;

determining a first time period based on the identified comments;

calculating a first frequency of the identified comments during the first time period;

identifying, from the information from the third-party data source, comments made by the individual in a second time period subsequent to the first time period;

calculating a second frequency of the identified comments made by the individual in the second time period; and

determining that the second frequency is less than the first frequency.

17. The system of claim 11, wherein the control circuitry is further configured to transmit the likelihood that the user will change the first service to a service provider of the first service.

18. The system of claim 11, wherein the control circuitry is further configured to transmit to the user at least one of an advertisement for the first service or an offer for a discount for the first service.

19. The system of claim 18, wherein the control circuitry is configured to transmit to the user at least one of the advertisement for the first service or the offer for the discount for the first service in response to calculating the likelihood that the user will change the first service.

20. The system of claim 11, wherein the control circuitry is further configured to:

identify a second service to which the user is not subscribed;

identify, based on the information from the third-party data source, data indicating a positive interest in the second service; and

update the likelihood that the user will change the first service based on the identified data indicating a positive interest in the second service.

21. A system for determining a likelihood that a user will change a service, the system comprising:

- means for identifying a first service to which a user is subscribed;
- means for receiving information from a third-party data source corresponding to the user;
- means for identifying, based on the information from the third-party data source, data indicating a negative interest in the first service; and
- means for calculating a likelihood that the user will change the first service based on the identified data.

22. The system of claim 21, wherein means for identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises means for identifying, from the information from the third-party data source, negative feedback of the first service made by the user.

23. The system of claim 21, wherein means for identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises:

- means for identifying, from the information from the third-party data source, comments made by the user that include the first service;
- means for determining a first time period based on the identified comments;
- means for calculating a first frequency of the identified comments during the first time period;
- means for identifying, from the information from the third-party data source, comments made by the user in a second time period subsequent to the first time period;
- means for calculating a second frequency of the identified comments made by the user in the second time period; and

means for determining that the second frequency is less than the first frequency.

24. The system of claim 21, wherein the third-party data source is a social media data source.

25. The system of claim 24, wherein means for identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises:

means for identifying an individual connected to the user through a social network maintained by the third-party data source; and

means for identifying, from the information from the third-party data source, negative feedback of the first service made by the individual.

26. The system of claim 24, wherein means for identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises:

means for identifying an individual connected to the user through a social network maintained by the third-party data source;

means for identifying, from the information from the third-party data source, comments made by the individual that include the first service;

means for determining a first time period based on the identified comments;

means for calculating a first frequency of the identified comments during the first time period;

means for identifying, from the information from the third-party data source, comments made by the individual in a second time period subsequent to the first time period;

means for calculating a second frequency of the identified comments made by the individual in the second time period; and

means for determining that the second frequency is less than the first frequency.

27. The system of claim 21, further comprising means for transmitting the likelihood that the user will change the first service to a service provider of the first service.

28. The system of claim 21, further comprising, means for transmitting to the user at least one of an advertisement for the first service or an offer for a discount for the first service.

29. The system of claim 28, wherein means for transmitting to the user at least one of the advertisement for the first service or the offer for the discount for the first service comprises means for transmitted to the user the at least one of the advertisement for the first service or the offer for the discount for the first service in response to calculating the likelihood that the user will change the first service.

30. The system of claim 21, further comprising:
means for identifying a second service to which the user is not subscribed;
means for identifying, based on the information from the third-party data source, data indicating a positive interest in the second service; and
means for updating the likelihood that the user will change the first service based on the identified data indicating a positive interest in the second service.

31. A method for determining a likelihood that a user will change a service, the method comprising:
identifying a first service to which a user is subscribed;
receiving information from a third-party data source corresponding to the user;
identifying, based on the information from the third-party data source, data indicating a negative interest in the first service; and
calculating a likelihood that the user will change the first service based on the identified data.

32. The method of claim 31, wherein identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises identifying, from the information from the third-party data source, negative feedback of the first service made by the user.

33. The method of any one of claims 31-32, wherein identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises:

- identifying, from the information from the third-party data source, comments made by the user that include the first service;

- determining a first time period based on the identified comments;

- calculating a first frequency of the identified comments during the first time period;

- identifying, from the information from the third-party data source, comments made by the user in a second time period subsequent to the first time period;

- calculating a second frequency of the identified comments made by the user in the second time period; and

- determining that the second frequency is less than the first frequency.

34. The method of any one of claims 31-33, wherein the third-party data source is a social media data source.

35. The method of any one of claims 31-34, wherein identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises:

- identifying an individual connected to the user through a social network maintained by the third-party data source; and

- identifying, from the information from the third-party data source, negative feedback of the first service made by the individual.

36. The method of any one of claims 31-34, wherein identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises:

identifying an individual connected to the user through a social network maintained by the third-party data source;

identifying, from the information from the third-party data source, comments made by the individual that include the first service;

determining a first time period based on the identified comments;

calculating a first frequency of the identified comments during the first time period;

identifying, from the information from the third-party data source, comments made by the individual in a second time period subsequent to the first time period;

calculating a second frequency of the identified comments made by the individual in the second time period; and

determining that the second frequency is less than the first frequency.

37. The method of any one of claims 31-36, further comprising transmitting the likelihood that the user will change the first service to a service provider of the first service.

38. The method of any one of claims 31-37, further comprising, transmitting to the user at least one of an advertisement for the first service or an offer for a discount for the first service.

39. The method of claim 38, wherein transmitting to the user at least one of the advertisement for the first service or the offer for the discount for the first service is performed in response to calculating the likelihood that the user will change the first service.

40. The method of any one of claims 31-39, further comprising:

- 118 -

identifying a second service to which the user is not subscribed;
identifying, based on the information from the third-party data source, data indicating a positive interest in the second service; and
updating the likelihood that the user will change the first service based on the identified data indicating a positive interest in the second service.

41. A non-transitory computer readable medium comprising instructions thereon for determining a likelihood that a user will change a service, the instructions comprising:

instructions for identifying a first service to which a user is subscribed;

instructions for receiving information from a third-party data source corresponding to the user;

instructions for identifying, based on the information from the third-party data source, data indicating a negative interest in the first service; and

instructions for calculating a likelihood that the user will change the first service based on the identified data.

42. The non-transitory computer readable medium of claim 41, wherein instructions for identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises instructions for identifying, from the information from the third-party data source, negative feedback of the first service made by the user.

43. The non-transitory computer readable medium of claim 41, wherein instructions for identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises:

instructions for identifying, from the information from the third-party data source, comments made by the user that include the first service;

instructions for determining a first time period based on the identified comments;

- 119 -

instructions for calculating a first frequency of the identified comments during the first time period;

instructions for identifying, from the information from the third-party data source, comments made by the user in a second time period subsequent to the first time period;

instructions for calculating a second frequency of the identified comments made by the user in the second time period; and

instructions for determining that the second frequency is less than the first frequency.

44. The non-transitory computer readable medium of claim 41, wherein the third-party data source is a social media data source.

45. The non-transitory computer readable medium of claim 44, wherein instructions for identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises:

instructions for identifying an individual connected to the user through a social network maintained by the third-party data source; and

instructions for identifying, from the information from the third-party data source, negative feedback of the first service made by the individual.

46. The non-transitory computer readable medium of claim 44, wherein instructions for identifying, based on the information from the third-party data source, data indicating a negative interest in the first service comprises:

instructions for identifying an individual connected to the user through a social network maintained by the third-party data source;

instructions for identifying, from the information from the third-party data source, comments made by the individual that include the first service;

instructions for determining a first time period based on the identified comments;

instructions for calculating a first frequency of the identified comments during the first time period;

instructions for identifying, from the information from the third-party data source, comments made by the individual in a second time period subsequent to the first time period;

instructions for calculating a second frequency of the identified comments made by the individual in the second time period; and

instructions for determining that the second frequency is less than the first frequency.

47. The non-transitory computer readable medium of claim 41, the instructions further comprising instructions for transmitting the likelihood that the user will change the first service to a service provider of the first service.

48. The non-transitory computer readable medium of claim 41, the instructions further comprising, instructions for transmitting to the user at least one of an advertisement for the first service or an offer for a discount for the first service.

49. The non-transitory computer readable medium of claim 48, wherein instructions for transmitting to the user at least one of the advertisement for the first service or the offer for the discount for the first service comprises instructions for transmitting to the user at least one of the advertisement for the first service or the offer for the discount for the first service in response to calculating the likelihood that the user will change the first service.

50. The non-transitory computer readable medium of claim 41, the instructions further comprising:

instructions for identifying a second service to which the user is not subscribed;

instructions for identifying, based on the information from the third-party data source, data indicating a positive interest in the second service; and

instructions for updating the likelihood that the user will change the first service based on the identified data indicating a positive interest in the second service.

51. A method for generating a model to determine a likelihood that a user will change a service, the method comprising:

- identifying a first service to which a plurality of users are subscribed;
- receiving information from a third-party data source for each of the plurality of users;
- identifying, based on the respective information from the third-party data source, a user action performed by each of the plurality of users in relation to the first service;
- identifying for at least one of the plurality of users, based on the respective information from the third-party data source, a request to change the first service; and
- generating a model to determine a likelihood that a user will change the first service based on the identified user action and the identified request to change the first service.

52. The method of claim 51, wherein generating the model to determine the likelihood that the user will change the first service comprises calculating a probability that the identified user action is followed by the identified request to change the first service.

53. The method of claim 51, wherein the user action performed by each of the plurality of users is a first user action, the method further comprising:

- identifying, based on the respective information from the third-party data source, a second user action performed by each of the plurality of users in relation to the first service;
- determining a pattern of action based on the first user action and the second user action; and
- wherein generating the model to determine the likelihood that the user will change the first service comprises calculating a probability that the determined pattern of action is followed by the identified request to change the first service.

54. The method of claim 51, wherein the user action is one of a playback action, negative feedback for the first service, a negative comment made about the first service, or a lack of user action for a period of time.

55. The method of claim 51, further comprising:
receiving information from the third-party data source for the user;
identifying, based on the information from the third-party data source for the user, a user action performed by the user in relation to the first service;
comparing the user action performed by the user to the user action performed by each of the plurality of users; and
calculating, based on the comparison, a correlation factor that indicates a similarity between the user and one of the plurality of users.

56. The method of claim 55, further comprising determining, based on the correlation factor, a probability that the user will request to change the first service.

57. The method of claim 55, further comprising transmitting the correlation factor to a service provider of the first service.

58. The method of claim 55, further comprising transmitting to the user at least one of an advertisement for the first service or an offer for a discount for the first service.

59. The method of claim 51, wherein the request to change the first service occurs within a user-defined period of time of the user action performed by the at least one of the plurality of users.

60. The method of claim 51, wherein the third-party data source is a social media data source.

61. A system for generating a model to determine a likelihood that a user will change a service, the system comprising:

control circuitry configured to:

identify a first service to which a plurality of users are subscribed;

receive information from a third-party data source for each of the plurality of users;

identify, based on the respective information from the third-party data source, a user action performed by each of the plurality of users in relation to the first service;

identify for at least one of the plurality of users, based on the respective information from the third-party data source, a request to change the first service; and

generate a model to determine a likelihood that a user will change the first service based on the identified user action and the identified request to change the first service.

62. The system of claim 61, wherein the control circuitry is configured to generate the model to determine the likelihood that the user will change the first service by calculating a probability that the identified user action is followed by the identified request to change the first service.

63. The system of claim 61, wherein the user action performed by each of the plurality of users is a first user action, the control circuitry further configured to:

identify, based on the respective information from the third-party data source, a second user action performed by each of the plurality of users in relation to the first service;

determine a pattern of action based on the first user action and the second user action; and

wherein the control circuitry is configured to generate the model to determine the likelihood that the user will change the first service by calculating a

probability that the determined pattern of action is followed by the identified request to change the first service.

64. The system of claim 61, wherein the user action is one of a playback action, negative feedback for the first service, a negative comment made about the first service, or a lack of user action for a period of time.

65. The system of claim 61, the control circuitry is further configured to:

- receive information from the third-party data source for the user;
- identify, based on the information from the third-party data source for the user, a user action performed by the user in relation to the first service;
- compare the user action performed by the user to the user action performed by each of the plurality of users; and
- calculate, based on the comparison, a correlation factor that indicates a similarity between the user and one of the plurality of users.

66. The system of claim 65, the control circuitry is further configured to determine, based on the correlation factor, a probability that the user will request to change the first service.

67. The system of claim 65, the control circuitry further configured to transmit the correlation factor to a service provider of the first service.

68. The system of claim 65, the control circuitry further configured to transmit to the user at least one of an advertisement for the first service or an offer for a discount for the first service.

69. The system of claim 61, wherein the request to change the first service occurs within a user-defined period of time of the user action performed by the at least one of the plurality of users.

70. The system of claim 61, wherein the third-party data source is a social media data source.

71. A system for generating a model to determine a likelihood that a user will change a service, the system comprising:

means for identifying a first service to which a plurality of users are subscribed;

means for receiving information from a third-party data source for each of the plurality of users;

means for identifying, based on the respective information from the third-party data source, a user action performed by each of the plurality of users in relation to the first service;

means for identifying for at least one of the plurality of users, based on the respective information from the third-party data source, a request to change the first service; and

means for generating a model to determine a likelihood that a user will change the first service based on the identified user action and the identified request to change the first service.

72. The system of claim 71, wherein means for generating the model to determine the likelihood that the user will change the first service comprises means for calculating a probability that the identified user action is followed by the identified request to change the first service.

73. The system of claim 71, wherein the user action performed by each of the plurality of users is a first user action, the system further comprising:

means for identifying, based on the respective information from the third-party data source, a second user action performed by each of the plurality of users in relation to the first service;

means for determining a pattern of action based on the first user action and the second user action; and

wherein means for generating the model to determine the likelihood that the user will change the first service comprises means for calculating a probability that the determined pattern of action is followed by the identified request to change the first service.

74. The system of claim 71, wherein the user action is one of a playback action, negative feedback for the first service, a negative comment made about the first service, or a lack of user action for a period of time.

75. The system of claim 71, further comprising:
means for receiving information from the third-party data source for the user;
means for identifying, based on the information from the third-party data source for the user, a user action performed by the user in relation to the first service;
means for comparing the user action performed by the user to the user action performed by each of the plurality of users; and
means for calculating, based on the comparison, a correlation factor that indicates a similarity between the user and one of the plurality of users.

76. The system of claim 75, further comprising means for determining, based on the correlation factor, a probability that the user will request to change the first service.

77. The system of claim 75, further comprising means for transmitting the correlation factor to a service provider of the first service.

78. The system of claim 75, further comprising means for transmitting to the user at least one of an advertisement for the first service or an offer for a discount for the first service.

79. The system of claim 71, wherein the request to change the first service occurs within a user-defined period of time of the user action performed by the at least one of the plurality of users.

80. The system of claim 71, wherein the third-party data source is a social media data source.

81. A method for generating a model to determine a likelihood that a user will change a service, the method comprising:
identifying a first service to which a plurality of users are subscribed;
receiving information from a third-party data source for each of the plurality of users;
identifying, based on the respective information from the third-party data source, a user action performed by each of the plurality of users in relation to the first service;
identifying for at least one of the plurality of users, based on the respective information from the third-party data source, a request to change the first service; and
generating a model to determine a likelihood that a user will change the first service based on the identified user action and the identified request to change the first service.

82. The method of claim 81, wherein generating the model to determine the likelihood that the user will change the first service comprises calculating a probability that the identified user action is followed by the identified request to change the first service.

83. The method of any one of claims 81-82, wherein the user action performed by each of the plurality of users is a first user action, the method further comprising:
identifying, based on the respective information from the third-party data source, a second user action performed by each of the plurality of users in relation to the first service;
determining a pattern of action based on the first user action and the second user action; and

wherein generating the model to determine the likelihood that the user will change the first service comprises calculating a probability that the determined pattern of action is followed by the identified request to change the first service.

84. The method of any one of claims 81-83, wherein the user action is one of a playback action, negative feedback for the first service, a negative comment made about the first service, or a lack of user action for a period of time.

85. The method of any one of claims 81-84, further comprising:
receiving information from the third-party data source for the user;
identifying, based on the information from the third-party data source for the user, a user action performed by the user in relation to the first service;
comparing the user action performed by the user to the user action performed by each of the plurality of users; and
calculating, based on the comparison, a correlation factor that indicates a similarity between the user and one of the plurality of users.

86. The method of claim 85, further comprising determining, based on the correlation factor, a probability that the user will request to change the first service.

87. The method of claim 85 or 86, further comprising transmitting the correlation factor to a service provider of the first service.

88. The method of any one of claims 85-87, further comprising transmitting to the user at least one of an advertisement for the first service or an offer for a discount for the first service.

89. The method of any one of claims 81-88, wherein the request to change the first service occurs within a user-defined period of time of the user action performed by the at least one of the plurality of users.

90. The method of any one of claims 81-89, wherein the third-party data source is a social media data source.

91. A non-transitory computer readable medium comprising instructions thereon for providing media recommendations for a group, the instructions comprising:

instructions for identifying a first service to which a plurality of users are subscribed;

instructions for receiving information from a third-party data source for each of the plurality of users;

instructions for identifying, based on the respective information from the third-party data source, a user action performed by each of the plurality of users in relation to the first service;

instructions for identifying for at least one of the plurality of users, based on the respective information from the third-party data source, a request to change the first service; and

instructions for generating a model to determine a likelihood that a user will change the first service based on the identified user action and the identified request to change the first service.

92. The non-transitory computer readable medium of claim 91, wherein instructions for generating the model to determine the likelihood that the user will change the first service comprises instructions for calculating a probability that the identified user action is followed by the identified request to change the first service.

93. The non-transitory computer readable medium of claim 91, wherein the user action performed by each of the plurality of users is a first user action, the instructions further comprising:

instructions for identifying, based on the respective information from the third-party data source, a second user action performed by each of the plurality of users in relation to the first service;

instructions for determining a pattern of action based on the first user action and the second user action; and

wherein instructions for generating the model to determine the likelihood that the user will change the first service comprises instructions for calculating a probability that the determined pattern of action is followed by the identified request to change the first service.

94. The non-transitory computer readable medium of claim 91, wherein the user action is one of a playback action, negative feedback for the first service, a negative comment made about the first service, or a lack of user action for a period of time.

95. The non-transitory computer readable medium of claim 91, the instructions further comprising:

instructions for receiving information from the third-party data source for the user;
instructions for identifying, based on the information from the third-party data source for the user, a user action performed by the user in relation to the first service;
instructions for comparing the user action performed by the user to the user action performed by each of the plurality of users; and

instructions for calculating, based on the comparison, a correlation factor that indicates a similarity between the user and one of the plurality of users.

96. The non-transitory computer readable medium of claim 95, further comprising instructions for determining, based on the correlation factor, a probability that the user will request to change the first service.

97. The non-transitory computer readable medium of claim 95, further comprising instructions for transmitting the correlation factor to a service provider of the first service.

98. The non-transitory computer readable medium of claim 95, further comprising instructions for transmitting to the user at least one of an advertisement for the first service or an offer for a discount for the first service.

99. The non-transitory computer readable medium of claim 91, wherein the request to change the first service occurs within a user-defined period of time of the user action performed by the at least one of the plurality of users.

100. The non-transitory computer readable medium of claim 91, wherein the third-party data source is a social media data source.

101. A method for preventing users from terminating services, the method comprising:

determining, using control circuitry, a user is accessing a service;

determining, using the control circuitry, a biometric state of the user while the user is accessing the service;

cross-referencing the biometric state with a database listing biometric states indicative of a desire to terminate the service to determine whether the biometric state indicates the user desires to terminate the service; and

in response to determining that the biometric state indicates the user desires to terminate the service, generating for display, on a display device, content associated with preventing the user from terminating the service.

102. The method of claim 101, wherein the content includes a discount for the service.

103. The method of claim 101, wherein the content includes a list of media assets accessible through the service.

104. The method of claim 101, wherein determining the biometric state includes monitoring eye contact of the user with the display device while the user is accessing the service.

105. The method of claim 101, wherein determining the biometric state includes detecting a frequency range of brain activity of the user.

106. The method of claim 101, further comprising determining the user is accessing the service in response to receiving data from a provider of the service.

107. The method of claim 101, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being bored while accessing the service.

108. The method of claim 101, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being upset while accessing the service.

109. The method of claim 101, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being non-attentive while accessing the service.

110. The method of claim 101, further comprising:
determining a length of time the user has the biometric state;
comparing the length of time to a threshold length of time;
and
cross-referencing the biometric state in the database in response to determining that the length of time corresponds to the threshold length of time.

111. A system for preventing users from terminating services, the system comprising:
storage circuitry configured to store a database listing biometric states indicative of a desire to terminate the service; and
control circuitry configured to:

- 133 -

determine a user is accessing a service;
determining a biometric state of the user while the user is accessing the service;

cross-reference the biometric state with the database listing biometric states indicative of the desire to terminate the service to determine whether the biometric state indicates the user desires to terminate the service; and

in response to determining that the biometric state indicates the user desires to terminate the service, generate for display content associated with preventing the user from terminating the service.

112. The system of claim 111, wherein the content includes a discount for the service.

113. The system of claim 111, wherein the content includes a list of media assets accessible through the service.

114. The system of claim 111, wherein the control circuitry configured to determine the biometric state is further configured to monitor eye contact of the user while the user is accessing the service.

115. The system of claim 111, wherein the control circuitry configured to determine the biometric state is further configured to detect a frequency range of brain activity of the user.

116. The system of claim 111, further comprising control circuitry configured to determine the user is accessing the service in response to receiving data from a provider of the service.

117. The system of claim 111, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being bored while accessing the service.

118. The system of claim 111, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being upset while accessing the service.

119. The system of claim 111, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being non-attentive while accessing the service.

120. The system of claim 111, wherein the control circuitry configured to:

- determine a length of time the user has the biometric state;
- compare the length of time to a threshold length of time; and
- cross-reference the biometric state in the database in response to determining that the length of time corresponds to the threshold length of time.

121. A system for preventing users from terminating services, the system comprising:

- means for determining a user is accessing a service;
- means for determining a biometric state of the user while the user is accessing the service;
- means for cross-referencing the biometric state with a database listing biometric states indicative of a desire to terminate the service to determine whether the biometric state indicates the user desires to terminate the service; and
- in response to determining that the biometric state indicates the user desires to terminate the service, means for generating for display content associated with preventing the user from terminating the service.

122. The system of claim 121, wherein the content includes a discount for the service.

123. The system of claim 121, wherein the content includes a list of media assets accessible through the service.

124. The system of claim 121, wherein the means for determining the biometric state includes means for monitoring eye contact of the user while the user is accessing the service.

125. The system of claim 121, wherein the means for determining the biometric state includes means for detecting a frequency range of brain activity of the user.

126. The system of claim 121, wherein the means for determining the user is accessing the service uses data from a provider of the service to determine the user is accessing the service.

127. The system of claim 121, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being bored while accessing the service.

128. The system of claim 121, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being upset while accessing the service.

129. The system of claim 121, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being non-attentive while accessing the service.

130. The system of claim 121, further comprising:
means for determining a length of time the user has the biometric state;
means for comparing the length of time to a threshold length of time; and
means for cross-referencing the biometric state in the database in response to determining that the length of time corresponds to the threshold length of time.

131. A method for preventing users from terminating services, the method comprising:
determining a user is accessing a service;
determining a biometric state of the user while the user is accessing the service;

- 136 -

cross-referencing the biometric state with a database listing biometric states indicative of a desire to terminate the service to determine whether the biometric state indicates the user desires to terminate the service; and

in response to determining that the biometric state indicates the user desires to terminate the service, generating for display content associated with preventing the user from terminating the service.

132. The method of claim 131, wherein the content includes a discount for the service.

133. The method of claim 131 or 132, wherein the content includes a list of media assets accessible through the service.

134. The method of any one of claims 131-133, wherein determining the biometric state includes monitoring eye contact of the user while the user is accessing the service.

135. The method of any one of claims 131-134, wherein determining the biometric state includes detecting a frequency range of brain activity of the user.

136. The method of any one of claims 131-135, further comprising determining the user is accessing the service in response to receiving data from a provider of the service.

137. The method of any one of claims 131-136, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being bored while accessing the service.

138. The method of any one of claims 131-137, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being upset while accessing the service.

139. The method of any one of claims 131-138, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being non-attentive while accessing the service.

- 137 -

140. The method of any one of claims 131-139, further comprising:
determining a length of time the user has the biometric state;
comparing the length of time to a threshold length of time;
and
cross-referencing the biometric state in the database in response to determining that the length of time corresponds to the threshold length of time.

141. A non-transitory computer-readable medium comprising instructions for preventing users from terminating services, the instructions comprising:
instructions for determining a user is accessing a service;
instructions for determining a biometric state of the user while the user is accessing the service;
instructions for cross-referencing the biometric state with a database listing biometric states indicative of a desire to terminate the service to determine whether the biometric state indicates the user desires to terminate the service; and
instructions for generating for display content associated with preventing the user from terminating the service in response to determining that the biometric state indicates the user desires to terminate the service.

142. The non-transitory computer-readable medium of claim 141, wherein the content includes a discount for the service.

143. The non-transitory computer-readable medium of claim 141, wherein the content includes a list of media assets accessible through the service.

144. The non-transitory computer-readable medium of claim 141, wherein the instructions for determining the biometric state include instructions for monitoring eye contact of the user while the user is accessing the service.

145. The non-transitory computer-readable medium of claim 141, wherein the instructions for determining the biometric state include instructions for detecting a frequency range of brain activity of the user.

146. The non-transitory computer-readable medium of claim 141, further comprising instructions for determining the user is accessing the service based on data received from a provider of the service.

147. The non-transitory computer-readable medium of claim 141, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being bored while accessing the service.

148. The non-transitory computer-readable medium of claim 141, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being upset while accessing the service.

149. The non-transitory computer-readable medium of claim 141, wherein the biometric state indicative of the desire to terminate the service corresponds to the user being non-attentive while accessing the service.

150. The non-transitory computer-readable medium of claim 141, further comprising:

instructions for determining a length of time the user has the biometric state;

instructions for comparing the length of time to a threshold length of time; and

instructions for cross-referencing the biometric state in the database in response to determining that the length of time corresponds to the threshold length of time.

151. A method for preventing users from terminating services, the method comprising:

determining, using control circuitry, that a user is subscribed to a first service;

detecting, using the control circuitry, that the user has subscribed to a second service;

in response to detecting that the user has subscribed to the second service, comparing media assets accessible through the first service to media assets

accessible through the second service to determine whether a media asset is accessible through both the first service and the second service;

in response to determining the media asset is accessible through both the first service and the second service, generating for display, on a display device, content associated with preventing the user from terminating the first service.

152. The method of claim 151, further comprising, in response to determining the media asset is not accessible through the second service, not generating for display, on the display device, the content associated with preventing the user from terminating the service.

153. The method of claim 151, further comprising cross-referencing a database listing content providers for the media asset to determine whether the second service provides the media asset.

154. The method of claim 151, further comprising:
comparing a price for the first service to a price for the second service; and

determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the price for the first service is less than the price for the second service based on the comparison.

155. The method of claim 151, further comprising:
comparing a first date when the media asset is accessible through the first service to a second date when the media asset is accessible through the second service; and

determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first date is before the second date.

156. The method of claim 151, wherein determining whether the media asset is accessible through both the first service and the second service further

comprises determining whether a series of media assets is accessible through both the first service and the second service.

157. The method of claim 151, further comprising detecting that the user has subscribed to the second service in response to determining that a subscription period for the first service is ending.

158. The method of claim 151, wherein the content includes a discount for the first service.

159. The method of claim 151, wherein the content includes a list of media assets accessible through the first service.

160. The method of claim 159, wherein the media assets accessible through the first service are accessible at a future point in time.

161. A system for preventing users from terminating services, the system comprising:

storage circuitry configured to store content associated with preventing the user from terminating the first service; and

control circuitry configured to:

determine that a user is subscribed to a first service;

detect that the user has subscribed to a second service;

in response to detecting that the user has subscribed to the second service, compare media assets accessible through the first service to media assets accessible through the second service to determine whether a media asset is accessible through both the first service and the second service;

in response to determining the media asset is accessible through both the first service and the second service, generate for display the content associated with preventing the user from terminating the first service.

162. The system of claim 161, wherein the control circuitry is further configured to, in response to determining the media asset is not accessible through the second service, not generate for display the content associated with preventing the user from terminating the service.

163. The system of claim 161, wherein the control circuitry is further configured to cross-reference a database listing content providers for the media asset to determine whether the second service provides the media asset.

164. The system of claim 161, wherein the control circuitry is further configured to:

compare a price for the first service to a price for the second service; and

determine not to generate for display the content associated with preventing the user from terminating the first service in response to determining that the price for the first service is less than the price for the second service based on the comparison.

165. The system of claim 161, wherein the control circuitry is further configured to:

compare a first date when the media asset is accessible through the first service to a second date when the media asset is accessible through the second service; and

determine not to generate for display the content associated with preventing the user from terminating the first service in response to determining that the first date is before the second date.

166. The system of claim 161, wherein the control circuitry configured to determine whether the media asset is accessible through both the first service and the second service is further configured to determine whether a series of media assets is accessible through both the first service and the second service.

167. The system of claim 161, wherein the control circuitry configured to detect that the user has subscribed to the second service in response to determining that a subscription period for the first service is ending.

168. The system of claim 161, wherein the content includes a discount for the first service.

169. The system of claim 161, wherein the content includes a list of media assets accessible through the first service.

170. The system of claim 169, wherein the media assets accessible through the first service are accessible at a future point in time.

171. A system for preventing users from terminating services, the system comprising:
means for determining that a user is subscribed to a first service;
means for detecting that the user has subscribed to a second service;

in response to detecting that the user has subscribed to the second service, means for comparing media assets accessible through the first service to media assets accessible through the second service to determine whether a media asset is accessible through both the first service and the second service;

in response to determining the media asset is accessible through both the first service and the second service, means for generating for display content associated with preventing the user from terminating the first service.

172. The system of claim 171, further comprising, in response to determining the media asset is not accessible through the second service, means for not generating for display the content associated with preventing the user from terminating the service.

173. The system of claim 171, further comprising means for cross-referencing a database listing content providers for the media asset to determine whether the second service provides the media asset.

174. The system of claim 171, further comprising:
means for comparing a price for the first service to a price for the second service; and
means for determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in

response to determining that the price for the first service is less than the price for the second service based on the comparison.

175. The system of claim 171, further comprising:
means for comparing a first date when the media asset is accessible through the first service to a second date when the media asset is accessible through the second service; and
means for determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first date is before the second date.

176. The system of claim 171, wherein the means for determining whether the media asset is accessible through both the first service and the second service further comprises means for determining whether a series of media assets is accessible through both the first service and the second service.

177. The system of claim 171, further comprising means for detecting that the user has subscribed to the second service in response to determining that a subscription period for the first service is ending.

178. The system of claim 171, wherein the content includes a discount for the first service.

179. The system of claim 171, wherein the content includes a list of media assets accessible through the first service.

180. The system of claim 179, wherein the media assets accessible through the first service are accessible at a future point in time.

181. A method for preventing users from terminating services, the method comprising:
determining that a user is subscribed to a first service;
detecting that the user has subscribed to a second service;
in response to detecting that the user has subscribed to the second service, comparing media assets accessible through the first service to media assets

accessible through the second service to determine whether a media asset is accessible through both the first service and the second service;

in response to determining the media asset is accessible through both the first service and the second service, generating for display content associated with preventing the user from terminating the first service.

182. The method of claim 181, further comprising, in response to determining the media asset is not accessible through the second service, not generating for display the content associated with preventing the user from terminating the service.

183. The method of claim 181 or 182, further comprising cross-referencing a database listing content providers for the media asset to determine whether the second service provides the media asset.

184. The method of any one of claims 181-183, further comprising: comparing a price for the first service to a price for the second service; and

determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the price for the first service is less than the price for the second service based on the comparison.

185. The method of any one of claims 181-184, further comprising: comparing a first date when the media asset is accessible through the first service to a second date when the media asset is accessible through the second service; and

determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first date is before the second date.

186. The method of any one of claims 181-185, wherein determining whether the media asset is accessible through both the first service and the second service further comprises determining whether a series of media assets is accessible through both the first service and the second service.

187. The method of any one of claims 181-186, further comprising detecting that the user has subscribed to the second service in response to determining that a subscription period for the first service is ending.

188. The method of any one of claims 181-187, wherein the content includes a discount for the first service.

189. The method of any one of claims 181-188, wherein the content includes a list of media assets accessible through the first service.

190. The method of any one of claims 181-189, wherein the media assets accessible through the first service are accessible at a future point in time.

191. A non-transitory computer-readable medium comprising instructions for preventing users from terminating services, the instructions comprising:
instructions for determining that a user is subscribed to a first service;
instructions for detecting that the user has subscribed to a second service;
in response to detecting that the user has subscribed to the second service, instructions for comparing media assets accessible through the first service to media assets accessible through the second service to determine whether a media asset is accessible through both the first service and the second service;
in response to determining the media asset is accessible through both the first service and the second service, instructions for generating for display content associated with preventing the user from terminating the first service.

192. The non-transitory computer-readable medium of claim 191, further comprising instructions for, in response to determining the media asset is not accessible through the second service, not generating for display the content associated with preventing the user from terminating the service.

193. The non-transitory computer-readable medium of claim 191, further comprising instructions for cross-referencing a database listing content providers for the media asset to determine whether the second service provides the media asset.

194. The non-transitory computer-readable medium of claim 191, further comprising:
instructions for comparing a price for the first service to a price for the second service; and
instructions for determining not to generate for display the content associated with preventing the user from terminating the first service in response to determining that the price for the first service is less than the price for the second service based on the comparison.

195. The non-transitory computer-readable medium of claim 191, further comprising:
instructions for comparing a first date when the media asset is accessible through the first service to a second date when the media asset is accessible through the second service; and
instructions for determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first date is before the second date.

196. The non-transitory computer-readable medium of claim 191, wherein the instructions for determining whether the media asset is accessible through both the first service and the second service further comprises instructions for determining whether a series of media assets is accessible through both the first service and the second service.

197. The non-transitory computer-readable medium of claim 191, further comprising instructions for detecting that the user has subscribed to the second service in response to determining that a subscription period for the first service is ending.

198. The non-transitory computer-readable medium of claim 191, wherein the content includes a discount for the first service.

199. The non-transitory computer-readable medium of claim 191, wherein the content includes a list of media assets accessible through the first service.

200. The non-transitory computer-readable medium of claim 199, wherein the media assets accessible through the first service are accessible at a future point in time.

201. A method for preventing users from terminating services, the method comprising:

retrieving, using control circuitry, a media asset purchase history for a user, wherein the media asset purchase history indicates media assets purchased by the user from a first service;

determining, using the control circuitry, a number of media assets that were purchased by the user from the first service that are not accessible through a second service;

comparing, using the control circuitry, the number to a threshold number; and

in response to determining that the number does not exceed the threshold number, generating for display, on a display device, content associated with preventing the user from terminating the first service.

202. The method of claim 201, further comprising, in response to determining that the number does exceed the threshold number, not generating for display, on the display device, the content associated with preventing the user from terminating the service.

203. The method of claim 201, further comprising cross-referencing a database listing content providers for the media assets purchased by the user from the first service to determine the number of media assets that were purchased by the user from the first service that are not accessible through the second service.

204. The method of claim 201, further comprising:
comparing a price for the first service to a price for the second service; and

determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the price for the first service is less than the price for the second service based on the comparison.

205. The method of claim 201, further comprising:
determining a media asset that was purchased by the user from the first service is accessible through the second service;
comparing a first date when the media asset was accessible through the first service to a second date when the media asset was accessible through the second service; and
in response to determining that the first date is before the second date, increasing the number by one.

206. The method of claim 201, further comprising:
determining a media asset that was purchased by the user from the first service and is accessible through the second service;
comparing a first price of the media asset, wherein the first price indicates a price of accessing the media asset through the first service, to a second price of the media asset, wherein the second price indicates a price of accessing the media asset through the second service; and
in response to determining that the first price is less than the second price, increasing the number by one.

207. The method of claim 201, further comprising determining the number of media assets that were purchased by the user from the first service that are not accessible through the second service in response to determining that a subscription period for the first service is ending.

208. The method of claim 201, wherein the content includes a discount for the first service.

209. The method of claim 201, wherein the content includes a list of media assets accessible through the first service.

210. The method of claim 209, wherein the media assets accessible through the first service are accessible at a future point in time.

211. A system for preventing users from terminating services, the system comprising:

storage circuitry configured to store content associated with preventing the user from terminating the first service; and

control circuitry configured to:

retrieve a media asset purchase history for a user, wherein the media asset purchase history indicates media assets purchased by the user from a first service;

determine a number of media assets that were purchased by the user from the first service that are not accessible through a second service;

compare the number to a threshold number; and

in response to determining that the number does not exceed the threshold number, generate for display the content associated with preventing the user from terminating the first service.

212. The system of claim 211, wherein the control circuitry is further configured to not generate for display the content associated with preventing the user from terminating the service in response to determining that the number does exceed the threshold number.

213. The system of claim 211, wherein the control circuitry is further configured to cross-reference a database listing content providers for the media assets purchased by the user from the first service to determine the number of media assets that were purchased by the user from the first service that are not accessible through the second service.

214. The system of claim 211, wherein the control circuitry is further configured to:

compare a price for the first service to a price for the second

service; and

determine not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the price for the first service is less than the price for the second service based on the comparison.

215. The system of claim 211, wherein the control circuitry is further configured to:

determine a media asset that was purchased by the user from the first service is accessible through the second service;

compare a first date when the media asset was accessible through the first service to a second date when the media asset was accessible through the second service; and

in response to determining that the first date is before the second date, increase the number by one.

216. The system of claim 211, wherein the control circuitry is further configured to:

determine a media asset that was purchased by the user from the first service and is accessible through the second service;

compare a first price of the media asset, wherein the first price indicates a price of accessing the media asset through the first service, to a second price of the media asset, wherein the second price indicates a price of accessing the media asset through the second service; and

in response to determining that the first price is less than the second price, increase the number by one.

217. The system of claim 211, wherein the control circuitry is further configured to determine the number of media assets that were purchased by the user from the first service that are not accessible through the second service in response to determining that a subscription period for the first service is ending.

218. The system of claim 211, wherein the content includes a discount for the first service.

219. The system of claim 211, wherein the content includes a list of media assets accessible through the first service.

220. The system of claim 219, wherein the media assets accessible through the first service are accessible at a future point in time.

221. A system for preventing users from terminating services, the system comprising:

means for retrieving a media asset purchase history for a user, wherein the media asset purchase history indicates media assets purchased by the user from a first service;

means for determining a number of media assets that were purchased by the user from the first service that are not accessible through a second service;

means for comparing the number to a threshold number; and
in response to determining that the number does not exceed the threshold number, means for generating for display content associated with preventing the user from terminating the first service.

222. The system of claim 221, further comprising, in response to determining that the number does exceed the threshold number, means for not generating for display the content associated with preventing the user from terminating the service.

223. The system of claim 21, further comprising means for cross-referencing a database listing content providers for the media assets purchased by the user from the first service to determine the number of media assets that were purchased by the user from the first service that are not accessible through the second service.

224. The system of claim 221, further comprising:

means for comparing a price for the first service to a price for the second service; and

means for determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in

response to determining that the price for the first service is less than the price for the second service based on the comparison.

225. The system of claim 221, further comprising:
means for determining a media asset that was purchased by the user from the first service is accessible through the second service;
means for comparing a first date when the media asset was accessible through the first service to a second date when the media asset was accessible through the second service; and
in response to determining that the first date is before the second date, means for increasing the number by one.

226. The system of claim 221, further comprising:
means for determining a media asset that was purchased by the user from the first service and is accessible through the second service;
means for comparing a first price of the media asset, wherein the first price indicates a price of accessing the media asset through the first service, to a second price of the media asset, wherein the second price indicates a price of accessing the media asset through the second service; and
in response to determining that the first price is less than the second price, means for increasing the number by one.

227. The system of claim 221, further comprising means for determining the number of media assets that were purchased by the user from the first service that are not accessible through the second service in response to determining that a subscription period for the first service is ending.

228. The system of claim 221, wherein the content includes a discount for the first service.

229. The system of claim 221, wherein the content includes a list of media assets accessible through the first service.

230. The system of claim 229, wherein the media assets accessible through the first service are accessible at a future point in time.

231. A method for preventing users from terminating services, the method comprising:

retrieving a media asset purchase history for a user, wherein the media asset purchase history indicates media assets purchased by the user from a first service;

determining a number of media assets that were purchased by the user from the first service that are not accessible through a second service;

comparing the number to a threshold number; and

in response to determining that the number does not exceed the threshold number, generating for display content associated with preventing the user from terminating the first service.

232. The method of claim 231, further comprising, in response to determining that the number does exceed the threshold number, not generating for display the content associated with preventing the user from terminating the service.

233. The method of claim 231 or 232, further comprising cross-referencing a database listing content providers for the media assets purchased by the user from the first service to determine the number of media assets that were purchased by the user from the first service that are not accessible through the second service.

234. The method of any one of claims 231-233, further comprising:
comparing a price for the first service to a price for the second service; and

determining not to generate for display the content associated with preventing the user from terminating the first service in response to determining that the price for the first service is less than the price for the second service based on the comparison.

235. The method of any one of claims 231-234, further comprising:
determining a media asset that was purchased by the user from the first service is accessible through the second service;

comparing a first date when the media asset was accessible through the first service to a second date when the media asset was accessible through the

second service; and

in response to determining that the first date is before the second date, increasing the number by one.

236. The method of any one of claims 231-235, further comprising:
determining a media asset that was purchased by the user from the first service and is accessible through the second service;
comparing a first price of the media asset, wherein the first price indicates a price of accessing the media asset through the first service, to a second price of the media asset, wherein the second price indicates a price of accessing the media asset through the second service; and
in response to determining that the first price is less than the second price, increasing the number by one.

237. The method of any one of claims 231-236, further comprising determining the number of media assets that were purchased by the user from the first service that are not accessible through the second service in response to determining that a subscription period for the first service is ending.

238. The method of any one of claims 231-237, wherein the content includes a discount for the first service.

239. The method of any one of claims 231-238, wherein the content includes a list of media assets accessible through the first service.

240. The method of claim 239, wherein the media assets accessible through the first service are accessible at a future point in time.

241. A non-transitory computer-readable medium comprising instructions for preventing users from terminating services, the instructions comprising:
instructions for retrieving a media asset purchase history for a user, wherein the media asset purchase history indicates media assets purchased by the user from a first service;
instructions for determining a number of media assets that were purchased by the user from the first service that are not accessible through a second

service;

instructions for comparing the number to a threshold number;

and

in response to determining that the number does not exceed the threshold number, instructions for generating for display content associated with preventing the user from terminating the first service.

242. The non-transitory computer-readable medium of claim 241, further comprising, in response to determining that the number does exceed the threshold number, instructions for not generating for display the content associated with preventing the user from terminating the service.

243. The non-transitory computer-readable medium of claim 241, further comprising instructions for cross-referencing a database listing content providers for the media assets purchased by the user from the first service to determine the number of media assets that were purchased by the user from the first service that are not accessible through the second service.

244. The non-transitory computer-readable medium of claim 241, further comprising:
instructions for comparing a price for the first service to a price for the second service; and
instructions for determining not to generate for display the content associated with preventing the user from terminating the first service in response to determining that the price for the first service is less than the price for the second service based on the comparison.

245. The non-transitory computer-readable medium of claim 241, further comprising:
instructions for determining a media asset that was purchased by the user from the first service is accessible through the second service;
instructions for comparing a first date when the media asset was accessible through the first service to a second date when the media asset was accessible through the second service; and

in response to determining that the first date is before the second date, instructions for increasing the number by one.

246. The non-transitory computer-readable medium of claim 241, further comprising:

instructions for determining a media asset that was purchased by the user from the first service and is accessible through the second service;

instructions for comparing a first price of the media asset, wherein the first price indicates a price of accessing the media asset through the first service, to a second price of the media asset, wherein the second price indicates a price of accessing the media asset through the second service; and

in response to determining that the first price is less than the second price, instructions for increasing the number by one.

247. The non-transitory computer-readable medium of claim 241, further comprising instructions for determining the number of media assets that were purchased by the user from the first service that are not accessible through the second service in response to determining that a subscription period for the first service is ending.

248. The non-transitory computer-readable medium of claim 241, wherein the content includes a discount for the first service.

249. The non-transitory computer-readable medium of claim 241, wherein the content includes a list of media assets accessible through the first service.

250. The non-transitory computer-readable medium of claim 249, wherein the media assets accessible through the first service are accessible at a future point in time.

251. A method for preventing users from terminating services, the method comprising:

determining a user is subscribed to a first service;

determining media assets accessible through the first service;

retrieving a viewing history for the user from a user profile;

- 157 -

identifying a preferred media asset of the media assets based on the viewing history;

determining whether the preferred media asset is accessible through a second service; and

in response to determining the preferred media asset is accessible through the second service, generating for display, on a display device, content associated with preventing the user from terminating the service.

252. The method of claim 251, wherein the preferred media asset is part of a series of media assets of which the user has been consuming, and wherein the viewing history indicates a rate at which the user has consumed the series of media assets over a time period.

253. The method of claim 252, wherein identifying the preferred media asset of the media assets based on the viewing history, further comprises:

comparing the rate at which the user has consumed the series of media assets to a threshold rate; and

determining the preferred media asset in response to the rate exceeding the threshold rate.

254. The method of claim 251, wherein determining whether the preferred media asset is accessible through the second service, further comprises cross-referencing a database listing services that provide the preferred media asset to determine whether the second service provides the preferred media asset.

255. The method of claim 251, further comprising:
comparing a first price for accessing the preferred media asset through the first service to a second price for accessing the preferred media asset through the second service; and

determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first price is less than the second price.

256. The method of claim 251, further comprising:
comparing a first date when the preferred media asset is accessible through the first service to a second date when the preferred media asset is accessible through the second service; and
determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first date is before the second date.

257. The method of claim 251, further comprising determining whether the preferred media asset is accessible through the second service in response to determining that a subscription period for the first service is ending.

258. The method of claim 251, wherein the content includes a discount for the first service.

259. The method of claim 251, wherein the content includes a list of media assets accessible through the first service.

260. The method of claim 259, wherein the media assets accessible through the first service are accessible at a future point in time.

261. A system for preventing users from terminating services, the system comprising:

storage circuitry configured to store content associated with preventing the user from terminating the service; and

control circuitry configured to:

determine a user is subscribed to a first service;
determine media assets accessible through the first service;

retrieve a viewing history for the user from a user profile;

identify a preferred media asset of the media assets based on the viewing history;

determine whether the preferred media asset is

accessible through a second service; and

in response to determining the preferred media asset is accessible through the second service, generate for display, on a display device, the content associated with preventing the user from terminating the service.

262. The system of claim 261, wherein the preferred media asset is part of a series of media assets of which the user has been consuming, and wherein the viewing history indicates a rate at which the user has consumed the series of media assets over a time period.

263. The system of claim 262, wherein the control circuitry is configured to identify the preferred media asset of the media assets based on the viewing history, is further configured to:

compare the rate at which the user has consumed the series of media assets to a threshold rate; and

determine the preferred media asset in response to the rate exceeding the threshold rate.

264. The system of claim 261, wherein the control circuitry is configured to determine whether the preferred media asset is accessible through the second service, is further configured to cross-reference a database listing services that provide the preferred media asset to determine whether the second service provides the preferred media asset.

265. The system of claim 261, wherein the control circuitry is configured to:

compare a first price for accessing the preferred media asset through the first service to a second price for accessing the preferred media asset through the second service; and

determine not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first price is less than the second price.

266. The system of claim 261, wherein the control circuitry is configured to:

compare a first date when the preferred media asset is accessible through the first service to a second date when the preferred media asset is accessible through the second service; and

determine not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first date is before the second date.

267. The system of claim 261, wherein the control circuitry is configured to determine whether the preferred media asset is accessible through the second service in response to determining that a subscription period for the first service is ending.

268. The system of claim 261, wherein the content includes a discount for the first service.

269. The system of claim 261, wherein the content includes a list of media assets accessible through the first service.

270. The system of claim 269, wherein the media assets accessible through the first service are accessible at a future point in time.

271. A system for preventing users from terminating services, the system comprising:

means for determining a user is subscribed to a first service;
means for determining media assets accessible through the first service;

means for retrieving a viewing history for the user from a user profile;

means for identifying a preferred media asset of the media assets based on the viewing history;

means for determining whether the preferred media asset is accessible through a second service; and

in response to determining the preferred media asset is accessible through the second service, means for generating for display, on a display device, content associated with preventing the user from terminating the service.

272. The system of claim 271, wherein the preferred media asset is part of a series of media assets of which the user has been consuming, and wherein the viewing history indicates a rate at which the user has consumed the series of media assets over a time period.

273. The system of claim 272, wherein the means for identifying the preferred media asset of the media assets based on the viewing history, further comprises:

means for comparing the rate at which the user has consumed the series of media assets to a threshold rate; and

means for determining the preferred media asset in response to the rate exceeding the threshold rate.

274. The system of claim 271, wherein the means for determining whether the preferred media asset is accessible through the second service, further comprises means for cross-referencing a database listing services that provide the preferred media asset to determine whether the second service provides the preferred media asset.

275. The system of claim 271, further comprising:
means for comparing a first price for accessing the preferred media asset through the first service to a second price for accessing the preferred media asset through the second service; and

means for determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first price is less than the second price.

276. The system of claim 271, further comprising:
means for comparing a first date when the preferred media asset is accessible through the first service to a second date when the preferred media asset

- 162 -

is accessible through the second service; and

means for determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first date is before the second date.

277. The system of claim 271, further comprising means for determining whether the preferred media asset is accessible through the second service in response to determining that a subscription period for the first service is ending.

278. The system of claim 271, wherein the content includes a discount for the first service.

279. The system of claim 271, wherein the content includes a list of media assets accessible through the first service.

280. The system of claim 279, wherein the media assets accessible through the first service are accessible at a future point in time.

281. A method for preventing users from terminating services, the method comprising:

- determining, using control circuitry, a user is subscribed to a first service;
- determining, using the control circuitry, media assets accessible through the first service;
- retrieving, using the control circuitry, a viewing history for the user from a user profile;
- identifying, using the control circuitry, a preferred media asset of the media assets based on the viewing history;
- determining, using the control circuitry, whether the preferred media asset is accessible through a second service; and
- in response to determining the preferred media asset is accessible through the second service, generating for display, on a display device, content associated with preventing the user from terminating the service.

282. The method of claim 281, wherein the preferred media asset is part of a series of media assets of which the user has been consuming, and wherein the viewing history indicates a rate at which the user has consumed the series of media assets over a time period.

283. The method of claim 282, wherein identifying the preferred media asset of the media assets based on the viewing history, further comprises:

comparing the rate at which the user has consumed the series of media assets to a threshold rate; and

determining the preferred media asset in response to the rate exceeding the threshold rate.

284. The method of any one of claims 281-283, wherein determining whether the preferred media asset is accessible through the second service, further comprises cross-referencing a database listing services that provide the preferred media asset to determine whether the second service provides the preferred media asset.

285. The method of any one of claims 281-284, further comprising:

comparing a first price for accessing the preferred media asset through the first service to a second price for accessing the preferred media asset through the second service; and

determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first price is less than the second price.

286. The method of any one of claims 281-285, further comprising:

comparing a first date when the preferred media asset is accessible through the first service to a second date when the preferred media asset is accessible through the second service; and

determining not to generate for display, on the display

device, the content associated with preventing the user from terminating the first service in response to determining that the first date is before the second date.

287. The method of any one of claims 281-286, further comprising determining whether the preferred media asset is accessible through the second service in response to determining that a subscription period for the first service is ending.

288. The method of any one of claims 281-287, wherein the content includes a discount for the first service.

289. The method of any one of claims 281-288, wherein the content includes a list of media assets accessible through the first service.

290. The method of claim 289, wherein the media assets accessible through the first service are accessible at a future point in time.

291. A non-transitory computer-readable medium comprising instructions for preventing users from terminating services, the instructions comprising:

- instructions for determining a user is subscribed to a first service;
- instructions for determining media assets accessible through the first service;
- instructions for retrieving a viewing history for the user from a user profile;
- instructions for identifying a preferred media asset of the media assets based on the viewing history;
- instructions for determining whether the preferred media asset is accessible through a second service; and
- in response to determining the preferred media asset is accessible through the second service, instructions for generating for display, on a display device, content associated with preventing the user from terminating the service.

292. The non-transitory computer-readable medium of claim 291, wherein the preferred media asset is part of a series of media assets of which the user has

been consuming, and wherein the viewing history indicates a rate at which the user has consumed the series of media assets over a time period.

293. The non-transitory computer-readable medium of claim 292, wherein the instructions for identifying the preferred media asset of the media assets based on the viewing history, further comprising:

instructions for comparing the rate at which the user has consumed the series of media assets to a threshold rate; and

instructions for determining the preferred media asset in response to the rate exceeding the threshold rate.

294. The non-transitory computer-readable medium of claim 291, wherein the instructions for determining whether the preferred media asset is accessible through the second service, further comprise instructions for cross-referencing a database listing services that provide the preferred media asset to determine whether the second service provides the preferred media asset.

295. The non-transitory computer-readable medium of claim 291, further comprising:

instructions for comparing a first price for accessing the preferred media asset through the first service to a second price for accessing the preferred media asset through the second service; and

instructions for determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first price is less than the second price.

296. The non-transitory computer-readable medium of claim 291, further comprising:

instructions for comparing a first date when the preferred media asset is accessible through the first service to a second date when the preferred media asset is accessible through the second service; and

instructions for determining not to generate for display, on the display device, the content associated with preventing the user from terminating the first service in response to determining that the first date is before the second date.

297. The non-transitory computer-readable medium of claim 291, further comprising instructions for determining whether the preferred media asset is accessible through the second service in response to determining that a subscription period for the first service is ending.

298. The non-transitory computer-readable medium of claim 291, wherein the content includes a discount for the first service.

299. The non-transitory computer-readable medium of claim 291, wherein the content includes a list of media assets accessible through the first service.

300. The non-transitory computer-readable medium of claim 299, wherein the media assets accessible through the first service are accessible at a future point in time.

301. A method for preventing users from terminating services, the method comprising:

- retrieving, using control circuitry, a viewing history for a user, wherein the viewing history indicates a rate at which the user consumed media assets over a first time period;
- comparing, using the control circuitry, the rate to a threshold rate;
- in response to determining that the rate does not exceed the threshold rate, determining, using the control circuitry, a characteristic not associated with the media assets consumed over the first time period; and
- recommending, using the control circuitry, a media asset associated with the characteristic.

302. The method of claim 301, wherein the threshold rate is based on a rate at which the user consumed media assets over a second time period.

303. The method of claim 301, wherein the characteristic is a genre.

304. The method of claim 301, wherein the characteristic is a media asset series affiliation.

305. The method of claim 301, wherein determining the characteristic not associated with media assets consumed over the first time period further comprises broadening criteria used for user recommendations.

306. The method of claim 301, wherein the viewing history of the user is retrieved in response to determining that a subscription service, through which the user accesses the media assets consumed over the first time period, is near expiration.

307. The method of claim 301, further comprising determining whether to generate for display, on a display device, content associated with preventing the user from terminating the first service based on whether the rate exceeds the threshold rate.

308. The method of claim 307, wherein the content includes a discount for the first service.

309. The method of claim 307, wherein the content includes a list of media assets accessible through the first service.

310. The method of claim 309, wherein the media assets available from the first service are accessible at a future point in time.

311. A system for preventing users from terminating services, the system comprising:

storage circuitry configured to store characteristics of media assets; and

control circuitry configured to:

retrieve a viewing history for a user, wherein the viewing history indicates a rate at which the user consumed media assets over a first time period;

compare the rate to a threshold rate;

in response to determining that the rate does not

exceed the threshold rate, determine a characteristic not associated with the media assets consumed over the first time period; and

recommend a media asset associated with the characteristic.

312. The system of claim 311, wherein the threshold rate is based on a rate at which the user consumed media assets over a second time period.

313. The system of claim 311, wherein the characteristic is a genre.

314. The system of claim 311, wherein the characteristic is a media asset series affiliation.

315. The system of claim 311, wherein the control circuitry configured to determine the characteristic not associated with media assets consumed over the first time period is further configured to broaden criteria used for user recommendations.

316. The system of claim 311, wherein the viewing history of the user is retrieved in response to determining that a subscription service, through which the user accesses the media assets consumed over the first time period, is near expiration.

317. The system of claim 311, wherein the control circuitry is further configured to determine whether to generate for display, on a display device, content associated with preventing the user from terminating the first service based on whether the rate exceeds the threshold rate.

318. The system of claim 317, wherein the content includes a discount for the first service.

319. The system of claim 317, wherein the content includes a list of media assets accessible through the first service.

320. The system of claim 319, wherein the media assets available from the first service are accessible at a future point in time.

321. A system for preventing users from terminating services, the system comprising:

means for retrieving a viewing history for a user, wherein the viewing history indicates a rate at which the user consumed media assets over a first time period;

means for comparing the rate to a threshold rate;

in response to determining that the rate does not exceed the threshold rate, means for determining a characteristic not associated with the media assets consumed over the first time period; and

means for recommending a media asset associated with the characteristic.

322. The system of claim 321, wherein the threshold rate is based on a rate at which the user consumed media assets over a second time period.

323. The system of claim 321, wherein the characteristic is a genre.

324. The system of claim 321, wherein the characteristic is a media asset series affiliation.

325. The system of claim 321, wherein the means for determining the characteristic not associated with media assets consumed over the first time period further comprises means for broadening criteria used for user recommendations.

326. The system of claim 321, wherein the viewing history of the user is retrieved in response to determining that a subscription service, through which the user accesses the media assets consumed over the first time period, is near expiration.

327. The system of claim 321, further comprising means for determining whether to generate for display, on a display device, content associated with preventing the user from terminating the first service based on whether the rate exceeds the threshold rate.

328. The system of claim 327, wherein the content includes a discount for the first service.

329. The system of claim 327, wherein the content includes a list of media assets accessible through the first service.

330. The system of claim 329, wherein the media assets available from the first service are accessible at a future point in time.

331. A method for preventing users from terminating services, the method comprising:

storing characteristics of media assets;
retrieving a viewing history for a user, wherein the viewing history indicates a rate at which the user consumed media assets over a first time period;
comparing the rate to a threshold rate;
in response to determining that the rate does not exceed the threshold rate, determining a characteristic not associated with the media assets consumed over the first time period; and
recommending a media asset associated with the characteristic.

332. The method of claim 331, wherein the threshold rate is based on a rate at which the user consumed media assets over a second time period.

333. The method of claim 331 or 332, wherein the characteristic is a genre.

334. The method of any one of claims 331-333, wherein the characteristic is a media asset series affiliation.

335. The method of any one of claims 331-334, wherein determining the characteristic not associated with media assets consumed over the first time period further comprises broadening criteria used for user recommendations.

336. The method of any one of claims 331-335, wherein the viewing history of the user is retrieved in response to determining that a subscription service, through which the user accesses the media assets consumed over the first time period, is near expiration.

337. The method of any one of claims 331-336, further comprising determining whether to generate for display, on a display device, content associated with preventing the user from terminating the first service based on whether the rate exceeds the threshold rate.

338. The method of claim 337, wherein the content includes a discount for the first service.

339. The method of claim 337 or 338, wherein the content includes a list of media assets accessible through the first service.

340. The method of claim 339, wherein the media assets available from the first service are accessible at a future point in time.

341. A non-transitory computer-readable medium comprising instructions for preventing users from terminating services, the instructions comprising:
instructions for retrieving a viewing history for a user,
wherein the viewing history indicates a rate at which the user consumed media assets over a first time period;
instructions for comparing the rate to a threshold rate;
in response to determining that the rate does not exceed the threshold rate, instructions for determining a characteristic not associated with the media assets consumed over the first time period; and
instructions for recommending a media asset associated with the characteristic.

342. The non-transitory computer-readable medium of claim 341, wherein the threshold rate is based on a rate at which the user consumed media assets over a second time period.

343. The non-transitory computer-readable medium of claim 341, wherein the characteristic is a genre.

344. The non-transitory computer-readable medium of claim 341, wherein the characteristic is a media asset series affiliation.

345. The non-transitory computer-readable medium of claim 341, wherein the instructions for determining the characteristic not associated with media assets consumed over the first time period further comprise instructions for broadening criteria used for user recommendations.

346. The non-transitory computer-readable medium of claim 341, wherein the viewing history of the user is retrieved in response to determining that a subscription service, through which the user accesses the media assets consumed over the first time period, is near expiration.

347. The non-transitory computer-readable medium of claim 341, further comprising instructions for determining whether to generate for display, on a display device, content associated with preventing the user from terminating the first service based on whether the rate exceeds the threshold rate.

348. The non-transitory computer-readable medium of claim 347, wherein the content includes a discount for the first service.

349. The non-transitory computer-readable medium of claim 347, wherein the content includes a list of media assets accessible through the first service.

350. The non-transitory computer-readable medium of claim 349, wherein the media assets available from the first service are accessible at a future point in time.

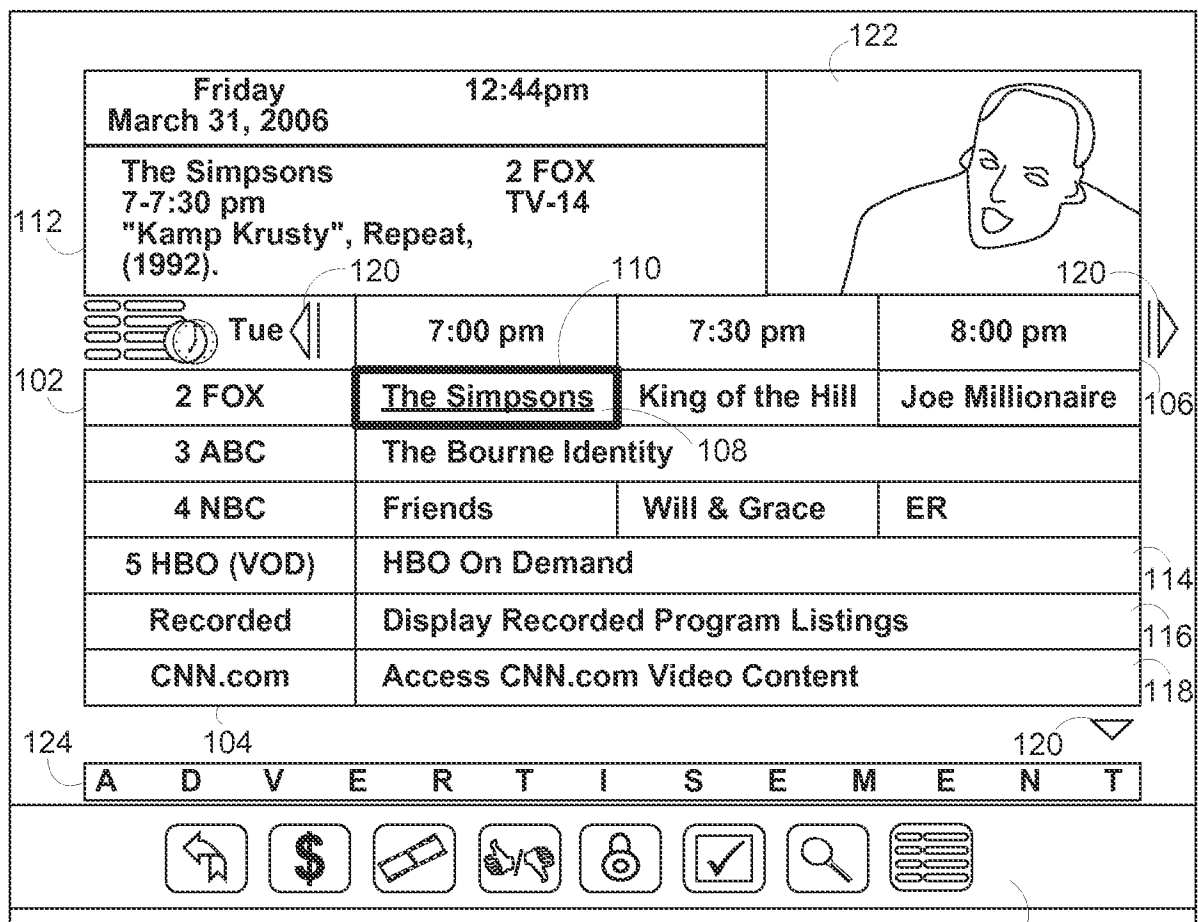
1/17
100

FIG. 1

126

200

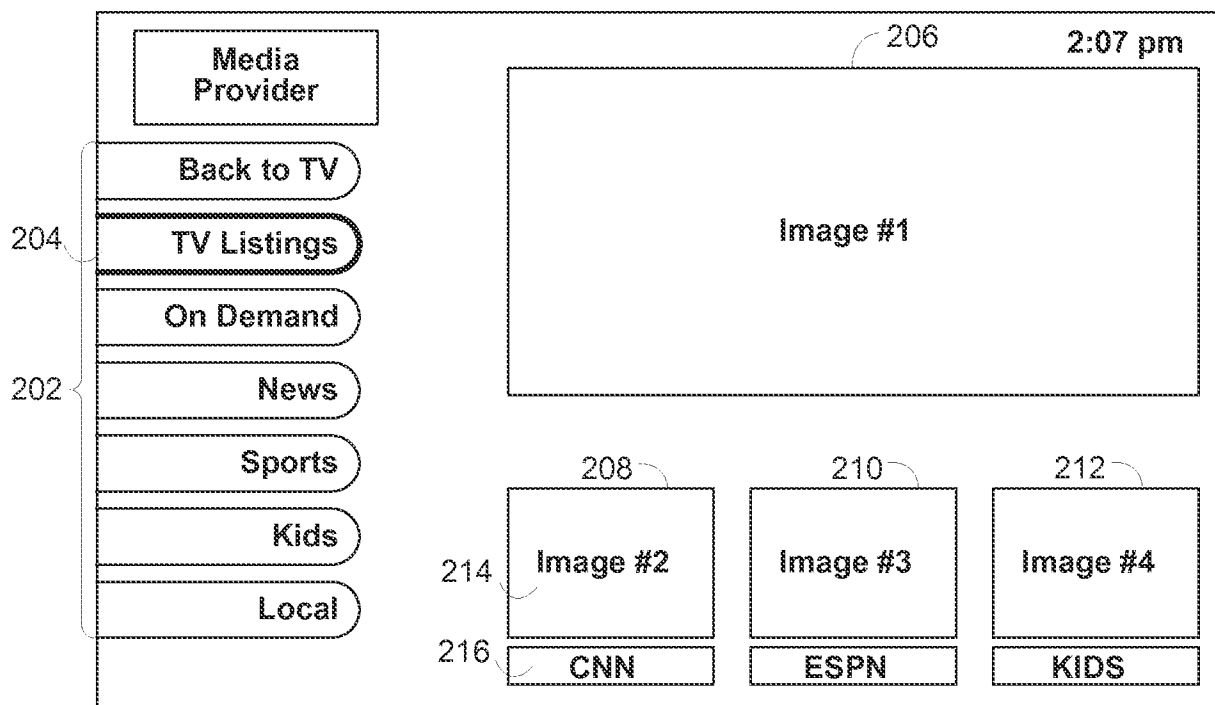
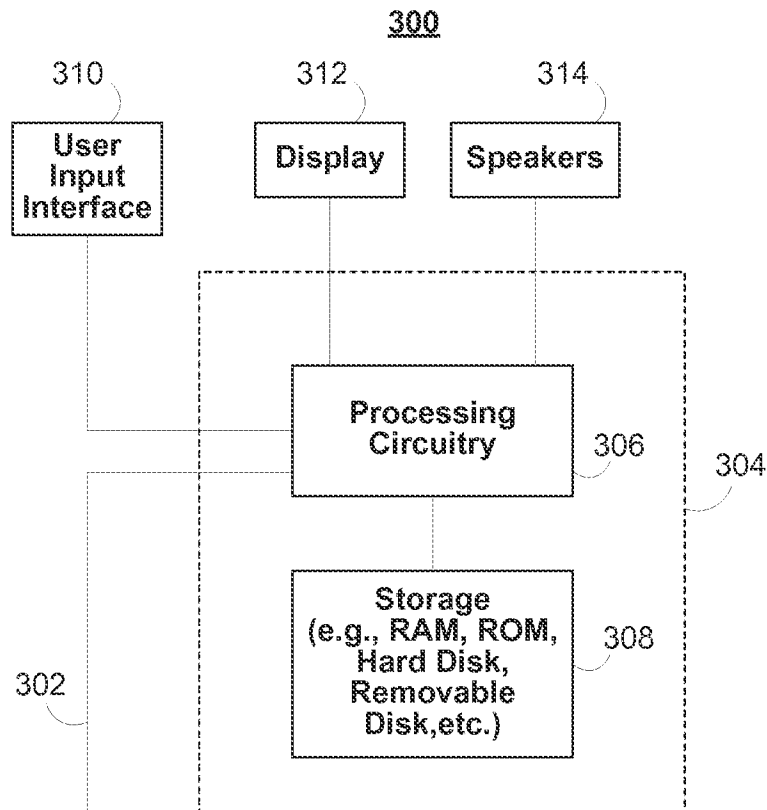
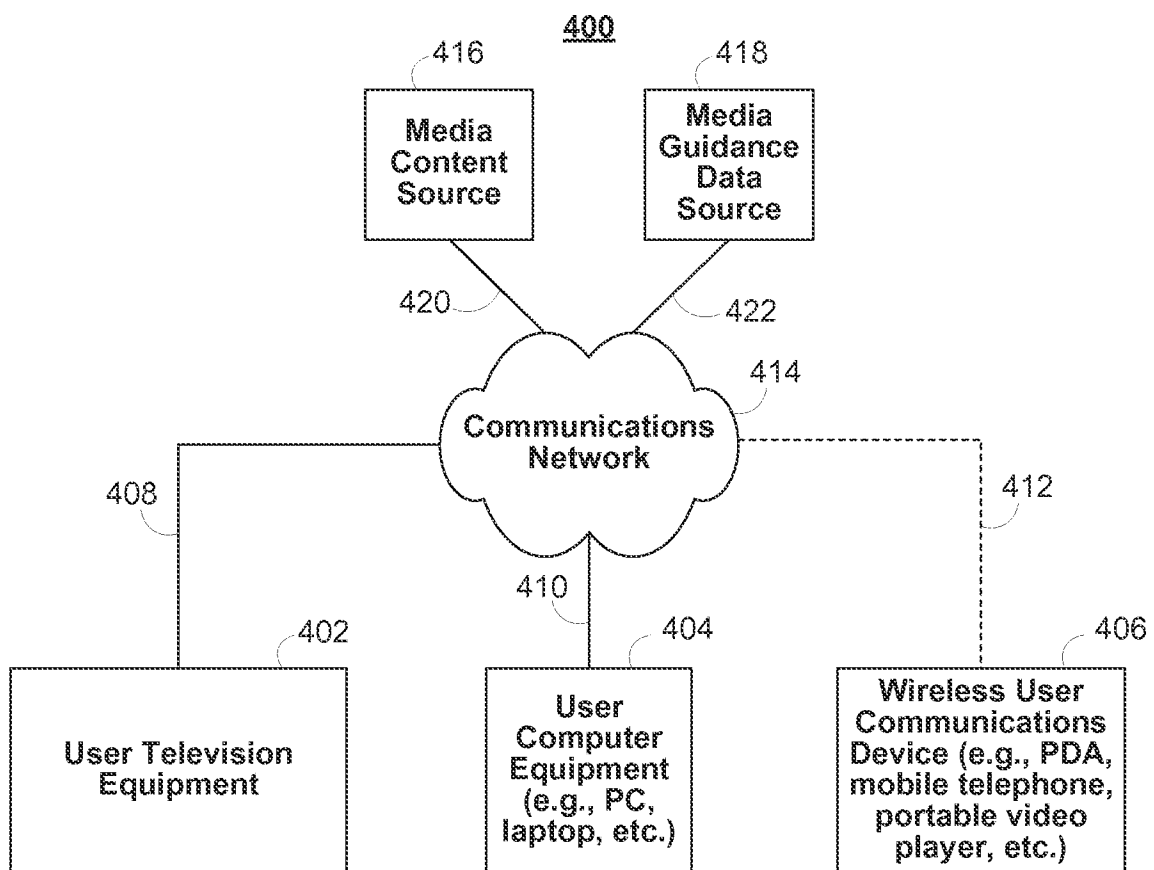


FIG. 2

2/17

**FIG. 3****FIG. 4**

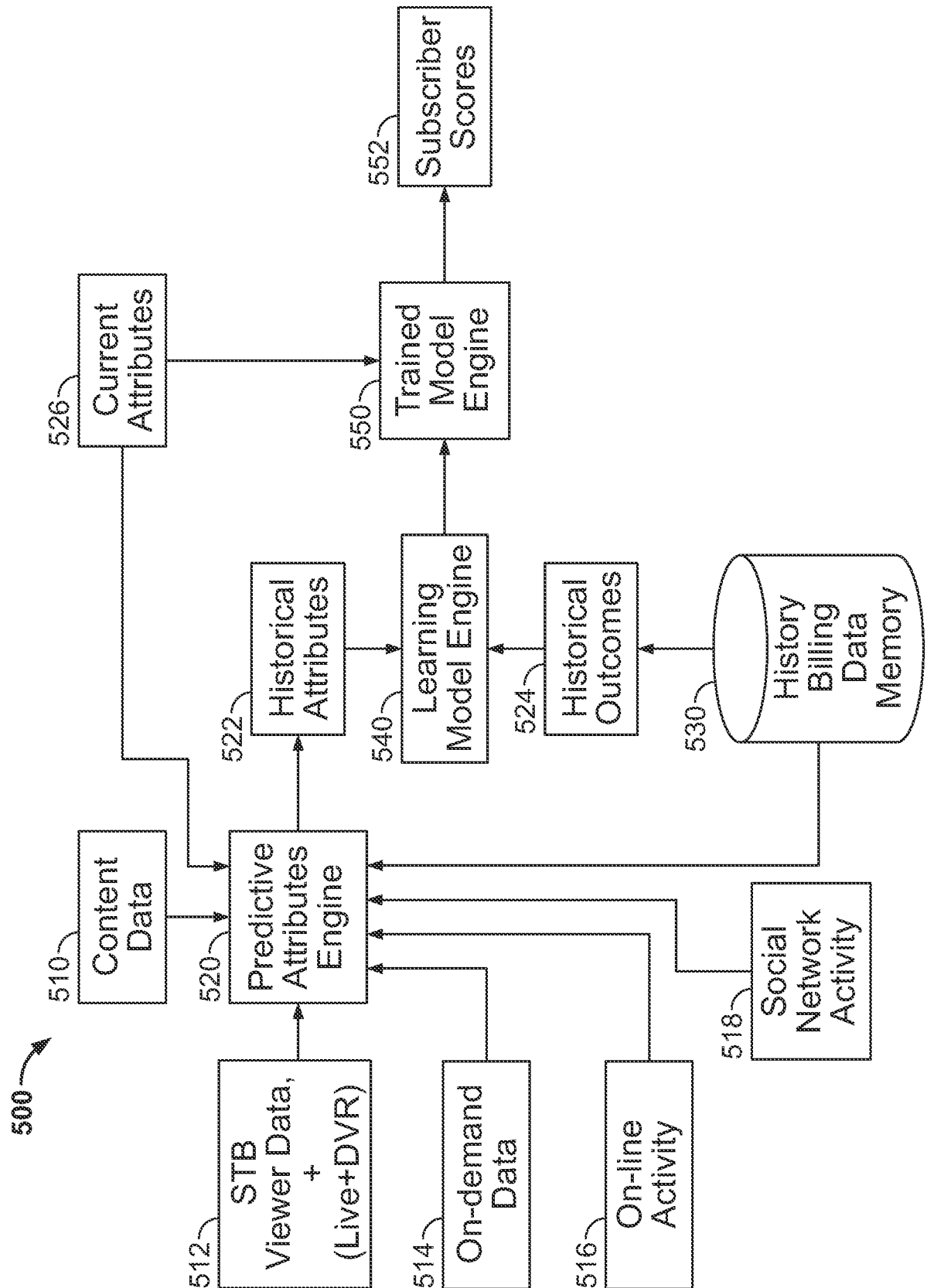
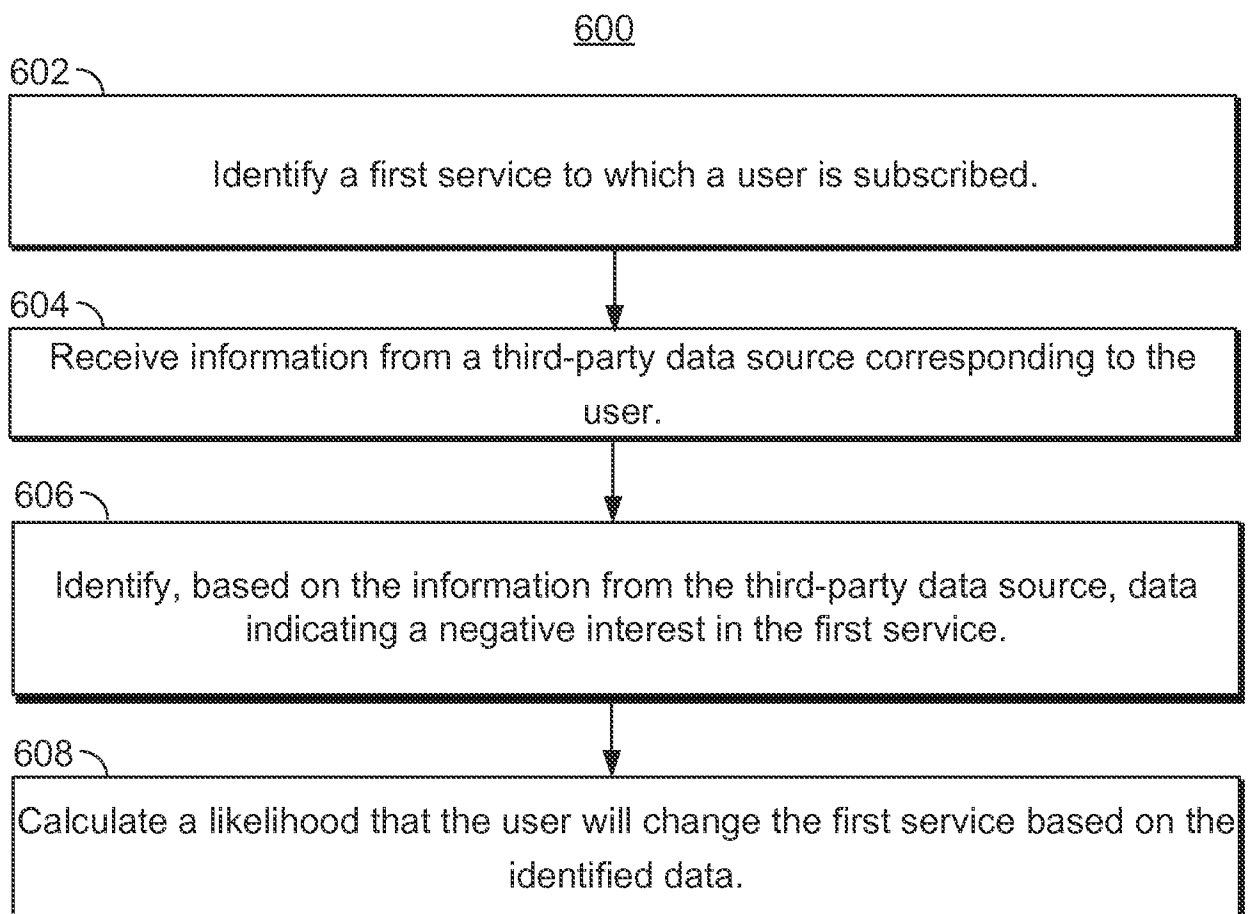


FIG. 5

**FIG. 6**

5/17

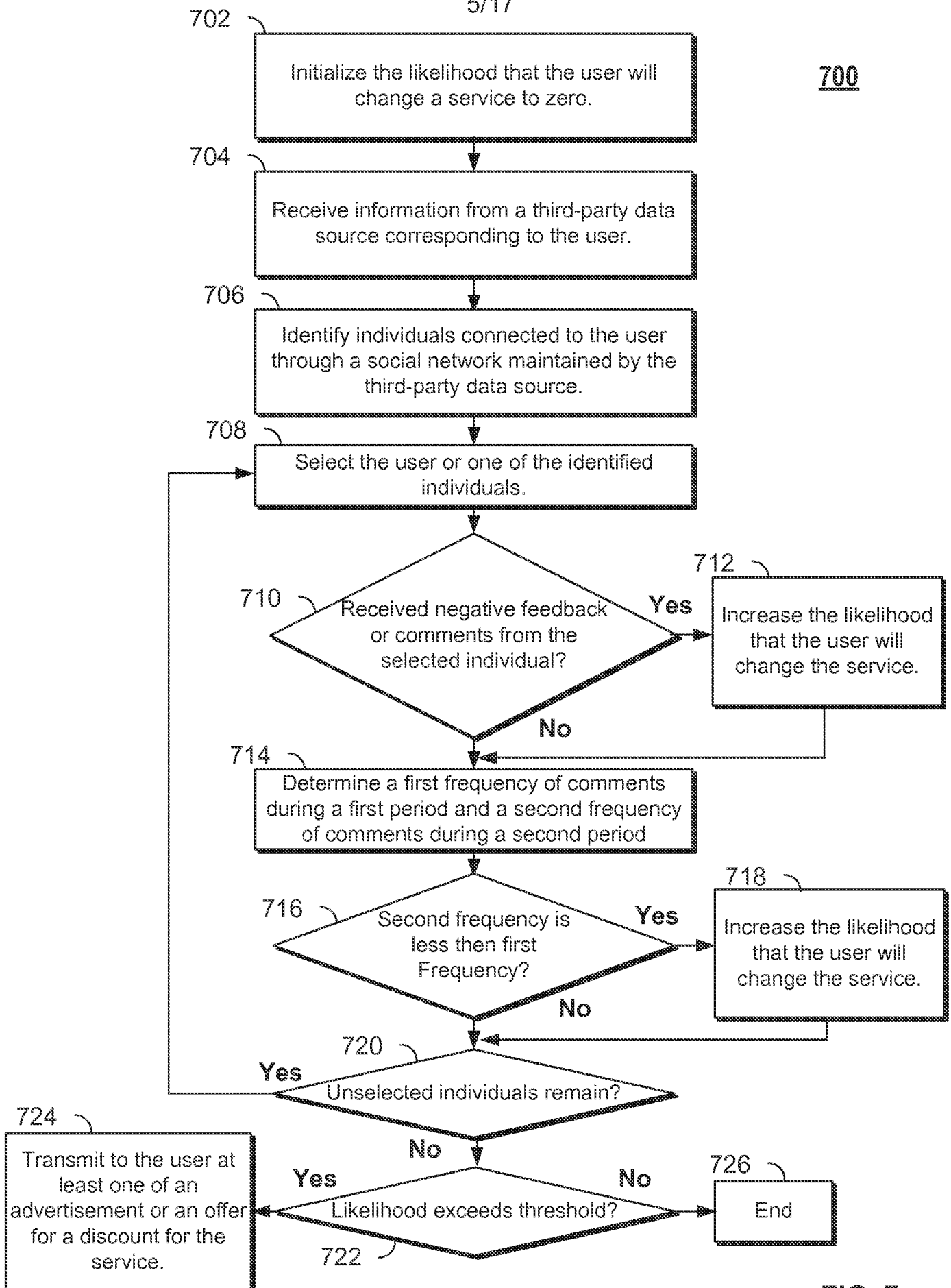


FIG. 7

6/17

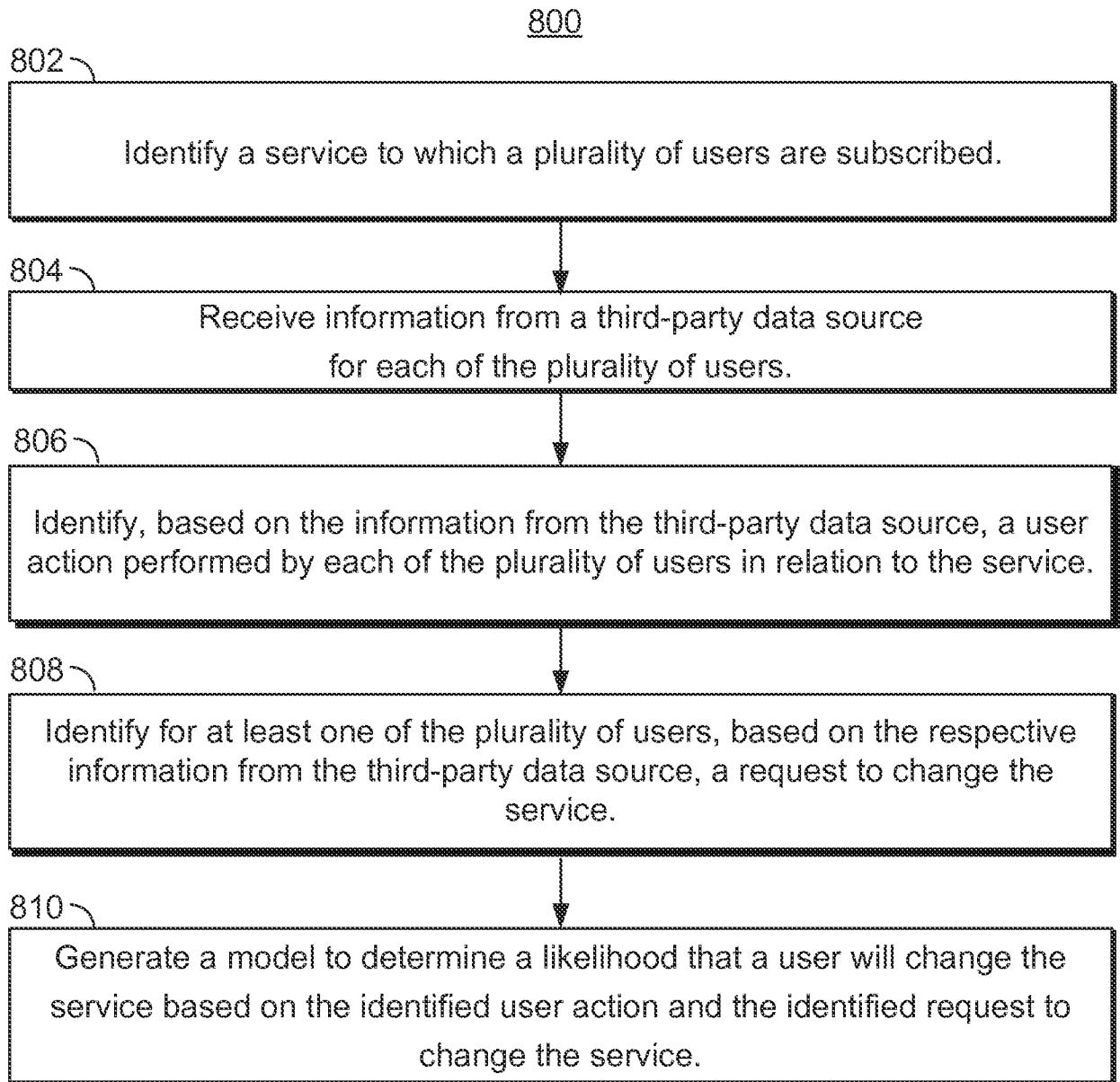


FIG. 8

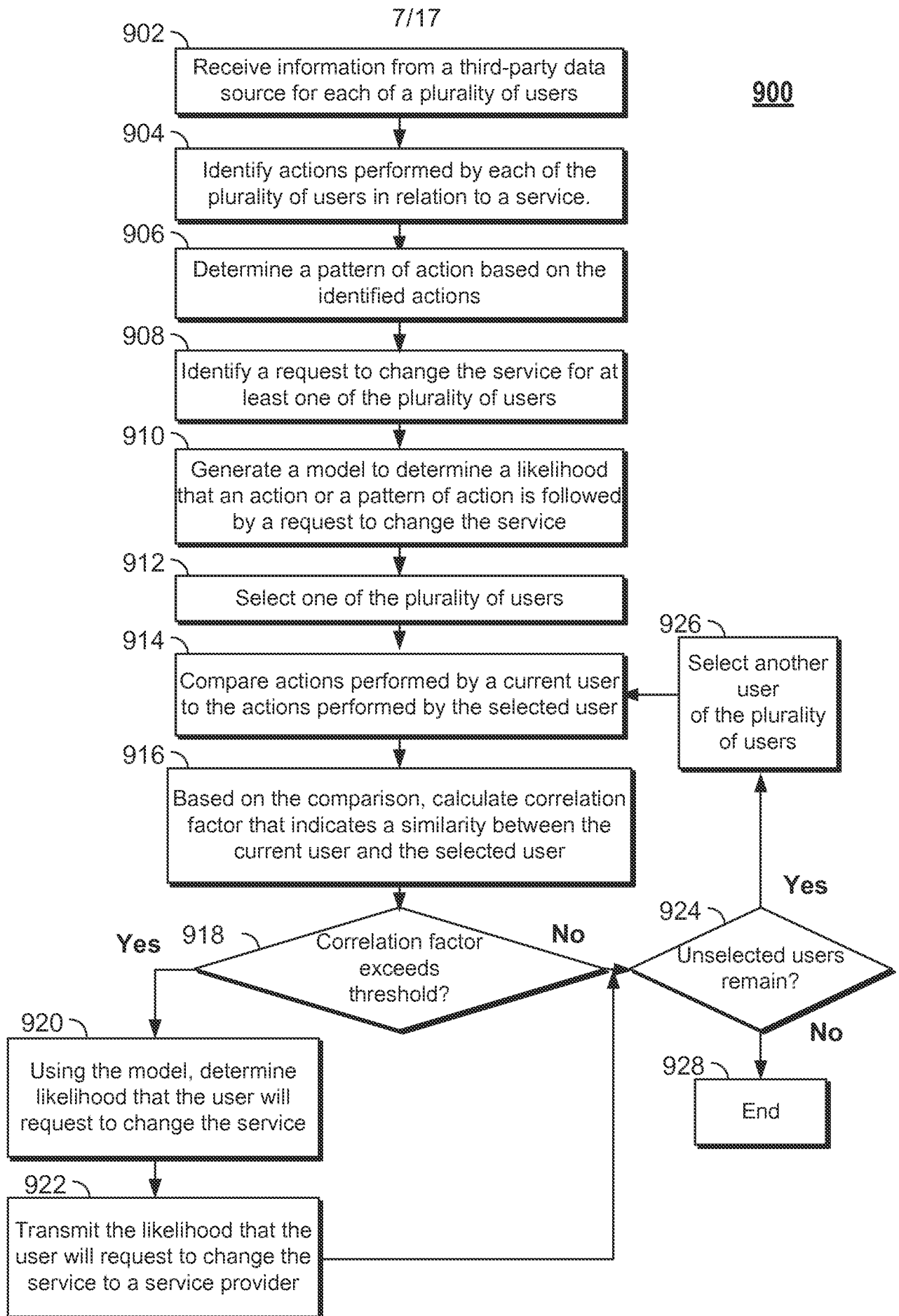


FIG. 9

8/17

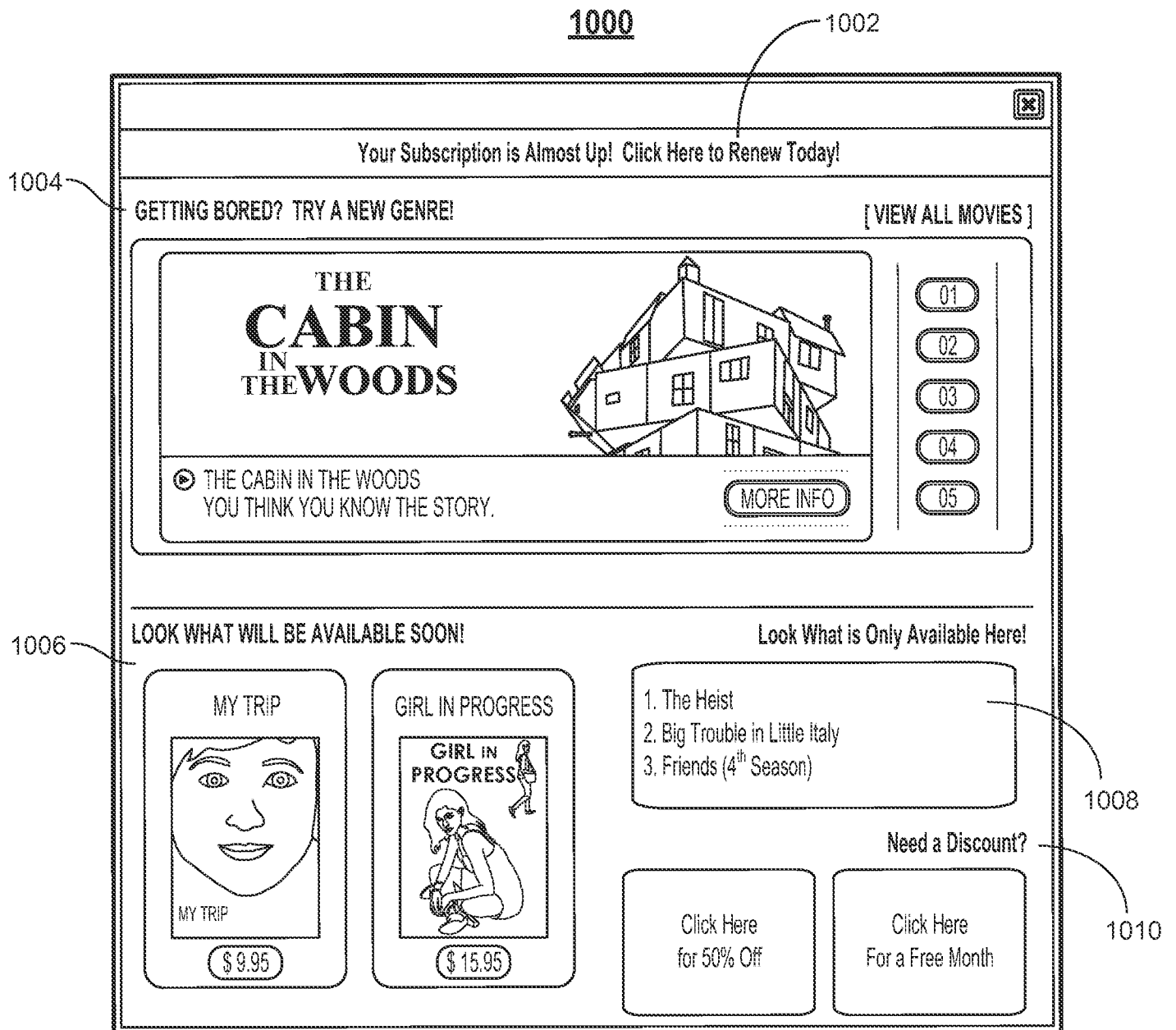
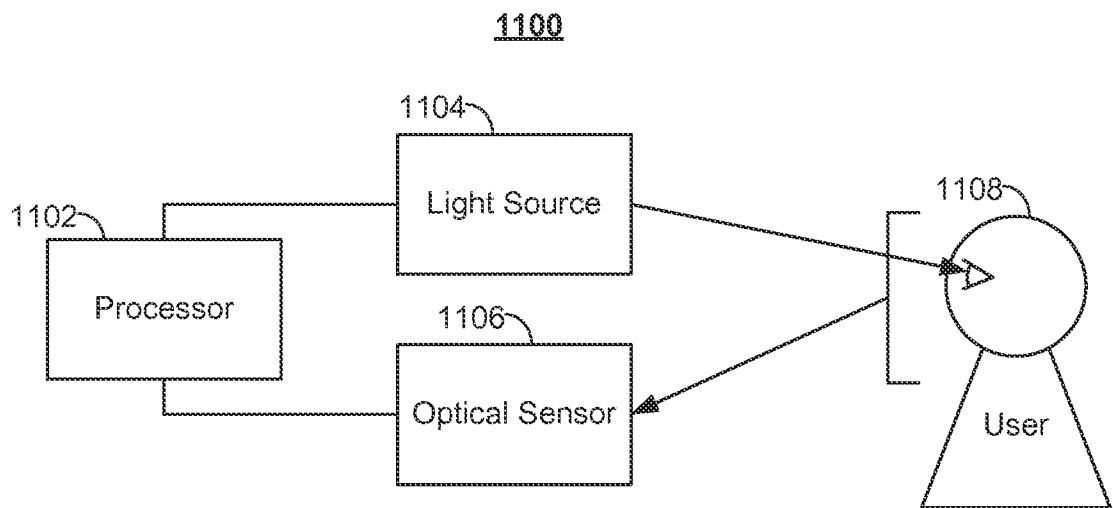


FIG. 10

9/17

**FIG. 11**

10/17

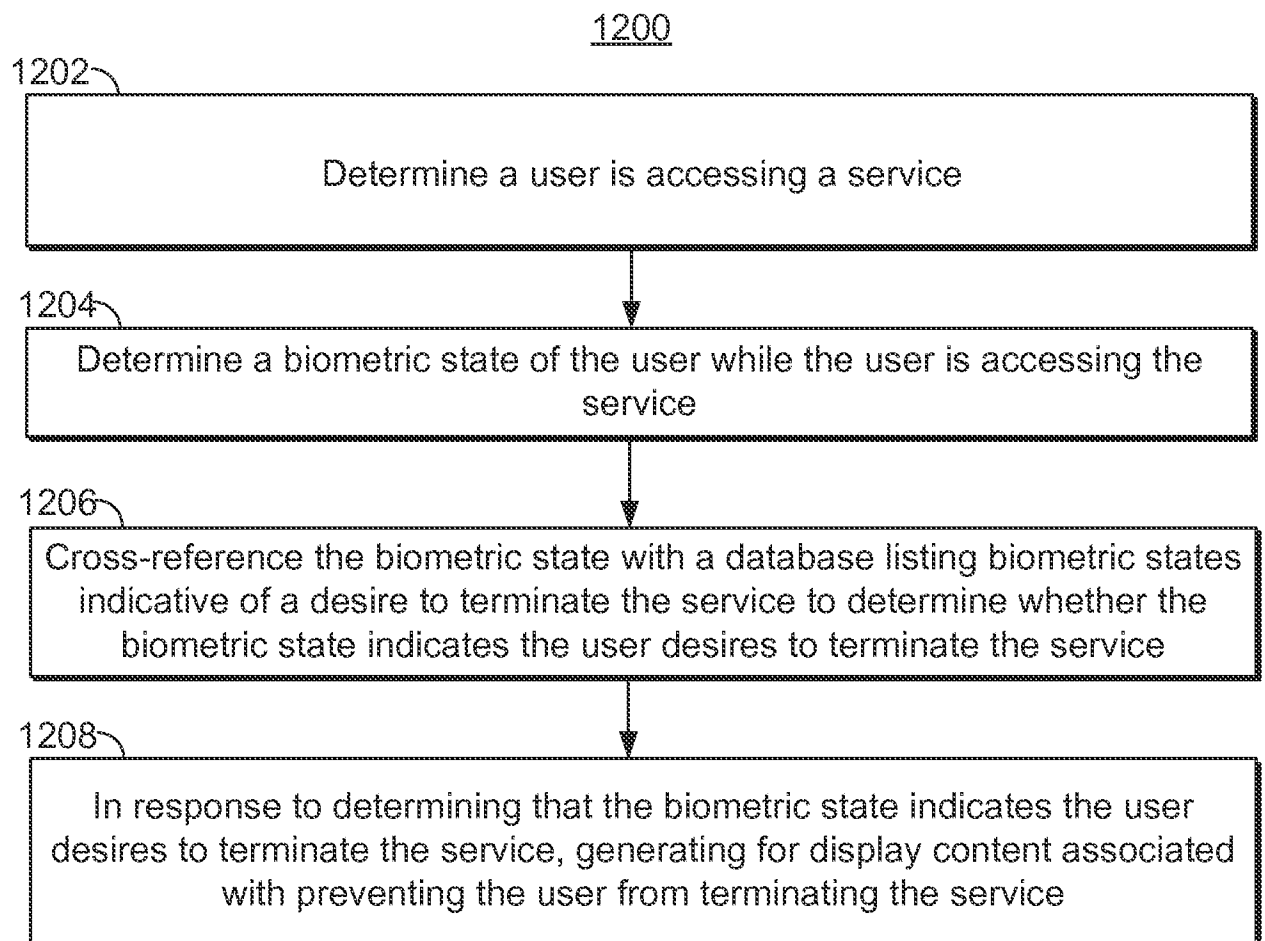
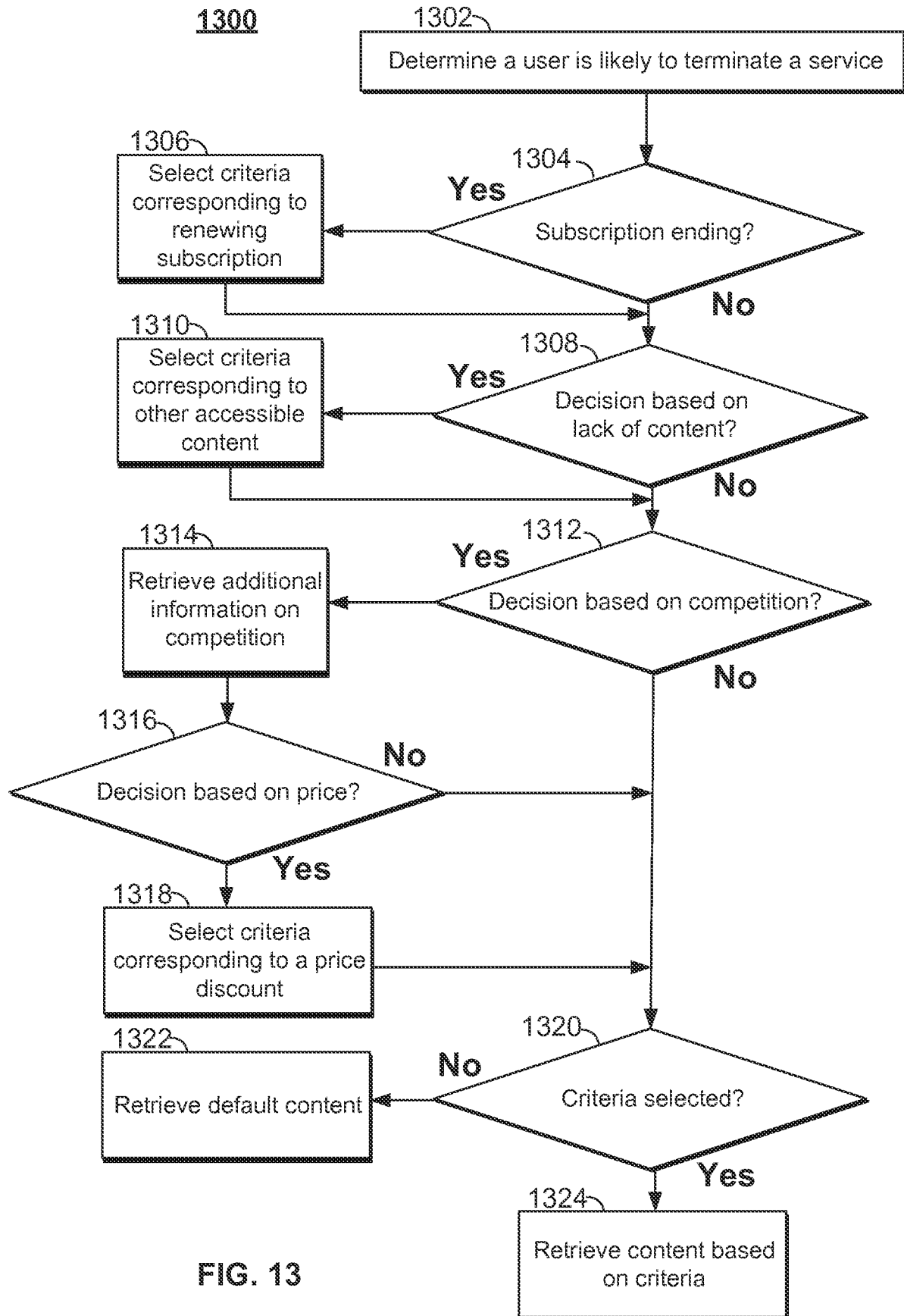


FIG. 12

11/17



12/17

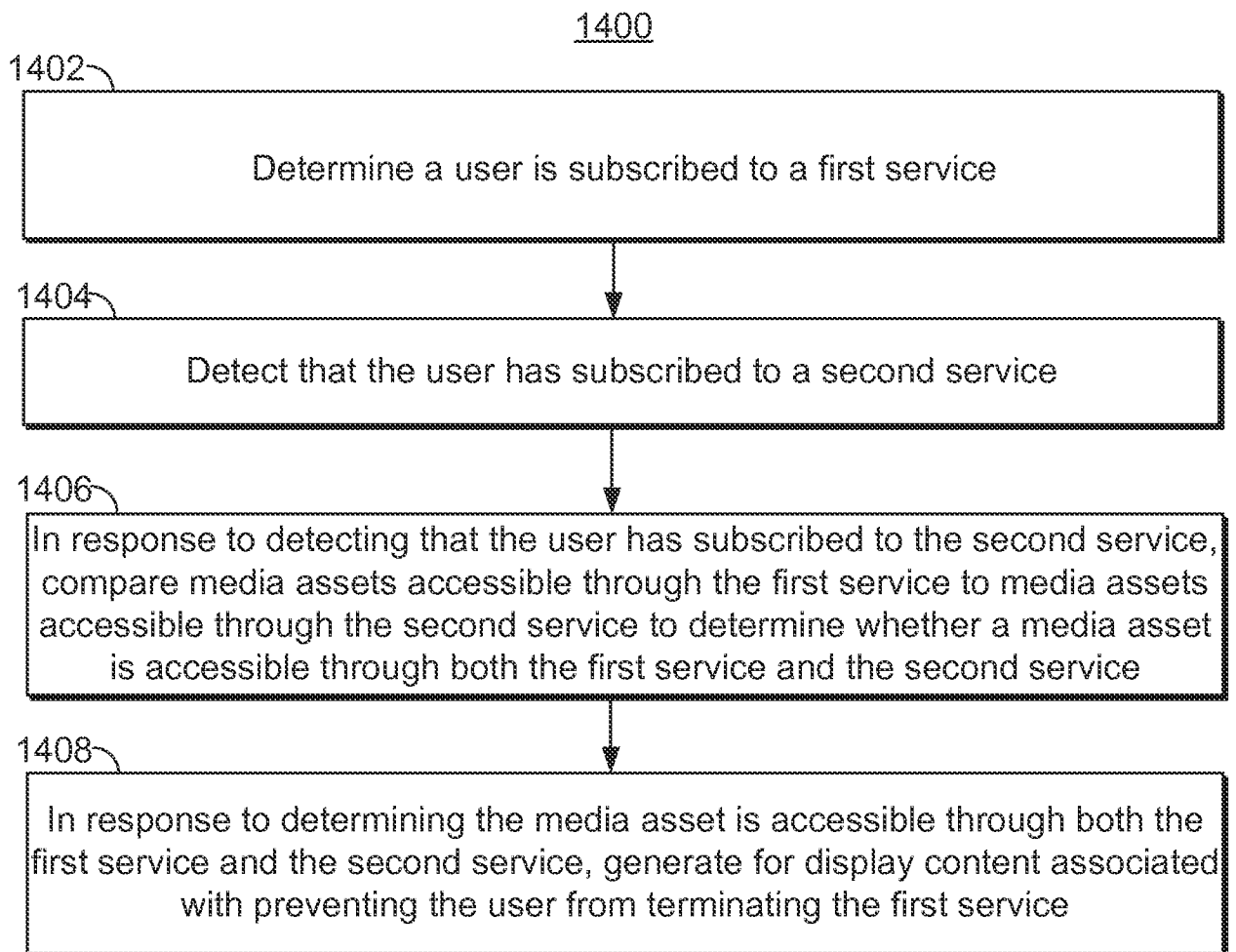


FIG. 14

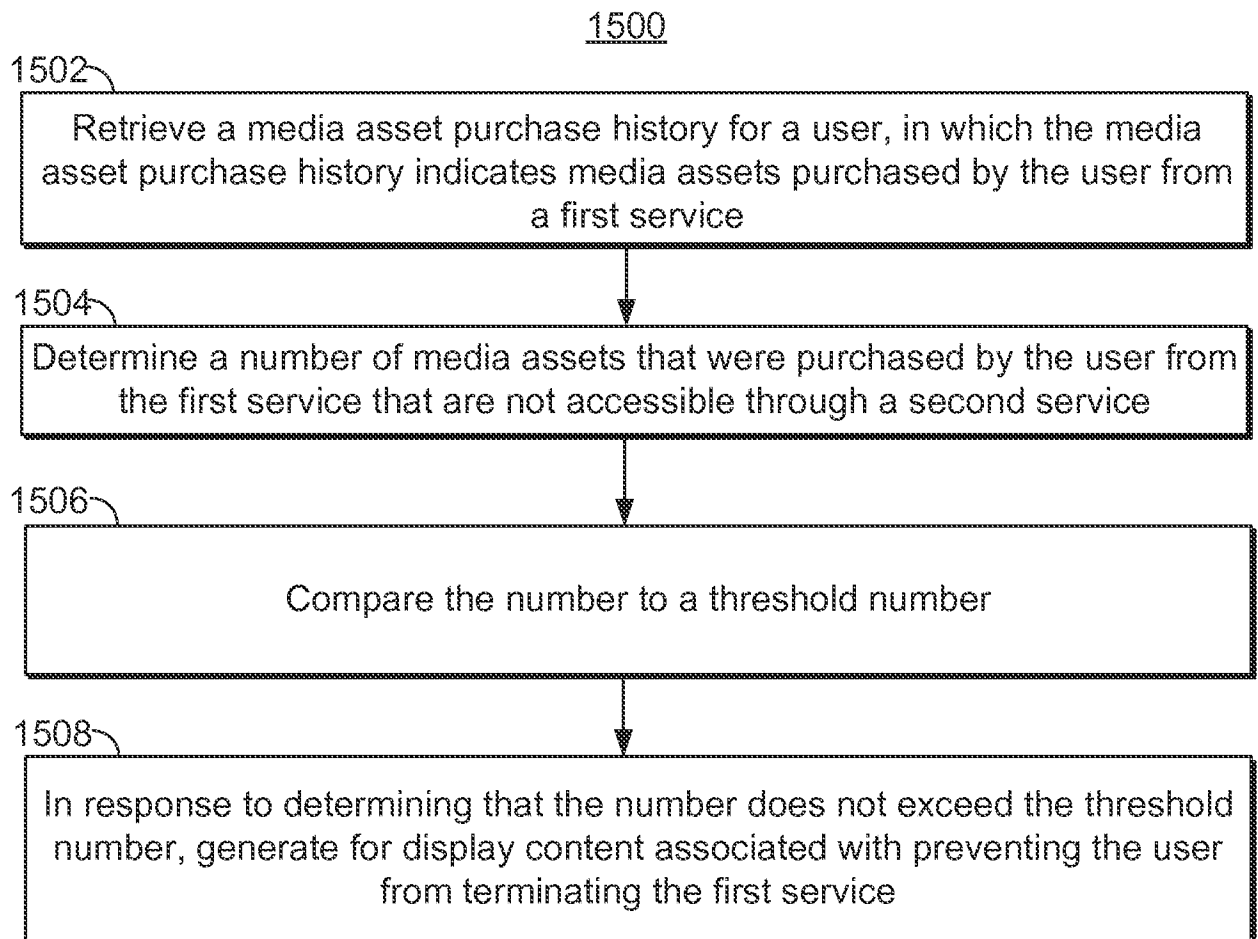
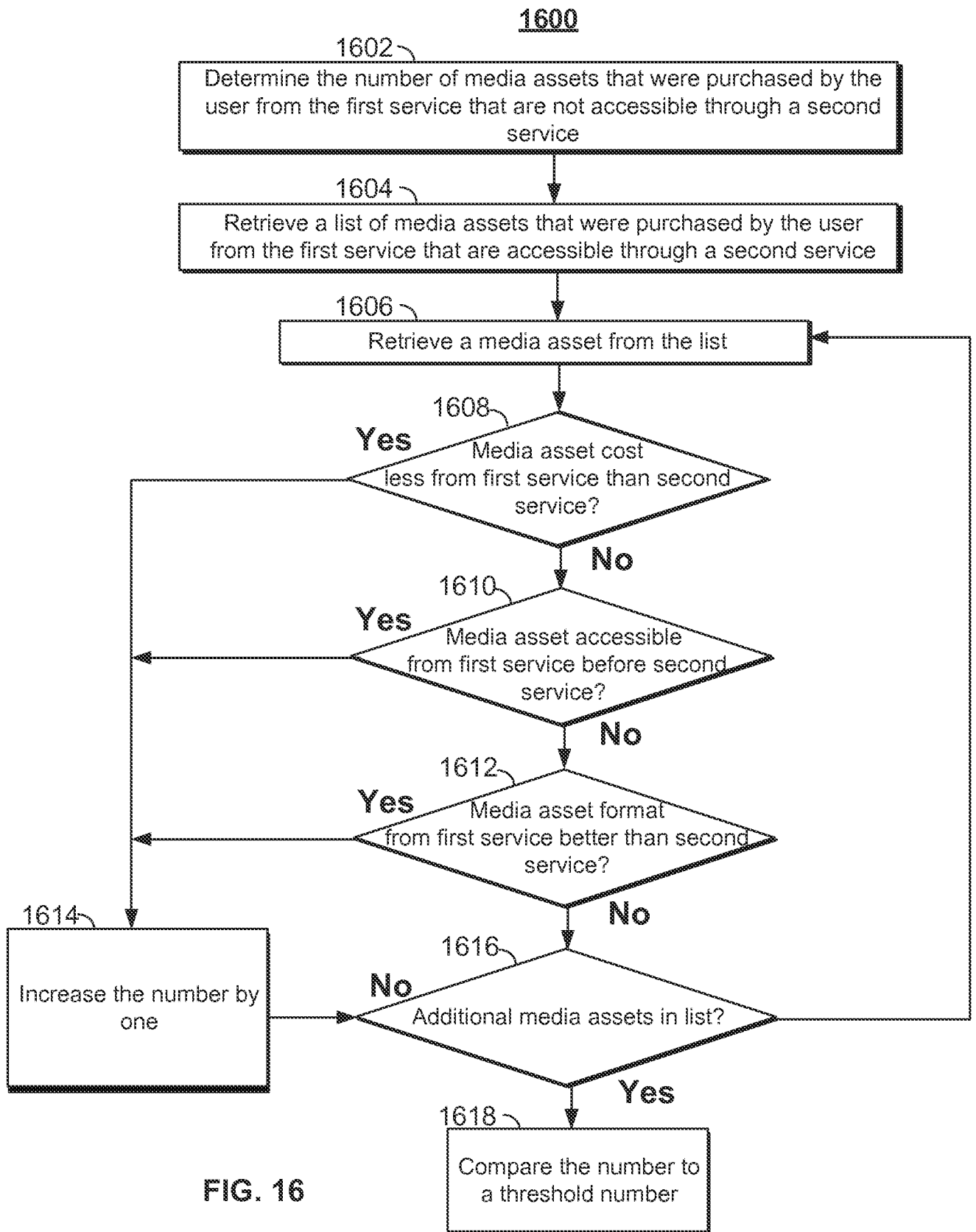
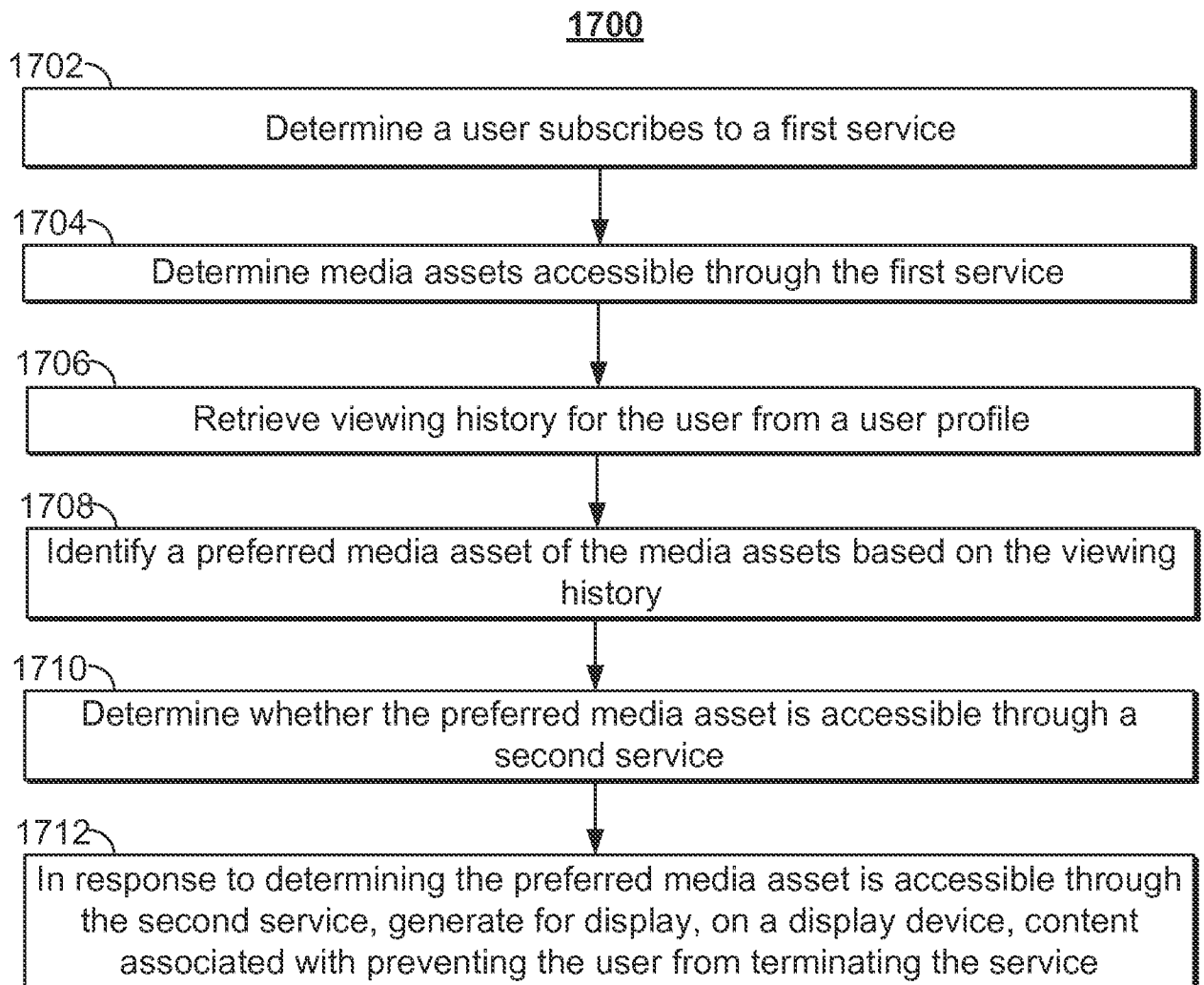


FIG. 15



**FIG. 17**

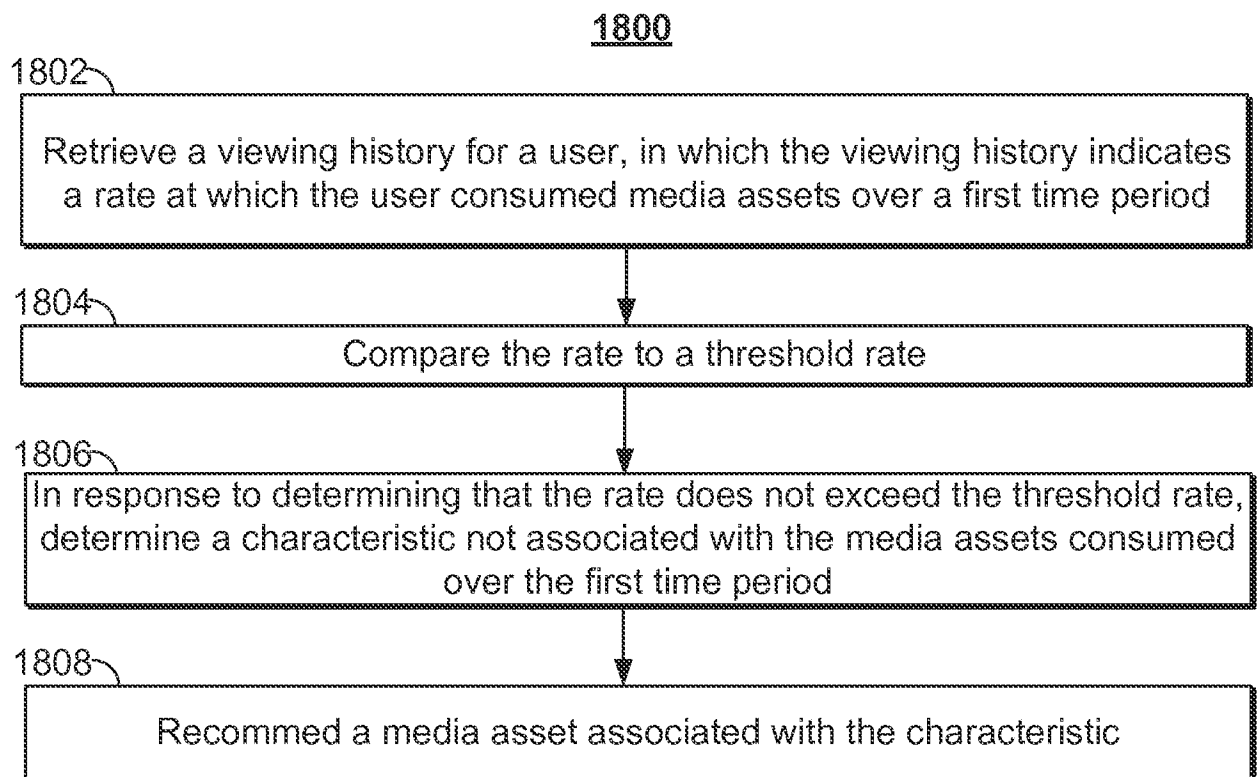


FIG. 18

17/17

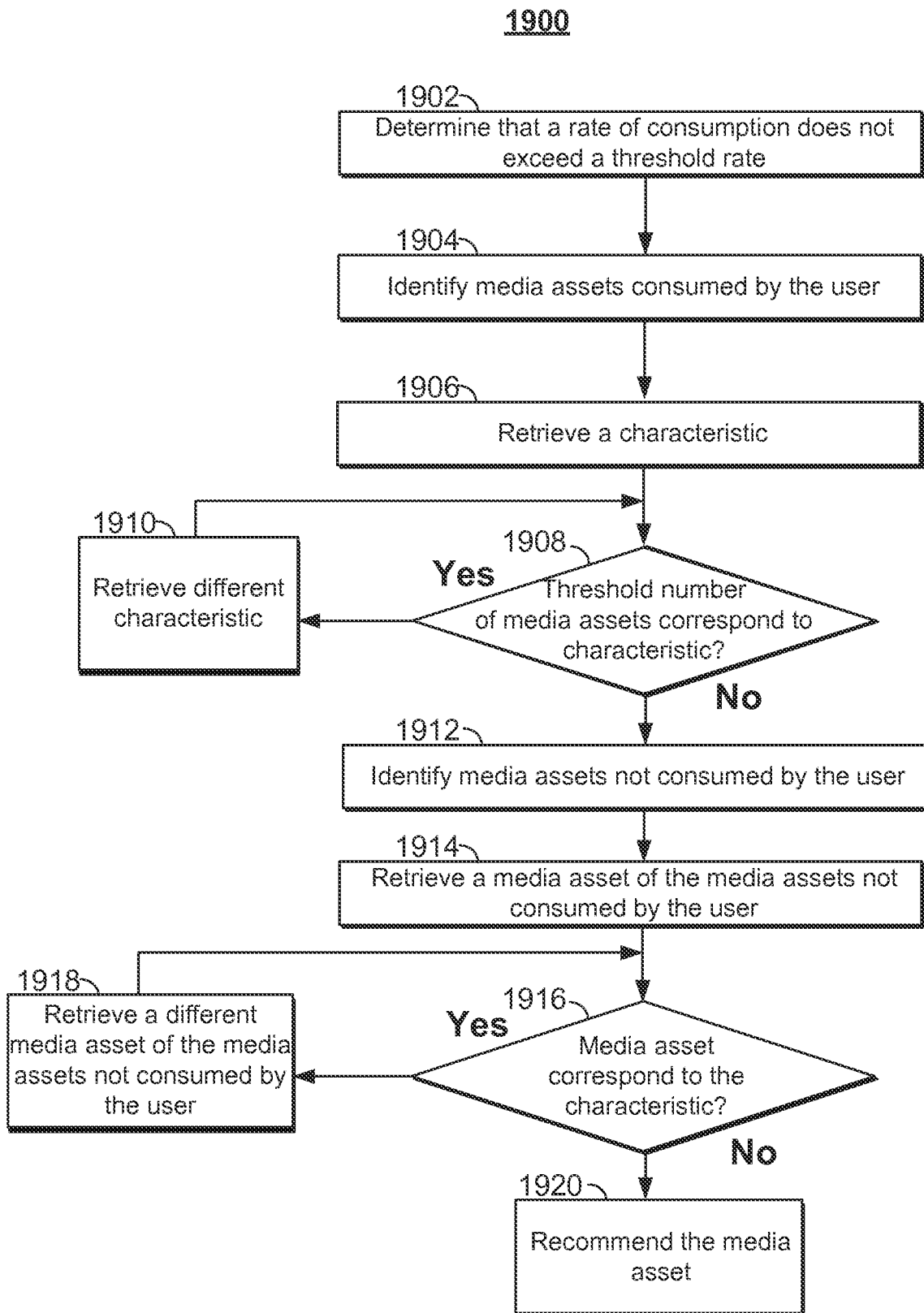


FIG. 19

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2015/027222

A. CLASSIFICATION OF SUBJECT MATTER
INV. G06Q30/02 H04N21/40 A61B5/16
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06Q H04N A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2014/096152 A1 (FERENS RON [IL] ET AL) 3 April 2014 (2014-04-03)	1-350
Y	figures 1, 2 figure 4 paragraph [0035] paragraph [0037] paragraph [0039] paragraph [0020]	105
Y	----- WO 2009/059246 A1 (EMSENSE CORP [US]; LEE HANS C [US]; HONG TIMMIE T [US]; MUNOZ JUAN C []) 7 May 2009 (2009-05-07)	105
A	page 1 - page 2 last paragraph; page 35 page 37, paragraph 3 - paragraph 4 figure 24 page 37, paragraph 1 ----- -/-	101-103



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

8 July 2015

Date of mailing of the international search report

17/07/2015

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Thielemann, Benedikt

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2015/027222

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 2 417 904 A2 (NIELSEN CO US LLC [US]) 15 February 2012 (2012-02-15) figure 1A figures 2A-2E figure 6 paragraphs [0006], [0008] paragraph [0009] paragraph [0011] paragraph [0031] - paragraph [0032] paragraphs [0034], [0040], [0041] paragraphs [0047], [0048] paragraphs [0055], [0057] paragraph [0082] paragraphs [0097], [0099] -----	1-350

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2015/027222

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
US 2014096152	A1	03-04-2014		US 2014096152	A1		03-04-2014
				WO 2014052864	A1		03-04-2014

WO 2009059246	A1	07-05-2009		CN 101917898	A		15-12-2010
				EP 2214550	A1		11-08-2010
				JP 2011505175	A		24-02-2011
				US 2009131764	A1		21-05-2009
				US 2009133047	A1		21-05-2009
				WO 2009059246	A1		07-05-2009
				WO 2009059248	A1		07-05-2009

EP 2417904	A2	15-02-2012		EP 2417904	A2		15-02-2012
				US 2012036004	A1		09-02-2012
				US 2013185144	A1		18-07-2013
