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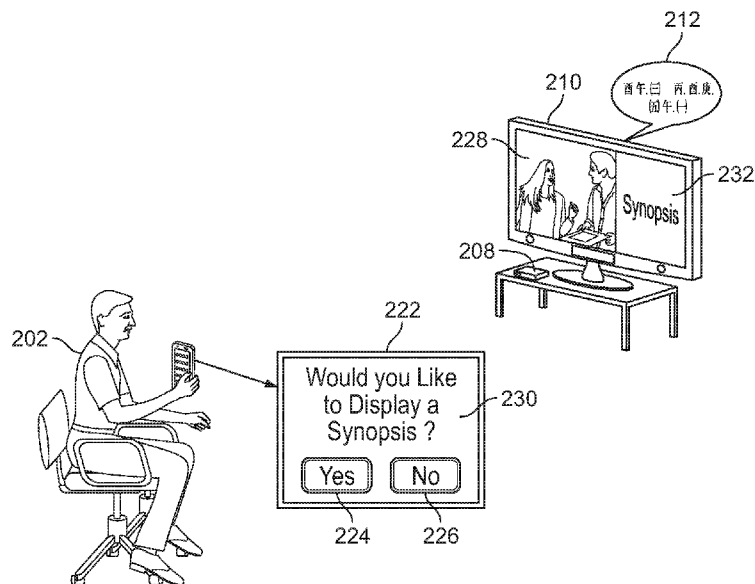


FIG. 2

(57) Abstract: Systems and methods are described herein for ensuring program comprehension based on user comfort levels and geographic area. For example, the system may receive a viewing log, indicating that a user watched a scene of a media asset, and a biometric log of certain biological feedback, which coincide temporally. If the system determines that the scene of the media asset contains dialogue with a language, dialect, or accent that is not common to the user's primary geographic region, the system may combine his/her "comfort level" with other comfort levels of users in the primary geography to determine an average comfort level for the primary geography. If another user in the primary geography tries to watch that scene of the media asset, the system may provide content associated with the scene of the media asset to that user to ensure that the user understands the scene of the media asset.

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SYSTEMS AND METHODS FOR ENSURING PROGRAM COMPREHENSION
BASED ON USER COMFORT LEVELS AND GEOGRAPHIC AREA

Background

[0001] It has become increasingly common for media
5 to be released around the world for a worldwide
audience. With this global distribution of media,
media assets, or scenes therein, may have dialogue in
languages, dialects, or accents that are not common in
geographical areas where the media asset is being
10 viewed. Traditionally, a director or producer would
insert subtitles during scenes of a media asset when
languages, dialects, or accents may be difficult for a
target audience to understand. However, with global
media consumption becoming more and more common, it
15 becomes increasingly difficult to determine exactly who
will consume the media assets, and what they will have
difficulty understanding. While the viewers may be
able to manually rewind the program or enable
subtitles, this may be cumbersome to the user and cause
20 him or her to feel less connected to the media asset,
ultimately decreasing the viewers' willingness to
consume media that they find difficult to understand.

Summary

[0002] Accordingly, systems and methods are described herein for ensuring program comprehension based on user comfort levels and geographic area. For
5 example, determining that viewers in a certain geographic area are generally uncomfortable when watching a scene in a media asset, and providing all users in that area with an automatic recording of the scene, a synopsis of the scene, or an edited/more
10 easily understandable audio track may create a more user-friendly and enjoyable media viewing experience without requiring the viewers in the geographic area to take measures to ensure that they do not miss anything in the scene.

15 [0003] For example, the system may receive a viewing log, indicating that the user watched a scene of the media asset, and a biometric log of certain biological feedback (e.g., heart rate, temperature, sweat levels, etc.), which coincide temporally. If the system
20 determines that the scene of the media asset contains dialogue with a language, dialect, or accent that is not common to the user's primary geographic region (e.g., where the user lives or normally consumes media), the system may combine his/her "comfort level"
25 (a combination of his/her biological feedback) with other comfort levels of users in the primary geography to determine an average comfort level for the primary geography. If another user in the primary geography tries to watch that scene of the media asset, the
30 system may provide content associated with the scene of the media asset to that user to ensure that the user understands the scene of the media asset.

[0004] These systems and methods may be implemented by a media guidance application (e.g., executed by user equipment associated with the user) that may receive a viewing log indicating that the first user equipment
5 was generating for display a first segment of a media asset (e.g., the scene from the seventeenth minute to the eighteenth minute of "Rush Hour 3") at a first time (e.g., 5:17PM - 5:18PM). The media guidance application may determine a primary geography of the first user
10 (e.g., Boston, Massachusetts) and his/her baseline biological parameters (e.g., heart rate, sweat level, temperature, etc.).

[0005] The media guidance application may further receive a biometric log that indicates the biological
15 parameters of the first user during the first time. The biological parameters of the first user during the first time are compared to the baseline biological parameters to determine a specific comfort level of the first user at the first time (e.g., if the heart rate
20 and sweat levels of the user are higher than normal, his/her comfort level may be "very uncomfortable" or a two out of ten). When the media guidance application determines that the first segment has linguistic characteristics (languages, dialects, accents, etc.)
25 (e.g., dialogue spoken in the Chinese language) that are not common to the primary geography, the media guidance application will combine comfort levels for a plurality of users in the primary geography when watching the first segment with the specific comfort
30 level of the first user to determine an average comfort level specific to the first segment and to the primary geography.

[0006] Later, the media guidance application may receive a request to play back the first segment from a second user equipment associated with a second user, and based on determining that the second user is
5 associated with the primary geography and that the average comfort level exceeds a threshold level (e.g., "very uncomfortable" exceeds the level of "moderately uncomfortable"), the media guidance application may provide content associated with the first segment to
10 the second user equipment (e.g., a synopsis of the scene/dialogue spoken in Chinese in the scene from the seventeenth minute to the eighteenth minute of "Rush Hour 3").

[0007] In some aspects, a media guidance application
15 may receive, from a first user equipment associated with a first user, a viewing log indication that the first user equipment was generating for display a first segment of a media asset at a first time. For example, the media guidance application may receive a data
20 packet over a communications network that includes the viewing log. In some embodiments, the media guidance application may extract, from the viewing log, an indication of the first segment of the media asset, an indication of the first user, and a first indication of
25 the first time. For example, the media guidance application may extract, by executing an SQL script utilizing the declarative "Select" command, an indication of the seventeenth to the eighteenth minute of "Rush Hour 3," an indication of the first user
30 (e.g., John Doe), and an indication of 5:17PM to 5:18PM.

[0008] In some embodiments, the media guidance application may query a profile database for a first

user profile of the first user. For example, the profile database may store a plurality of user profiles associated with a plurality of users. The media guidance application may query the profile database, either by transmitting a request over a communications network including an identifier of the first user, or by querying local storage, for a first user profile of the first user.

[0009] In some embodiments, the media guidance application may receive, from the profile database, the first user profile indicating a primary geography of the first user and a plurality of baseline biological parameters of the first user. For example, the media guidance application may receive, over a communications network, a data packet with the first user profile. The first user profile may include a field indicating that the primary geography of the first user (e.g., where the first user lives, is originally from, or most often consumes media) is Boston, Massachusetts. The first user profile may also include a field indicating a plurality of baseline biological parameters of the first user, for example, that his/her baseline heart rate is about 80 beats per minute, a temperature of about 37 degrees Celsius, and a sweat rate of about 0.5 milliliters (mL) per minute.

[0010] In some embodiments, the media guidance application may receive, from the first user equipment, a biometric log indicating a plurality of biological parameters of the first user at the first time. For example, the media guidance application may receive a data packet over a communications network that includes the biometric log. The biometric log may have been created using data from a user's biometric sensor, such

as a smart watch or fitness band. In some embodiments, the media guidance application may extract, from the biometric log, at least one indication of the plurality of biological parameters of the first user and a second indication of the first time. For example, the media guidance application may extract, by executing an SQL script utilizing the declarative "Select" command, at least one indication that the heart rate of the first user at the first time was 100 beats per minute, the temperature was 38 degrees Celsius, and that the sweat rate of the first user was 0.75 mL per minute during the first time. The media guidance application may also extract, by executing an SQL script utilizing the declarative "Select" command, an indication of the time at which the plurality of biological parameters of the first user were gathered, which may have been 5:15PM - 5:20PM.

[0011] In some embodiments, the media guidance application may compare the first indication of the first time and the second indication of the first time to determine that the biometric log and the viewing log coincide temporally. For example, the media guidance application may compare the indication in the viewing log of 5:17PM - 5:18PM to the indication in the biometric log of 5:15PM - 5:20PM to determine that the data in the biometric log was recorded at the same time the first user equipment was generating for display the first segment of the media asset at the first time.

[0012] In some embodiments, the media guidance application may compare the at least one indication of the plurality of biological parameters to the plurality of baseline biological parameters of the first user to determine a specific comfort level of the first user at

the first time. For example, the media guidance application may compare the heart rate of 100 beats per minute gathered at the first time to the baseline heart rate of 80 beats per minute, the temperature of 38
5 degrees Celsius gathered at the first time to the baseline temperature of 37 degrees Celsius, and the sweat rate of 0.7 mL per minute gathered at the first time to the baseline sweat rate of 0.5 mL per minute to determine that the first user's biological parameters
10 are all high, and thus that the first user is "very uncomfortable."

[0013] In some embodiments, the media guidance application may use a function to determine a specific comfort level based on the comparison. In some
15 embodiments, the media guidance application may calculate a plurality of differences, each associated with one of a plurality of biological parameter types. Each difference of the plurality of differences is a difference between a biological parameter of the
20 plurality of biological parameters of a first type of the plurality of biological parameter types and a baseline biological parameter of the plurality of baseline biological parameters of the first type. For example, the difference associated with "heart rate"
25 may be 20 beats per minute, the difference associated with "temperature" may be one degree Celcius, and the difference associated with sweat rate may be 0.2mL per minute. In some embodiments, the media guidance application may access, from the media database, a
30 function relating the plurality of differences to specific comfort levels. The function may be an average of the percent differences, or some other combination of the differences. In some embodiments,

the media guidance application may input the plurality of differences into the function to determine the specific comfort level of the first user. For example, the formula may be based on percentage differences, and
5 the media guidance application may use the function to determine that the first user's biological parameters are on average 22.6 percent higher than normal. The function may further indicate that the specific comfort level of the first user was "very uncomfortable" during
10 the first time.

[0014] In some embodiments, the media guidance application may query a media database for a linguistic characteristic of the first segment of the media asset. In some embodiments, the linguistic characteristic of
15 the first segment may be at least one of a language, a dialect, and an accent. For example, the media guidance application may transmit, to the media database, an identification of the seventeenth to the eighteenth minute of "Rush Hour 3," requesting the
20 linguistic characteristics of the said segment. In some embodiments, the media guidance application may receive, from the media database, a media data structure indicating the linguistic characteristic of the first segment of the media asset. For example, the
25 media guidance application may receive the data structure over a communications network. The media guidance application may extract, by executing an SQL script utilizing the declarative "Select" command, an indication that the seventeenth to eighteenth minute of
30 "Rush Hour 3" features dialogue spoken in Chinese (e.g., the linguistic characteristic of the first segment).

[0015] In some embodiments, the media guidance application may compare the linguistic characteristic of the first segment to a plurality of linguistic characteristics common to the primary geography of the first user. For example, the media guidance application may determine that the plurality of linguistic characteristics common to the primary geography are the language "English" and the accent "Boston accent." In some embodiments, the media guidance application may, using this comparison, determine that the linguistic characteristic of the first segment of the media asset is not contained in the plurality of linguistic characteristics common to the primary geography of the first user. For example, the media guidance application may determine that the language "Chinese" is not included in the plurality of linguistic characteristics common to the primary geography (e.g., the language "English" and the accent "Boston accent").

[0016] In some embodiments, the media guidance application may, based on determining that the linguistic characteristic of the first segment of the media asset is not contained in the plurality of linguistic characteristics common to the primary geography of the first user and that the biometric log and the viewing log coincide temporally, retrieve, from the media database, a plurality of specific comfort levels of a plurality of users associated with the first segment of the media asset, where the plurality of users are located in the primary geography. For example, the media guidance application may retrieve two comfort levels gathered from two other users in Boston, Massachusetts, while the two other users were

watching the seventeenth to the eighteenth minute of "Rush Hour 3." The media guidance application may determine that the comfort levels are "moderately uncomfortable" and "extremely uncomfortable."

5 **[0017]** In some embodiments, the media guidance application may calculate an average comfort level specific to the primary geography and associated with the first segment of the media asset based on the specific comfort level of the first user and the
10 plurality of specific comfort levels. For example, the media guidance application may determine that the average comfort level associated with the seventeenth minute to the eighteenth minute of "Rush Hour 3" for users in Boston, Massachusetts is an average of "very
15 uncomfortable" (i.e., the specific comfort level of the first user), "moderately uncomfortable," and "extremely uncomfortable" (i.e., the plurality of specific comfort levels) to determine that the average comfort level is "very uncomfortable."

20 **[0018]** In some embodiments, the media guidance application may receive a request from a second user equipment of a second user to play back the first segment of the media asset. For example, the media guidance application may be streaming "Rush Hour 3" to
25 the second user equipment and the seventeenth to eighteenth minute is approaching. Alternatively, the second user equipment may indicate that the second user has requested playback from the beginning of the program, which may indicate that the second user is
30 requesting playback of the first segment.

[0019] In some embodiments, the media guidance application may query the profile database for a second user profile of the second user. For example, the

media guidance application may transmit, to the profile database, an identification of the second user and a request for the second user's profile. In some embodiments, the media guidance application may

5 receive, from the profile database, the second user profile indicating that the second user is associated with the primary geography. For example, the media guidance application may receive a data packet containing the second user profile over a

10 communications network. The media guidance application may extract, by executing an SQL script utilizing the declarative "Select" command, from the second user profile, an indication that the second user lives in Boston, Massachusetts.

15 [0020] In some embodiments, the media guidance application may compare, based on determining that the second user is associated with the primary geography, the average comfort level specific to the primary geography to a threshold level. For example, the media

20 guidance application may, based on determining that the second user lives in Boston, Massachusetts, compare the average comfort level specific to Boston, Massachusetts and associated with the first segment, that is, "very uncomfortable," to a threshold level, which may be, for

25 example, "moderately uncomfortable." In some embodiments, the media guidance application may, based on determining that the average comfort level specific to the primary geography is greater than the threshold level, provide content associated with the first

30 segment of the media asset to the second user equipment. In some embodiments, the media guidance application may provide the content associated with the first segment of the media asset to the second user

equipment by providing at least one of a summary of the first segment, a transcript of subtitles associated with the first segment, a stored copy of the first segment, and edited audio associated with the first
5 segment. For example, the media guidance application may determine that the average comfort level specific to Boston, Massachusetts and associated with the first segment, that is, "very uncomfortable," exceeds the threshold level of "moderately uncomfortable." Based
10 on this determination, the media guidance application may provide content associated with the first segment of the media asset to the second user equipment. For example, the media guidance application may provide an automatically recorded copy of the seventeenth to
15 eighteenth minute of "Rush Hour 3," may provide a synopsis of the first segment/dialogue or a transcript of the dialogue in the first segment to the second user in a menu over playback of "Rush Hour 3," an option to play the first segment with edited audio (e.g., audio
20 in another language or audio that is slowed down), or any other suitable content to ensure the second user fully understands the first segment.

[0021] In some embodiments, the media guidance application may further base providing content
25 associated with the first segment of the media asset to the second user equipment on other factors. In some embodiments, the media guidance application may determine whether someone close to the second user was comfortable with the first segment of the media asset,
30 which may indicate that the second user would also be comfortable with the first segment of the media asset. In some embodiments, the media guidance application may access a knowledge graph to determine a third user

associated with the second user. For example, the media guidance application may retrieve, from memory, a knowledge graph that related the third user (e.g., the second user's dad) to the second user.

5 **[0022]** In some embodiments, the media guidance application may access a third user profile associated with the third user from the profile database. For example, the media guidance application may query the database for the third user profile and receive the
10 third user profile in return, in a similar manner to as described above in relation to receiving the first user profile from the profile database. In some embodiments, the media guidance application may extract, from the third user profile, an indication of
15 a comfort level of the third user, wherein the third user profile associates the comfort level of the third user with the first segment of the media asset. For example, the media guidance application may extract, by executing an SQL script utilizing the declarative
20 "Select" command, an indication of a comfort level of "moderately comfortable" from the third user profile, which may associate the comfort level of "moderately comfortable" with the seventeenth to eighteenth minute of "Rush Hour 3."

25 **[0023]** In some embodiments, the media guidance application may, based on determining that the comfort level of the third user does not exceed the threshold level, cause a display of a notification to the second user querying whether displaying the content associated
30 with the first segment of the media asset is necessary. For example, the media guidance application may determine that the comfort level of "moderately comfortable," associated with the third user, does not

exceed the threshold level of "moderately uncomfortable." Based on this determination, the media guidance application may cause a display of a notification to the second user with the text "Do you
5 want a synopsis of the last scene?" with a "yes" option and a "no" option. The second user may therefore have the option to have content associated with the seventeenth to eighteenth minute of "Rush Hour 3" provided to them if they did not understand the first
10 segment, but can choose not to be bothered by the content if they understood the first segment.

[0024] In some embodiments, the media guidance application may use a secondary geography (e.g., a geography that the second user spends a significant
15 amount of time in or has another connection to) as a factor in determining whether to provide the content associated with the first segment of the media asset. In some embodiments, the media guidance application may access, from the second user profile, a secondary
20 geography of the second user. For example, the media guidance application may extract, by executing an SQL script utilizing the declarative "Select" command, from the second user profile, an indication that the secondary geography of the second user is Taipei,
25 Taiwan, as the second user frequently goes on business trips there.

[0025] In some embodiments, the media guidance application may compare the linguistic characteristic of the first segment to a second plurality of
30 linguistic characteristics common to the secondary geography of the second user to determine that the linguistic characteristic of the first segment of the media asset is contained in the plurality of linguistic

characteristics common to the secondary geography of the second user. For example, the media guidance application may determine that the linguistic characteristic of the first segment of the media asset, 5 "Chinese," is contained in a second plurality of linguistic characteristics common to the secondary geography of the second user (e.g., "Chinese" and "Mandarin" are common to "Taipei, Taiwan").

[0026] In some embodiments, the media guidance application may, based on determining that the 10 linguistic characteristic of the first segment of the media asset is contained in the second plurality of linguistic characteristics common to the secondary geography of the second user, cause a display of a notification to the second user querying whether 15 displaying the content associated with the first segment of the media asset is necessary. For example, based on determining that "Chinese" is associated with "Taipei, Taiwan" (i.e., the secondary geography of the second user) the media guidance application may cause a 20 display of a notification similar to the notification described above.

[0027] In some embodiments, the media guidance application may provide the content associated with the 25 first segment of the media asset during the next advertisement/commercial break. In some embodiments, the media guidance application may access, from the media database, an indication of a next break of the media asset. For example, the media guidance application may query the media database for the 30 indication, and receive, from the media database, a data structure indicating that there will be a commercial break at 30 minutes into "Rush Hour 3," 50

minutes into "Rush Hour 3," and 70 minutes into "Rush Hour 3." The media guidance application may determine that the next commercial break is 30 minutes into "Rush Hour 3." In some embodiments, the media guidance application may monitor playback of the media asset to determine when the next break of the media asset begins. For example, the media guidance application may monitor the playback of "Rush Hour 3" to determine when "Rush Hour 3" reaches its thirtieth minute, and therefore that the break has begun. In some embodiments, in response to determining that the next break of the media asset has begun, the media guidance application may cause the content to be displayed to the second user. For example, in response to determining that the break in "Rush Hour 3" has begun, the media guidance application may display a menu on the screen with the synopsis of the seventeenth to the eighteenth minute of "Rush Hour 3."

[0028] In some embodiments, the media guidance application may further determine another user equipment associated with the second user to use to display the content associated with the first segment of the media asset. For example, if the media guidance application is to provide a synopsis, it may be beneficial to provide the synopsis immediately to the second user's phone as opposed to waiting for the next commercial break or by displaying a menu over the playback of the media asset. In some embodiments, the media guidance application may extract, from the second user profile, an indication of a third user equipment associated with the second user. The third user equipment may not be generating for display the media asset. For example, the media guidance application may

extract, by executing an SQL script utilizing the declarative "Select" command, a device ID and device address from the second user profile of a user's mobile device. In some embodiments, the media guidance application may provide, to the third user equipment, the content associated with the first segment of the media asset. For example, the media guidance application may use the device ID and device address to direct a data packet to the second user's mobile device, that, when received by the mobile device, causes the mobile device to generate for display a synopsis of the seventeenth minute to the eighteenth minute of "Rush Hour 3" or to playback an edited/alternate audio track of the seventeenth minute to the eighteenth minute of "Rush Hour 3."

[0029] In some embodiments, the media guidance application may have multiple types of content associated with the first segment of the media asset. The different types may be synopsis, auto-recording, edited audio track, or subtitle transcript, as described above. In some embodiments, the media guidance application may extract, from the second user profile, an indication of a preference selected by the second user for a type of content. For example, the media guidance application may have previously received a user indication that the second user prefers to receive synopses of programs that they cannot understand. In some embodiments, the media guidance application may access, from the media database, the content based on the indication of the preference. For example, the media guidance application may access, from the media database, the synopsis of the seventeenth to the eighteenth minute of "Rush Hour 3"

instead of an edited audio track or an automatic recording of the same based on the indication of the second user's preference for synopses.

[0030] In some embodiments, the media guidance application may determine certain baselines using segments of media assets that the media guidance application determines users can readily understand. In some embodiments, the media guidance application may calculate the plurality of baseline biological parameters of the first user based on a second plurality of biological parameters gathered while the first user equipment was generating for display a second segment of a second media asset with a linguistic characteristic that is contained in a plurality of linguistic characteristics common to the primary geography of the first user.

[0031] In some embodiments, the media guidance application may receive a second biometric log, prior to receiving the first biometric log, comprising the second plurality of biological parameters that was gathered at the same time the first user equipment was generating for display the second segment of the second media asset. For example, the first user equipment may have been generating for display the seventeenth minute to the twentieth minute of "Good Will Hunting" from 2:30PM - 2:33PM, and the second biometric log may indicate that the second user's biological parameters (i.e., the second plurality of biological parameters) were a heart rate of 80 beats per minute, a temperature of 37 degrees Celsius, and a sweat rate of about 0.5 milliliters (mL) per minute. The media guidance application may then determine that a linguistic characteristic associated with the seventeenth minute

to the twentieth minute of "Good Will Hunting" is a
"Boston accent." Based on determining that the "Boston
accent" is associated with Boston, Massachusetts (i.e.,
the primary geography of the first user, indicating
5 that the first user is likely comfortable with this
accent), in some embodiments, the media guidance
application may store, in the first user profile, a
data structure associating the second plurality of
biological parameters with the plurality of baseline
10 parameters.

[0032] In some embodiments, the media guidance
application may further determine a baseline for the
first segment of the media asset. In some embodiments,
the media guidance application may receive, from a
15 third user equipment associated with a third user, a
second viewing log indicating that the third user
equipment was generating for display the first segment
of the media asset at a second time. For example, the
media guidance application may receive a viewing log
20 indicating that the third user equipment was generating
for display the seventeenth minute to the eighteenth
minute of "Rush Hour 3" from 11:30AM-11:31AM. In some
embodiments, the media guidance application may, based
on receiving the viewing log, determine a primary
25 geography of the third user. For example, the media
guidance application may determine the primary
geography of the third user in a manner similar to
determining the primary geography of the first user,
and may determine that the primary geography of the
30 third user is "Beijing, China."

[0033] In some embodiments, the media guidance
application may receive, from the third user equipment,
a second biometric log indicating a second plurality of

biological parameters of the third user at the second time. For example, the media guidance application may determine, similar to as described above, that the second plurality of biological parameters of the third user from 11:30AM-11:31AM were a heart rate of 90 beats per minute, a temperature of 36 degrees Celsius, and a sweat rate of 0.4 mL per minute. In some embodiments, the media guidance application may compare the second plurality of biological parameters to a second plurality of baseline biological parameters of the third user to determine a second specific comfort level of the third user at the second time. For example, the media guidance application may compare the second plurality of biological parameters to the second plurality of baseline biological parameters by comparing the baseline heart rate of 90 beats per minute to a current heart rate of 95 beats per minute, the baseline temperature of 36 degrees Celsius to a current temperature of 36 degrees Celsius, and the baseline sweat rate of 0.4 mL per minute to a sweat rate of 0.35 mL per minute. Based on determining that some biological parameters are lower than the baseline, and none are much greater than the baseline, the media guidance application may determine that the comfort level of the third user at the second time was "moderately comfortable."

[0034] In some embodiments, the media guidance application may compare the linguistic characteristic of the first segment to a second plurality of linguistic characteristics common to the primary geography of the third user to determine that the linguistic characteristic of the first segment of the media asset is contained in the second plurality of

linguistic characteristics common to the primary geography of the third user. For example, the media guidance application may determine that the linguistic characteristic of the first segment of the media asset,
5 "Chinese," is contained in a second plurality of linguistic characteristics common to the primary geography of the third (e.g., "Chinese" and "Mandarin" are common to "Beijing, China").

[0035] In some embodiments, the media guidance
10 application may, based on determining that the linguistic characteristic of the first segment of the media asset is contained in the second plurality of linguistic characteristics common to the primary geography of the third user, retrieve, from the media
15 database, a second plurality of specific comfort levels of a second plurality of users associated with the first segment of the media asset, wherein the second plurality of users are located in the primary geography of the third user. For example, the media guidance
20 application may retrieve two comfort levels gathered from two other users in Beijing, China while the two other users were watching the seventeenth to the eighteenth minute of "Rush Hour 3." The media guidance application may determine that the comfort levels are
25 "very comfortable" and "neutral."

[0036] In some embodiments, the media guidance application may calculate a baseline comfort level associated with the first segment of the media asset based on the second specific comfort level of the third
30 user and the second plurality of specific comfort levels. For example, the media guidance application may determine that the baseline comfort level associated with the seventeenth minute to the

eighteenth minute of "Rush Hour 3" for users in Beijing, China is an average of "moderately comfortable" (i.e., the second specific comfort level of the third user), "very comfortable," and "neutral" (i.e., the second plurality of specific comfort levels) to determine that the baseline comfort level is "moderately comfortable."

[0037] In this way, the media guidance application has calculated a "baseline comfort level," that is, how comfortable users who are associated with the particular linguistic characteristic of the first segment of the media asset are when watching said segment. In some embodiments, the media guidance application may calculate the threshold level based on the baseline comfort level. For example, the media guidance application may set the threshold level to "moderately comfortable." Alternatively, the media guidance application may access a function or table to convert the baseline comfort level into a threshold level. For example, the function or table may state that a baseline comfort level of "moderately comfortable" is associated with a threshold level of "moderately uncomfortable."

[0038] It should be noted 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

[0039] 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:

5 [0040] FIG. 1 shows an illustrative example of a media guidance application determining an average comfort level associated specific to a geography and a segment of a media asset, in accordance with some embodiments of the disclosure;

10 [0041] FIG. 2 shows an illustrative example of a media guidance application ensuring program comprehension based on user comfort levels and geographic area, in accordance with some embodiments of the disclosure;

15 [0042] FIG. 3 shows an illustrative example of a display screen for use in accessing media content, in accordance with some embodiments of the disclosure;

[0043] FIG. 4 shows another illustrative example of a display screen used in accessing media content, in accordance with some embodiments of the disclosure;

20 [0044] FIG. 5 is a block diagram of an illustrative user equipment device, in accordance with some embodiments of the disclosure;

[0045] FIG. 6 is a block diagram of an illustrative media system, in accordance with some embodiments of the disclosure;

25 [0046] FIG. 7 is a flowchart of illustrative steps for ensuring program comprehension based on user comfort levels and geographic area, in accordance with some embodiments of the disclosure;

30 [0047] FIG. 8 is a flowchart of illustrative steps for determining a threshold level based on a baseline comfort level, in accordance with some embodiments of the disclosure;

[0048] FIG. 9 is a flowchart of illustrative steps for calculating a specific comfort level of a user, in accordance with some embodiments of the disclosure;

[0049] FIG. 10 is a flowchart of illustrative steps
5 for providing content associated with a first segment of a media asset, in accordance with some embodiments of the disclosure; and

[0050] FIG. 11 is a flowchart of illustrative steps for searching for determining an average comfort level
10 specific to a geographic area and associated with a first segment of a media asset, in accordance with some embodiments of the disclosure.

Detailed Description

15 [0051] Systems and methods are described herein for ensuring program comprehension based on user comfort levels and geographic area. For example, determining that viewers in a certain geographic area are generally uncomfortable when watching a scene in a media asset,
20 and providing all users in that area with an automatic recording of the scene, a synopsis of the scene, or an edited/more easily understandable audio track may create a more user-friendly and enjoyable media viewing experience without requiring the viewers in the
25 geographic area to take measures to ensure that they do not miss anything in the scene.

[0052] For example, the system may receive a viewing log, indicating that the user watched a scene of the media asset, and a biometric log of certain biological
30 feedback (e.g., heart rate, temperature, sweat levels, etc.), which coincide temporally. If the system determines that the scene of the media asset contains

dialogue with a language, dialect, or accent that is not common to the user's primary geographic region (e.g., where the user lives or normally consumes media), the system may combine his/her "comfort level" (a combination of his/her biological feedback) with other comfort levels of users in the primary geography to determine an average comfort level for the primary geography. If another user in the primary geography tries to watch that scene of the media asset, the system may provide content associated with the scene of the media asset to that user to ensure that the user understands the scene of the media asset.

[0053] These systems and methods may be implemented by a media guidance application (e.g., executed by user equipment associated with the user) that may receive a viewing log indicating that the first user equipment was generating for display a first segment of a media asset (e.g., the scene from the seventeenth minute to the eighteenth minute of "Rush Hour 3") at a first time (e.g., 5:17PM - 5:18PM). The media guidance application may determine a primary geography of the first user (e.g., Boston, Massachusetts) and his/her baseline biological parameters (e.g., heart rate, sweat level, temperature, etc.).

[0054] The media guidance application may further receive a biometric log that indicates the biological parameters of the first user during the first time. The biological parameters of the first user during the first time are compared to the baseline biological parameters to determine a specific comfort level of the first user at the first time (e.g., if the heart rate and sweat levels of the user are higher than normal, his/her comfort level may be "very uncomfortable" or a

two out of ten). When the media guidance application determines that the first segment has linguistic characteristics (languages, dialects, accents, etc.) (e.g., dialogue spoken in the Chinese language) that
5 are not common to the primary geography, the media guidance application will combine comfort levels for a plurality of users in the primary geography when watching the first segment with the specific comfort level of the first user to determine an average comfort
10 level specific to the first segment and to the primary geography.

[0055] Later, the media guidance application may receive a request to play back the first segment from a second user equipment associated with a second user,
15 and based on determining that the second user is associated with the primary geography and that the average comfort level exceeds a threshold level (e.g., "very uncomfortable" exceeds the level of "moderately uncomfortable"), the media guidance application may
20 provide content associated with the first segment to the second user equipment (e.g., a synopsis of the scene/dialogue spoken in Chinese in the scene from the seventeenth minute to the eighteenth minute of "Rush Hour 3").

25 [0056] FIG. 1 shows an illustrative example of a media guidance application determining an average comfort level associated specific to a geography and a segment of a media asset, in accordance with some embodiments of the disclosure. For example, user 102
30 may be watching segment 128 of a media asset, generated for display by user equipment 108 and displayed on display 110. Segment 128 may contain dialogue 112. During playback of segment 128, monitor 104 may monitor

plurality of biological parameter types 116 of user 102. Plurality of biological parameter types 116 may include heart rate, temperature, and sweat rate. Each of plurality of biological parameter types 116 may be
5 associated with one of plurality of values 118 (i.e., a plurality of biological parameters may comprise plurality of biological parameter types 116 and plurality of values 118) in biometric log 114. For example, heart rate may be associated with 100 beats
10 per minute (BPM), temperature may be associated with 38 degrees Celsius, and sweat rate may be associated with 0.75 mL per minute. Biometric log 114 may further include time indication 120, indicating the time at which plurality of values 118 for plurality of
15 biological parameter types 116 were gathered. Monitor 104 may transmit, over communications link 106, biometric log 114 to user equipment 108 for processing or further transmission.

[0057] In some embodiments, a media guidance
20 application may receive, from user equipment 108 associated with user 102, a viewing log indication that user equipment 108 was generating for display on display 110 segment 128 of a media asset at a first time. For example, the media guidance application may
25 receive a data packet, from user equipment 108, over a communications network that includes the viewing log. In some embodiments, the media guidance application may extract, from the viewing log, an indication of segment 128 of the media asset, an indication of user 102, and
30 a first indication of the first time. For example, the media guidance application may extract, by executing an SQL script utilizing the declarative "Select" command, an indication of segment 128 (e.g., the seventeenth to

the eighteenth minute of "Rush Hour 3"), an indication of user 102, and an indication of 5:17PM to 5:18PM.

[0058] In some embodiments, the media guidance application may query a profile database for a first user profile of user 102. For example, the profile database may store a plurality of user profiles associated with a plurality of users. The media guidance application may query the profile database, either by transmitting a request over a communications network including an identifier of user 102 or by querying local storage for a first user profile of user 102.

[0059] In some embodiments, the media guidance application may receive, from the profile database, the first user profile of user 102 indicating a primary geography of user 102 and a plurality of baseline biological parameters of user 102. For example, the media guidance application may receive, over a communications network, a data packet with the first user profile. The first user profile may include a field indicating that the primary geography of user 102 (e.g., where user 102 lives, is originally from, or most often consumes media) is Boston, Massachusetts. The first user profile may also include a field indicating a plurality of baseline biological parameters of user 102, for example, that a baseline heart rate is about 80 beats per minute, a temperature of about 37 degrees Celsius, and a sweat rate of about 0.5 milliliters (mL) per minute.

[0060] In some embodiments, the media guidance application may receive, from user equipment 102, biometric log 114 indicating plurality of biological parameter types 116 of user 102 at the first time. For

example, the media guidance application may receive a data packet over a communications network that includes biometric log 114. Biometric log 114 may have been created using data from monitor 104, which may be a
5 biometric sensor, such as a smart watch or fitness band. In some embodiments, the media guidance application may extract, from biometric log 114, at least one indication of plurality of values 118 associated with plurality of biological parameter types
10 116 of user 102 and time indication 120. For example, the media guidance application may extract, by executing an SQL script utilizing the declarative "Select" command, at least one indication that the heart rate of the user 102 at the first time was 100
15 beats per minute, the temperature of user 102 was 38 degrees Celsius, and that the sweat rate of user 102 was 0.75 mL per minute during the first time. The media guidance application may also extract, by executing an SQL script utilizing the declarative
20 "Select" command, time indication 120 at which plurality of values 118 associated with plurality of biological parameter types 116 of user 102 were gathered, which may be 5:15PM - 5:20PM.

[0061] In some embodiments, the media guidance
25 application may compare the first indication of the first time and time indication 120 to determine that biometric log 114 and the viewing log coincide temporally. For example, the media guidance application may compare the indication in the viewing
30 log of 5:17PM - 5:18PM to time indication 120 in biometric log 114 of 5:15PM - 5:20PM to determine that the plurality of values 118 associated with plurality of biological parameter types 116 in biometric log 114

were recorded at the same time user equipment 108 was generating for display on display 110 segment 128 of the media asset at the first time.

[0062] In some embodiments, the media guidance application may compare the at least one indication of plurality of values 118 associated with plurality of biological parameter types 116 of user 102 to the plurality of baseline biological parameters of user 102 to determine a specific comfort level of user 102 at the first time. For example, the media guidance application may compare the heart rate of 100 beats per minute gathered at the first time to the baseline heart rate of 80 beats per minute, the temperature of 38 degrees Celsius gathered at the first time to the baseline temperature of 37 degrees Celsius, and the sweat rate of 0.7 mL per minute gathered at the first time to the baseline sweat rate of 0.5 mL per minute to determine that plurality of values 118 associated with plurality of biological parameter types 116 of user 102 are all high when compared to the plurality of baseline biological parameters of user 102, and thus that user 102 is "very uncomfortable."

[0063] In some embodiments, the media guidance application may use a function to determine a specific comfort level of user 102 based on the comparison. In some embodiments, the media guidance application may calculate a plurality of differences, each associated with one of plurality of biological parameter types 116. Each difference of the plurality of differences is a difference between a value of plurality of values 118, a first type of plurality of biological parameter types 116, and a baseline biological parameter of the plurality of baseline biological parameters of the

first type of plurality of biological parameter types
116. For example, the difference associated with
"heart rate" may be 20 beats per minute, the difference
associated with "temperature" may be one degree
5 Celcius, and the difference associated with sweat rate
may be 0.2mL per minute. In some embodiments, the media
guidance application may access, from the media
database, a function relating the plurality of
differences to specific comfort levels. The function
10 may be an average of the percent differences, or some
other combination of the differences. In some
embodiments, the media guidance application may input
the plurality of differences into the function to
determine the specific comfort level of user 102. For
15 example, the formula may be based on percentage
differences, and the media guidance application may use
the function to determine that plurality of values 118
associated with plurality of biological parameter types
116 of user 102 are on average 22.6 percent higher than
20 normal. The function may further indicate that the
specific comfort level of user 102 was "very
uncomfortable" during the first time.

[0064] In some embodiments, the media guidance
application may query a media database for a linguistic
25 characteristic of segment 128 of the media asset. The
linguistic characteristic of segment 128 may be at
least one of a language, a dialect, and an accent. For
example, the media guidance application may transmit,
to the media database, an identification of segment 128
30 (e.g., the seventeenth to the eighteenth minute of
"Rush Hour 3"), requesting the linguistic
characteristics of segment 128. In some embodiments,
the media guidance application may receive, from the

media database, a media data structure indicating the linguistic characteristic of segment 128 of the media asset. For example, the media guidance application may receive the data structure over a communications
5 network. The media guidance application may extract, by executing an SQL script utilizing the declarative "Select" command, an indication that segment 128 (the seventeenth to eighteenth minute of "Rush Hour 3") contains dialogue (e.g., dialogue 112) spoken in
10 Chinese (e.g., the linguistic characteristic of segment 128).

[0065] In some embodiments, the media guidance application may compare the linguistic characteristic of segment 128 to a plurality of linguistic
15 characteristics common to the primary geography of user 102. For example, the media guidance application may determine that the plurality of linguistic characteristics common to the primary geography are the language "English" and the accent "Boston accent." In
20 some embodiments, the media guidance application may, using this comparison, determine that the linguistic characteristic of segment 128 is not contained in the plurality of linguistic characteristics common to the primary geography of user 102. For example, the media
25 guidance application may determine that the language "Chinese" is not included in the plurality of linguistic characteristics common to the primary geography (e.g., the language "English" and the accent "Boston accent").

30 [0066] In some embodiments, the media guidance application may, based on determining that the linguistic characteristic of segment 128 of the media asset is not contained in the plurality of linguistic

characteristics common to the primary geography of the user 102 and that biometric log 114 and the viewing log coincide temporally, retrieve, from the media database, a plurality of specific comfort levels of a plurality of users associated with segment 128, where the plurality of users are located in the primary geography of user 102. For example, the media guidance application may retrieve two comfort levels gathered from two other users in Boston, Massachusetts, while the two other users were watching segment 128 (e.g., the seventeenth to the eighteenth minute of "Rush Hour 3"). The media guidance application may determine that the comfort levels are "moderately uncomfortable" and "extremely uncomfortable."

15 [0067] In some embodiments, the media guidance application may calculate an average comfort level specific to the primary geography and associated with the segment 128 based on the specific comfort level of the user 102 and the plurality of specific comfort levels. For example, the media guidance application may determine that the average comfort level associated with segment 128 (e.g., the seventeenth minute to the eighteenth minute of "Rush Hour 3") for users in Boston, Massachusetts is an average of "very uncomfortable" (i.e., the specific comfort level of the user 102), "moderately uncomfortable," and "extremely uncomfortable" (i.e., the plurality of specific comfort levels) to determine that the average comfort level is "very uncomfortable."

30 [0068] In some embodiments, the media guidance application may determine certain baselines using segments of media assets that the media guidance application determines users can readily understand.

In some embodiments, the media guidance application may calculate the plurality of baseline biological parameters of user 102 based on a second plurality of biological parameters gathered while user equipment 108 was generating for display a second segment of a second media asset with a linguistic characteristic that is contained in a plurality of linguistic characteristics common to the primary geography of user 102.

[0069] In some embodiments, the media guidance application may receive a second biometric log, prior to receiving the biometric log 114, comprising the second plurality of biological parameters that was gathered at the same time user equipment 108 was generating for display the second segment of the second media asset. For example, user equipment 108 may have been generating for display the seventeenth minute to the twentieth minute of "Good Will Hunting" from 2:30PM - 2:33PM, and the second biometric log may indicate that user 102's biological parameters (i.e., the second plurality of biological parameters) were a heart rate of 80 beats per minute, a temperature of 37 degrees Celsius, and a sweat rate of about 0.5 milliliters (mL) per minute. The media guidance application may then determine that a linguistic characteristic associated with the seventeenth minute to the twentieth minute of "Good Will Hunting" is a "Boston accent." Based on determining that the "Boston accent" is associated with Boston, Massachusetts (i.e., the primary geography of user 102, indicating that user 102 is likely comfortable with this accent), in some embodiments, the media guidance application may store, in the first user profile, a data structure associating the second

plurality of biological parameters with the plurality of baseline parameters.

[0070] FIG. 2 shows an illustrative example of a media guidance application ensuring program
5 comprehension based on user comfort levels and geographic area, in accordance with some embodiments of the disclosure. For example, user 202 (who may be different from user 102 of FIG. 1) may be watching segment 228 of a media asset (e.g., segment 128 of the
10 media asset as described in FIG. 1), generated for display by user equipment 208 and displayed on display 210. Segment 228 may contain dialogue 212. If the media guidance application determines that segment 228 generally makes people in the primary geography of user
15 202 uncomfortable, the media guidance application may take steps to ensure that the user can understand segment 228. For example, the media guidance application may generate for display, on user equipment 222, notification 230 that content 232 associated with
20 segment 228 of the media asset is available, and querying whether displaying the content is necessary, to which user 202 can select affirmative option 224 or negative option 226. In response to receiving a selection of the affirmative option 224, content 232
25 can be displayed on display 210 or on user equipment 222.

[0071] In some embodiments, the media guidance application may receive a request from user equipment 208 of user 202 to play back segment 228 of the media
30 asset. For example, the media guidance application may be streaming the media asset to user equipment 208 and segment 228 may be approaching. Alternatively, user equipment 208 may indicate that user 202 has requested

playback from the beginning of the media asset, which may indicate that user 202 is requesting playback of segment 228.

[0072] In some embodiments, the media guidance application may query the profile database for a second user profile of user 202. For example, the media guidance application may transmit, to the profile database, an identification of user 202 and a request for the second user profile associated with user 202.

10 In some embodiments, the media guidance application may receive, from the profile database, the second user profile indicating that user 202 is associated with a primary geography (e.g., the primary geography of user 102 of FIG. 1, Boston, Massachusetts). For example,

15 the media guidance application may receive a data packet containing the second user profile over a communications network. The media guidance application may extract, by executing an SQL script utilizing the declarative "Select" command, from the second user

20 profile, an indication that user 202 lives in Boston, Massachusetts.

[0073] In some embodiments, the media guidance application may compare, based on determining that user 202 is associated with the primary geography, an

25 average comfort level specific to the primary geography to a threshold level. For example, the media guidance application may, based on determining that user 202 lives in Boston Massachusetts, compare the average comfort level specific to Boston, Massachusetts and

30 associated with segment 228, that is, "very uncomfortable" (e.g., the average comfort level calculated with respect to FIG. 1), to a threshold level, which may be, for example, "moderately

uncomfortable." In some embodiments, the media guidance application may, based on determining that the average comfort level specific to the primary geography is greater than the threshold level, provide content 232 associated with segment 228 of the media asset to user equipment 208. In some embodiments, the media guidance application may provide content 232 associated with segment 228 to user equipment 208 by providing at least one of a summary or synopsis of segment 228, a transcript of subtitles associated with segment 228, a stored copy of segment 228, and edited audio associated with segment 228. For example, the media guidance application may determine that the average comfort level specific to Boston, Massachusetts and associated with segment 228, that is, "very uncomfortable," exceeds the threshold level of "moderately uncomfortable." Based on this determination, the media guidance application may provide content 232 associated with the segment 228 to user equipment 208. For example, the media guidance application may provide an automatically recorded copy of segment 228, a synopsis of segment 228, a transcript of dialogue 212 to the user in a menu over playback of the media asset, an option to play segment 228 with edited audio (e.g., audio in another language or audio that is slowed down), or any other suitable content to ensure the user fully understands segment 228.

[0074] In some embodiments, the media guidance application may further base providing content 232 associated with segment 228 of the media asset to user equipment 208 on other factors. In some embodiments, the media guidance application may determine whether someone close to user 202 was comfortable with the

segment 228 of the media asset, which may indicate that the user 202 would also be comfortable with segment 228. In some embodiments, the media guidance application may access a knowledge graph to determine a
5 third user associated with user 202. For example, the media guidance application may retrieve, from memory, a knowledge graph that related the third user (e.g., the user 202's dad) to user 202.

[0075] In some embodiments, the media guidance
10 application may access a third user profile associated with the third user from the profile database. For example, the media guidance application may query the database for the third user profile and receive the third user profile in return, in a similar manner to
15 that described above in relation to FIG. 1 and receiving the first user profile from the profile database. In some embodiments, the media guidance application may extract, from the third user profile, an indication of a comfort level of the third user,
20 wherein the third user profile associates the comfort level of the third user with segment 228. For example, the media guidance application may extract, by executing an SQL script utilizing the declarative
"Select" command, an indication of a comfort level of
25 "moderately comfortable" from the third user profile, which may associate the comfort level of "moderately comfortable" with segment 228.

[0076] In some embodiments, the media guidance application may, based on determining that the comfort
30 level of the third user does not exceed the threshold level, cause a display of notification 230 to user 202 querying whether displaying content 232 associated with the segment 228 of the media asset is necessary. For

example, the media guidance application may determine that the comfort level of "moderately comfortable," associated with the third user, does not exceed the threshold level of "moderately uncomfortable." Based on this determination, the media guidance application may cause a display of notification 232 to user 202 (e.g., a notification with the text "Would you like to display a synopsis?") as well as affirmative option 224 and negative option 226. User 202 may therefore have the option to display content 232 associated with segment 228 if they did not understand segment 228, but can choose not to be bothered by content 232 if they understood segment 232.

[0077] In some embodiments, the media guidance application may use a secondary geography (e.g., a geography that user 202 spends a significant amount of time in or has another connection to) as a factor in determining whether to provide content 232 associated with segment 228. In some embodiments, the media guidance application may access, from the second user profile, a secondary geography of user 202. For example, the media guidance application may extract, by executing an SQL script utilizing the declarative "Select" command, from the second user profile, an indication that the secondary geography of user 202 is Taipei, Taiwan, as user 202 frequently goes on business trips there.

[0078] In some embodiments, the media guidance application may compare the linguistic characteristic of segment 228 to a second plurality of linguistic characteristics common to the secondary geography of user 202 to determine that the linguistic characteristic of segment 228 is contained in the

plurality of linguistic characteristics common to the secondary geography of user 202. For example, the media guidance application may determine that the linguistic characteristic of segment 228, "Chinese," is contained
5 in a second plurality of linguistic characteristics common to the secondary geography of user 202 (e.g., "Chinese" and "Mandarin" are common to "Taipei, Taiwan").

[0079] In some embodiments, the media guidance application may, based on determining that the
10 linguistic characteristic of segment 228 is contained in the second plurality of linguistic characteristics common to the secondary geography of user 202, cause a display of notification 230 to user 202 querying
15 whether displaying content 232 associated with segment 228 is necessary. For example, based on determining that "Chinese" is associated with "Taipei, Taiwan" (i.e., the secondary geography of user 202), the media guidance application may cause a display of
20 notification 230 on user equipment 222 or through user equipment 208 to display 210 similar to as described above.

[0080] If user 202 selects affirmative option 224, or simply in response to determining that the average
25 comfort level for the primary geography exceeds the threshold level, the media guidance application may then cause content 232 to be displayed. The media guidance application may decide, when, where, and what type of content is to be displayed. In some
30 embodiments, the media guidance application may provide content 232 associated with segment 228 of the media asset immediately before, during, or immediately after the display of segment 228. In some embodiments, the

media guidance application may provide content 232 associated with segment 228 of the media asset during the next advertisement/commercial break of the media asset. In some embodiments, the media guidance application may access, from the media database, an indication of a next break of the media asset. For example, the media guidance application may query the media database for the indication, and receive, from the media database, a data structure indicating that there will be a commercial break at 30 minutes into the media asset, 50 minutes into the media asset, and 70 minutes into the media asset. The media guidance application may determine that the next commercial break is 30 minutes into the media asset. In some embodiments, the media guidance application may monitor playback of the media asset to determine when the next break of the media asset begins. For example, the media guidance application may monitor the playback of the media asset to determine when the media asset reaches its thirtieth minute, and therefore that the break has begun. In some embodiments, in response to determining that the next break of the media asset has begun, the media guidance application may cause content 232 to be displayed to user 202. For example, in response to determining that the break in the media asset has begun, the media guidance application may display a menu on the screen with the synopsis of segment 232 (i.e., content 232).

[0081] In some embodiments, the media guidance application may further determine that user equipment 222 is associated with user 202 and use user equipment 222 to display content 232 associated with segment 228. For example, if the media guidance application is to

provide a synopsis as content 232, it may be beneficial to provide the synopsis immediately to the user equipment 222 (which may be user 202's mobile device) as opposed to waiting for the next commercial break or displaying a menu over the playback of the media asset.

5 In some embodiments, the media guidance application may extract, from the second user profile, an indication of user equipment 222 associated with user 202. User equipment 222 may not be generating for display segment

10 228. For example, the media guidance application may extract, by executing an SQL script utilizing the declarative "Select" command, a device ID and device address from the second user profile of user equipment 222. In some embodiments, the media guidance

15 application may provide, to user equipment 222, content 232 associated with segment 228. For example, the media guidance application may use the device ID and device address of user equipment 222 to direct a data packet to user equipment 222, that, when received by

20 user equipment 222, causes the mobile device to generate for display a synopsis of segment 228 or to play back an edited/alternate audio track of segment 228.

[0082] In some embodiments, the media guidance

25 application may have multiple types of content 232 associated with segment 228. The different types may be synopsis, auto-recording, edited audio track, subtitle transcript, or any other suitable type of content, as described above. In some embodiments, the

30 media guidance application may extract, from the second user profile, an indication of a preference selected by user 202 for a type of content. For example, the media guidance application may have previously received a

user indication that user 202 prefers to receive synopses of programs that he/she cannot understand. In some embodiments, the media guidance application may access, from the media database, content 232, based on
5 the indication of the preference. For example, the media guidance application may access, from the media database, the synopsis of segment 228 instead of an edited audio track or an automatic recording of segment 228 based on the indication of the user's preference
10 for synopses.

[0083] In some embodiments, the media guidance application may further determine a baseline for the first segment of the media asset. In some embodiments, the media guidance application may receive, from a
15 third user equipment associated with a second user, a second viewing log indicating that the third user equipment was generating for display the first segment of the media asset at a second time. For example, the media guidance application may receive a viewing log
20 indicating that the third user equipment was generating for display segment 228. In some embodiments, the media guidance application may, based on receiving the viewing log, determine a primary geography of the second user. For example, the media guidance
25 application may determine the primary geography of the second user in a manner similar to determining the primary geography of the first user, and may determine that the primary geography of the second user is "Beijing, China."

30 [0084] In some embodiments, the media guidance application may receive, from the third user equipment, a second biometric log indicating a second plurality of biological parameters of the second user at the first

time. For example, the media guidance application may determine, similar to as described above, that the second plurality of biological parameters of the second user from 11:30AM-11:31AM were a heart rate of 90 beats
5 per minute, a temperature of 36 degrees Celsius, and a sweat rate of 0.4 mL per minute. In some embodiments, the media guidance application may compare the plurality of biological parameters to a plurality of baseline biological parameters of the second user to
10 determine a specific comfort level of the second user at the first time. For example, the media guidance application may compare the plurality of biological parameters to the plurality of baseline biological parameters by comparing the baseline heart rate of 90
15 beats per minute to a current heart rate of 95 beats per minute, the baseline temperature of 36 degrees Celsius to a current temperature of 36 degrees Celsius, and the baseline sweat rate of 0.4 mL per minute to a sweat rate of 0.35 mL per minute. Based on determining
20 that some biological parameters are lower than the baseline, and none are much greater than the baseline, the media guidance application may determine that the comfort level of the second user at the first time was "moderately comfortable."

25 [0085] In some embodiments, the media guidance application may compare the linguistic characteristic of segment 228 to a plurality of linguistic characteristics common to the primary geography of the second user to determine that the linguistic
30 characteristic of segment 228 is contained in the plurality of linguistic characteristics common to the primary geography of the second user. For example, the media guidance application may determine that the

linguistic characteristic of segment 228, which may be
"Chinese," is contained in a second plurality of
linguistic characteristics common to the primary
geography of the second user (e.g., "Chinese," and
5 "Mandarin" are common to "Beijing, China").

[0086] In some embodiments, the media guidance
application may, based on determining that the
linguistic characteristic of segment 228 of the media
asset is contained in the second plurality of
10 linguistic characteristics common to the primary
geography of the second user, retrieve, from the media
database, a plurality of specific comfort levels of a
plurality of users associated with segment 228, wherein
the plurality of users are located in the primary
15 geography of the second user. For example, the media
guidance application may retrieve two comfort levels
gathered from two other users in Beijing, China, while
the two other users were watching segment 228. The
media guidance application may determine that the
20 comfort levels are "very comfortable" and "neutral."

[0087] In some embodiments, the media guidance
application may calculate a baseline comfort level
associated with segment 228 based on the specific
comfort level of the second user and the plurality of
25 specific comfort levels. For example, the media
guidance application may determine that the baseline
comfort level associated with segment 228 for users in
Beijing, China, is an average of "moderately
comfortable" (i.e., the specific comfort level of the
30 second user), "very comfortable," and "neutral" (i.e.,
the plurality of specific comfort levels) to determine
that the baseline comfort level is "moderately
comfortable."

[0088] In this way, the media guidance application has calculated a "baseline comfort level," that is, how comfortable users who are associated with the particular linguistic characteristic of segment 228 are when watching segment 228. In some embodiments, the media guidance application may calculate the threshold level based on the baseline comfort level. For example, the media guidance application may set the threshold level to "moderately comfortable."

10 Alternatively, the media guidance application may access a function or table to convert the baseline comfort level into a threshold level. For example, the function or table may state that a baseline comfort level of "moderately comfortable" is associated with a threshold level of "moderately uncomfortable."

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[0089] 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 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.

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[0090] 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 applications that, among other things, allow users to navigate among and locate many types of content or media assets. Interactive media

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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), Internet content (e.g., streaming content, downloadable content, Webcasts, etc.), video clips, audio, content information, pictures, rotating images, documents, playlists, websites, articles, books, electronic books, blogs, 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. 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.

[0091] 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.

[0092] With the advent of the Internet, mobile computing, and high-speed wireless networks, users are
5 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
10 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
15 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
20 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,
25 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
30 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.

[0093] 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, 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.), on-demand information, blogs, websites, and any other type of guidance data that is helpful for a user to navigate among and locate desired content selections.

[0094] FIGS. 3-4 show illustrative display screens that may be used to provide media guidance data. The

display screens shown in FIGS. 3-4 may be implemented on any suitable user equipment device or platform. While the displays of FIGS. 3-4 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 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 criteria.

20 [0095] FIG. 3 shows illustrative grid of a program listings display 300 arranged by time and channel that also enables access to different types of content in a single display. Display 300 may include grid 302 with: (1) a column of channel/content type identifiers 304, 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 306, where each time identifier (which is a cell in the row) identifies a time block of programming. Grid 302 also includes cells of program listings, such as program listing 308, 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 310. Information relating to the program listing selected by highlight region 310 may be provided in program information region 312.

5 Region 312 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.

10 [0096] 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
15 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),
20 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
25 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
30 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).

[0097] Grid 302 may provide media guidance data for non-linear programming including on-demand listing 314, recorded content listing 316, and Internet content listing 318. 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 300 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 314, 316, and 318 are shown as spanning the entire time block displayed in grid 302 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 302. Additional media guidance data may be displayed in response to the user selecting one of the navigational icons 320. (Pressing an arrow key on a user input device may affect the display in a similar manner as selecting navigational icons 320.)

[0098] Display 300 may also include video region 322, and options region 326. Video region 322 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 322 may correspond to, or be independent from, one of the listings displayed in grid 302. 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.

10 **[0099]** Options region 326 may allow the user to access different types of content, media guidance application displays, and/or media guidance application features. Options region 326 may be part of display 300 (and other display screens described
15 herein), or may be invoked by a user by selecting an on-screen option or pressing a dedicated or assignable button on a user input device. The selectable options within options region 326 may concern features related to program listings in grid 302 or may include options
20 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,
25 purchasing a 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,
30 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.

[0100] The media guidance application may be personalized based on a user's 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. 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 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.

[0101] The media guidance application may allow a user to provide user profile 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 www.Tivo.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 user experience is described in greater detail below in connection with FIG. 6. 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 incorporated by reference herein in their entireties.

[0102] Another display arrangement for providing media guidance is shown in FIG. 4. Video mosaic display 400 includes selectable options 402 for content information organized based on content type, genre, and/or other organization criteria. In display 400, television listings option 404 is selected, thus providing listings 406, 408, 410, and 412 as broadcast program listings. In display 400 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 408 may include more than one portion, including media portion 414 and text portion 416. Media portion 414 and/or text portion 416 may be selectable to view content in full-screen or to view information related to the content displayed in media portion 414 (e.g., to view listings for the channel that the video is displayed on).

[0103] The listings in display 400 are of different sizes (i.e., listing 406 is larger than listings 408, 410, and 412), 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 November 12, 2009, which is hereby incorporated by reference herein in its entirety.

[0104] 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. 5 shows a generalized embodiment of illustrative user equipment device 500. More specific implementations of user equipment devices are discussed below in connection with FIG. 6. User equipment device 500 may receive content and data via

input/output (hereinafter "I/O") path 502. I/O path 502 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 504, which includes processing circuitry 506 and storage 508. Control circuitry 504 may be used to send and receive commands, requests, and other suitable data using I/O path 502. I/O path 502 may connect control circuitry 504 (and specifically processing circuitry 506) 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. 5 to avoid overcomplicating the drawing.

[0105] Control circuitry 504 may be based on any suitable processing circuitry such as processing circuitry 506. 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 504 executes instructions for a media guidance application

stored in memory (i.e., storage 508). Specifically, control circuitry 504 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 504 to generate the media guidance displays. In some implementations, any action performed by control circuitry 504 may be based on instructions received from the media guidance application.

10 [0106] In client-server based embodiments, control circuitry 504 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.

15 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. 6). In addition,

20 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).

25 [0107] Memory may be an electronic storage device provided as storage 508 that is part of control circuitry 504. As referred to herein, the phrase "electronic storage device" or "storage device" should

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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 508 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. 6, may be used to supplement storage 508 or instead of storage 508.

[0108] Control circuitry 504 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 504 may also include scaler circuitry for upconverting and downconverting content into the preferred output format of the user equipment 500. Circuitry 504 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, 5 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., 10 watch and record functions, picture-in-picture (PIP) functions, multiple-tuner recording, etc.). If storage 508 is provided as a separate device from user equipment 500, the tuning and encoding circuitry (including multiple tuners) may be associated with 15 storage 508.

[0109] A user may send instructions to control circuitry 504 using user input interface 510. User input interface 510 may be any suitable user interface, such as a remote control, mouse, trackball, keypad, 20 keyboard, touch screen, touchpad, stylus input, joystick, voice recognition interface, or other user input interfaces. Display 512 may be provided as a stand-alone device or integrated with other elements of user equipment device 500. For example, display 512 25 may be a touchscreen or touch-sensitive display. In such circumstances, user input interface 510 may be integrated with or combined with display 512. Display 512 may be one or more of a monitor, a television, a liquid crystal display (LCD) for a mobile device, 30 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 512 may be HDTV-capable. In some embodiments, display 512 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 512. 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 504. The video card may be integrated with the control circuitry 504. Speakers 514 may be provided as integrated with other elements of user equipment device 500 or may be stand-alone units. The audio component of videos and other content displayed on display 512 may be played through speakers 514. In some embodiments, the audio may be distributed to a receiver (not shown), which processes and outputs the audio via speakers 514.

[0110] 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 500. In such an approach, instructions of the application are stored locally (e.g., in storage 508), 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 504 may retrieve instructions of the application from storage 508 and process the instructions to generate any of the displays discussed herein. Based on the processed instructions, control circuitry 504 may determine what action to perform when input is received from input interface 510. For example, movement of a cursor on a display up/down may be indicated by the processed instructions when input interface 510 indicates that an up/down button was selected.

[0111] 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 500 is retrieved on-demand by issuing requests to a server remote to the user equipment device 500. In one example of a client-server based guidance application, control circuitry 504 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 504) 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 500. This way, the processing of the instructions is performed remotely by the server while the resulting displays are provided locally on equipment device 500. Equipment device 500 may receive inputs from the user via input interface 510 and transmit those inputs to the remote

server for processing and generating the corresponding displays. For example, equipment device 500 may transmit a communication to the remote server indicating that an up/down button was selected via
5 input interface 510. 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
10 device 500 for presentation to the user.

[0112] In some embodiments, the media guidance application is downloaded and interpreted or otherwise run by an interpreter or virtual machine (run by control circuitry 504). In some embodiments, the
15 guidance application may be encoded in the ETV Binary Interchange Format (EBIF), received by control circuitry 504 as part of a suitable feed, and interpreted by a user agent running on control circuitry 504. For example, the guidance application
20 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 504. In some of such embodiments
25 (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.

30 [0113] User equipment device 500 of FIG. 5 can be implemented in system 600 of FIG. 6 as user television equipment 602, user computer equipment 604, wireless user communications device 606, 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

5 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

10 devices may be implemented and are discussed in more detail below.

[0114] A user equipment device utilizing at least some of the system features described above in connection with FIG. 5 may not be classified solely as

15 user television equipment 602, user computer equipment 604, or a wireless user communications device 606. For example, user television equipment 602 may, like some user computer equipment 604, be Internet-enabled allowing for access to Internet content, while user

20 computer equipment 604 may, like some television equipment 602, 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

25 capabilities of the user equipment. For example, on user computer equipment 604, 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

30 devices 606.

[0115] In system 600, there is typically more than one of each type of user equipment device but only one of each is shown in FIG. 6 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.

[0116] In some embodiments, a user equipment device
5 (e.g., user television equipment 602, user computer equipment 604, wireless user communications device 606) 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
10 content presented on the second screen device may be any suitable content that supplements the content presented on the first device. In some embodiments, the second screen device provides an interface for adjusting settings and display preferences of the first
15 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
20 device but in the same house or building, or in a different building from the first device.

[0117] The user may also set various settings to maintain consistent media guidance application settings across in-home devices and remote devices. Settings
25 include those described herein, as well as channel and program favorites, programming preferences that the guidance application utilizes to make programming recommendations, display preferences, and other desirable guidance settings. For example, if a user
30 sets a channel as a favorite on, for example, the web site www.Tivo.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 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.

10 [0118] The user equipment devices may be coupled to communications network 614. Namely, user television equipment 602, user computer equipment 604, and wireless user communications device 606 are coupled to communications network 614 via communications paths
15 608, 610, and 612, respectively. Communications network 614 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
20 communications network or combinations of communications networks. Paths 608, 610, and 612 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
25 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 612 is drawn with dotted lines to indicate that in
30 the exemplary embodiment shown in FIG. 6 it is a wireless path and paths 608 and 610 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. 6 to avoid overcomplicating the drawing.

5 [0119] 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 608, 610, and 612, as well as other short-range
10 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.
15 The user equipment devices may also communicate with each other directly through an indirect path via communications network 614.

[0120] System 600 includes content source 616 and media guidance data source 618 coupled to
20 communications network 614 via communication paths 620 and 622, respectively. Paths 620 and 622 may include any of the communication paths described above in connection with paths 608, 610, and 612.
Communications with the content source 616 and media
25 guidance data source 618 may be exchanged over one or more communications paths, but are shown as a single path in FIG. 6 to avoid overcomplicating the drawing. In addition, there may be more than one of each of content source 616 and media guidance data source 618,
30 but only one of each is shown in FIG. 6 to avoid overcomplicating the drawing. (The different types of each of these sources are discussed below.) If desired, content source 616 and media guidance data

source 618 may be integrated as one source device. Although communications between sources 616 and 618 with user equipment devices 602, 604, and 606 are shown as through communications network 614, in some
5 embodiments, sources 616 and 618 may communicate directly with user equipment devices 602, 604, and 606 via communication paths (not shown) such as those described above in connection with paths 608, 610, and 612.

10 [0121] Content source 616 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,
15 etc.), intermediate distribution facilities and/or servers, Internet providers, on-demand media servers, and other content providers. NBC is a trademark owned by the National Broadcasting Company, Inc., ABC is a trademark owned by the American Broadcasting Company,
20 Inc., and HBO is a trademark owned by the Home Box Office, Inc. Content source 616 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
25 provider of content of broadcast programs for downloading, etc.). Content source 616 may include cable sources, satellite providers, on-demand providers, Internet providers, over-the-top content providers, or other providers of content. Content
30 source 616 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 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
5 hereby incorporated by reference herein in its entirety.

[0122] Media guidance data source 618 may provide media guidance data, such as the media guidance data described above. Media guidance data may be provided
10 to the user 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).
15 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 signal, or by any other suitable data transmission technique. Program schedule data and
20 other media guidance data may be provided to user equipment on multiple analog or digital television channels.

[0123] In some embodiments, guidance data from media guidance data source 618 may be provided to users'
25 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
30 equipment may initiate sessions with source 618 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 618 may provide user equipment devices 602, 604, and 606 the media guidance application itself or software updates for the media guidance application.

[0124] 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 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.

[0125] 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 508, and executed by control circuitry 504 of a user equipment device 500. 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 504 of user equipment device 500 and partially on a remote server as a server application (e.g., media guidance data source 618) running on control circuitry of the remote server. When executed by control circuitry of the remote server (such as media guidance data source 618), 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 618
to transmit data for storage on the user equipment.
The client application may instruct control circuitry
of the receiving user equipment to generate the
5 guidance application displays.

[0126] Content and/or media guidance data delivered
to user equipment devices 602, 604, and 606 may be
over-the-top (OTT) content. OTT content delivery
allows Internet-enabled user devices, including any
10 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
15 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.
20 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
25 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
30 applications), or the content can be displayed by media
guidance applications stored on the user equipment
device.

[0127] Media guidance system 600 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. 6.

[0128] 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 614. 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 Publication No. 2005/0251827, 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.

[0129] 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.

[0130] 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 616 to access content. Specifically, within a home, users of user television equipment 602 and user computer equipment 604 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 606 to navigate among and locate desirable content.

[0131] 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 614. These cloud resources may include one or more content sources 616 and one or more media guidance data sources 618. In addition or in the alternative, the remote computing sites may include other user equipment devices, such as user television equipment 602, user computer equipment 604, and wireless user communications device 606. 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.

[0132] 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.

[0133] 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 604 or wireless user communications device 606 having content capture feature. Alternatively, the user can first transfer the content to a user equipment device, such as user computer equipment 604. The user equipment device storing the content uploads the content to the cloud using a data transmission service on communications network 614. 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.

[0134] 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. 5.

[0135] As referred herein, the term "in response to" refers to initiated as a result of. For example, a first action being performed in response to a second action may include interstitial steps between the first action and the second action. As referred herein, the term "directly in response to" refers to caused by. For example, a first action being performed directly in response to a second action may not include interstitial steps between the first action and the second action.

[0136] FIG. 7 is a flowchart of illustrative steps for ensuring program comprehension based on user comfort levels and geographic area, in accordance with some embodiments of the disclosure. For example, a media guidance application may instruct control circuitry 504 to execute the elements of 700.

[0137] Process 700 begins at 702, where the media guidance application receives (e.g., via control circuitry 504), from a first user equipment (e.g., user television equipment 602) associated with a first user, a viewing log indicating that the first user equipment was generating for display a first segment of a media asset at a first time. For example, the media guidance application may receive (e.g., via control circuitry 504 over communications network 614), from user equipment 108 (e.g., user television equipment 602), a viewing log indicating that user equipment 108 was generating for display segment 128 of a media asset from 5:17PM - 5:18PM as described above in relation to FIG. 1.

[0138] Process 700 continues to 704, where the media guidance application extracts (e.g., via control circuitry 504), from the viewing log, an indication of the first segment of the media asset, an indication of the first user, and an indication of the first time. For example, the media guidance application may extract (e.g., via control circuitry 504), by executing an SQL script utilizing the declarative "Select" command, an indication of segment 128, an indication of user 102, and an indication of 5:17PM - 5:18PM as described above in relation to FIG. 1.

[0139] Process 700 continues to 706, where the media guidance application queries (e.g., via control circuitry 504) a profile database (e.g., media guidance data source 618) for a first user profile of the first user. The media guidance application may query the profile database (e.g., media guidance data source 618), either by transmitting (e.g., via control circuitry 504) a request over a communications network

(e.g., communications network 614) including an identifier of user 102 or by querying local storage (e.g., storage 508), for a first user profile of user 102 as described above in relation to FIG. 1.

5 **[0140]** Process 700 continues to 708, where the media guidance application receives (e.g., via control circuitry 504 over communications network 614), from the profile database (e.g., media guidance data source 618), the first user profile indicating a primary
10 geography of the first user and a plurality of baseline biological parameters of the first user. For example, the media guidance application may receive (e.g., via control circuitry 504) the first user profile, which may indicate that user 102's primary geography is
15 Boston, Massachusetts, and that the plurality of baseline biological parameters of user 102 are a heart rate of 80 beats per minute, a temperature of 37 degrees Celsius, and a sweat rate of 0.5 mL per minute as described above in relation to FIG. 1.

20 **[0141]** Process 700 continues to 710, where the media guidance application receives (e.g., via control circuitry 504), from the first user equipment, a biometric log indicating a plurality of biological parameters of the first user. For example, the media
25 guidance application may receive (e.g., via control circuitry 504 over communications network 614), from user equipment 108 (e.g., user television equipment 602), biological log 114 of user 102 indicating a plurality of values 118 for plurality of biometric
30 types 116, which together may be a plurality of biological parameters, as described above in relation to FIG. 1.

[0142] Process 700 continues to 712, where the media guidance application extracts (e.g., via control circuitry 504), from the biometric log, at least one indication of the plurality of biological parameters of the first user and an indication of a time at which the biological parameters were gathered. For example, the media guidance application may extract (e.g., via control circuitry 504), by executing an SQL script utilizing the declarative "Select" command, an indication that a heart rate of the user 102 at the first time was 100 beats per minute, the temperature of user 102 was 38 degrees Celsius, and that the sweat rate of user 102 was 0.75 mL per minute during the first time, and that biometric log 120 was recorded from 5:15PM - 5:20PM as described above in relation to FIG. 1.

[0143] Process 700 continues to 714, where the media guidance application compares (e.g., via control circuitry 504) the indication of the first time and the indication of the time at which the biological parameters were gathered. For example, the media guidance application may compare (e.g., via control circuitry 504) the time of 5:17PM - 5:18PM to time indication 120 of biological log 114, which may be 5:15PM - 5:20PM.

[0144] Process 700 continues to 716, where the media guidance application determines (e.g., via control circuitry 504) whether the first time and the time at which the biological parameters were gathered coincide temporally. If the media guidance application determines (e.g., via control circuitry 504) that the first time and the time at which the biological parameters were gathered do not coincide temporally,

process 700 returns to 710, where a new biometric log is received.

[0145] If, instead, the media guidance application determines (e.g., via control circuitry 504) that the first time and the time at which the biological parameters were gathered coincide temporally, process 700 continues to 718, where the media guidance application compares (e.g., via control circuitry 504) the at least one indication of the plurality of biological parameters to the plurality of baseline biological parameters of the first user to determine (e.g., via control circuitry 504) a specific comfort level of the first user at the first time. For example, the media guidance application may determine (e.g., via control circuitry 504) that the first time of 5:17PM - 5:18PM and the time of 5:15PM - 5:20PM coincide temporally because they overlap. Based on this determination, the media guidance application may compare (e.g., via control circuitry 504) the heart rate of 100 beats per minute gathered at the first time to the baseline heart rate of 80 beats per minute, the temperature of 38 degrees Celsius gathered at the first time to the baseline temperature of 37 degrees Celsius, and the sweat rate of 0.7 mL per minute gathered at the first time to the baseline sweat rate of 0.5 mL per minute to determine that plurality of values 118 associated with plurality of biological parameter types 116 of user 102 are all high when compared to the plurality of baseline biological parameters of user 1022, and thus that user 102 is "very uncomfortable," as described above in relation to FIG. 1. More details regarding determining and calculating the specific

comfort level of the first user at the first time are presented below in relation to FIG. 9.

[0146] Process 700 continues to 720, where the media guidance application queries (e.g., via control circuitry 504 over communications network 614) a media database (e.g., media guidance data source 618) for a linguistic characteristic of the first segment of the media asset. For example, the media guidance application may transmit (e.g., via control circuitry 504 over communications network 614), to the media database (e.g., media guidance data source), an identification of segment 128, requesting the linguistic characteristics of segment 128 as described above in relation to FIG. 1.

[0147] Process 700 continues to 722, where the media guidance application receives (e.g., via control circuitry 504 over communications network 614), from the media database (e.g., media guidance data source), a media data structure indicating the linguistic characteristic of the first segment of the media asset. For example, the media guidance application may receive (e.g., via control circuitry 504 over communications network 614) a data structure indicating that the linguistic characteristic of segment 128 is the language "Chinese," as described above in relation to FIG. 1. Other linguistic characteristics may include other language, dialects, and accents.

[0148] Process 700 continues to 724, where the media guidance application compares (e.g., via control circuitry 504) the linguistic characteristic of the first segment to a plurality of linguistic characteristics common to the primary geography of the first user. For example, the media guidance

application may determine (e.g., via control circuitry 504) that the plurality of linguistic characteristics common to the primary geography are the language "English" and the accent "Boston accent." The media guidance application may compare the language "Chinese" to the plurality of linguistic characteristics common to the primary geography (e.g., the language "English" and the accent "Boston accent").

[0149] Process 700 continues to 726, where the media guidance application determines (e.g., via control circuitry 504) if the linguistic characteristic of the first segment of the media asset is contained in the plurality of linguistic characteristics common to the primary geography of the first user. If the media guidance application determines (e.g., via control circuitry 504) that the linguistic characteristic of the first segment of the media asset is contained in the plurality of linguistic characteristics common to the primary geography of the first user, the media guidance application uses (e.g., via control circuitry 504) the specific comfort level of the first user at the first time in a baseline calculation. More details on calculating the baseline are presented below in relation to FIG. 8.

[0150] If, instead, at 726, the media guidance application determines (e.g., via control circuitry 504) that the linguistic characteristic of the first segment of the media asset is not contained in the plurality of linguistic characteristics common to the primary geography of the first user, process 700 continues to 730, where the media guidance application retrieves (e.g., via control circuitry 504) from the media database, a plurality of specific comfort levels

of a plurality of users associated with the first segment of the media asset, wherein the plurality of users are located in the primary geography of the first user. For example, the media guidance application may
5 retrieve (e.g., via control circuitry 504 from storage 508 or from media guidance data source 618 over communications network 614) two comfort levels gathered from two other users in Boston, Massachusetts, while the two other users were watching segment 128 (e.g.,
10 the seventeenth to the eighteenth minute of "Rush Hour 3"). The media guidance application may determine that the comfort levels are "moderately uncomfortable" and "extremely uncomfortable" as described above in relation to FIG. 1. Additional details regarding
15 retrieving the plurality of specific comfort levels are described below in relation to FIG. 11.

[0151] Process 700 continues to 732, where the media guidance application calculates (e.g., via control circuitry 504) an average comfort level specific to the
20 primary geography of the first user and associated with the first segment of the media asset, based on the specific comfort level of the first user and the plurality of specific comfort level. For example, the media guidance application may determine that the
25 average comfort level associated with segment 128 for users in Boston, Massachusetts is "very uncomfortable" as described above in relation to FIG. 1.

[0152] Process 700 continues to 734, where the media guidance application receives (e.g., via control
30 circuitry 504 over communications network 614), from a second user equipment (e.g., user equipment 208 or user television equipment 602), of a second user to play back the first segment of the media asset. The media

guidance application may receive (e.g., via control circuitry 504 over communications network 614), from user equipment 208 (e.g., user television equipment 602) of user 202, a request to play back segment 228 of the media asset, as described above in relation to FIG. 2.

[0153] Process 700 continues to 736, where the media guidance application queries (e.g., via control circuitry 504) the profile database for a second user profile of the second user. For example, the media guidance application may query (e.g., via control circuitry 504) the profile database (e.g., media guidance data source 618) for the second user profile of user 202 as described above in relation to FIG. 2 and above in relation to 706.

[0154] Process 700 continues to 738, where the media guidance application receives (e.g., via control circuitry 504 over communications network 614), from the profile database (e.g., media guidance data source), the second user profile indicating that the second user is associated with the primary geography of the user. For example, the media guidance application may receive (e.g., via control circuitry 504 over communications network 614) the second user profile that indicates that user 202 is associated with Boston, Massachusetts as described above in relation to FIG. 2.

[0155] Process 700 continues to 740, where the media guidance application determines (e.g., via control circuitry 504) whether the second user is associated with the primary geography of the first user. If the media guidance application determines (e.g., via control circuitry 504) that the second user is not associated with the primary geography of the first

user, process 700 continues to 748, where the media guidance application does not provide (e.g., via control circuitry 504) content associated with the first segment of the media asset to the second user equipment. For example, the media guidance application may not provide content 232 to user equipment 208, as described above in relation to FIG. 2.

[0156] If the media guidance application determines (e.g., via control circuitry 504) that the second user is associated with the primary geography of the first user, process 700 continues to 742, where the media guidance application compares (e.g., via control circuitry 504) the average comfort level specific to the primary geography of the first user to a threshold value. For example, if the media guidance application determines (e.g., via control circuitry 504) that user 202 is associated with Boston, Massachusetts, the media guidance application may compare (e.g., via control circuitry 504) the average comfort level of "very uncomfortable" to a threshold level, which may be, for example, "moderately uncomfortable" as described above in relation to FIG. 2 and described in more detail below in relation to FIG. 8.

[0157] Process 700 continues to 744, where the media guidance application determines (e.g., via control circuitry 504) whether the average comfort level specific to the primary geography of the first user exceeds the threshold value. If the media guidance application determines (e.g., via control circuitry 504) that the average comfort level specific to the primary geography of the first user does not exceed the threshold value (e.g., the threshold value is "moderately uncomfortable" and the average comfort

level is "neutral"), process 700 continues to 748, where the media guidance application does not provide (e.g., via control circuitry 504) content associated with the first segment of the media asset to the second
5 user equipment. For example, the media guidance application may not provide content 232 to user equipment 208, as described above in relation to FIG. 2.

[0158] If the media guidance application determines
10 (e.g., via control circuitry 504) that the average comfort level specific to the primary geography of the first user exceeds the threshold value (e.g., the threshold value is "moderately uncomfortable" and the average comfort level is "very uncomfortable"), process
15 700 continues to 748, where the media guidance application provides (e.g., via control circuitry 504 over communications network 614) content associated with the first segment of the media asset to the second user equipment (e.g., user television equipment 602).
20 For example, the media guidance application may provide (e.g., via control circuitry 504 over communication network 614) content 232 associated with segment 228 to user equipment 208 (e.g., user television equipment 602) as described above in relation to FIG. 2 and
25 further below in relation to FIG. 10.

[0159] FIG. 8 is a flowchart of illustrative steps for determining a threshold level based on a baseline comfort level, in accordance with some embodiments of the disclosure. For example, a media guidance
30 application may instruction control circuitry 504 to execute the elements of 800.

[0160] Process 800 begins at 802, where the media guidance application receives (e.g., via control

circuitry 504 over communications network 614), from user equipment (e.g., user television equipment 602) associated with a user, a viewing log indicating that the user equipment was generating for display a first
5 segment of a media asset at a first time. For example, the media guidance application may receive (e.g., via control circuitry 504) a viewing log indicating that the user equipment (e.g., user television equipment 602) was generating for display the seventeenth minute
10 to the eighteenth minute of "Rush Hour 3" from 11:30AM-11:31AM, similar to as described above in relation to the third user equipment generating for display segment 228 in relation to FIG. 2.

[0161] Process 800 continues to 804, where the media
15 guidance application determines (e.g., via control circuitry 504) a primary geography of the user. For example, the media guidance application may determine (e.g., via control circuitry 504) that the primary geography of the user is "Beijing, China" in a similar
20 manner as described above in relation to 706 and 708 of FIG. 7 above.

[0162] Process 800 continues to 806, where the media
guidance application receives (e.g., via control circuitry 504 over communications network 614), from
25 the user equipment (e.g., user television equipment 602), a biometric log indicating a plurality of biological parameters of the user at the first time. For example, the media guidance application may receive a biometric log (e.g., biometric log 114 of FIG 1) from
30 the user indicating that the plurality of biological parameters of the user were a heart rate of 90 beats per minute, a temperature of 36 degrees Celsius, and a

sweat rate of 0.4 mL per minute at 11:30AM - 11:31AM, as described above in relation to FIG. 2.

[0163] Process 800 continues to 808, where the media guidance application compares (e.g., via control circuitry 504) the plurality of biological parameters to a plurality of baseline biological parameters of the user to determine a specific comfort level of the user at the first time. For example, the media guidance application may compare (e.g., via control circuitry 504) the plurality of biological parameters to a plurality of baseline biological parameters in a similar manner to as described above in relation to 718 in FIG. 7 to determine (e.g., via control circuitry 504) that the specific comfort level of the user at 11:30AM - 11:31AM is "moderately comfortable" similar to determining the specific comfort level of the second user at the first time as described in relation to FIG. 2.

[0164] Process 800 continues to 810, where the media guidance application compares (e.g., via control circuitry 504) a linguistic characteristic of the first segment to a plurality of linguistic characteristics common to the primary geography of the user. For example, the media guidance application may compare (e.g., via control circuitry 504) the linguistic characteristic of the first segment of "Chinese" to the plurality of linguistic characteristics common to the primary geography of the language "Chinese" and the dialect "Mandarin."

[0165] Process 800 continues to 812, where the media guidance application determines whether the linguistic characteristic of the first segment of the media asset is contained in the plurality of linguistic

characteristics common to the primary geography of the second user. If the media guidance application determines (e.g., via control circuitry 504) that the linguistic characteristic of the first segment of the media asset is not contained in the plurality of linguistic characteristics common to the primary geography of the second user, process 800 continues to 814, where the media guidance application uses (e.g., via control circuitry 504) the specific comfort level of the user at the first time in an average comfort level calculation. For example, the media guidance application may use (e.g., via control circuitry 504) the specific comfort level in the average comfort level calculation as described above in relation to 730 and 732 of FIG. 7 above.

[0166] If the media guidance application determines (e.g., via control circuitry 504) that the linguistic characteristic of the first segment of the media asset is contained in the plurality of linguistic characteristics common to the primary geography of the user, process 800 continues to 816, where the media guidance application retrieves (e.g., via control circuitry 504 over communications network 614), from a media database (e.g., media guidance data source 618), a plurality of specific comfort levels of a plurality of users associated with the first segment of the media asset, wherein the plurality of users are located in the primary geography of the user. For example, the media guidance application may determine that "Chinese" is contained in the plurality of linguistic characteristics common to "Beijing, China" (e.g., "Chinese" and "Mandarin"). Based on this determination, the media guidance application may

retrieve (e.g., via control circuitry 504 from media guidance data source 618 over communications network 614) two comfort levels gathered from two other users in Beijing, China while the two other users were
5 watching segment 228 (e.g., "very comfortable" and "neutral"), as described above in relation to FIG. 2 and as described in more detail below in relation to FIG. 11.

[0167] Process 800 continues to 818, where the media
10 guidance application calculates (e.g., via control circuitry 504) a baseline comfort level associated with the first segment of the media asset based on the specific comfort level of the user and the plurality of specific comfort levels. For example, the media
15 guidance application may determine (e.g., via control circuitry 504) that the baseline comfort level associated with segment 228 for users in Beijing, China is an average of "moderately comfortable" (i.e., the specific comfort level of the second user), "very
20 comfortable," and "neutral" (i.e., the plurality of specific comfort levels) to determine (e.g., via control circuitry 504) that the baseline comfort level is "moderately comfortable," as described above in relation to FIG. 2.

25 [0168] Process 800 continues to 820, where the media guidance application determines (e.g., via control circuitry 504) a threshold level based on the baseline comfort level. For example, the media guidance application may compare (e.g., via control circuitry
30 504) the baseline comfort level to a chart, data structure, or table, or input (e.g., via control circuitry 504) the baseline comfort level into a function to determine (e.g., via control circuitry 504)

the threshold comfort level, which may be "moderately uncomfortable."

[0169] FIG. 9 is a flowchart of illustrative steps for calculating a specific comfort level of a user, in accordance with some embodiments of the disclosure. For example, a media guidance application may instruction control circuitry 504 to execute the elements of 900.

[0170] Process 900 begins at 902 where the media guidance application calculates (e.g., via control circuitry 504) a plurality of differences each associated with one of a plurality of biological parameter types, wherein each difference of the plurality of differences is a difference between a biological parameter of a plurality of biological parameters of a first type of a plurality of biological parameter types and a baseline biological parameter of a plurality of baseline biological parameters of the first type. For example, the media guidance application may determine (e.g., via control circuitry 504) that the plurality of biological parameter types are "heart rate," "temperature," and "sweat rate." The media guidance application may determine (e.g., via control circuitry 504) that the plurality of biological parameters are a heart rate of 100 beats per minute, a temperature of 37 degrees Celcius, and a sweat rate of 0.7 mL per minute based on biometric log 114 as described in relation to FIG. 1 above. The media guidance application may determine (e.g., via control circuitry 504) that the plurality of baseline parameters are a heart rate of 80 beats per minute, a temperature of 36 degrees Celcius, and a sweat rate of 0.5 mL per minute based on the first user profile of

user 102 as described above in relation to FIG. 1. The media guidance application may then calculate (e.g., via control circuitry 504) that the difference associated with "heart rate" may be 20 beats per minute, the difference associated with "temperature" may be one degree Celcius, and the difference associated with sweat rate may be 0.2mL per minute.

[0171] Process 900 continues to 904, where the media guidance application accesses (e.g., via control circuitry 504 over communications network 614), from a media database (e.g., user television equipment 602), a function relating the plurality of differences to specific comfort levels. For example, the media guidance application may query (e.g., via control circuitry 504) the media database (e.g., user television equipment 602) for the function. The media guidance application may receive (e.g., via control circuitry 504 over communications network) the function, which may be a stepwise function relating the differences to specific comfort levels, as described above in relation to FIG. 1.

[0172] Process 900 continues to 906, where the media guidance application inputs (e.g., via control circuitry 504) the plurality of differences into the function to determine the specific comfort level of the first user. For example, the media guidance application may input the plurality of differences of 20 beats per minute for "heart rate," one degree Celcius for "temperature," and 0.2mL per minute for "sweat rate" into the function to determine that the specific comfort level of user 102 is "very uncomfortable" as described above in relation to FIG. 1.

[0173] FIG. 10 is a flowchart of illustrative steps for providing content associated with a first segment of a media asset, in accordance with some embodiments of the disclosure. For example, a media guidance application may instruction control circuitry 504 to execute the elements of 1000.

[0174] Process 1000 begins at 1002, where the media guidance application determines (e.g., via control circuitry 504) that an average comfort level specific to a primary geography of a first user, and associated with a first segment of a media asset being generated for display by a first user equipment associated with the first user, exceeds a threshold value. For example, the media guidance application may determine (e.g., via control circuitry 504) that the average comfort level specific to Boston, Massachusetts (e.g., the primary geography of user 102) and associated with segment 228, that is, "very uncomfortable" (e.g., the average comfort level calculated in 732 in FIG. 7) to a threshold level, which may be, for example, "moderately uncomfortable" to determine that the average comfort level exceeds the threshold level, as described above in relation to FIG. 2.

[0175] Process 1000 continues to 1004, where the media guidance application accesses (e.g., via control circuitry 504 over communications network 614), from a profile database (e.g., media guidance data source 618), a user profile of the first user. For example, the media guidance application may transmit (e.g., via control circuitry 504 over communication network 614), to the profile database (e.g., media guidance data source), an identification of user 202 and a request for the user profile associated with user 202 and

receive (e.g., via control circuitry 504) the user profile in response, as described above in relation to FIG. 2.

[0176] Process 1000 continues to where the media guidance application determines (e.g., via control circuitry 504) whether the user profile indicates a preference selected by the first user for a type of content. For example, the media guidance application may extract (e.g., via control circuitry 504), by executing an SQL script utilizing the declarative "Select" command, from the user profile, a field indicating the preference for the type of content, which may be a synopsis, auto-recording, edited audio track, subtitle transcript, or any other suitable type of content. If the media guidance application determines (e.g., via control circuitry 504) that the user profile does not indicate a preference selected by the first user (e.g., the field is "null" or "default"), process 1000 continues to 1008, where the media guidance application searches (e.g., via control circuitry 504) a media database (e.g., media guidance data source 618) for content, associated with the first segment of the media asset, and of a default type. For example, the media guidance application may query (e.g., via control circuitry 504) the media database (e.g., media guidance data source 618) for content that is associated with segment 228, and is a "synopsis," as this is the default type.

[0177] If, at 1006, the media guidance application determines that the user profile indicates a preference selected by the first user (e.g., the field is "synopsis" or "auto-recording"), process 1000 continues to 1010, where the media guidance application searches

(e.g., via control circuitry 504) the media database (e.g., media guidance data source 618) for content, associated with the first segment of the media asset, and of the type of content indicated by the preference.

5 For example, the media guidance application may query (e.g., via control circuitry 504) the media database (e.g., media guidance data source 618) for content 232 that is associated with segment 228, and is a "synopsis" or "auto-recording," as this is the type

10 indicated by the user profile as user 202's preference, as described above in relation to FIG. 2.

[0178] Process 1000 continues from 1008 or 1010 to 1012, where the media guidance application determines (e.g., via control circuitry 504) whether the user

15 profile indicates a preferred device. For example, the media guidance application may extract (e.g., via control circuitry 504), by executing an SQL script utilizing the declarative "Select" command, from the user profile, a field indicating a preferred device.

20 If the media guidance application determines (e.g., via control circuitry 504) that the user profile does not indicate a preferred device, process 1000 continues to 1014, where the media guidance application selects (e.g., via control circuitry 504) the first user

25 equipment (e.g., user television equipment 602) as a selected device. For example, the media guidance application may determine (e.g., via control circuitry 504) that the field is "null" or "default" and thus choose the device associated with user 202 that is

30 generating for display segment 228 (e.g., user television equipment 602) for delivering content 232 to user 202, as described above in relation to FIG. 2.

[0179] If, at 1012, the media guidance application determines (e.g., via control circuitry 504) that the user profile indicates a preferred device, process 1000 continues to 1016, where the media guidance application
5 selects (e.g., via control circuitry 504) the first the preferred device (e.g., user computer equipment 604 or wireless user communications device 606) as a selected device. For example, the media guidance application may determine (e.g., via control circuitry 504) that
10 the field indicates a device ID of user equipment 222 (e.g., user computer equipment 604 or wireless user communications device 606), and thus choose (e.g., via control circuitry 504) user equipment 222 associated with user 202 (e.g., user computer equipment 604 or
15 wireless user communications device 606) for delivering content 232 to user 202, as described above in relation to FIG. 2.

[0180] Process 1000 continues from 1014 or 1016 to 1018, where the media guidance application accesses
20 (e.g., via control circuitry 504), from the media database (e.g., media guidance data source 618) an indication of a next break of the media asset. For example, the media guidance application may query (e.g., via control circuitry 504 over communication
25 network 614) the media database (e.g., media guidance data source 618) for the indication, and receive (e.g., via control circuitry 504 over communication network 614), from the media database (e.g., media guidance data source 618), a data structure indicating that
30 there will be a commercial break at 30 minutes into the media asset, 50 minutes into the media asset, and 70 minutes into the media asset. The media guidance application may determine (e.g., via control circuitry

504) that the next commercial break is 30 minutes into the media asset, as described above in relation to FIG. 2.

[0181] Process 1000 continues to 1020, where the media guidance application determines (e.g., via control circuitry 504) whether the next break has begun. For example, the media guidance application may monitor (e.g., via control circuitry 504) the playback of the media asset to determine when the media asset reaches its 30th minute. If the media guidance application determines (e.g., via control circuitry 504) that the next break has not begun, process 1000 returns to 1020, where the media guidance application continue to monitor (e.g., via control circuitry 504) the playback of the media asset, as described above in relation to FIG. 2.

[0182] If the media guidance application determines (e.g., via control circuitry 504) that the next break has begun (e.g., by determining that the media asset reaches its 30th minute), process 1000 continues to 1022, where the media guidance application transmits (e.g., via control circuitry 504 over communication network 614) the content associated with the first segment of the media asset to the selected device (e.g., user television equipment 602, user computer equipment 604, or wireless user communications device 606). For example, the media guidance application may transmit (e.g., via control circuitry 504 over communication network) content 232 associated with segment 228 to user equipment 222 (e.g. user computer equipment 604 or wireless user communications device 606), as described above in relation to FIG. 2.

[0183] FIG. 11 is a flowchart of illustrative steps for searching for determining an average comfort level specific to a geographic area and associated with a first segment of a media asset, in accordance with some
5 embodiments of the disclosure. For example, a media guidance application may instruction control circuitry 504 to execute the elements of 1100.

[0184] Process 1100 begins at 1102, where the media guidance application retrieves (e.g., via control
10 circuitry 504 over communication network 614), from a media database (e.g., media guidance data source 618), a plurality of data structures indicating a plurality of specific comfort levels, a plurality of primary geographies, and a plurality of segments associated
15 with a plurality of media assets. Each of the plurality of data structures is associated with one of the plurality of comfort levels, one of the plurality of primary geographies, and one of the plurality of segments associated with one of the plurality of media
20 assets. For example, the media guidance application may retrieve five data structures. A first data structure may indicate "very comfortable," "Beijing, China," and "the seventeenth minute to the twentieth minute of 'Good Will Hunting.'" A second data
25 structure may indicate "very uncomfortable," "Boston, Massachusetts," and "the seventeenth to eighteenth minute of 'Rush Hour 3.'" A third data structure may indicate "extremely uncomfortable," "Boston, Massachusetts," and "the seventeenth to eighteenth
30 minute of 'Rush Hour 3.'" A fourth data structure may indicate "neutral," "Boston, Massachusetts," and "the seventeenth minute to the twentieth minute of 'Good Will Hunting.'" A fifth data structure may indicate

"moderately uncomfortable," "Boston, Massachusetts," and "the seventeenth to eighteenth minute of 'Rush Hour 3.'" "

[0185] Process 1100 continues to 1104, where the
5 media guidance application extracts (e.g., via control circuitry 504), from the plurality of data structures, a plurality of indications of the primary geographies and the plurality of segments associated with the plurality of media assets. For example, the media
10 guidance application may extract (e.g., via control circuitry 504), by executing an SQL script utilizing the declarative "Select" command, a plurality of indications of the primary geographies (e.g., "Beijing, China," "Boston, Massachusetts," "Boston, Massachusetts," "Boston, Massachusetts," and "Boston, Massachusetts" from the first, second, third, fourth, and fifth data structures respectively) and a plurality of indications of the plurality of segments (e.g., "the
15 seventeenth minute to the twentieth minute of 'Good Will Hunting,'" "the seventeenth to eighteenth minute of 'Rush Hour 3,'" "the seventeenth to eighteenth minute of 'Rush Hour 3,'" "the seventeenth minute to the twentieth minute of 'Good Will Hunting,'" and "the
20 seventeenth to eighteenth minute of 'Rush Hour 3,'" from the first, second, third, fourth, and fifth data structures respectively).

[0186] Process 1100 continues to 1106, where the media guidance application searches (e.g., via control circuitry 504) the plurality of indications for a
30 subset of the plurality of data structures indicating a specific segment of a specific media asset and a specific primary geography. For example, the media guidance application may search (e.g., via control

circuitry 504) the plurality of indications for indications of "Boston, Massachusetts" and may identify the second, third, fourth, and fifth data structures. The media guidance application may further search
5 (e.g., via control circuitry 504) the plurality of indications for indications of "the seventeenth to eighteenth minute of 'Rush Hour 3,'" and identify the second, third, and fifth data structures. The media guidance application may determine (e.g., via control
10 circuitry 504) the intersection of the searches to determine that the second, third, and fifth data structures (e.g., the subset of the plurality of data structures) indicate the specific segment of the specific media asset (e.g., the seventeenth to
15 eighteenth minute of "Rush Hour 3") and the specific primary geography (e.g., Boston, Massachusetts).

[0187] Process 1100 continues to 1108, where the media guidance application extracts (e.g., via control circuitry 504), from the subset of the plurality of
20 data structures, a subset of the plurality of specific comfort levels. Each of the subset of the plurality of data structures is associated with one of the specific comfort levels of the subset of the plurality of specific comfort levels. For example, the media
25 guidance application may extract (e.g., via control circuitry 504), by executing an SQL script utilizing the declarative "Select" command, the comfort levels "very uncomfortable," "extremely uncomfortable," and "moderately uncomfortable" from the second, third, and
30 fifth data structures, respectively.

[0188] Process 1100 continues to 1110, where the media guidance application calculates (e.g., via control circuitry 504) a mathematical combination of

the subset of the plurality of specific comfort levels. For example, the media guidance application may access (e.g., via control circuitry 504 from storage 608 or from media guidance data source 618 over communication network) a table that relates each of the specific comfort levels in the subset of the plurality of specific comfort levels to a numerical value, or the plurality of specific comfort levels may be stored as numerical values. For example, the "very uncomfortable," "extremely uncomfortable," and "moderately uncomfortable" may correspond to -2, -3, and -1 respectively. The media guidance application may calculate a mathematical combination of the subset of the plurality of specific comfort levels. For example, the media guidance application may determine an average of -2, -3, and -1 to determine that the mathematical combination is -2, or "very uncomfortable."

[0189] 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. Additionally, it should be noted that any of the devices or equipment discussed in relation to FIGS. 5-6 could be used to perform one or more of the steps in processes 700-1100 in FIGS. 7-11, respectively. 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, performed with additional steps, performed with omitted steps, or done in parallel. 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. In addition, the systems and methods described
5 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 ensuring program comprehension based on user comfort levels and geographic area, the method comprising:

5 receiving, from a first user equipment associated with a first user, a viewing log indicating that the first user equipment was generating for display a first segment of a media asset at a first time;

 retrieving a first user profile of the first user
10 indicating a primary geography of the first user and a plurality of baseline biological parameters of the first user;

 receiving, from the first user equipment, a biometric log indicating a plurality of biological
15 parameters of the first user at the first time;

 comparing the plurality of biological parameters to the plurality of baseline biological parameters of the first user to determine a specific comfort level of the first user at the first time;

20 retrieving, from the media database, a media data structure indicating a linguistic characteristic of the first segment of the media asset, wherein the linguistic characteristic of the first segment is at least one of a language, a dialect, and an accent;

25 comparing the linguistic characteristic of the first segment to a plurality of linguistic characteristics common to the primary geography of the first user to determine that the linguistic characteristic of the first segment of the media asset
30 is not contained in the plurality of linguistic characteristics common to the primary geography of the first user;

based on determining that the linguistic characteristic of the first segment of the media asset is not contained in the plurality of linguistic characteristics common to the primary geography of the first user, calculating an average comfort level specific to the primary geography and associated with the first segment of the media asset based on the specific comfort level of the first user;

receiving a request from a second user equipment of a second user to playback the first segment of the media asset;

retrieving, from a profile database, a second user profile of the second user indicating that the second user is associated with the primary geography of the first user;

based on determining that the second user is associated with the primary geography, comparing the average comfort level specific to the primary geography of the first user to a threshold level; and

based on determining that the average comfort level specific to the primary geography of the first user exceeds the threshold level, providing content associated with the first segment of the media asset to the second user equipment.

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2. A method for ensuring program comprehension based on user comfort levels and geographic area, the method comprising:

receiving, from a first user equipment associated with a first user, a viewing log indicating that the first user equipment was generating for display a first segment of a media asset at a first time;

extracting, from the viewing log, an indication of the first segment of the media asset, an indication of the first user, and a first indication of the first time;

5 querying a profile database for a first user profile of the first user;

 receiving, from the profile database, the first user profile indicating a primary geography of the first user and a plurality of baseline biological
10 parameters of the first user;

 receiving, from the first user equipment, a biometric log indicating a plurality of biological parameters of the first user at the first time;

 extracting, from the biometric log, at least one
15 indication of the plurality of biological parameters of the first user and a second indication of the first time;

 comparing the first indication of the first time and the second indication of the first time to
20 determine that the biometric log and the viewing log coincide temporally;

 comparing the at least one indication of the plurality of biological parameters to the plurality of baseline biological parameters of the first user to
25 determine a specific comfort level of the first user at the first time;

 querying a media database for a linguistic characteristic of the first segment of the media asset, wherein the linguistic characteristic of the first
30 segment is at least one of a language, a dialect, and an accent;

receiving, from the media database, a media data structure indicating the linguistic characteristic of the first segment of the media asset;

5 comparing the linguistic characteristic of the first segment to a plurality of linguistic characteristics common to the primary geography of the first user to determine that the linguistic characteristic of the first segment of the media asset is not contained in the plurality of linguistic
10 characteristics common to the primary geography of the first user;

 based on determining that the linguistic characteristic of the first segment of the media asset is not contained in the plurality of linguistic
15 characteristics common to the primary geography of the first user and that the biometric log and the viewing log coincide temporally:

 retrieving, from the media database, a plurality of specific comfort levels of a plurality of
20 users associated with the first segment of the media asset, wherein the plurality of users are located in the primary geography of the first user;

 calculating an average comfort level specific to the primary geography of the first user and
25 associated with the first segment of the media asset based on the specific comfort level of the first user and the plurality of specific comfort levels;

 receiving a request from a second user equipment of a second user to playback the first segment of the
30 media asset;

 querying the profile database for a second user profile of the second user;

receiving, from the profile database, the second user profile indicating that the second user is associated with the primary geography of the first user;

5 based on determining that the second user is associated with the primary geography of the first user, comparing the average comfort level specific to the primary geography of the first user to a threshold level; and

10 based on determining that the average comfort level specific to the primary geography of the first user exceeds the threshold level, providing content associated with the first segment of the media asset to the second user equipment.

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3. The method of claim 2, the method further comprising:

receiving, from a third user equipment associated with a third user, a second viewing log indicating that
20 the third user equipment was generating for display the first segment of the media asset at a second time;

based on receiving the second viewing log, determining a primary geography of the third user;

receiving, from the third user equipment, a second
25 biometric log indicating a second plurality of biological parameters of the third user at the second time;

comparing the second plurality of biological parameters to a second plurality of baseline biological
30 parameters of the second user to determine a second specific comfort level of the second user at the second time;

comparing the linguistic characteristic of the first segment to a second plurality of linguistic characteristics common to the primary geography of the second user to determine that the linguistic
5 characteristic of the first segment of the media asset is contained in the second plurality of linguistic characteristics common to the primary geography of the second user;

based on determining that the linguistic
10 characteristic of the first segment of the media asset is contained in the second plurality of linguistic characteristics common to the primary geography of the second user:

retrieving, from the media database, a second
15 plurality of specific comfort levels of a second plurality of users associated with the first segment of the media asset, wherein the second plurality of users are located in the primary geography of the second user;

20 calculating a baseline comfort level associated with the first segment of the media asset based on the second specific comfort level of the second user and the second plurality of specific comfort levels; and

25 wherein the threshold level is calculated based on the baseline comfort level.

4. The method of claim 2, further comprising:
accessing a knowledge graph to determine a third
30 user associated with the second user;
accessing a third user profile associated with the third user from the profile database;

extracting, from the third user profile, an indication of a comfort level of the third user, wherein the third user profile further associates the comfort level of the third user with the first segment
5 of the media asset; and

based on determining that the comfort level of the third user does not exceed the threshold level, causing a display of a notification to the second user querying whether displaying the content associated with the
10 first segment of the media asset is necessary.

5. The method of claim 2, wherein the plurality of baseline biological parameters of the first user are calculated based on a second plurality of biological
15 parameters gathered while the first user equipment was generating for display a second segment of a second media asset with a second linguistic characteristic that is contained in the plurality of linguistic characteristics common to the primary geography of the
20 first user.

6. The method of claim 2, wherein determining the specific comfort level of the first user at the first time comprises:
25 calculating a plurality of differences each associated with one of a plurality of biological parameter types, wherein each difference of the plurality of differences is a difference between a biological parameter of the plurality of biological
30 parameters of a first type of the plurality of biological parameter types and a baseline biological parameter of the plurality of baseline biological parameters of the first type;

accessing, from the media database, a function relating the plurality of differences to specific comfort levels; and

inputting the plurality of differences into the
5 function to determine the specific comfort level of the first user.

7. The method of claim 2, further comprising:
accessing, from the second user profile, a
10 secondary geography of the second user;
comparing the linguistic characteristic of the first segment to a second plurality of linguistic characteristics common to the secondary geography of the second user to determine that the linguistic
15 characteristic of the first segment of the media asset is contained in the plurality of linguistic characteristics common to the secondary geography of the second user;

based on determining that the linguistic
20 characteristic of the first segment of the media asset is contained in the second plurality of linguistic characteristics common to the secondary geography of the second user, causing a display of a notification to the second user querying whether displaying the content
25 associated with the first segment of the media asset is necessary.

8. The method of claim 2, wherein providing the content associated with the first segment of the media
30 asset to the second user equipment comprises providing at least one of a summary of the first segment, a transcript of subtitles associated with the first

segment, a stored copy of the first segment, and edited audio associated with the first segment.

9. The method of claim 8, wherein providing the
5 content associated with the first segment of the media asset further comprises:

accessing, from the media database, an indication of a next break of the media asset;

monitoring playback of the media asset to
10 determine when the next break of the media asset begins; and

in response to determining that the next break of the media asset has begun, causing the content to be displayed to the second user.

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10. The method of claim 8, wherein providing the content associated with the first segment of the media asset further comprises:

extracting, from the second user profile, an
20 indication of a third user equipment associated with the second user, wherein the third user equipment is not generating for display the media asset; and

providing, to the third user equipment, the content associated with the first segment of the media
25 asset.

11. The method of claim 8, wherein providing the content associated with the first segment of the media asset further comprises:

30 extracting, from the first user profile, an indication of a preference selected by the second user for a type of content; and

accessing, from the media database, the content based on the indication of the preference.

12. A system for ensuring program comprehension
5 based on user comfort levels and geographic area, the system comprising:

control circuitry configured to:

receive, from a first user equipment associated with a first user, a viewing log indicating
10 that the first user equipment was generating for display a first segment of a media asset at a first time;

extract, from the viewing log, an indication of the first segment of the media asset, an indication
15 of the first user, and a first indication of the first time;

query a profile database for a first user profile of the first user;

receive, from the profile database, the first
20 user profile indicating a primary geography of the first user and a plurality of baseline biological parameters of the first user;

receive, from the first user equipment, a biometric log indicating a plurality of biological
25 parameters of the first user at the first time;

extract, from the biometric log, at least one indication of the plurality of biological parameters of the first user and a second indication of the first time;

30 compare the first indication of the first time and the second indication of the first time to determine that the biometric log and the viewing log coincide temporally;

compare the at least one indication of the plurality of biological parameters to the plurality of baseline biological parameters of the first user to determine a specific comfort level of the first user at
5 the first time;

query a media database for a linguistic characteristic of the first segment of the media asset, wherein the linguistic characteristic of the first segment is at least one of a language, a dialect, and
10 an accent;

receive, from the media database, a media data structure indicating the linguistic characteristic of the first segment of the media asset;

compare the linguistic characteristic of the first segment to a plurality of linguistic characteristics common to the primary geography of the first user to determine that the linguistic characteristic of the first segment of the media asset is not contained in the plurality of linguistic characteristics common to the primary geography of the first user;
15 20

based on determining that the linguistic characteristic of the first segment of the media asset is not contained in the plurality of linguistic characteristics common to the primary geography of the first user and that the biometric log and the viewing log coincide temporally:
25

retrieve, from the media database, a plurality of specific comfort levels of a plurality of users associated with the first segment of the media asset, wherein the plurality of users are located in the primary geography of the first user;
30

calculate an average comfort level
specific to the primary geography of the first user and
associated with the first segment of the media asset
based on the specific comfort level of the first user
5 and the plurality of specific comfort levels;
receive a request from a second user
equipment of a second user to playback the first
segment of the media asset;
query the profile database for a second user
10 profile of the second user;
receive, from the profile database, the
second user profile indicating that the second user is
associated with the primary geography of the first
user;
15 based on determining that the second user is
associated with the primary geography of the first
user, compare the average comfort level specific to the
primary geography of the first user to a threshold
level; and
20 based on determining that the average comfort
level specific to the primary geography of the first
user exceeds the threshold level, provide content
associated with the first segment of the media asset to
the second user equipment.

25

13. The system of claim 12, wherein the control
circuitry is further configured to:

receive, from a third user equipment associated
with a third user, a second viewing log indicating that
30 the third user equipment was generating for display the
first segment of the media asset at a second time;
based on receiving the second viewing log,
determine a primary geography of the third user;

receive, from the third user equipment, a second biometric log indicating a second plurality of biological parameters of the third user at the second time;

5 compare the second plurality of biological parameters to a second plurality of baseline biological parameters of the second user to determine a second specific comfort level of the second user at the second time;

10 compare the linguistic characteristic of the first segment to a second plurality of linguistic characteristics common to the primary geography of the second user to determine that the linguistic characteristic of the first segment of the media asset
15 is contained in the second plurality of linguistic characteristics common to the primary geography of the second user;

 based on determining that the linguistic characteristic of the first segment of the media asset
20 is contained in the second plurality of linguistic characteristics common to the primary geography of the second user:

 retrieve, from the media database, a second plurality of specific comfort levels of a second
25 plurality of users associated with the first segment of the media asset, wherein the second plurality of users are located in the primary geography of the second user;

 calculate a baseline comfort level associated
30 with the first segment of the media asset based on the second specific comfort level of the second user and the second plurality of specific comfort levels; and

calculate the threshold level based on the
baseline comfort level.

14. The system of claim 12, wherein the control
5 circuitry is further configured to:
access a knowledge graph to determine a third user
associated with the second user;
access a third user profile associated with the
third user from the profile database;
10 extract, from the third user profile, an
indication of a comfort level of the third user,
wherein the third user profile further associates the
comfort level of the third user with the first segment
of the media asset; and
15 based on determining that the comfort level of the
third user does not exceed the threshold level, cause a
display of a notification to the second user querying
whether displaying the content associated with the
first segment of the media asset is necessary.

20

15. The system of claim 12, wherein the control
circuitry is further configured to calculate the
plurality of baseline biological parameters of the
first user based on a second plurality of biological
25 parameters gathered while the first user equipment was
generating for display a second segment of a second
media asset with a second linguistic characteristic
that is contained in the plurality of linguistic
characteristics common to the primary geography of the
30 first user.

16. The system of claim 12, wherein the control circuitry is configured to determine the specific comfort level of the first user at the first time by:

calculating a plurality of differences each
5 associated with one of a plurality of biological parameter types, wherein each difference of the plurality of differences is a difference between a biological parameter of the plurality of biological parameters of a first type of the plurality of
10 biological parameter types and a baseline biological parameter of the plurality of baseline biological parameters of the first type;

accessing, from the media database, a function relating the plurality of differences to specific
15 comfort levels; and

inputting the plurality of differences into the function to determine the specific comfort level of the first user.

20 17. The system of claim 12, wherein the control circuitry is further configured to:

access, from the second user profile, a secondary geography of the second user;

compare the linguistic characteristic of the first
25 segment to a second plurality of linguistic characteristics common to the secondary geography of the second user to determine that the linguistic characteristic of the first segment of the media asset is contained in the plurality of linguistic
30 characteristics common to the secondary geography of the second user;

based on determining that the linguistic characteristic of the first segment of the media asset

is contained in the second plurality of linguistic characteristics common to the secondary geography of the second user, cause a display of a notification to the second user querying whether displaying the content associated with the first segment of the media asset is
5 necessary.

18. The system of claim 12, wherein the control circuitry is configured to provide the content
10 associated with the first segment of the media asset to the second user equipment by providing at least one of a summary of the first segment, a transcript of subtitles associated with the first segment, a stored copy of the first segment, and edited audio associated
15 with the first segment.

19. The system of claim 18, wherein the control circuitry is further configured to provide the content associated with the first segment of the media asset
20 by:

accessing, from the media database, an indication of a next break of the media asset;

monitoring playback of the media asset to determine when the next break of the media asset
25 begins; and

in response to determining that the next break of the media asset has begun, causing the content to be displayed to the second user.

30 20. The system of claim 18, wherein the control circuitry is further configured to provide the content associated with the first segment of the media asset by:

extracting, from the second user profile, an indication of a third user equipment associated with the second user, wherein the third user equipment is not generating for display the media asset; and

5 providing, to the third user equipment, the content associated with the first segment of the media asset.

21. The system of claim 18, wherein the control
10 circuitry is further configured to provide the content associated with the first segment of the media asset by:

extracting, from the first user profile, an indication of a preference selected by the second user
15 for a type of content; and

accessing, from the media database, the content based on the indication of the preference.

22. A system for ensuring program comprehension
20 based on user comfort levels and geographic area, the system comprising:

means for receiving, from a first user equipment associated with a first user, a viewing log indicating that the first user equipment was generating for
25 display a first segment of a media asset at a first time;

means for extracting, from the viewing log, an indication of the first segment of the media asset, an indication of the first user, and a first indication of
30 the first time;

means for querying a profile database for a first user profile of the first user;

means for receiving, from the profile database,
the first user profile indicating a primary geography
of the first user and a plurality of baseline
biological parameters of the first user;

5 means for receiving, from the first user
equipment, a biometric log indicating a plurality of
biological parameters of the first user at the first
time;

means for extracting, from the biometric log, at
10 least one indication of the plurality of biological
parameters of the first user and a second indication of
the first time;

means for comparing the first indication of the
first time and the second indication of the first time
15 to determine that the biometric log and the viewing log
coincide temporally;

means for comparing the at least one indication of
the plurality of biological parameters to the plurality
of baseline biological parameters of the first user to
20 determine a specific comfort level of the first user at
the first time;

means for querying a media database for a
linguistic characteristic of the first segment of the
media asset, wherein the linguistic characteristic of
25 the first segment is at least one of a language, a
dialect, and an accent;

means for receiving, from the media database, a
media data structure indicating the linguistic
characteristic of the first segment of the media asset;

30 means for comparing the linguistic characteristic
of the first segment to a plurality of linguistic
characteristics common to the primary geography of the
first user to determine that the linguistic

characteristic of the first segment of the media asset is not contained in the plurality of linguistic characteristics common to the primary geography of the first user;

5 based on determining that the linguistic characteristic of the first segment of the media asset is not contained in the plurality of linguistic characteristics common to the primary geography of the first user and that the biometric log and the viewing
10 log coincide temporally:

 means for retrieving, from the media database, a plurality of specific comfort levels of a plurality of users associated with the first segment of the media asset, wherein the plurality of users are
15 located in the primary geography of the first user;

 means for calculating an average comfort level specific to the primary geography of the first user and associated with the first segment of the media asset based on the specific comfort level of the first
20 user and the plurality of specific comfort levels;

 means for receiving a request from a second user equipment of a second user to playback the first segment of the media asset;

 means for querying the profile database for a
25 second user profile of the second user;

 means for receiving, from the profile database, the second user profile indicating that the second user is associated with the primary geography of the first user;

30 means for comparing, based on determining that the second user is associated with the primary geography of the first user, the average comfort level specific to

the primary geography of the first user to a threshold level; and

means for providing content associated with the first segment of the media asset to the second user equipment based on determining that the average comfort level specific to the primary geography of the first user exceeds the threshold level.

23. The system of claim 22, further comprising:
means for receiving, from a third user equipment associated with a third user, a second viewing log indicating that the third user equipment was generating for display the first segment of the media asset at a second time;

means for determining, based on receiving the second viewing log, a primary geography of the third user;

means for receiving, from the third user equipment, a second biometric log indicating a second plurality of biological parameters of the third user at the second time;

means for comparing the second plurality of biological parameters to a second plurality of baseline biological parameters of the second user to determine a second specific comfort level of the second user at the second time;

means for comparing the linguistic characteristic of the first segment to a second plurality of linguistic characteristics common to the primary geography of the second user to determine that the linguistic characteristic of the first segment of the media asset is contained in the second plurality of

linguistic characteristics common to the primary
geography of the second user;

based on determining that the linguistic
characteristic of the first segment of the media asset
5 is contained in the second plurality of linguistic
characteristics common to the primary geography of the
second user:

means for retrieving, from the media
database, a second plurality of specific comfort levels
10 of a second plurality of users associated with the
first segment of the media asset, wherein the second
plurality of users are located in the primary geography
of the second user;

means for calculating a baseline comfort
15 level associated with the first segment of the media
asset based on the second specific comfort level of the
second user and the second plurality of specific
comfort levels; and

means for calculating the threshold level based on
20 the baseline comfort level.

24. The system of claim 22, further comprising:

means for accessing a knowledge graph to determine
a third user associated with the second user;

25 means for accessing a third user profile
associated with the third user from the profile
database;

means for extracting, from the third user profile,
an indication of a comfort level of the third user,
30 wherein the third user profile further associates the
comfort level of the third user with the first segment
of the media asset; and

means for causing a display of a notification to the second user querying whether displaying the content associated with the first segment of the media asset is necessary based on determining that the comfort level
5 of the third user does not exceed the threshold level.

25. The system of claim 22, further comprising means for calculating the plurality of baseline biological parameters of the first user based on a
10 second plurality of biological parameters gathered while the first user equipment was generating for display a second segment of a second media asset with a second linguistic characteristic that is contained in the plurality of linguistic characteristics common to
15 the primary geography of the first user.

26. The system of claim 22, the means for determining the specific comfort level of the first user at the first time comprise:
20 means for calculating a plurality of differences each associated with one of a plurality of biological parameter types, wherein each difference of the plurality of differences is a difference between a biological parameter of the plurality of biological
25 parameters of a first type of the plurality of biological parameter types and a baseline biological parameter of the plurality of baseline biological parameters of the first type;
means for accessing, from the media database, a
30 function relating the plurality of differences to specific comfort levels; and

means for inputting the plurality of differences into the function to determine the specific comfort level of the first user.

5 27. The system of claim 22, the system further comprising:

 means for accessing, from the second user profile, a secondary geography of the second user;

 means for comparing the linguistic characteristic
10 of the first segment to a second plurality of linguistic characteristics common to the secondary geography of the second user to determine that the linguistic characteristic of the first segment of the media asset is contained in the plurality of linguistic
15 characteristics common to the secondary geography of the second user;

 means for causing a display of a notification to the second user querying whether displaying the content associated with the first segment of the media asset is
20 necessary based on determining that the linguistic characteristic of the first segment of the media asset is contained in the second plurality of linguistic characteristics common to the secondary geography of the second user.

25

 28. The system of claim 22, wherein the means for providing the content associated with the first segment of the media asset to the second user equipment
comprise means for providing at least one of a summary
30 of the first segment, a transcript of subtitles associated with the first segment, a stored copy of the first segment, and edited audio associated with the first segment.

29. The system of claim 28, wherein the means for providing the content associated with the first segment of the media asset further comprise:

5 means for accessing, from the media database, an indication of a next break of the media asset;

 means for monitoring playback of the media asset to determine when the next break of the media asset begins; and

10 means for causing, in response to determining that the next break of the media asset has begun, the content to be displayed to the second user.

30. The system of claim 28, wherein the means for providing the content associated with the first segment of the media asset further comprise:

 means for extracting, from the second user profile, an indication of a third user equipment associated with the second user, wherein the third user equipment is not generating for display the media asset; and

 means for providing, to the third user equipment, the content associated with the first segment of the media asset.

25

31. The system of claim 28, wherein the means for providing the content associated with the first segment of the media asset further comprise:

 means for extracting, from the first user profile, an indication of a preference selected by the second user for a type of content; and

 means for accessing, from the media database, the content based on the indication of the preference.

32. A non-transitory machine-readable medium comprising non-transitory machine-readable instructions encoded thereon for ensuring program comprehension
5 based on user comfort levels and geographic area, the instructions comprising:

instructions to receive, from a first user equipment associated with a first user, a viewing log indicating that the first user equipment was generating
10 for display a first segment of a media asset at a first time;

instructions to extract, from the viewing log, an indication of the first segment of the media asset, an indication of the first user, and a first indication of
15 the first time;

instructions to query a profile database for a first user profile of the first user;

instructions to receive, from the profile database, the first user profile indicating a primary
20 geography of the first user and a plurality of baseline biological parameters of the first user;

instructions to receive, from the first user equipment, a biometric log indicating a plurality of biological parameters of the first user at the first
25 time;

instructions to extract, from the biometric log, at least one indication of the plurality of biological parameters of the first user and a second indication of the first time;

30 instructions to compare the first indication of the first time and the second indication of the first time to determine that the biometric log and the viewing log coincide temporally;

instructions to compare the at least one
indication of the plurality of biological parameters to
the plurality of baseline biological parameters of the
first user to determine a specific comfort level of the
5 first user at the first time;

instructions to query a media database for a
linguistic characteristic of the first segment of the
media asset, wherein the linguistic characteristic of
the first segment is at least one of a language, a
10 dialect, and an accent;

instructions to receive, from the media database,
a media data structure indicating the linguistic
characteristic of the first segment of the media asset;

instructions to compare the linguistic
15 characteristic of the first segment to a plurality of
linguistic characteristics common to the primary
geography of the first user to determine that the
linguistic characteristic of the first segment of the
media asset is not contained in the plurality of
20 linguistic characteristics common to the primary
geography of the first user;

based on determining that the linguistic
characteristic of the first segment of the media asset
is not contained in the plurality of linguistic
25 characteristics common to the primary geography of the
first user and that the biometric log and the viewing
log coincide temporally:

instructions to retrieve, from the media
database, a plurality of specific comfort levels of a
30 plurality of users associated with the first segment of
the media asset, wherein the plurality of users are
located in the primary geography of the first user;

instructions to calculate an average comfort level specific to the primary geography of the first user and associated with the first segment of the media asset based on the specific comfort level of the first user and the plurality of specific comfort levels;

instructions to receive a request from a second user equipment of a second user to playback the first segment of the media asset;

instructions to query the profile database for a second user profile of the second user;

instructions to receive, from the profile database, the second user profile indicating that the second user is associated with the primary geography of the first user;

instructions to compare, based on determining that the second user is associated with the primary geography of the first user, the average comfort level specific to the primary geography of the first user to a threshold level; and

instructions to provide content associated with the first segment of the media asset to the second user equipment based on determining that the average comfort level specific to the primary geography of the first user exceeds the threshold level.

25

33. The non-transitory machine-readable medium of claim 32, wherein instructions further comprise:

instructions to receive, from a third user equipment associated with a third user, a second viewing log indicating that the third user equipment was generating for display the first segment of the media asset at a second time;

30

instructions to determine, based on receiving the second viewing log, a primary geography of the third user;

instructions to receive, from the third user
5 equipment, a second biometric log indicating a second plurality of biological parameters of the third user at the second time;

instructions to compare the second plurality of biological parameters to a second plurality of baseline
10 biological parameters of the second user to determine a second specific comfort level of the second user at the second time;

instructions to compare the linguistic characteristic of the first segment to a second
15 plurality of linguistic characteristics common to the primary geography of the second user to determine that the linguistic characteristic of the first segment of the media asset is contained in the second plurality of linguistic characteristics common to the primary
20 geography of the second user;

based on determining that the linguistic characteristic of the first segment of the media asset is contained in the second plurality of linguistic characteristics common to the primary geography of the
25 second user:

instructions to retrieve, from the media database, a second plurality of specific comfort levels of a second plurality of users associated with the first segment of the media asset, wherein the second
30 plurality of users are located in the primary geography of the second user;

instructions to calculate a baseline comfort level associated with the first segment of the media

asset based on the second specific comfort level of the second user and the second plurality of specific comfort levels; and

instructions to calculate the threshold level
5 based on the baseline comfort level.

34. The non-transitory machine-readable medium of claim 32, wherein the instructions further comprise:

instructions to access a knowledge graph to
10 determine a third user associated with the second user;
instructions to access a third user profile associated with the third user from the profile database;

instructions to extract, from the third user
15 profile, an indication of a comfort level of the third user, wherein the third user profile further associates the comfort level of the third user with the first segment of the media asset; and

instructions to cause a display of a notification
20 to the second user querying whether displaying the content associated with the first segment of the media asset is necessary based on determining that the comfort level of the third user does not exceed the threshold level.

25

35. The non-transitory machine-readable medium of claim 32, wherein the instructions further comprise instructions to calculate the plurality of baseline biological parameters of the first user based on a
30 second plurality of biological parameters gathered while the first user equipment was generating for display a second segment of a second media asset with a second linguistic characteristic that is contained in

the plurality of linguistic characteristics common to the primary geography of the first user.

36. The non-transitory machine-readable medium of claim 32, wherein the instruction to determine the specific comfort level of the first user at the first time comprise:

instructions to calculate a plurality of differences each associated with one of a plurality of biological parameter types, wherein each difference of the plurality of differences is a difference between a biological parameter of the plurality of biological parameters of a first type of the plurality of biological parameter types and a baseline biological parameter of the plurality of baseline biological parameters of the first type;

instructions to access, from the media database, a function relating the plurality of differences to specific comfort levels; and

instructions to input the plurality of differences into the function to determine the specific comfort level of the first user.

37. The non-transitory machine-readable medium of claim 32, wherein the instructions further comprise:

instructions to access, from the second user profile, a secondary geography of the second user;

instructions to compare the linguistic characteristic of the first segment to a second plurality of linguistic characteristics common to the secondary geography of the second user to determine that the linguistic characteristic of the first segment of the media asset is contained in the plurality of

linguistic characteristics common to the secondary
geography of the second user;

instructions to cause a display of a notification
to the second user querying whether displaying the
5 content associated with the first segment of the media
asset is necessary based on determining that the
linguistic characteristic of the first segment of the
media asset is contained in the second plurality of
linguistic characteristics common to the secondary
10 geography of the second user.

38. The system of claim 32, wherein the
instructions to provide the content associated with the
first segment of the media asset to the second user
15 equipment comprise instructions to provide at least one
of a summary of the first segment, a transcript of
subtitles associated with the first segment, a stored
copy of the first segment, and edited audio associated
with the first segment.

20

39. The non-transitory machine-readable medium of
claim 38, wherein instruction to provide the content
associated with the first segment of the media asset
further comprise:

25 instructions to access, from the media database,
an indication of a next break of the media asset;

instructions to monitor playback of the media
asset to determine when the next break of the media
asset begins; and

30 instructions to causing the content to be
displayed to the second user in response to determining
that the next break of the media asset has begun.

40. The non-transitory machine-readable medium of claim 38, wherein instruction to provide the content associated with the first segment of the media asset further comprise:

5 instructions to extract, from the second user profile, an indication of a third user equipment associated with the second user, wherein the third user equipment is not generating for display the media asset; and

10 instructions to provide, to the third user equipment, the content associated with the first segment of the media asset.

41. The non-transitory machine-readable medium of claim 38, wherein instruction to provide the content associated with the first segment of the media asset further comprise:

15 instructions to extract, from the first user profile, an indication of a preference selected by the second user for a type of content; and

20 instructions to access, from the media database, the content based on the indication of the preference.

42. A method for ensuring program comprehension based on a plurality of user comfort levels and geographic area, the method comprising:

25 receiving, from a first user equipment associated with a first user, a viewing log indicating that the first user equipment was generating for display a first segment of a media asset at a first time;

30 extracting, from the viewing log, an indication of the first segment of the media asset, an indication of

the first user, and a first indication of the first time;

querying a profile database for a first user profile of the first user;

5 receiving, from the profile database, the first user profile indicating a primary geography of the first user and a plurality of baseline biological parameters of the first user;

receiving, from the first user equipment, a
10 biometric log indicating a plurality of biological parameters of the first user at the first time;

extracting, from the biometric log, at least one indication of the plurality of biological parameters of the first user and a second indication of the first
15 time;

comparing the first indication of the first time and the second indication of the first time to determine that the biometric log and the viewing log coincide temporally;

20 comparing the at least one indication of the plurality of biological parameters to the plurality of baseline biological parameters of the first user to determine a specific comfort level of the first user at the first time;

25 querying a media database for a linguistic characteristic of the first segment of the media asset, wherein the linguistic characteristic of the first segment is at least one of a language, a dialect, and an accent;

30 receiving, from the media database, a media data structure indicating the linguistic characteristic of the first segment of the media asset;

comparing the linguistic characteristic of the first segment to a plurality of linguistic characteristics common to the primary geography of the first user to determine that the linguistic
5 characteristic of the first segment of the media asset is not contained in the plurality of linguistic characteristics common to the primary geography of the first user;

based on determining that the linguistic
10 characteristic of the first segment of the media asset is not contained in the plurality of linguistic characteristics common to the primary geography of the first user and that the biometric log and the viewing log coincide temporally:

15 retrieving, from the media database, a plurality of specific comfort levels of a plurality of users associated with the first segment of the media asset, wherein the plurality of users are located in the primary geography of the first user;

20 calculating an average comfort level specific to the primary geography of the first user and associated with the first segment of the media asset based on the specific comfort level of the first user and the plurality of specific comfort levels;

25 receiving a request from a second user equipment of a second user to playback the first segment of the media asset;

querying the profile database for a second user profile of the second user;

30 receiving, from the profile database, the second user profile indicating that the second user is associated with the primary geography of the first user;

based on determining that the second user is associated with the primary geography of the first user, comparing the average comfort level specific to the primary geography of the first user to a threshold
5 level; and

based on determining that the average comfort level specific to the primary geography of the first user exceeds the threshold level, providing content associated with the first segment of the media asset to
10 the second user equipment.

43. The method of claim 42, the method further comprising:

receiving, from a third user equipment associated
15 with a third user, a second viewing log indicating that the third user equipment was generating for display the first segment of the media asset at a second time;

based on receiving the second viewing log, determining a primary geography of the third user;

20 receiving, from the third user equipment, a second biometric log indicating a second plurality of biological parameters of the third user at the second time;

comparing the second plurality of biological
25 parameters to a second plurality of baseline biological parameters of the second user to determine a second specific comfort level of the second user at the second time;

comparing the linguistic characteristic of the
30 first segment to a second plurality of linguistic characteristics common to the primary geography of the second user to determine that the linguistic characteristic of the first segment of the media asset

is contained in the second plurality of linguistic characteristics common to the primary geography of the second user;

5 based on determining that the linguistic characteristic of the first segment of the media asset is contained in the second plurality of linguistic characteristics common to the primary geography of the second user:

10 retrieving, from the media database, a second plurality of specific comfort levels of a second plurality of users associated with the first segment of the media asset, wherein the second plurality of users are located in the primary geography of the second user;

15 calculating a baseline comfort level associated with the first segment of the media asset based on the second specific comfort level of the second user and the second plurality of specific comfort levels; and

20 wherein the threshold level is calculated based on the baseline comfort level.

44. The method of claims 42 or 43, further comprising:

25 accessing a knowledge graph to determine a third user associated with the second user;

 accessing a third user profile associated with the third user from the profile database;

30 extracting, from the third user profile, an indication of a comfort level of the third user, wherein the third user profile further associates the comfort level of the third user with the first segment of the media asset; and

based on determining that the comfort level of the third user does not exceed the threshold level, causing a display of a notification to the second user querying whether displaying the content associated with the
5 first segment of the media asset is necessary.

45. The method of any of claims 42 - 44, wherein the plurality of baseline biological parameters of the first user are calculated based on a second plurality
10 of biological parameters gathered while the first user equipment was generating for display a second segment of a second media asset with a second linguistic characteristic that is contained in the plurality of linguistic characteristics common to the primary
15 geography of the first user.

46. The method of any of claims 42 - 45, wherein determining the specific comfort level of the first user at the first time comprises:
20 calculating a plurality of differences each associated with one of a plurality of biological parameter types, wherein each difference of the plurality of differences is a difference between a biological parameter of the plurality of biological
25 parameters of a first type of the plurality of biological parameter types and a baseline biological parameter of the plurality of baseline biological parameters of the first type;
accessing, from the media database, a function
30 relating the plurality of differences to specific comfort levels; and

inputting the plurality of differences into the function to determine the specific comfort level of the first user.

5 47. The method of any of claims 42 - 46, further comprising:

 accessing, from the second user profile, a secondary geography of the second user;

 comparing the linguistic characteristic of the
10 first segment to a second plurality of linguistic characteristics common to the secondary geography of the second user to determine that the linguistic characteristic of the first segment of the media asset is contained in the plurality of linguistic
15 characteristics common to the secondary geography of the second user;

 based on determining that the linguistic characteristic of the first segment of the media asset is contained in the second plurality of linguistic
20 characteristics common to the secondary geography of the second user, causing a display of a notification to the second user querying whether displaying the content associated with the first segment of the media asset is necessary.

25

 48. The method of any of claims 42 - 47, wherein providing the content associated with the first segment of the media asset to the second user equipment comprises providing at least one of a summary of the
30 first segment, a transcript of subtitles associated with the first segment, a stored copy of the first segment, and edited audio associated with the first segment.

49. The method of claim 48, wherein providing the content associated with the first segment of the media asset further comprises:

5 accessing, from the media database, an indication of a next break of the media asset;

 monitoring playback of the media asset to determine when the next break of the media asset begins; and

10 in response to determining that the next break of the media asset has begun, causing the content to be displayed to the second user.

50. The method of claims 48 or 49, wherein
15 providing the content associated with the first segment of the media asset further comprises:

 extracting, from the second user profile, an indication of a third user equipment associated with the second user, wherein the third user equipment is
20 not generating for display the media asset; and

 providing, to the third user equipment, the content associated with the first segment of the media asset.

25 51. The method of any of claims 48 - 50, wherein providing the content associated with the first segment of the media asset further comprises:

 extracting, from the first user profile, an indication of a preference selected by the second user
30 for a type of content; and

 accessing, from the media database, the content based on the indication of the preference.

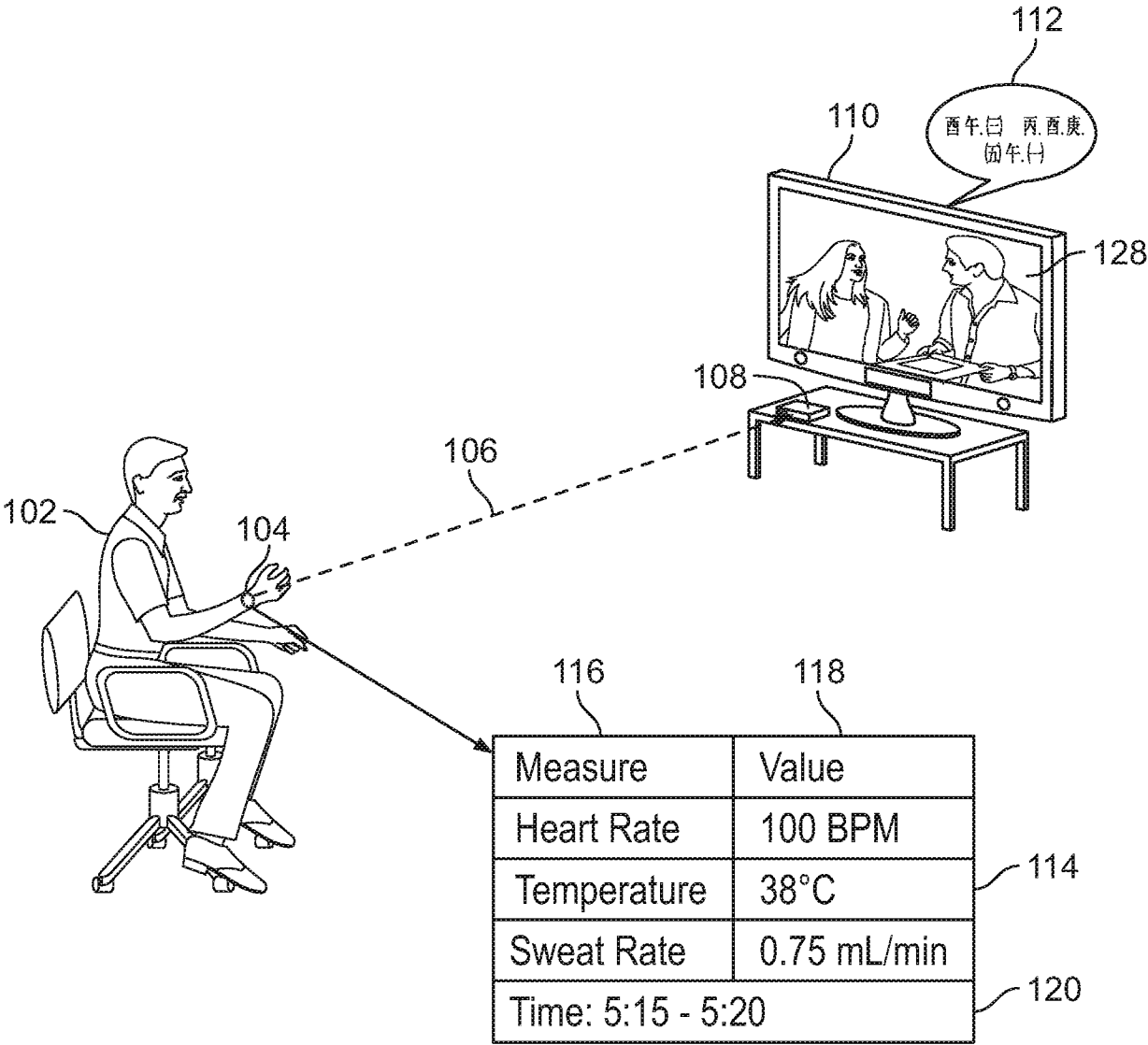


FIG. 1

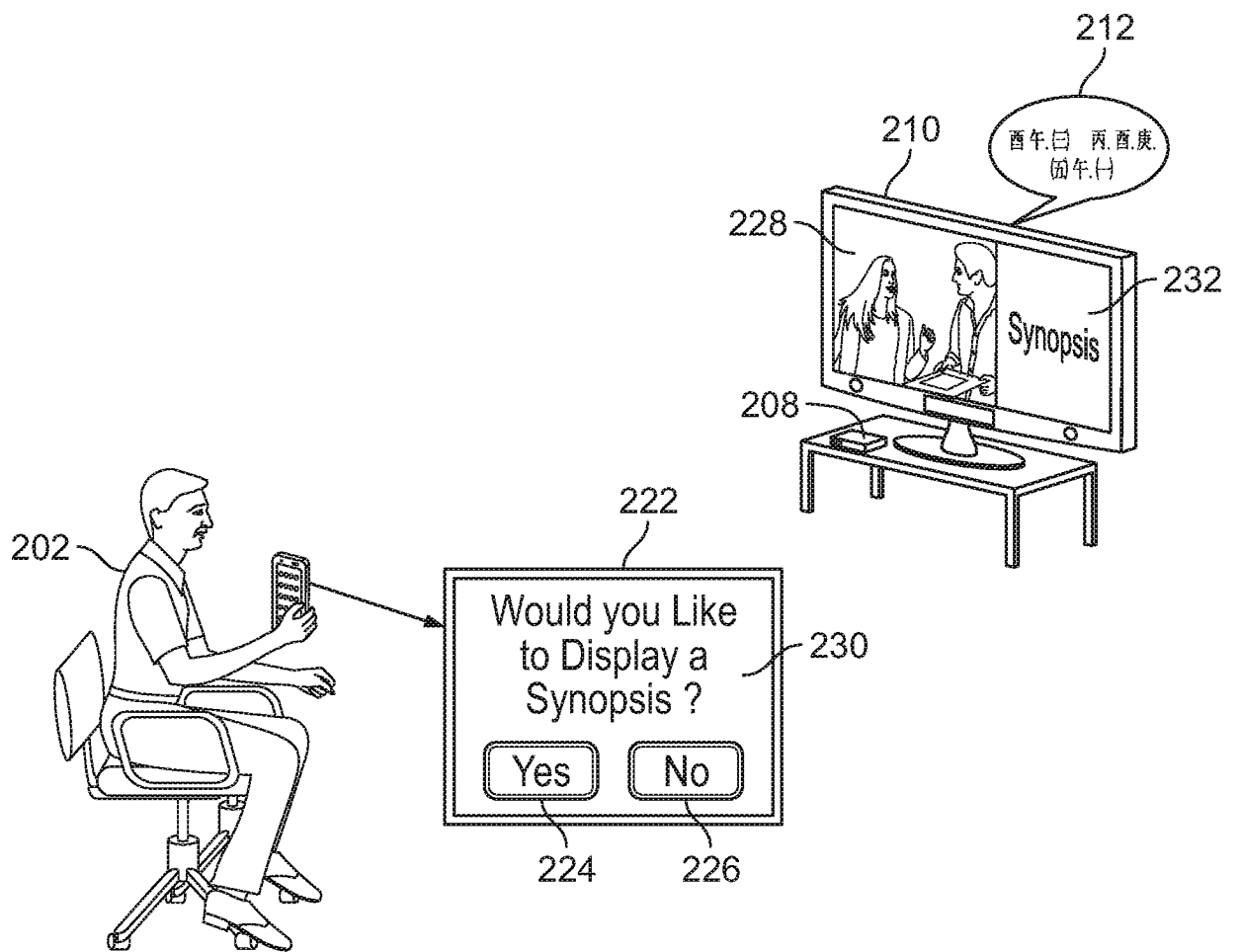
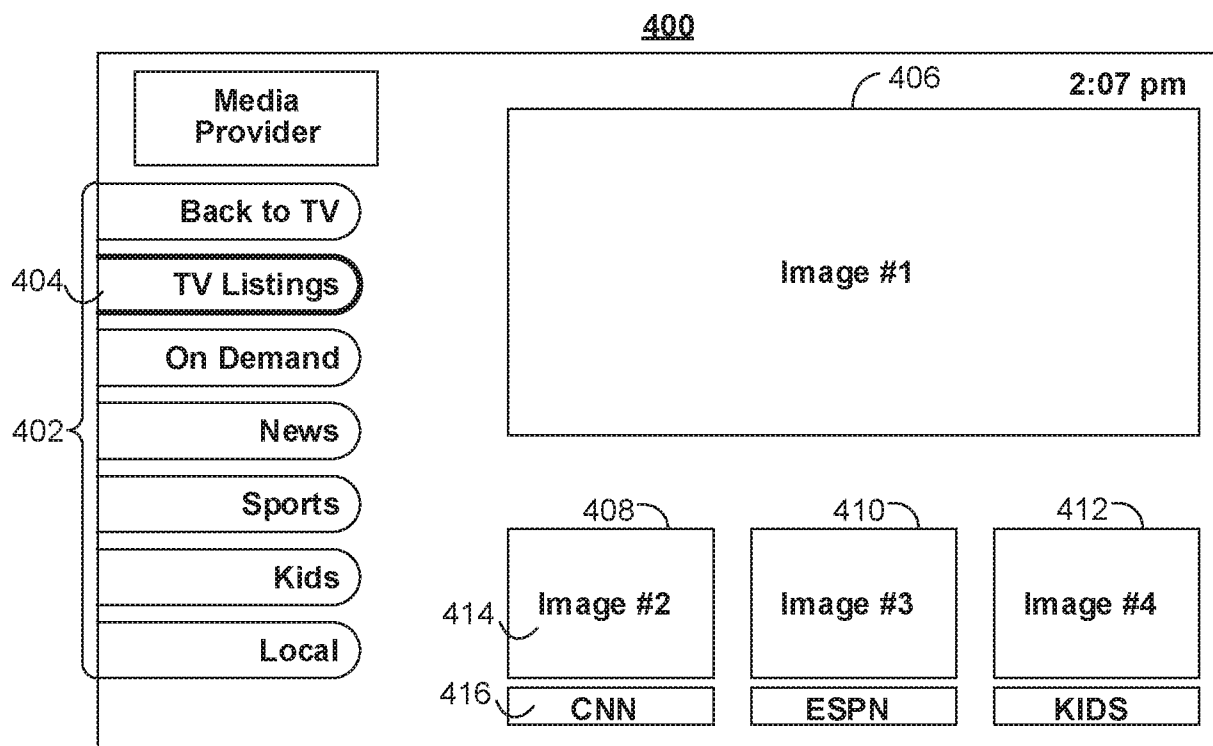
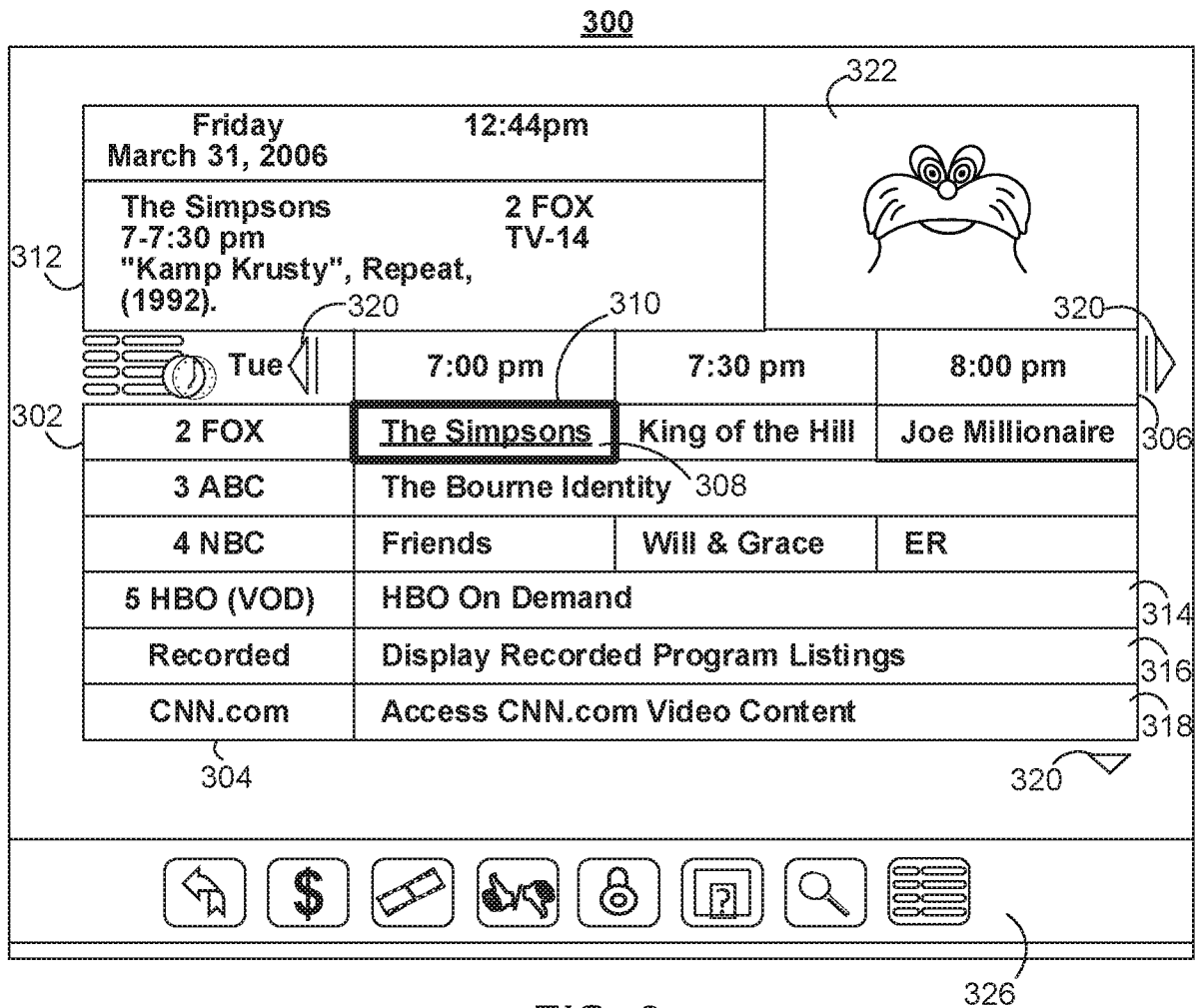
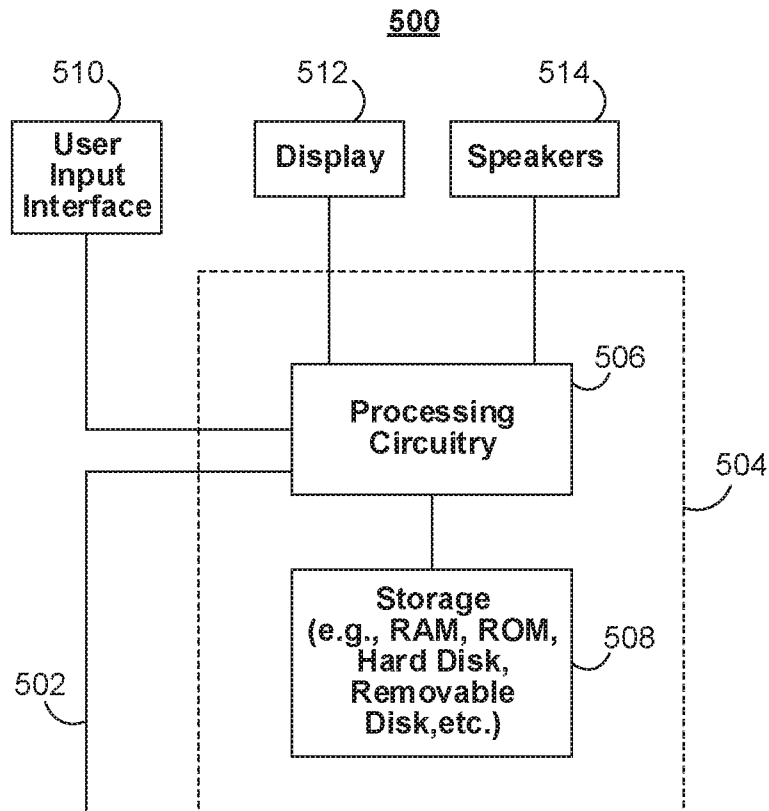
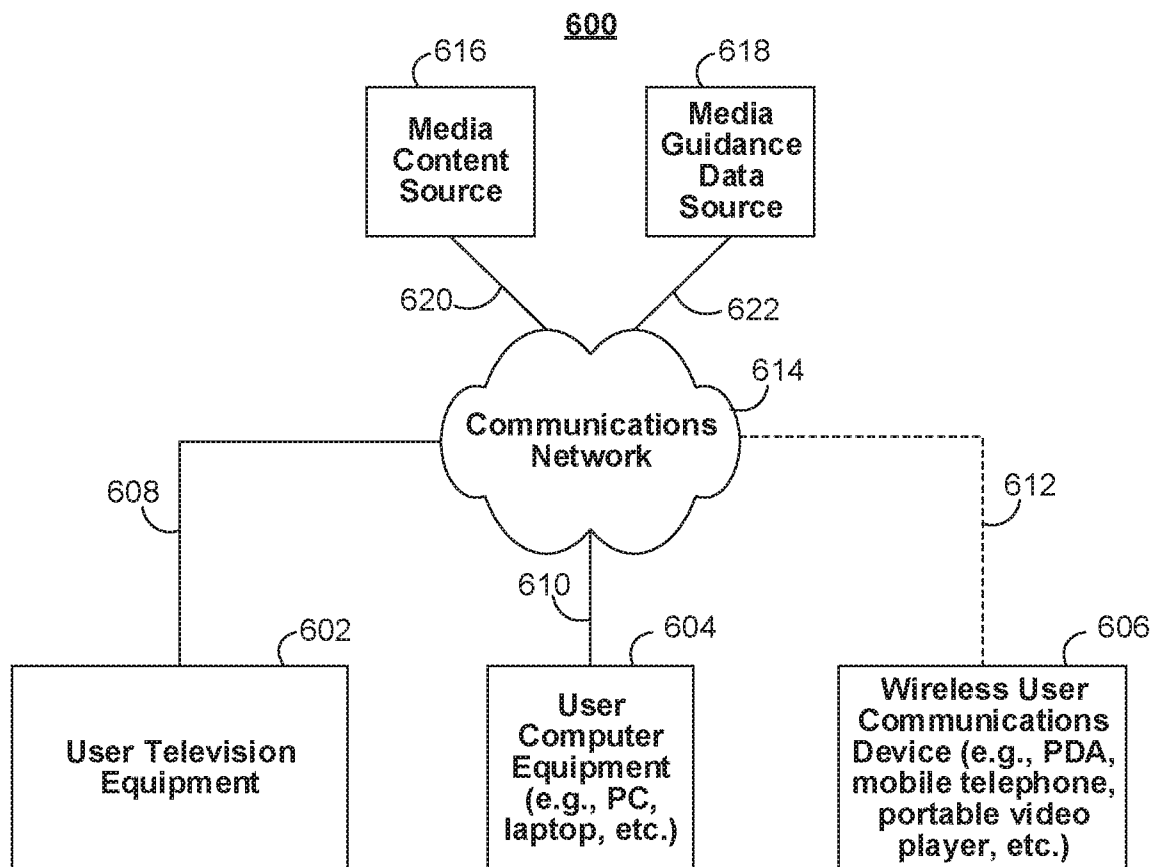


FIG. 2



**FIG. 5****FIG. 6**

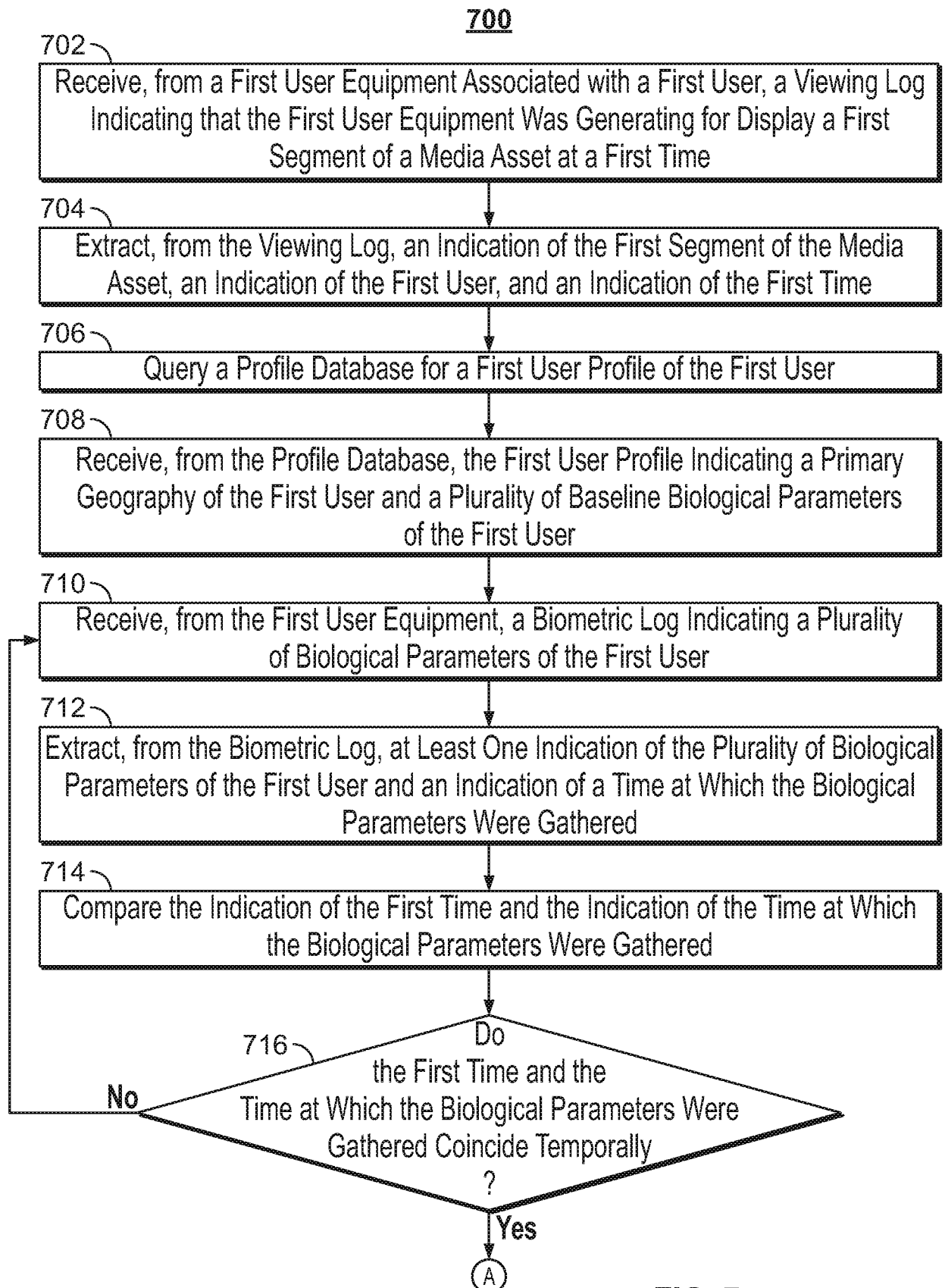


FIG. 7

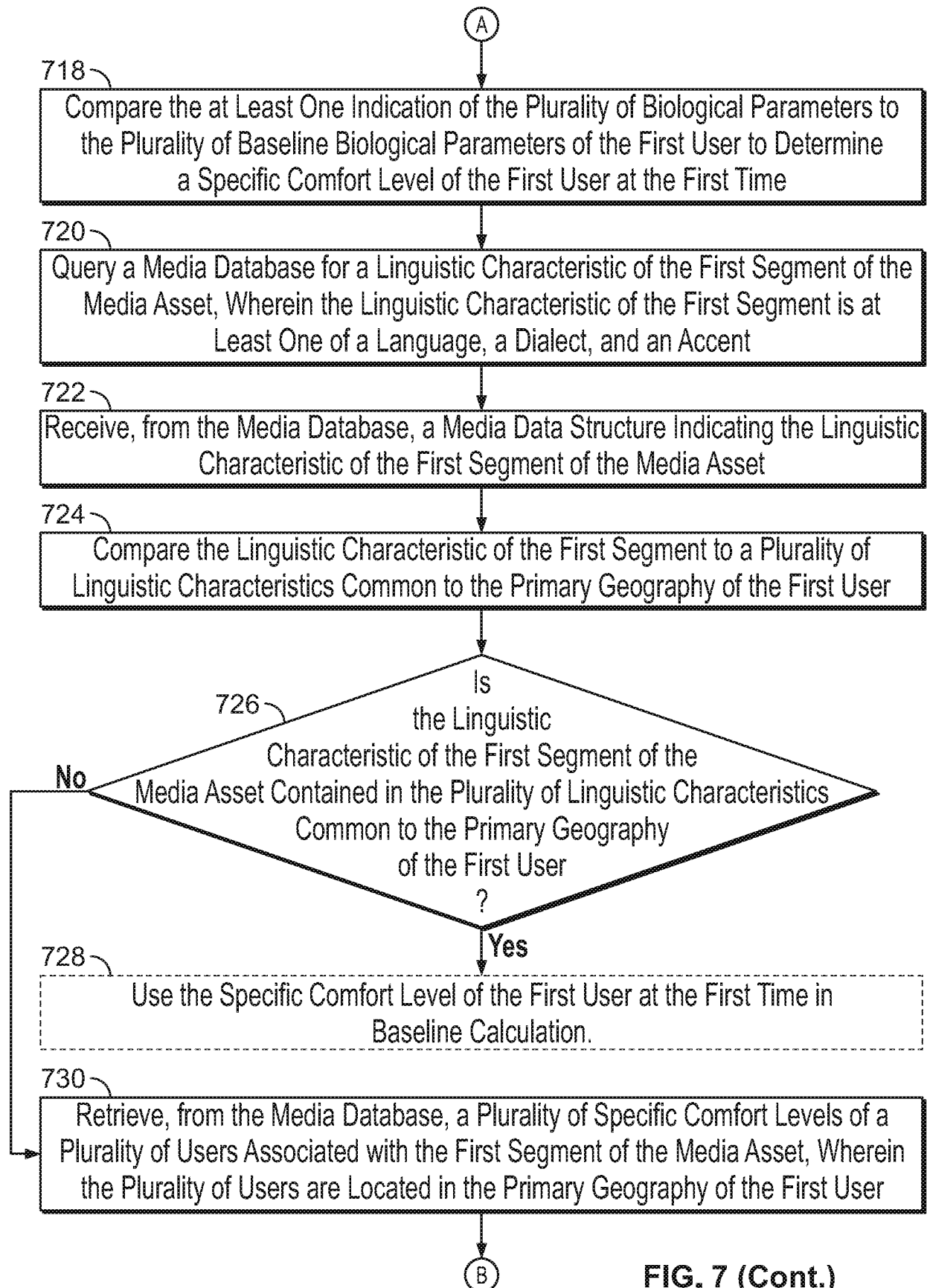


FIG. 7 (Cont.)

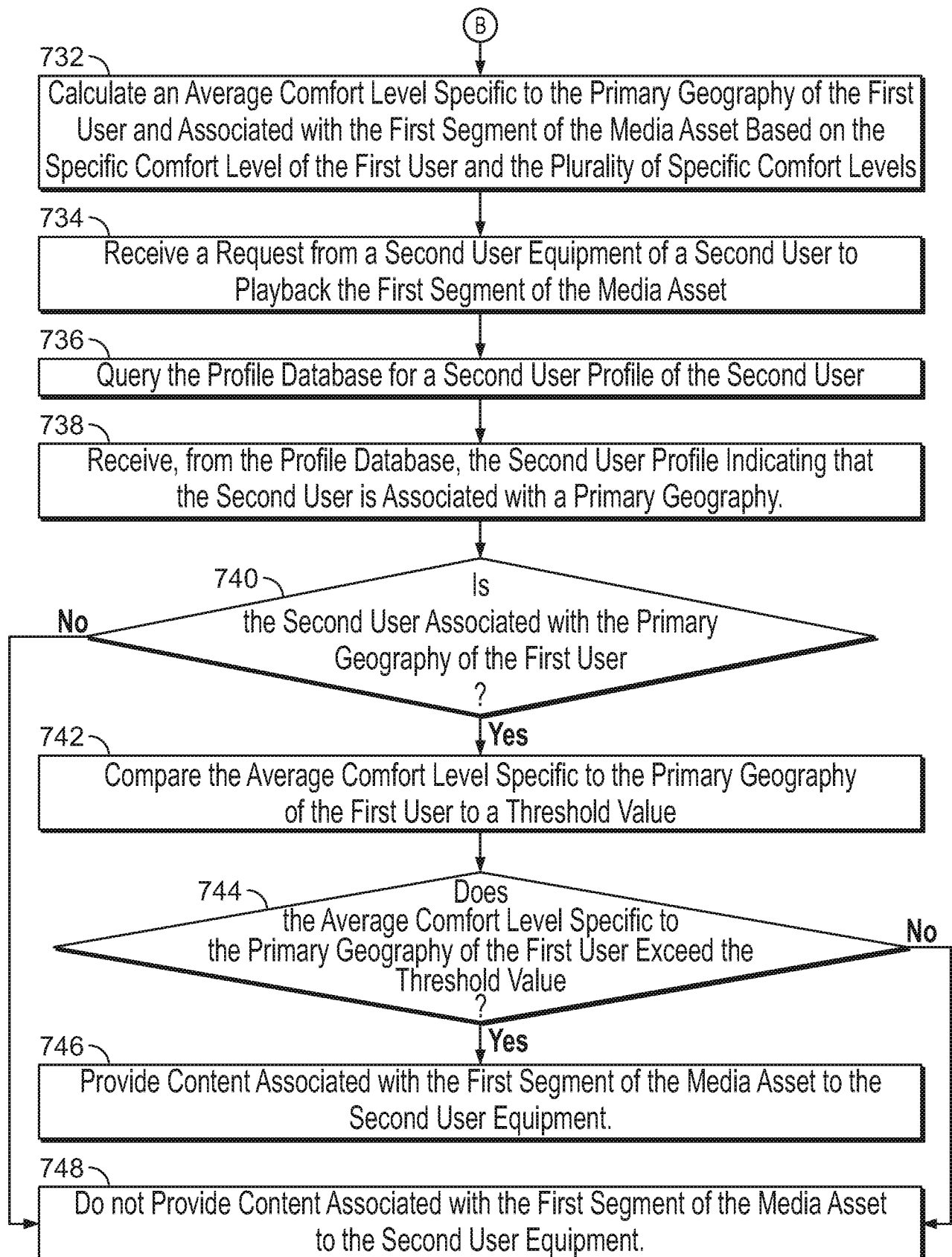
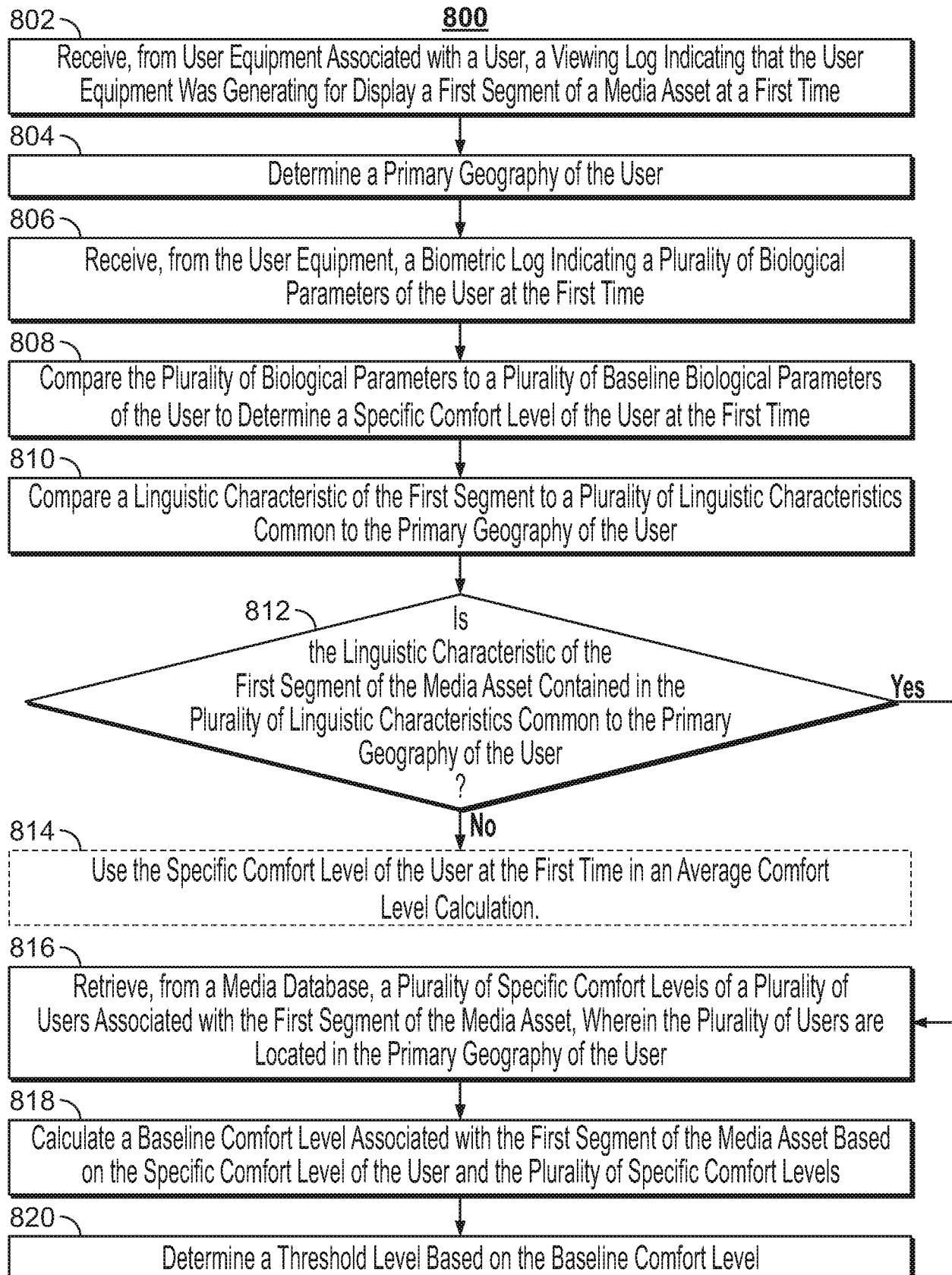


FIG. 7 (Cont.)

**FIG. 8**

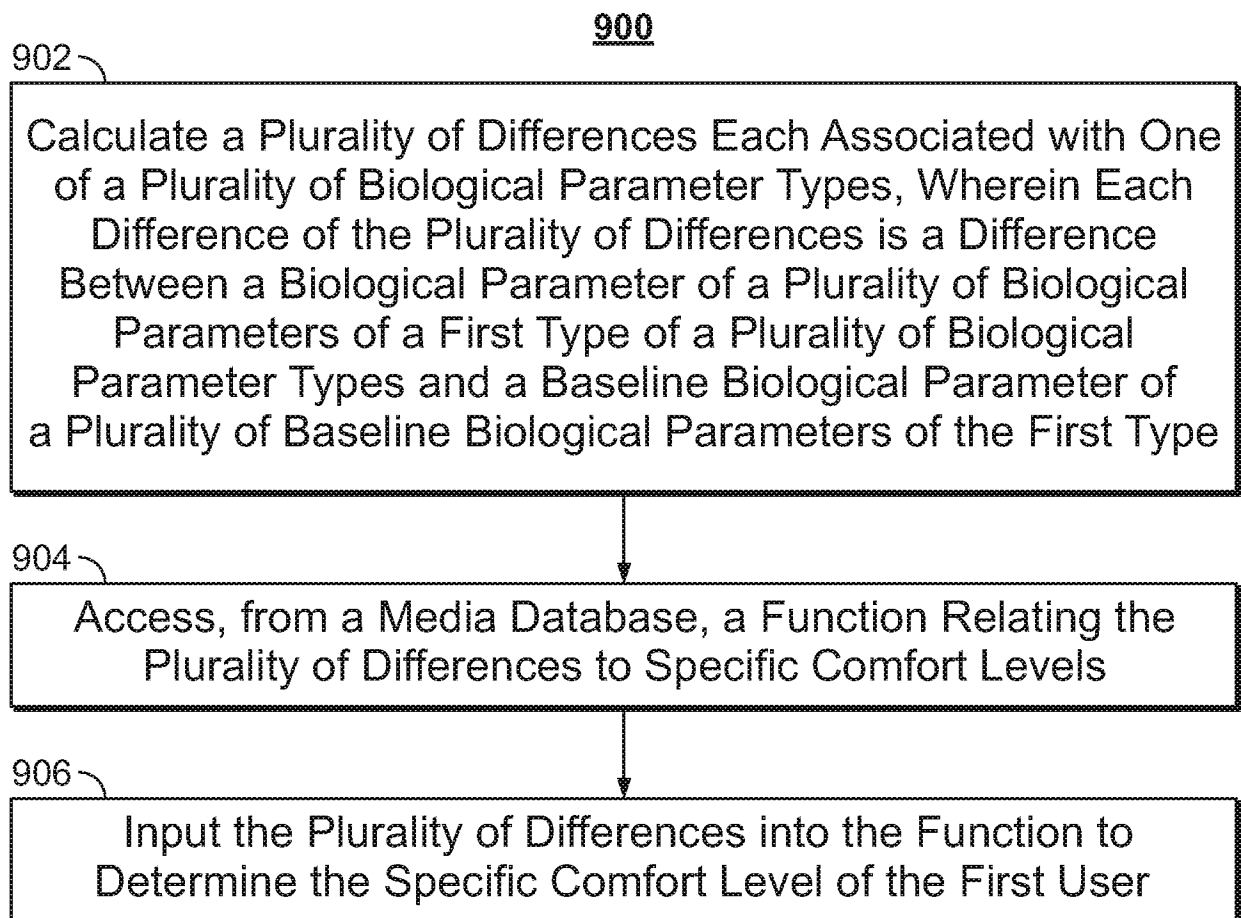


FIG. 9

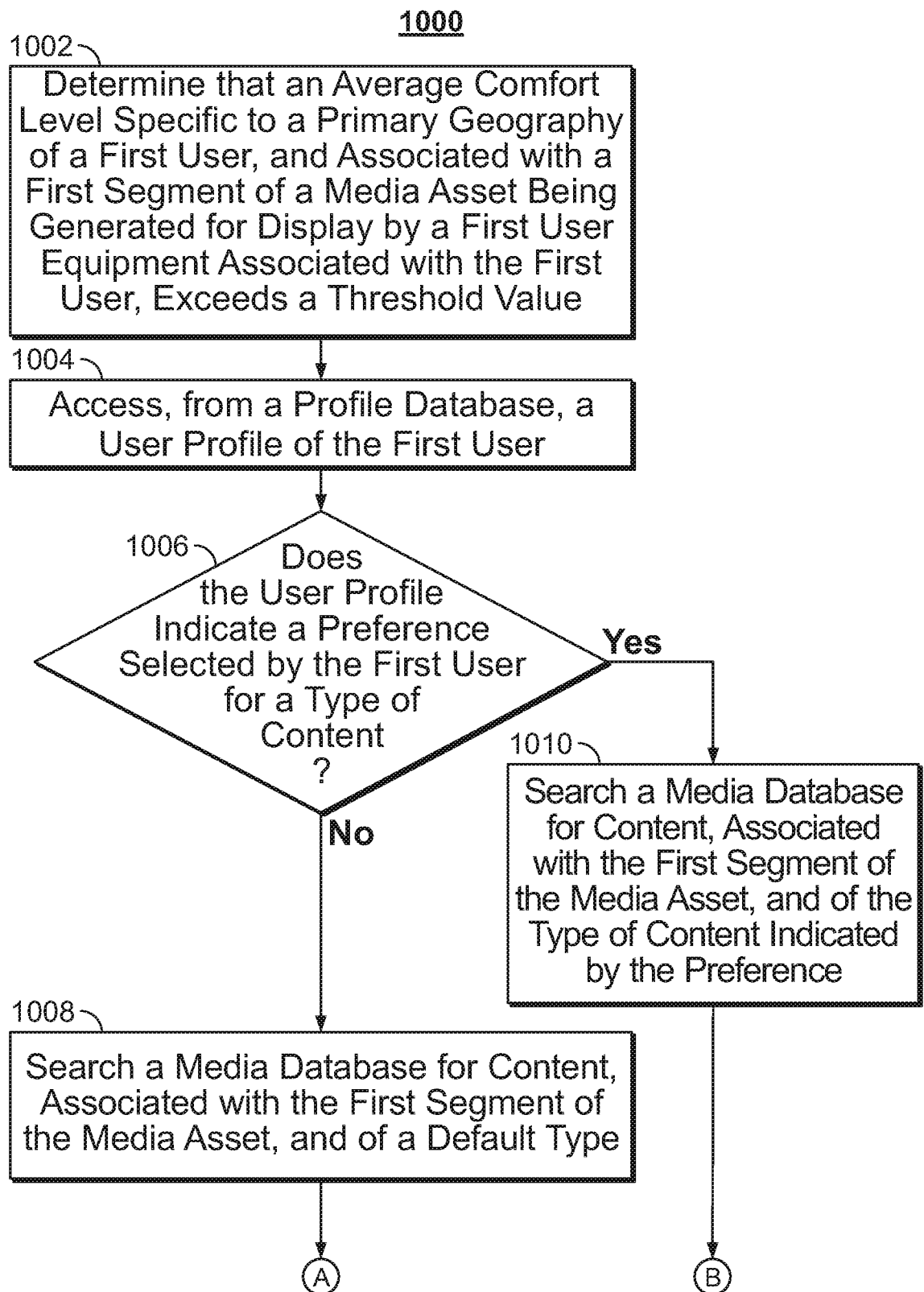


FIG. 10

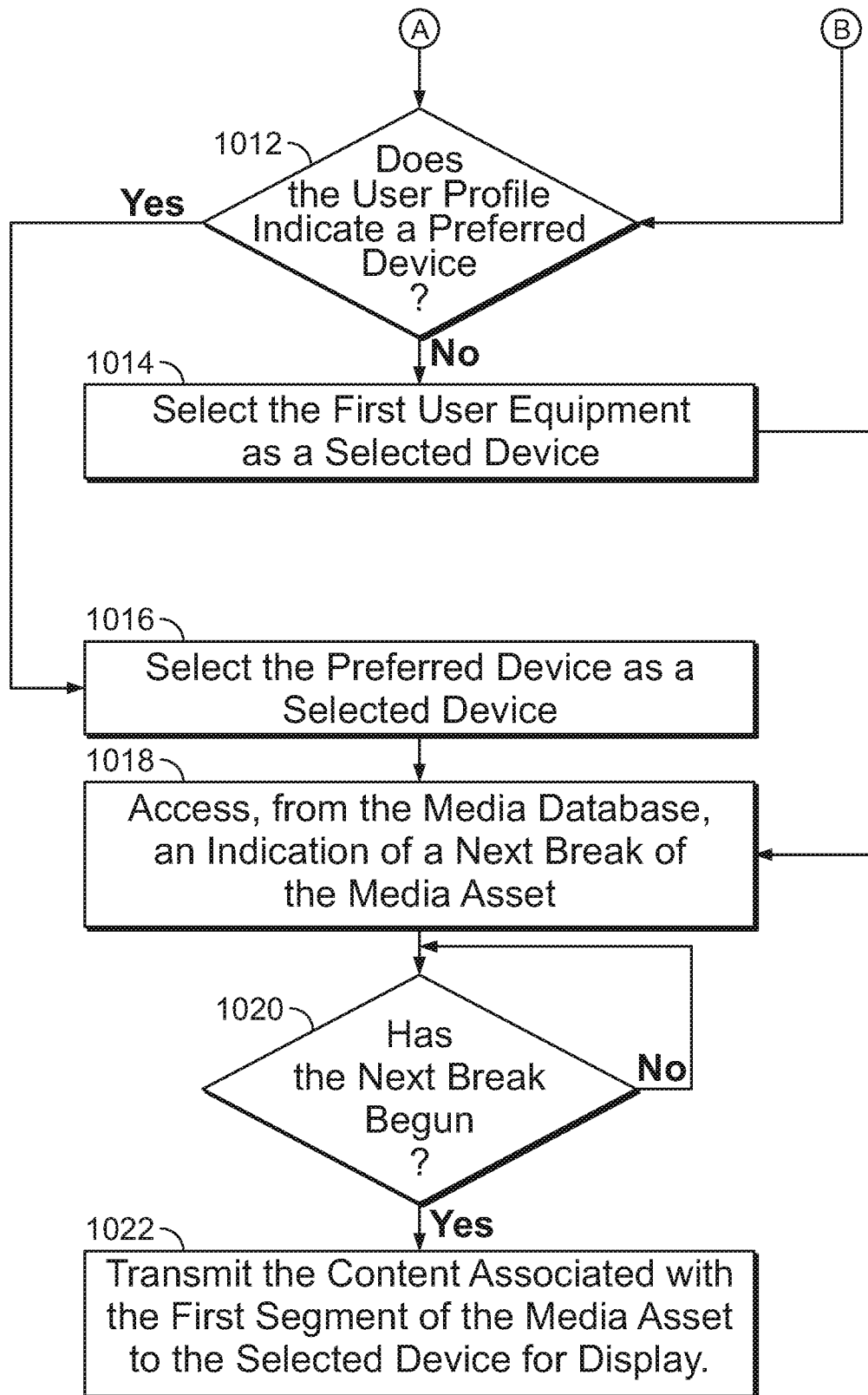
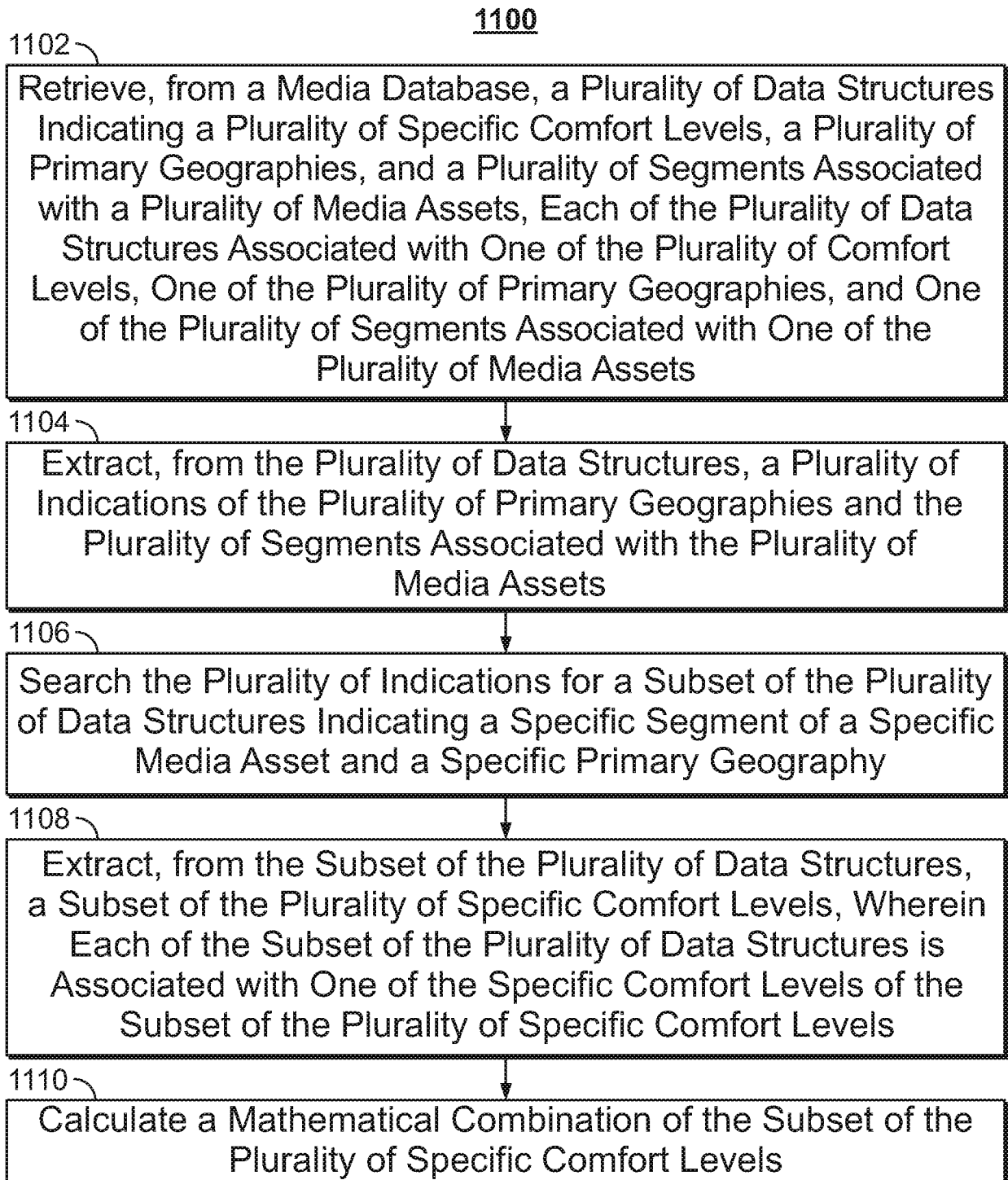


FIG. 10 (Cont.)

**FIG. 11**

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2017/039675

A. CLASSIFICATION OF SUBJECT MATTER
INV. G06F17/30
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)
G06F

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, INSPEC, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 9 590 941 B1 (ITOH TAKAHARU [JP] ET AL) 7 March 2017 (2017-03-07) column 3, line 30 - column 6, line 46 column 7, line 47 - column 9, line 26 -----	1-51
A	US 2015/382064 A1 (ARAVAMUDAN MURALI [US]) 31 December 2015 (2015-12-31) paragraphs [0036] - [0060] -----	1-51
A	US 2013/226896 A1 (CHIN JEFFREY [US] ET AL) 29 August 2013 (2013-08-29) paragraphs [0023] - [0036] -----	1-51



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2017/039675

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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