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(19) **United States**(12) **Patent Application Publication**
Gottlieb(10) **Pub. No.: US 2014/0229866 A1**(43) **Pub. Date: Aug. 14, 2014**(54) **SYSTEMS AND METHODS FOR GROUPING PARTICIPANTS OF MULTI-USER EVENTS**

filed on Nov. 24, 2008, provisional application No. 61/145,107, filed on Jan. 15, 2009.

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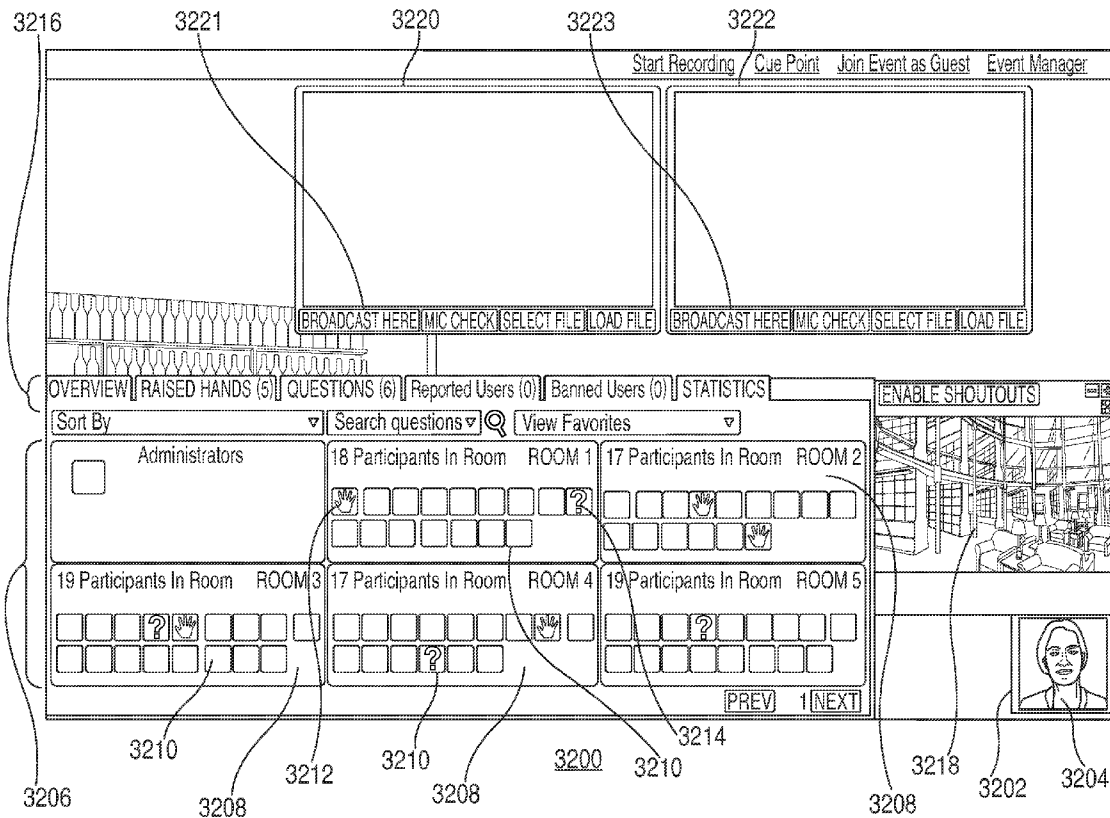
(63) Continuation-in-part of application No. 14/068,261, filed on Oct. 31, 2013, which is a continuation-in-part of application No. 13/925,059, filed on Jun. 24, 2013, which is a continuation-in-part of application No. 13/849,696, filed on Mar. 25, 2013, which is a continuation of application No. 12/624,829, filed on Nov. 24, 2009, now Pat. No. 8,405,702.

(60) Provisional application No. 61/117,477, filed on Nov. 24, 2008, provisional application No. 61/117,483,

(57)

ABSTRACT

Systems and methods for grouping participants of multi-user events are provided. In at least one embodiment, a method may include analyzing a profile corresponding to a first participant of a plurality of participants of the event, determining that the first participant should be grouped with at least another participant of the plurality of participants based on the analysis, and grouping the first participant with the at least another participant based on the determination.



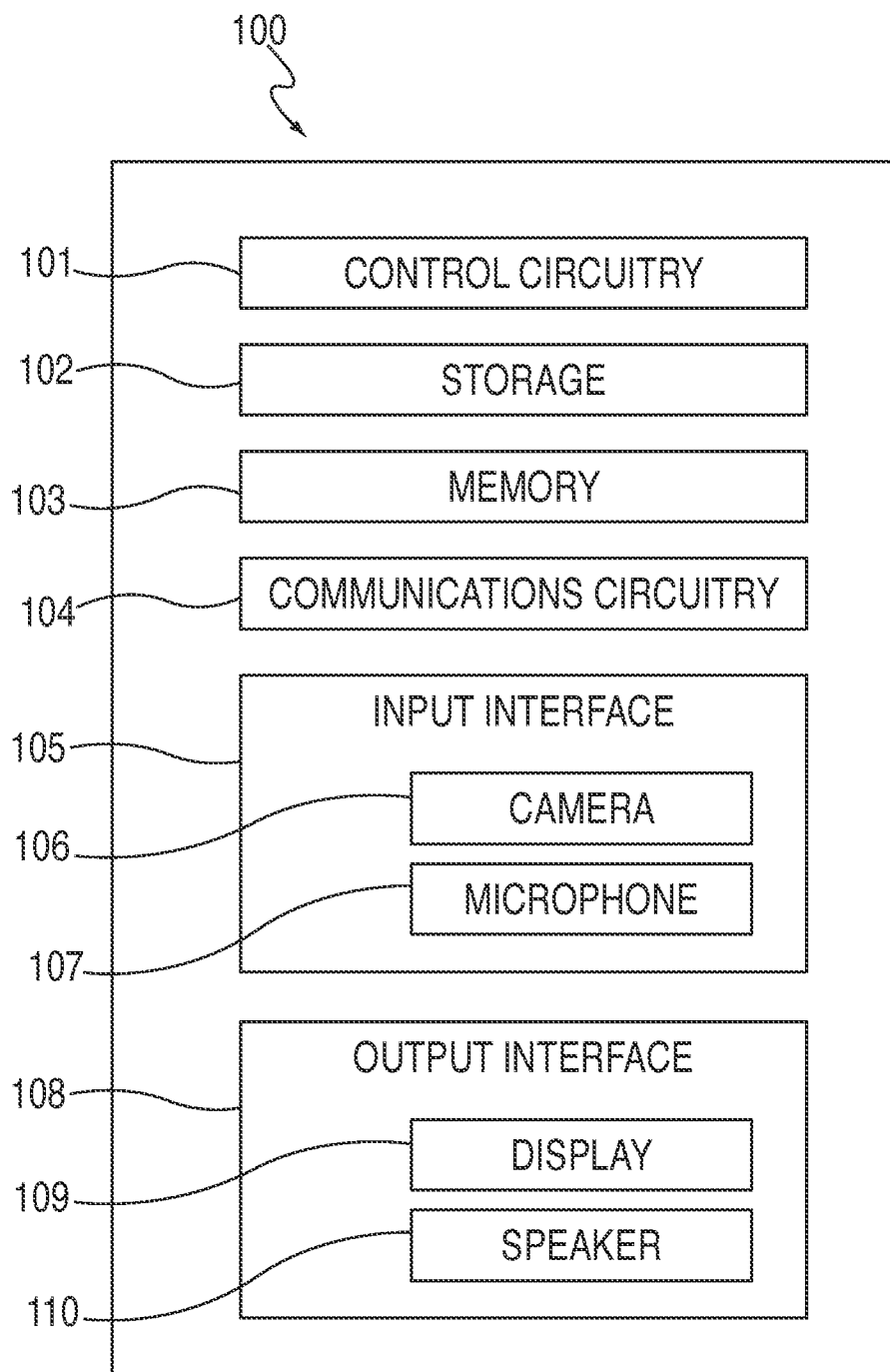


FIG. 1

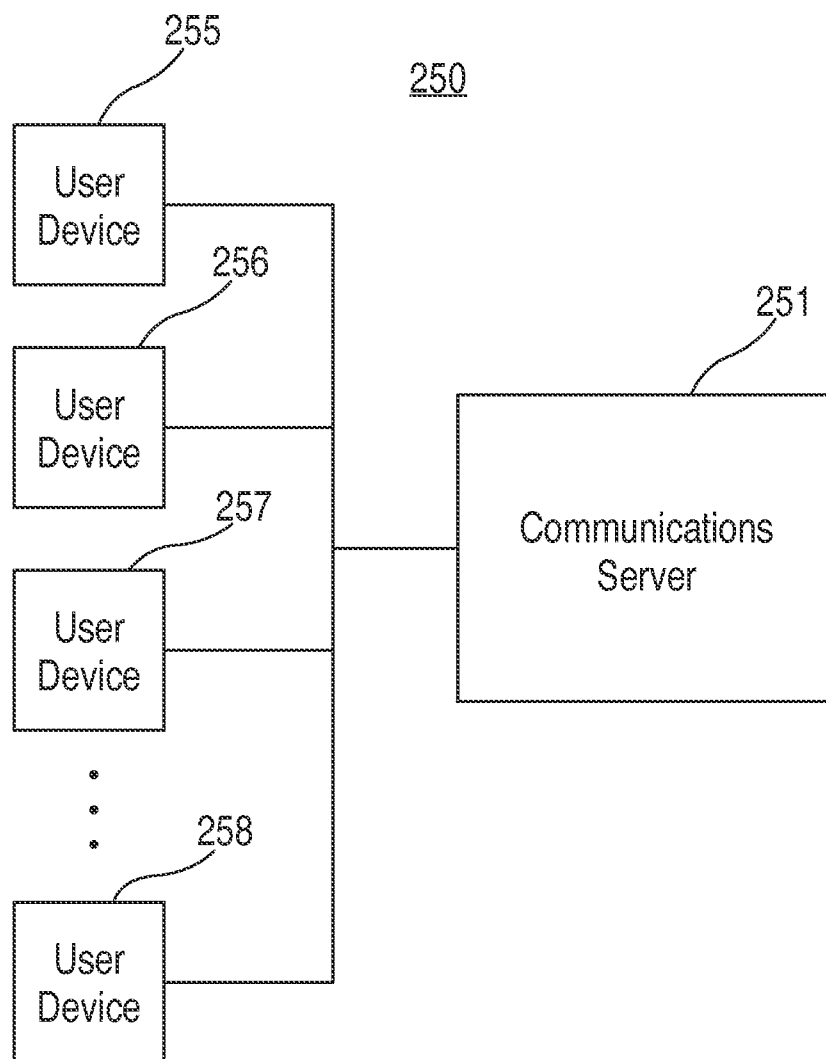


FIG. 2

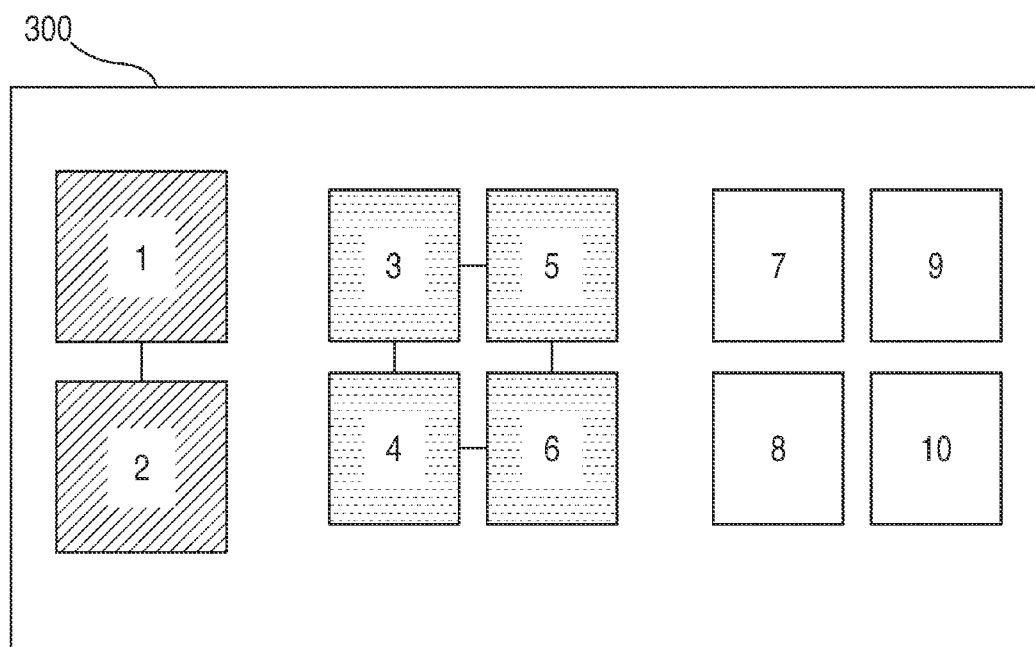


FIG. 3

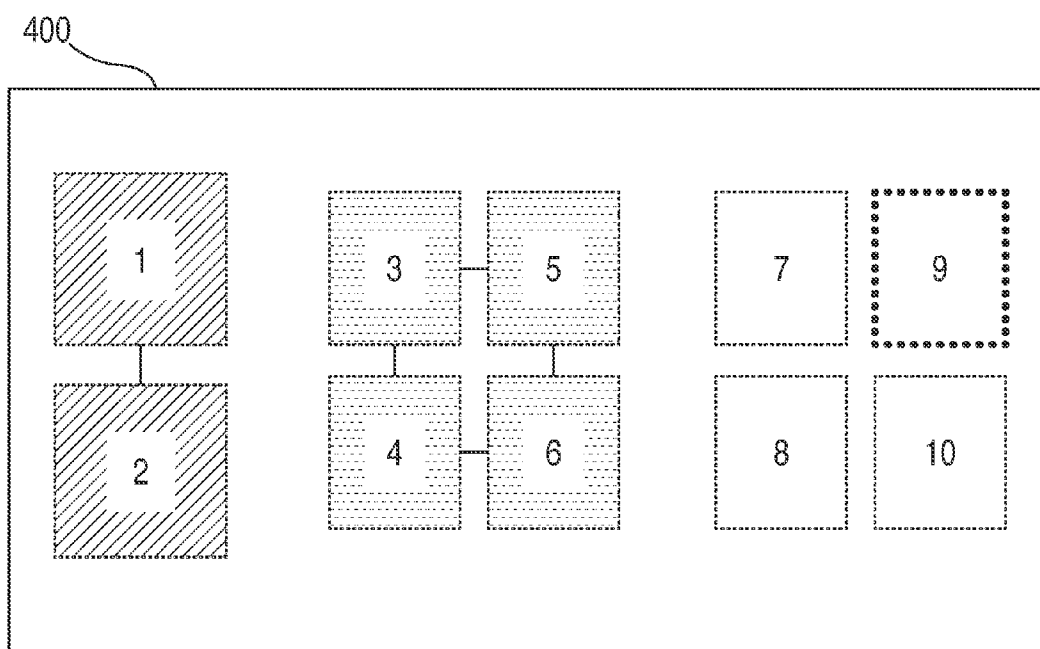


FIG. 4

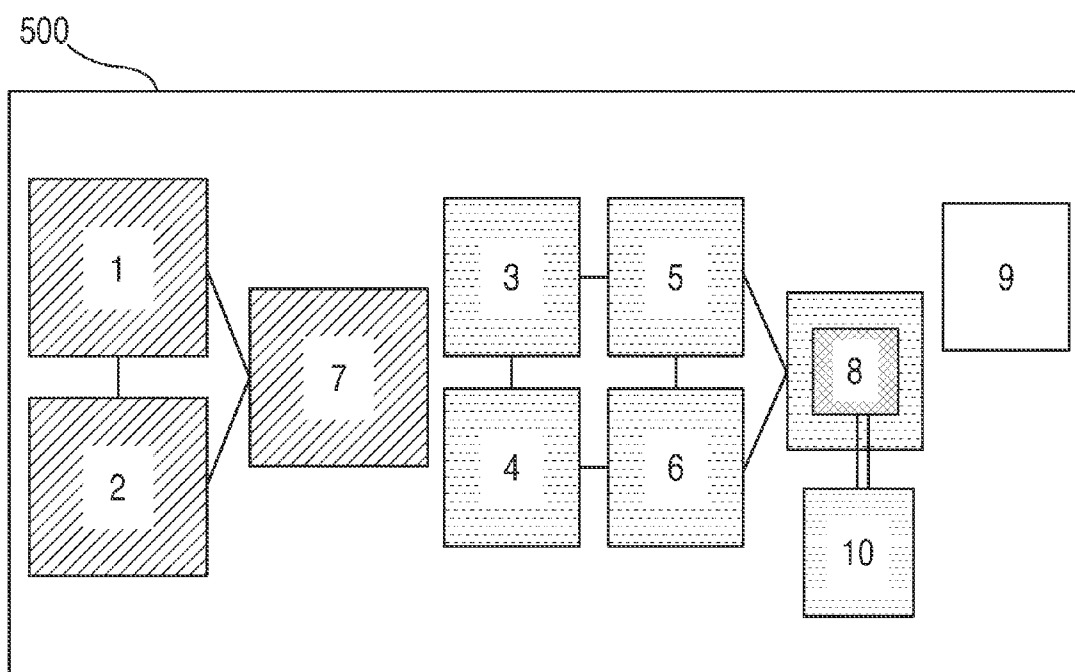


FIG. 5

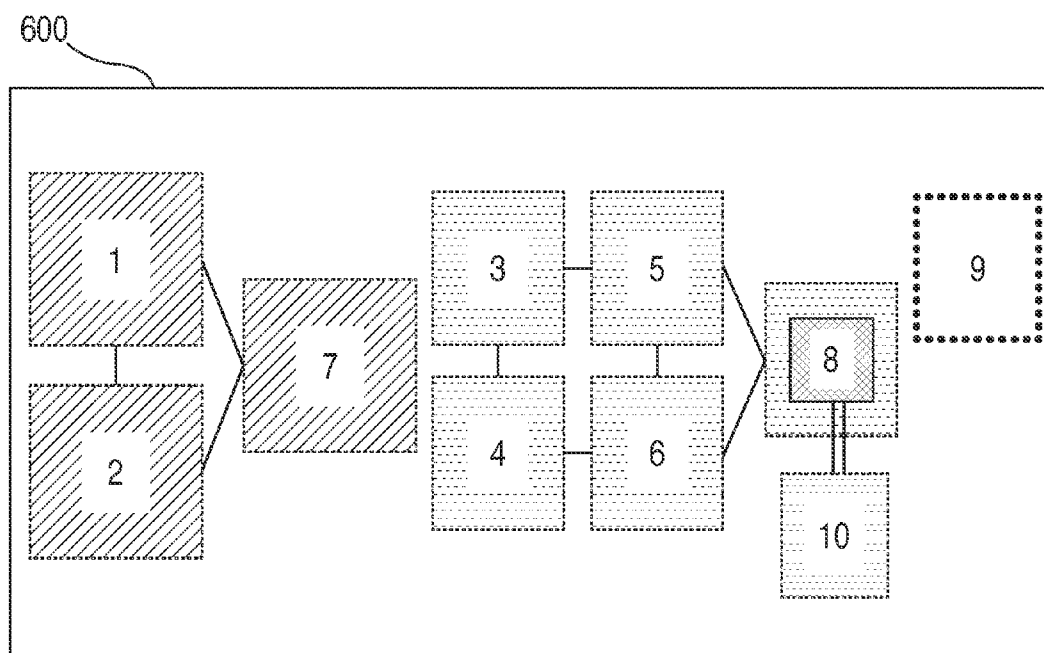


FIG. 6

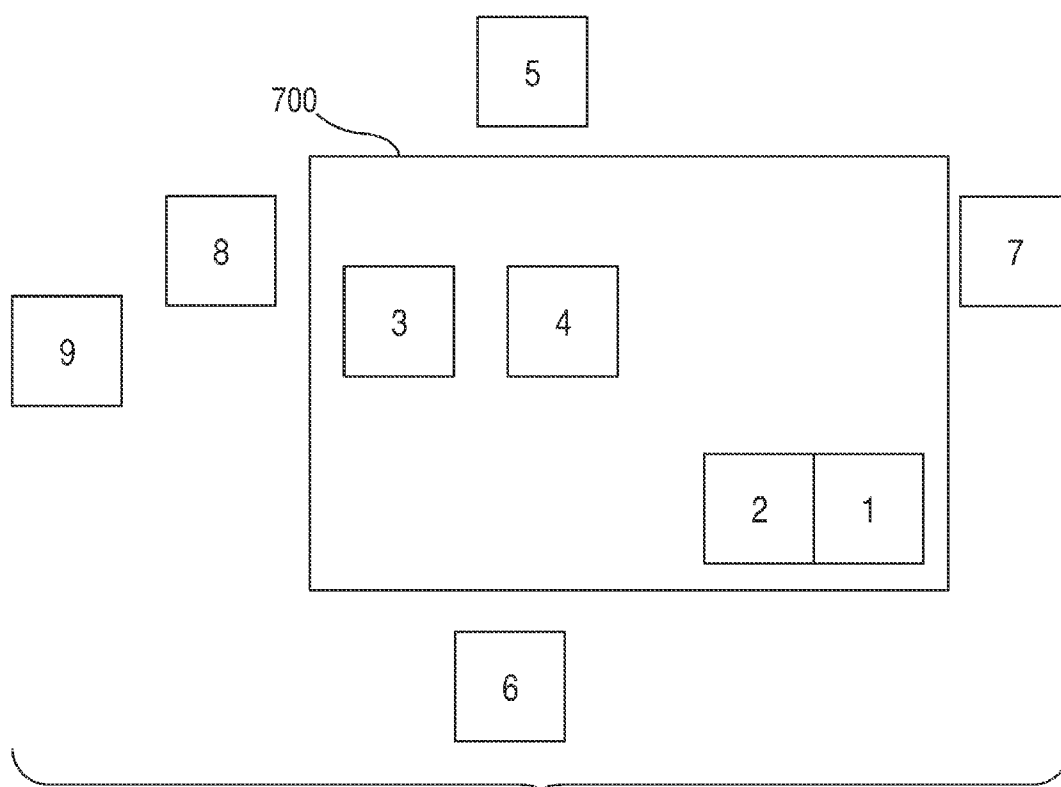


FIG. 7A

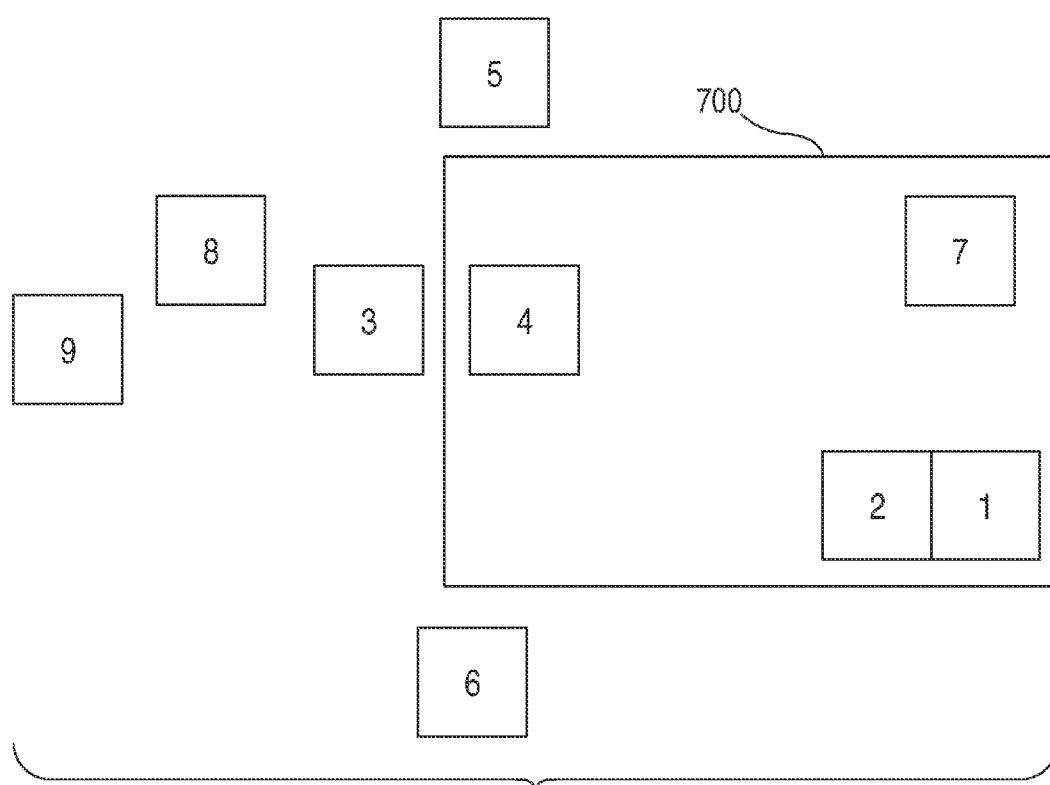


FIG. 7B

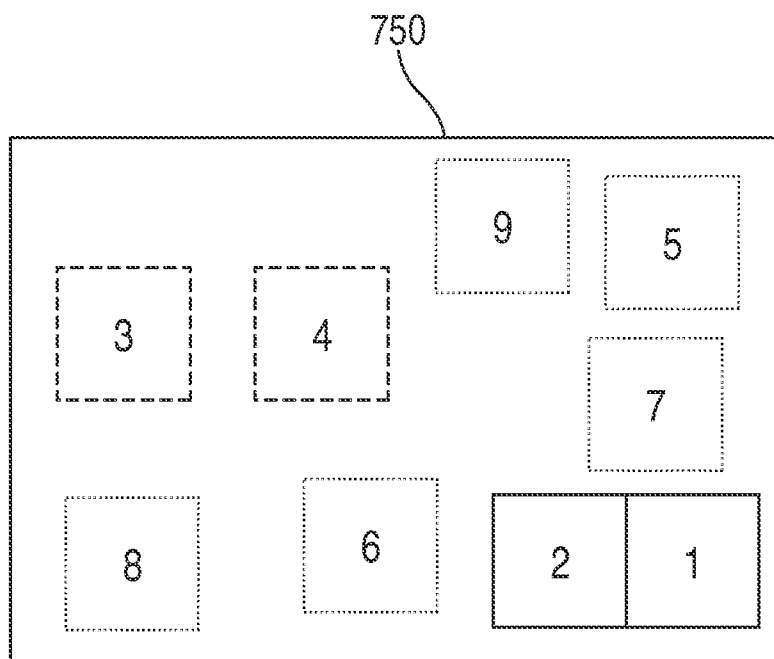


FIG. 7C

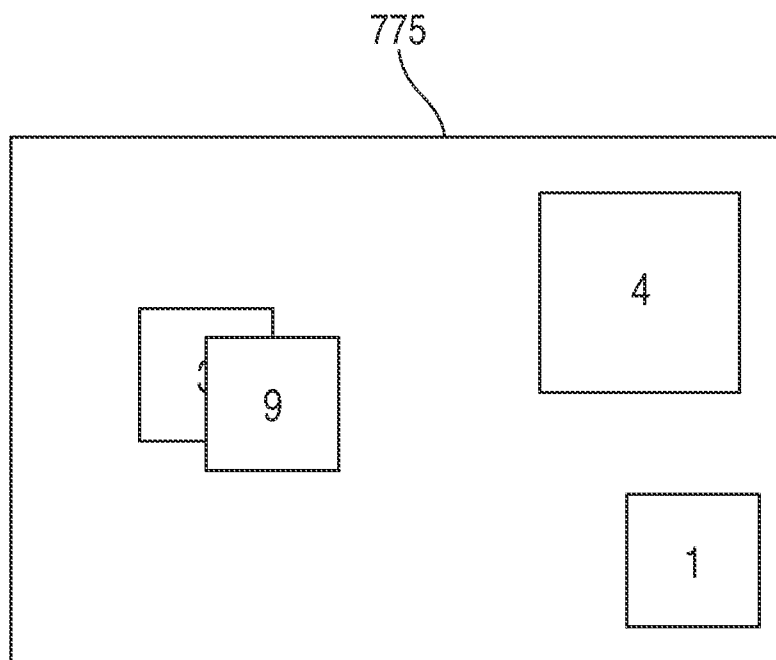


FIG. 7D

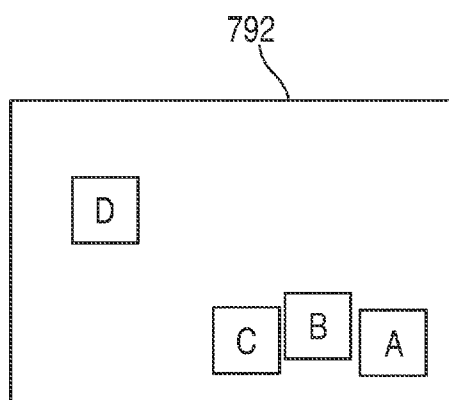


FIG. 7E

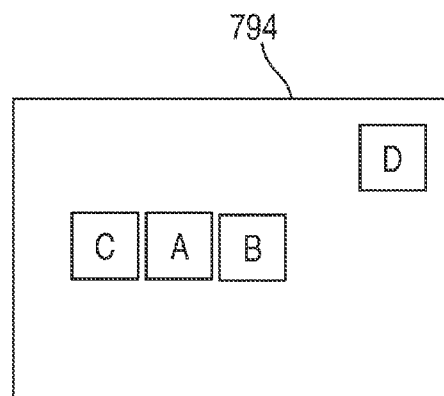


FIG. 7F

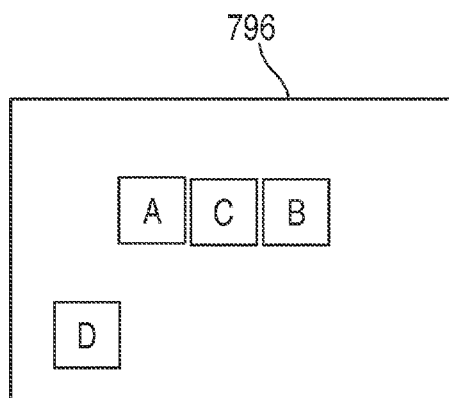


FIG. 7G

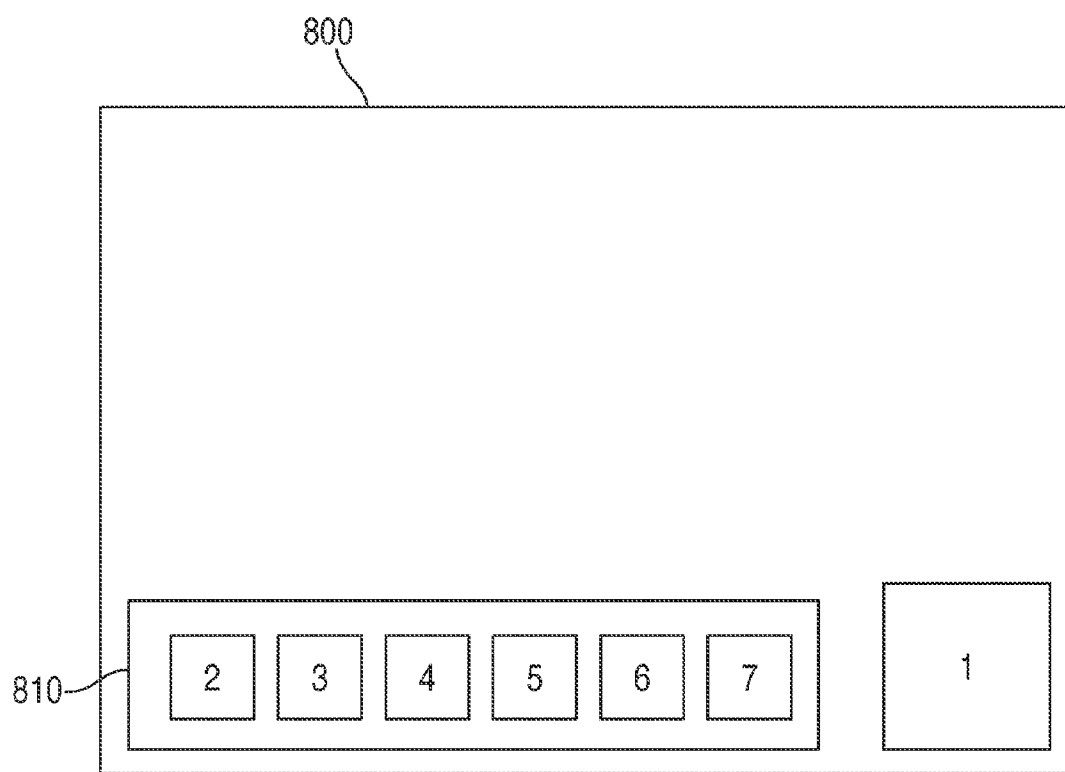


FIG. 8

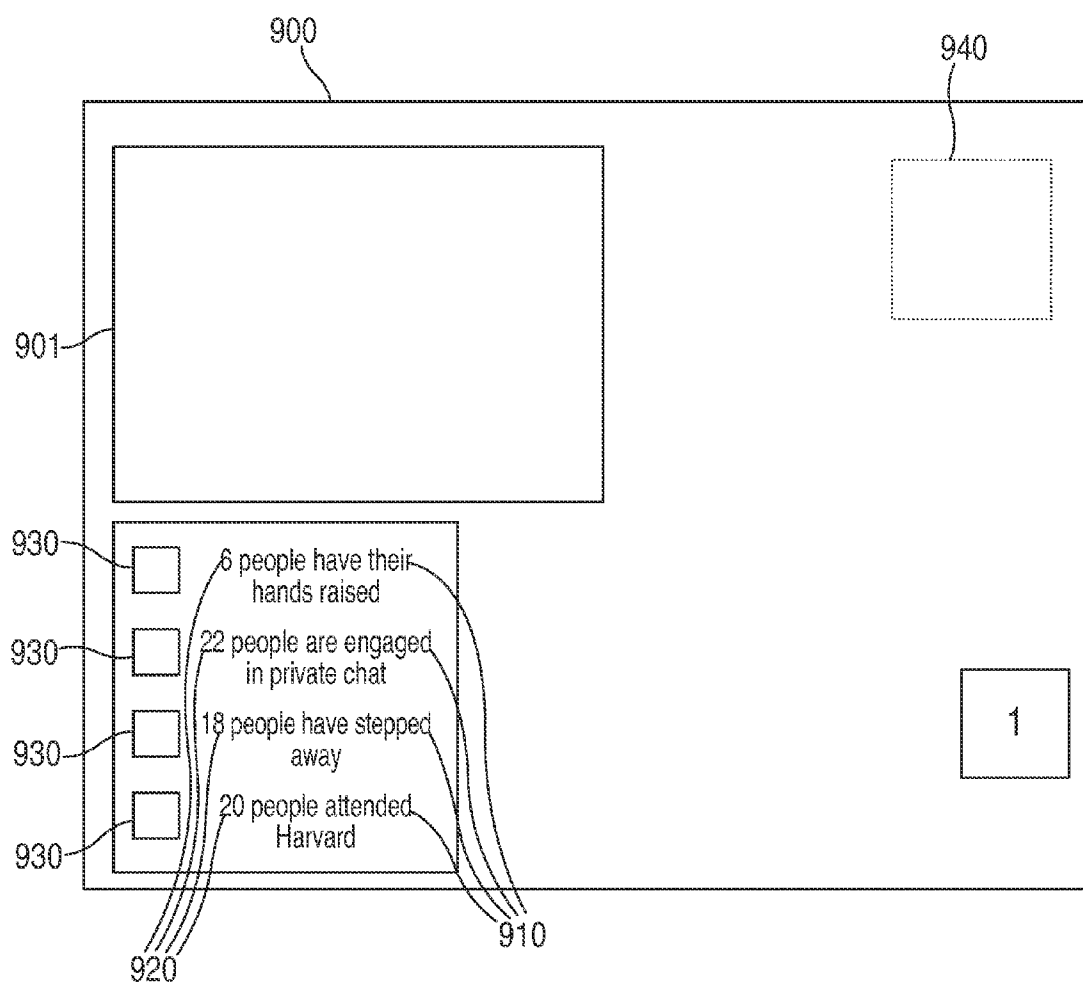
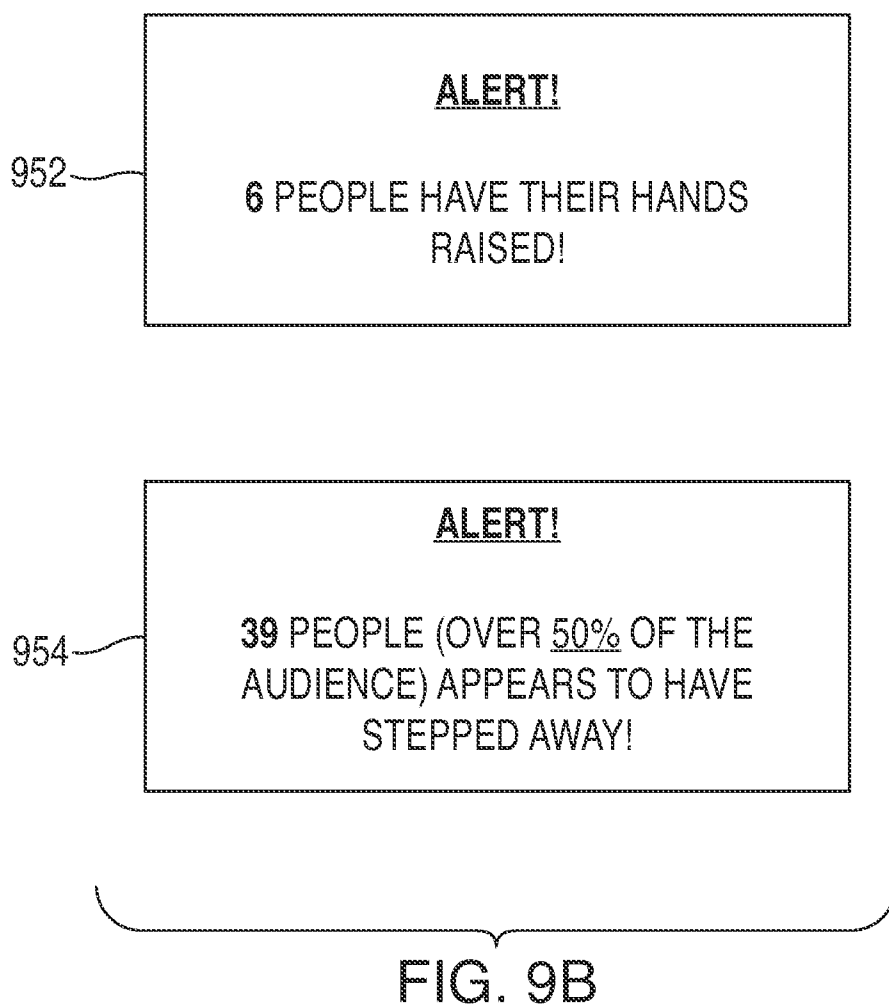


FIG. 9A



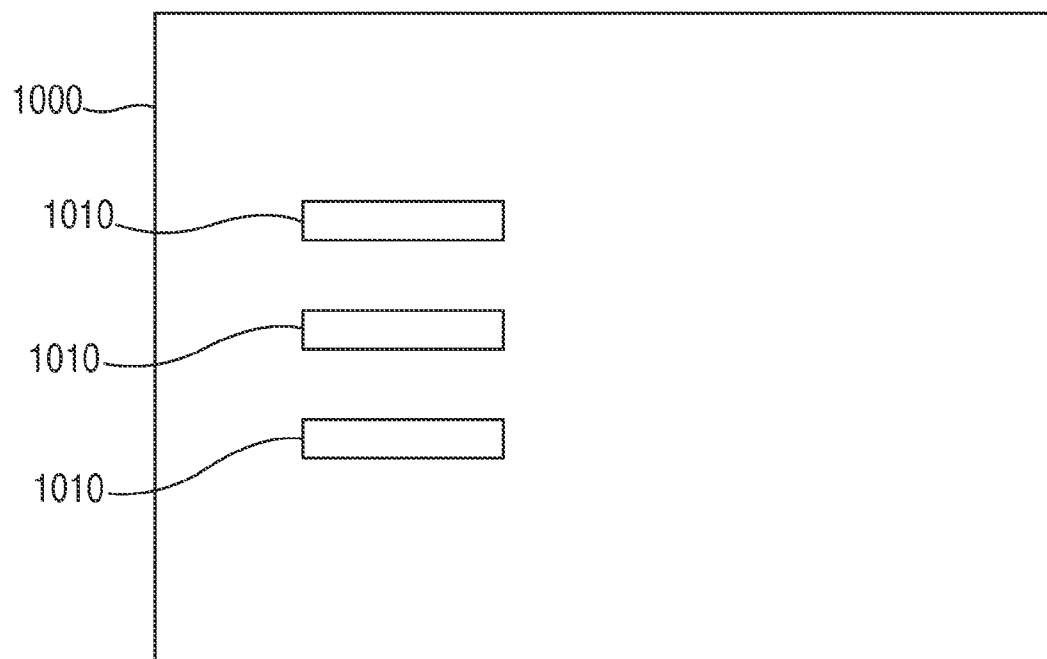


FIG. 10

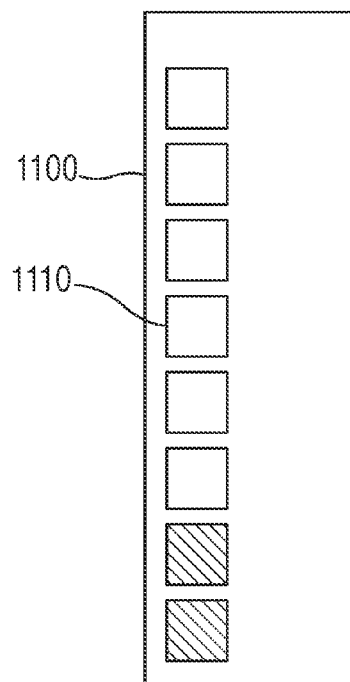


FIG. 11A

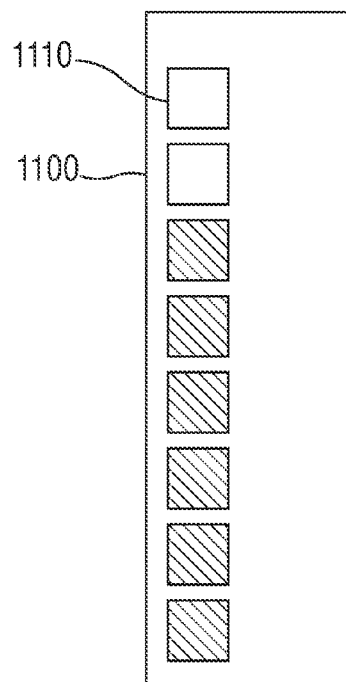


FIG. 11B

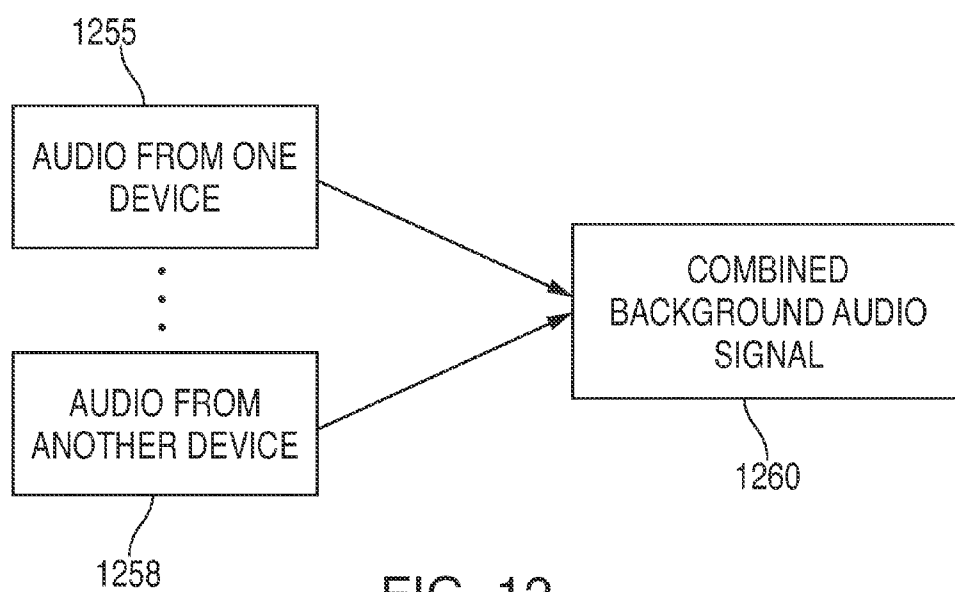


FIG. 12

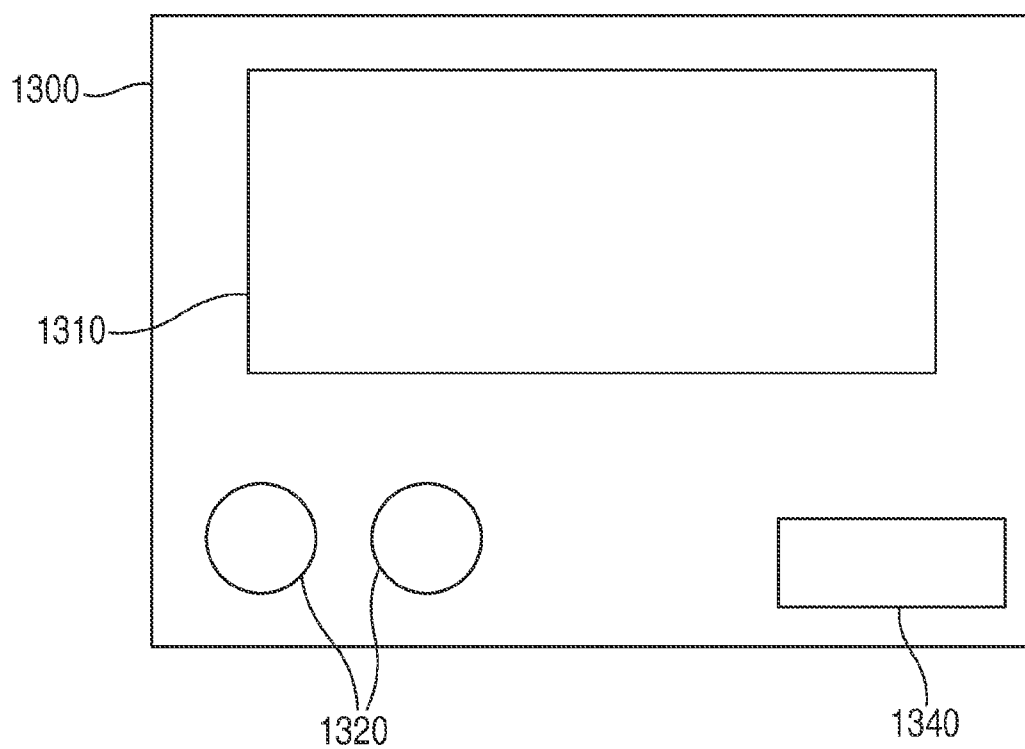


FIG. 13

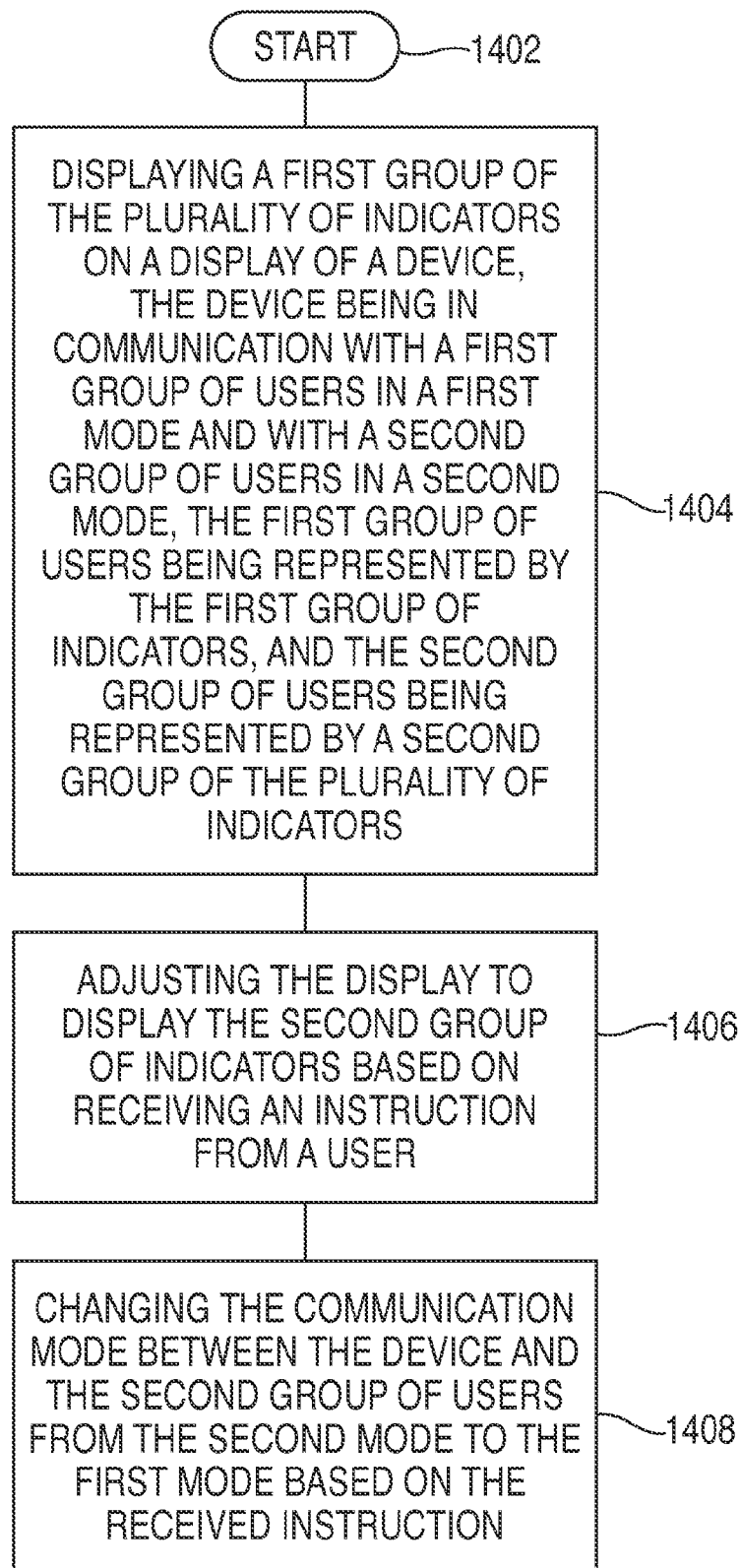
1400

FIG. 14

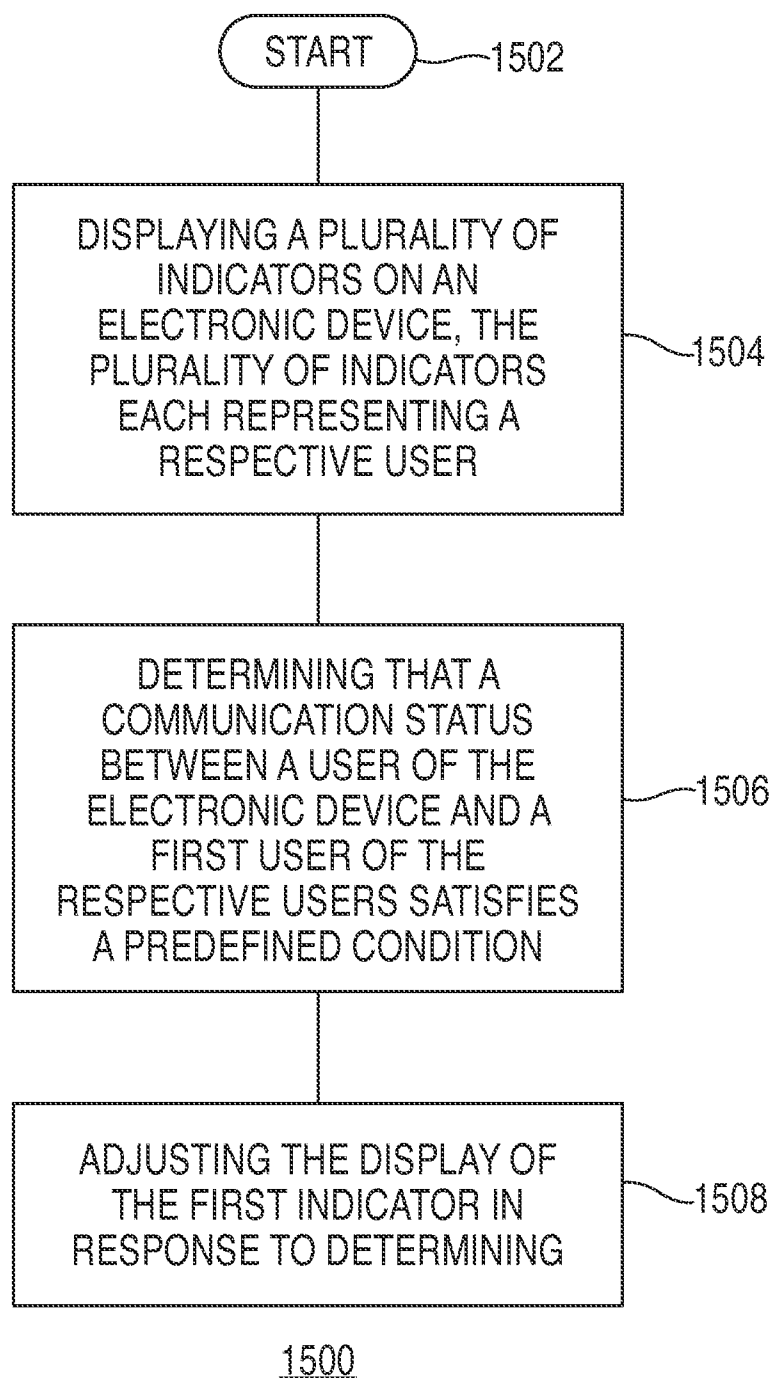


FIG. 15

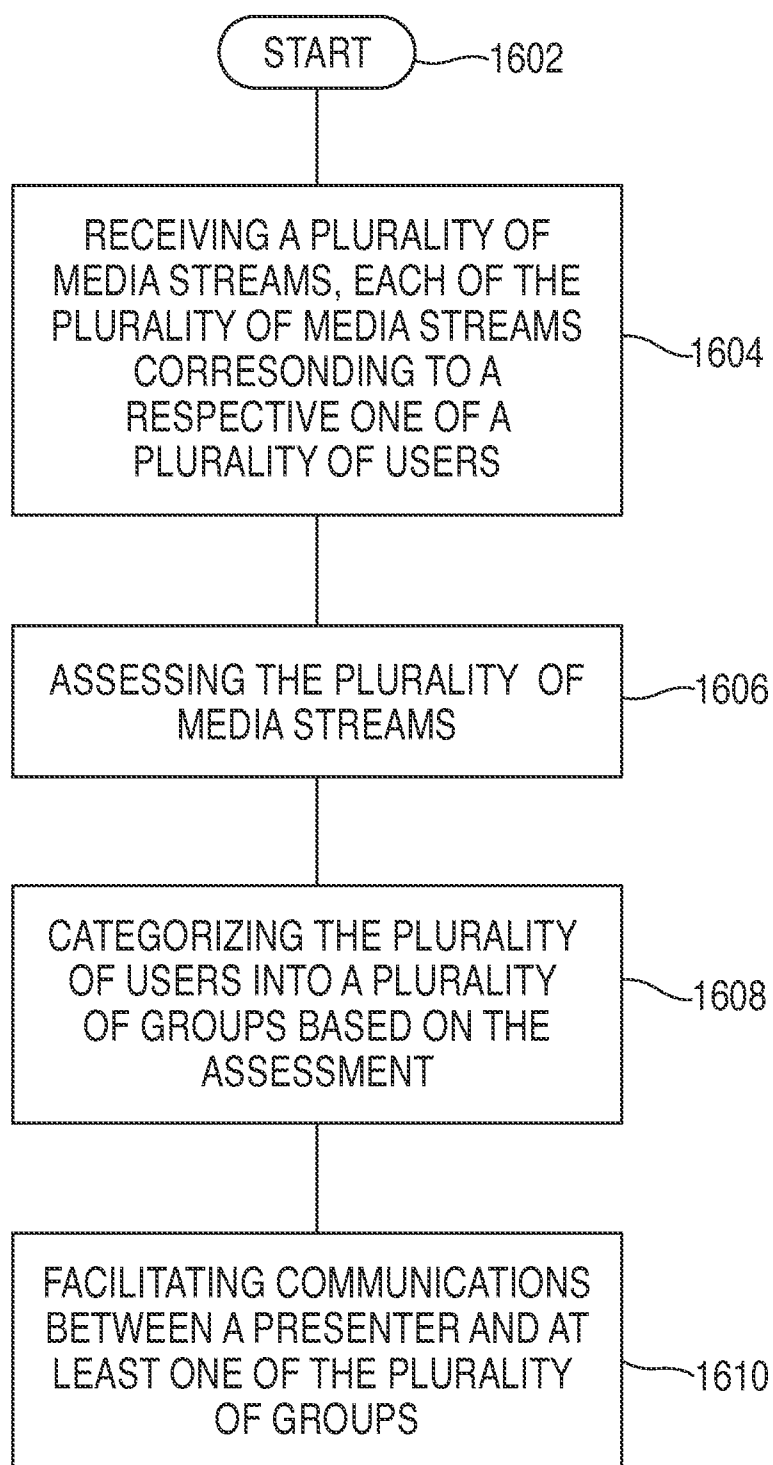


FIG. 16

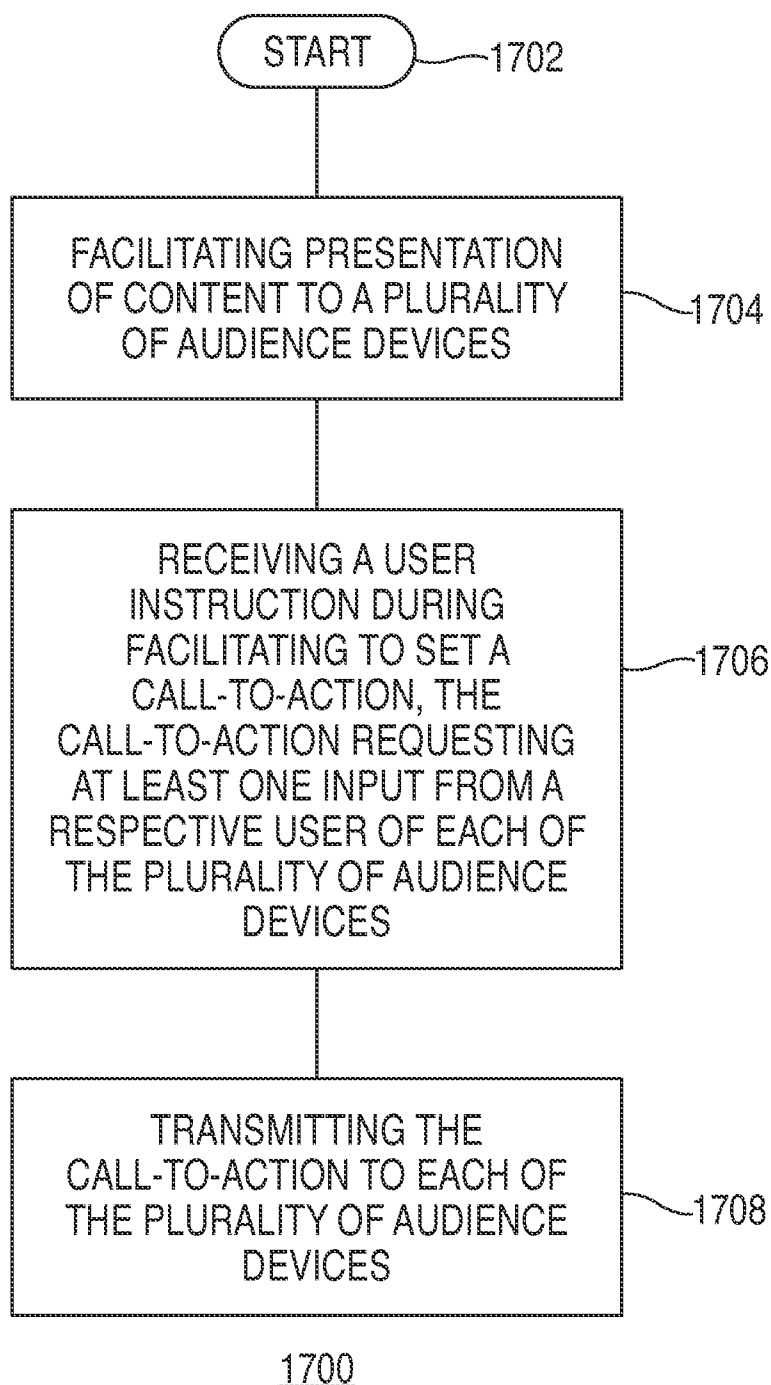
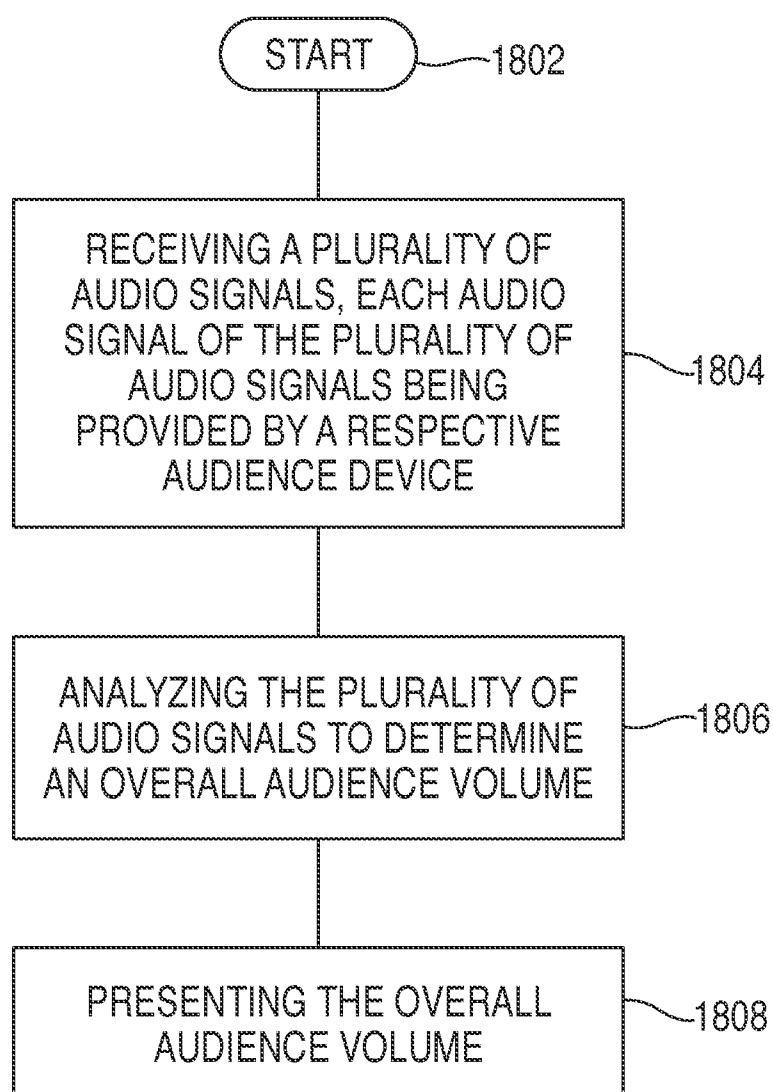
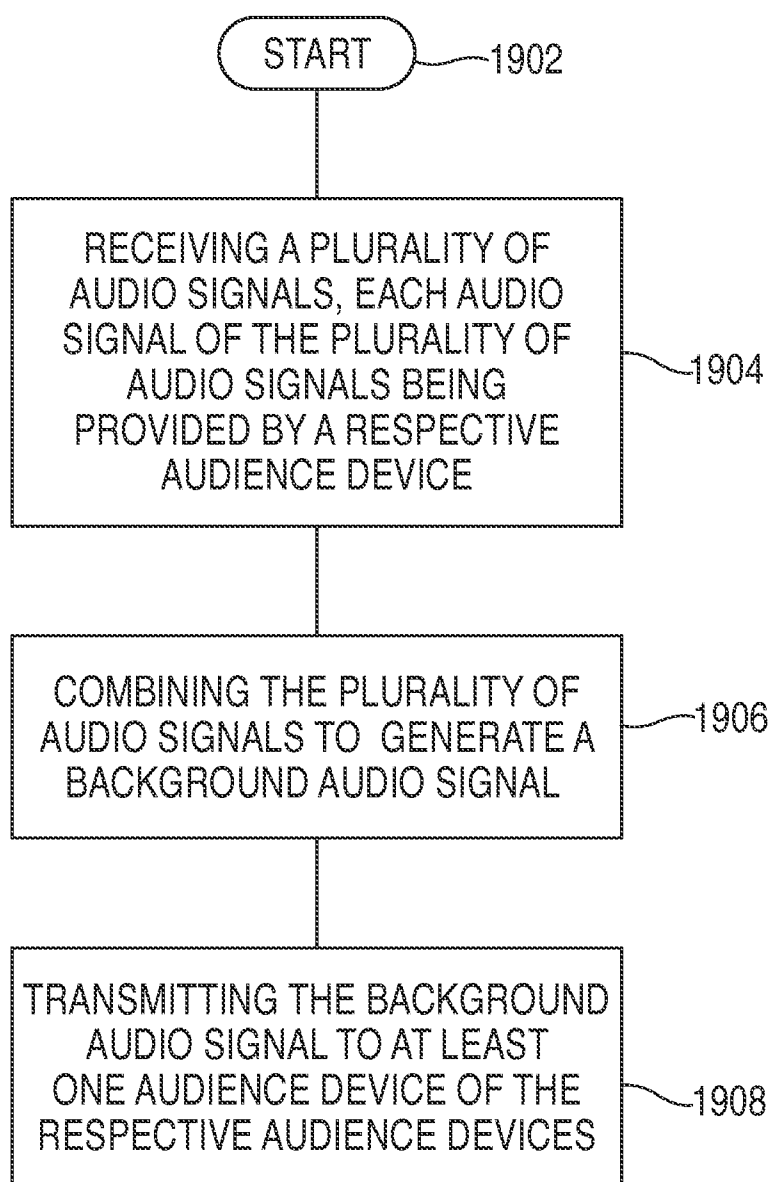


FIG. 17



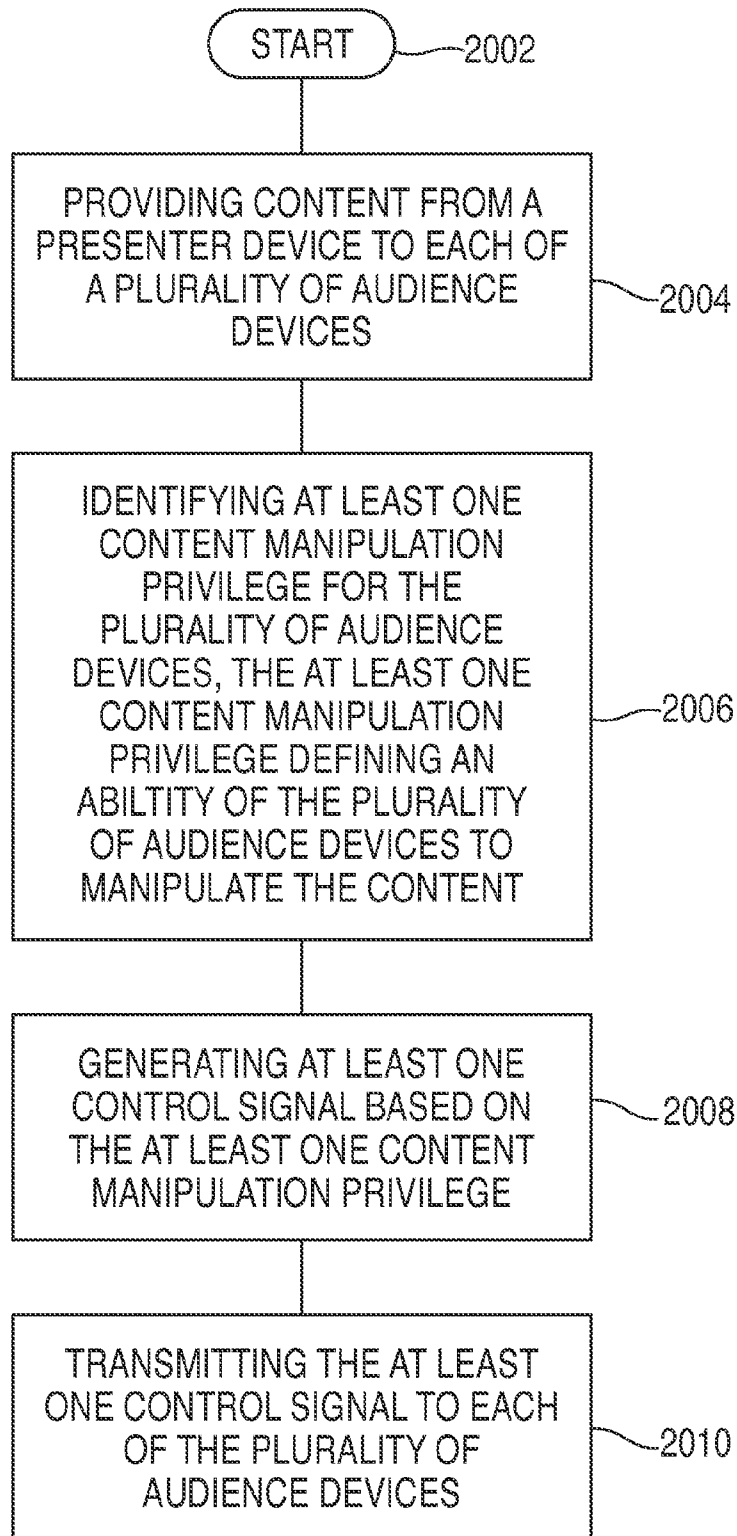
1800

FIG. 18



1900

FIG. 19



2000

FIG. 20

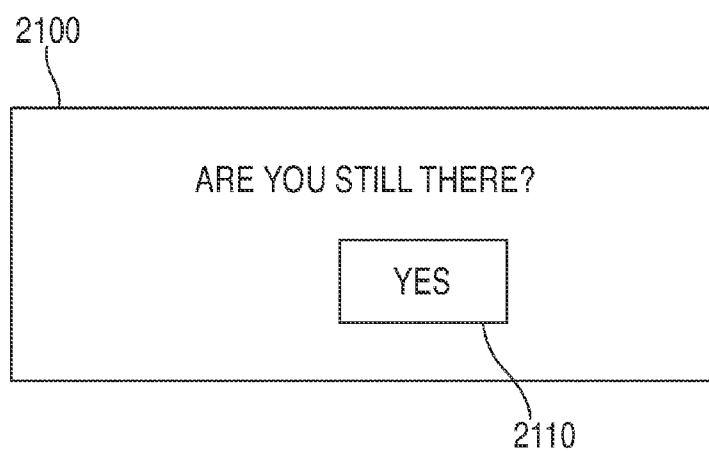


FIG. 21

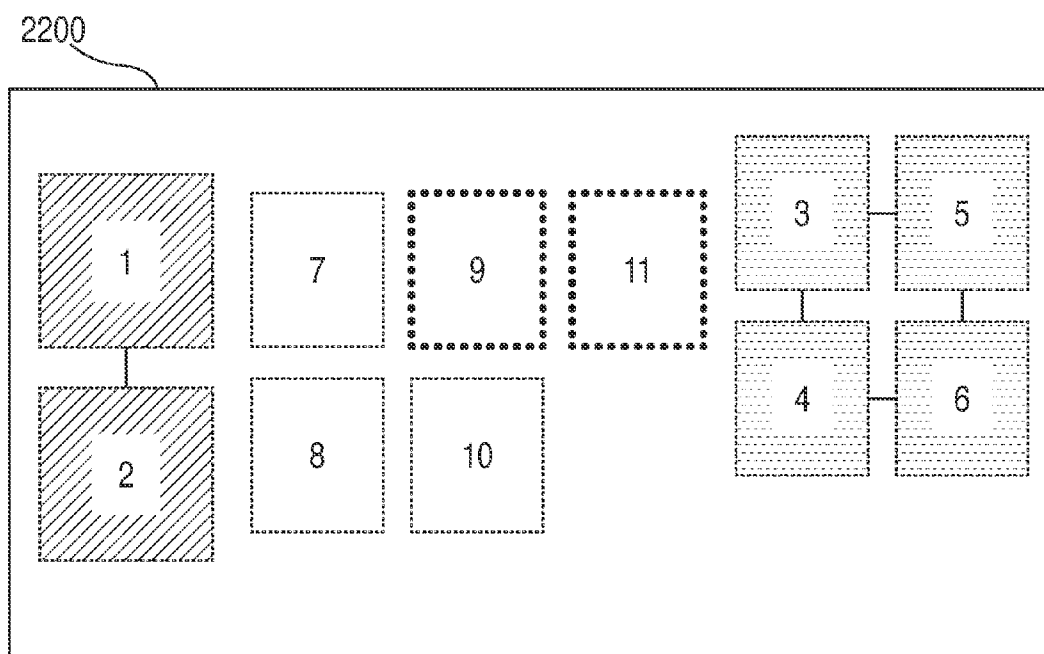


FIG. 22

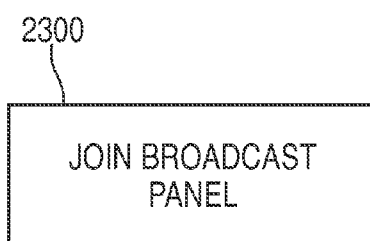


FIG. 23

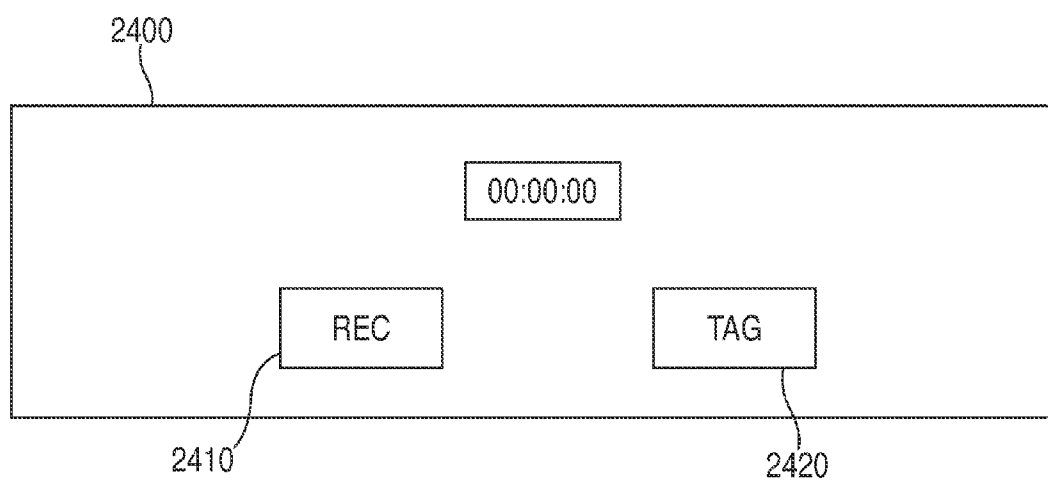


FIG. 24

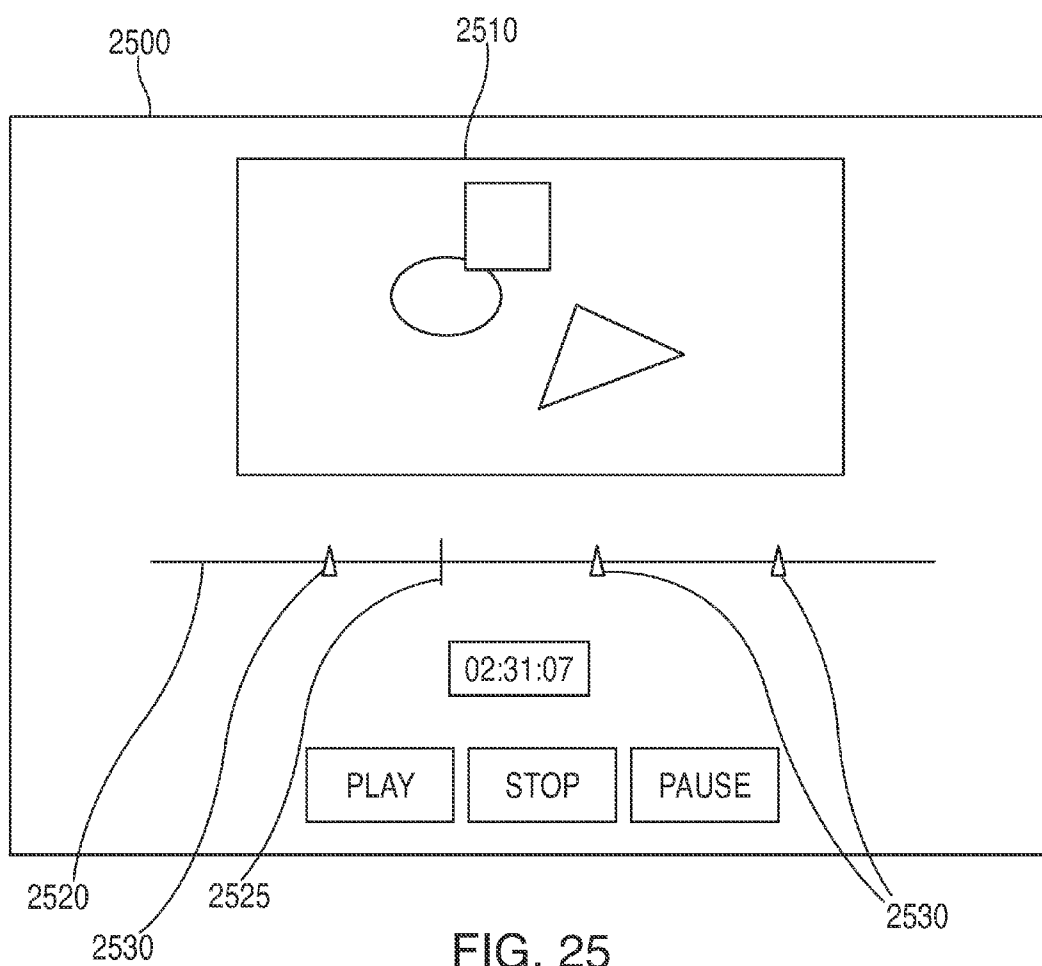


FIG. 25

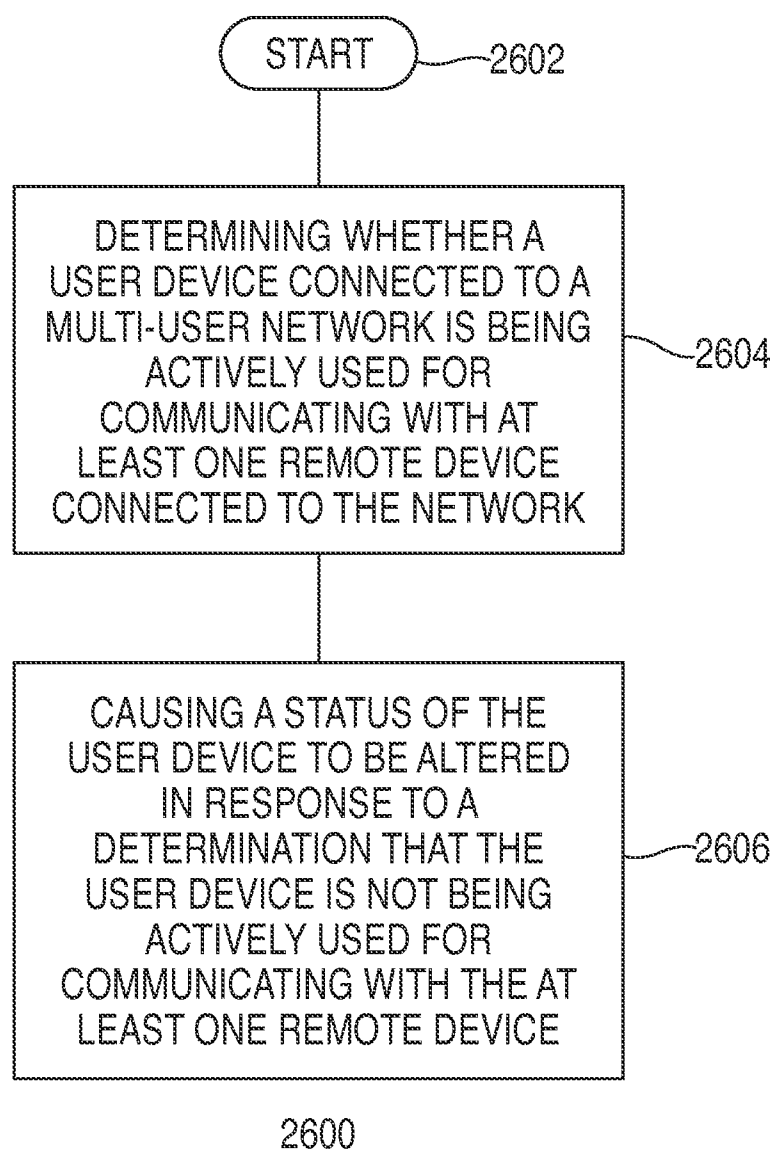


FIG. 26

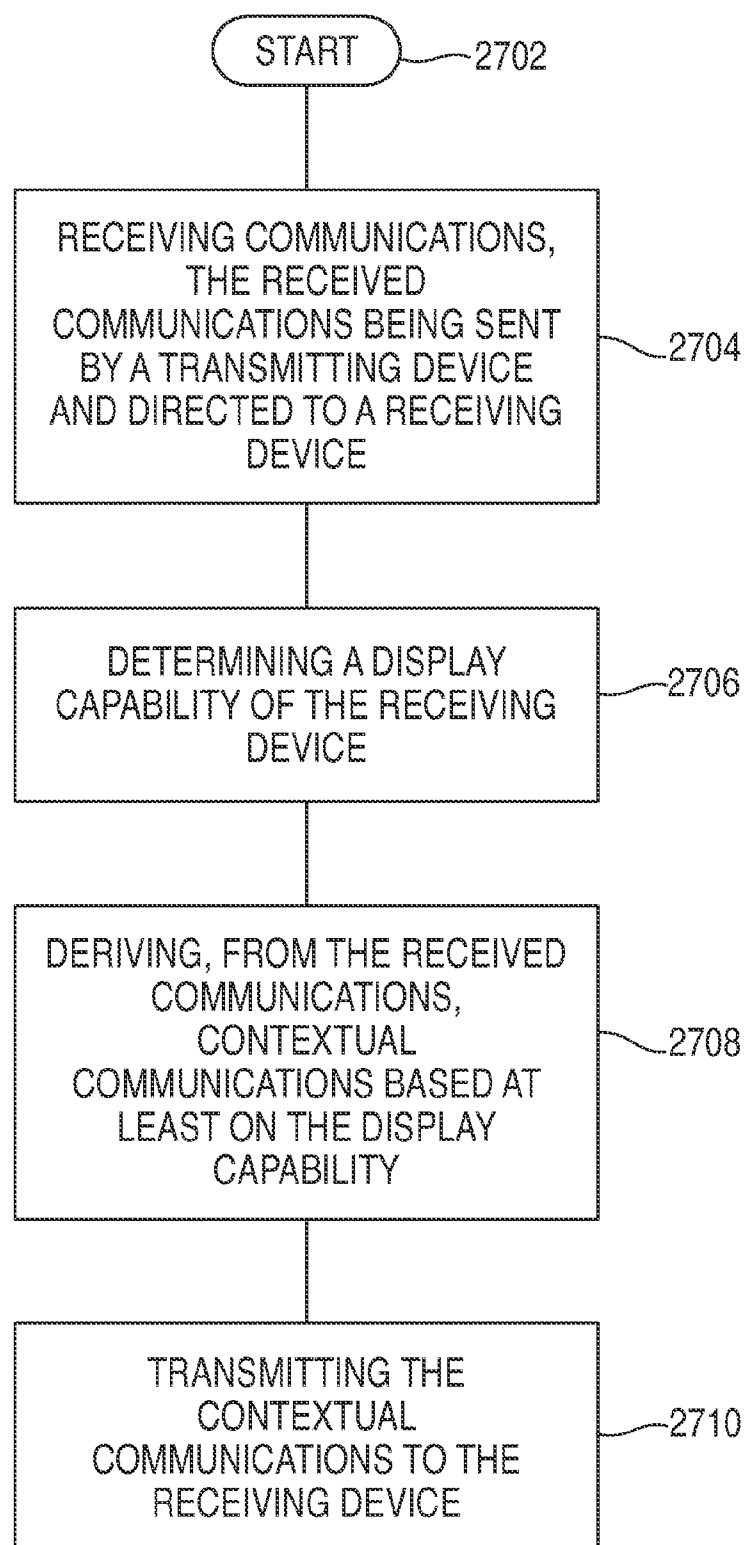
2700

FIG. 27

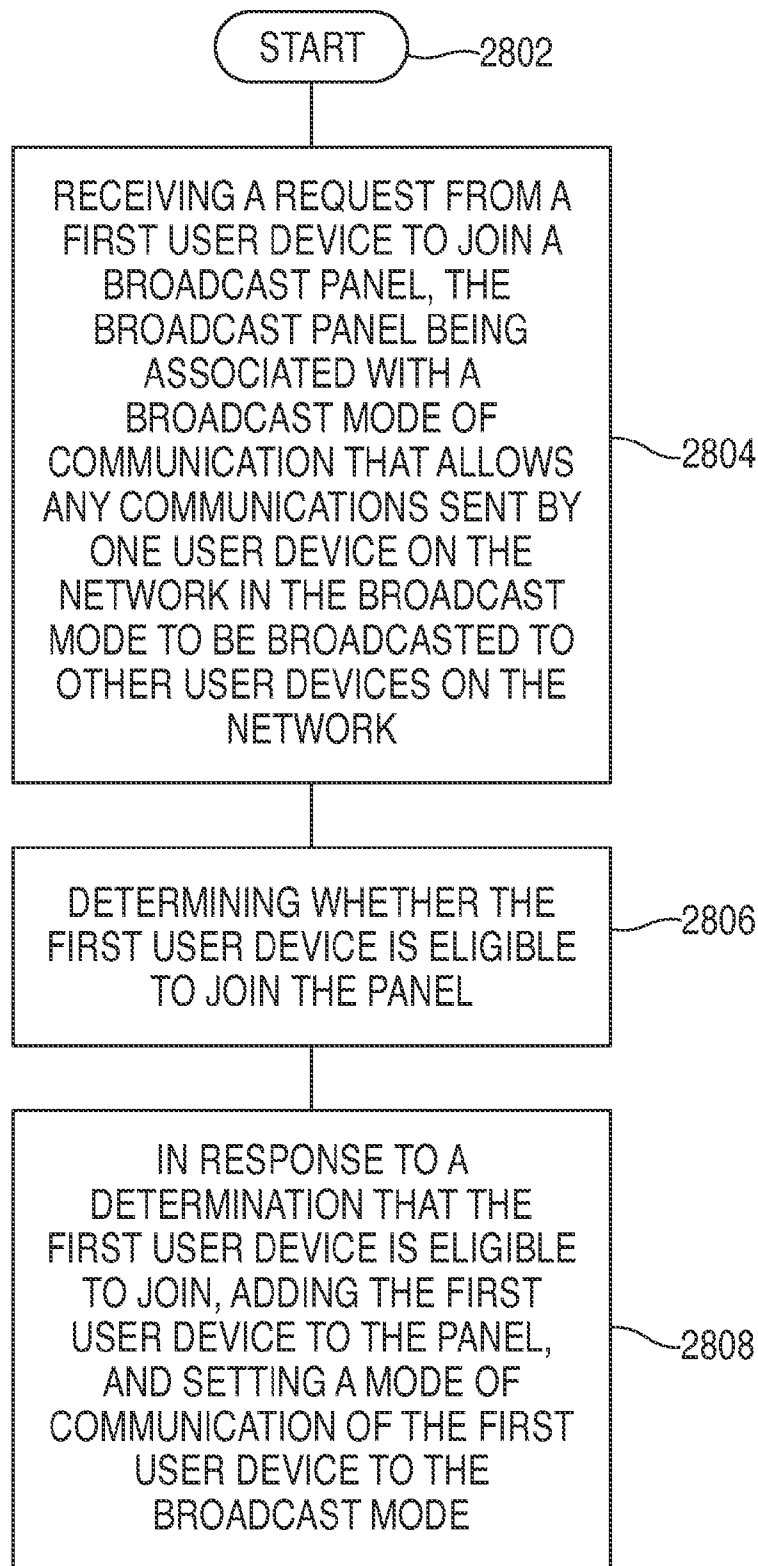
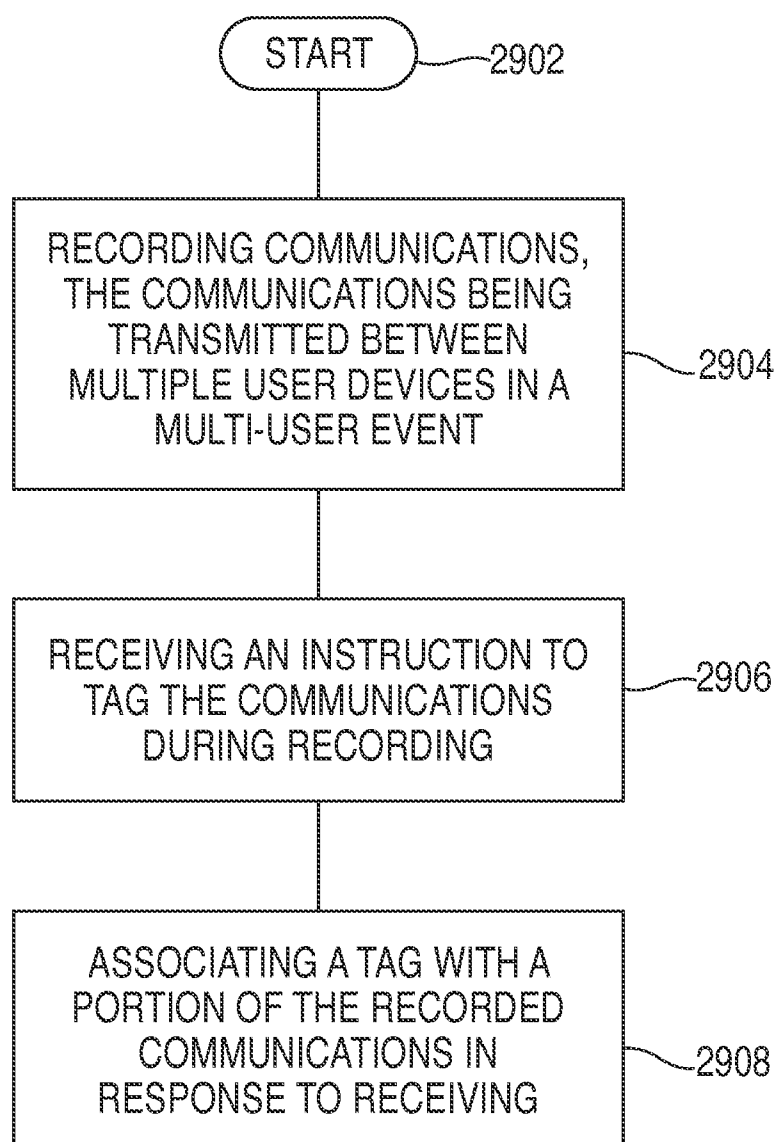
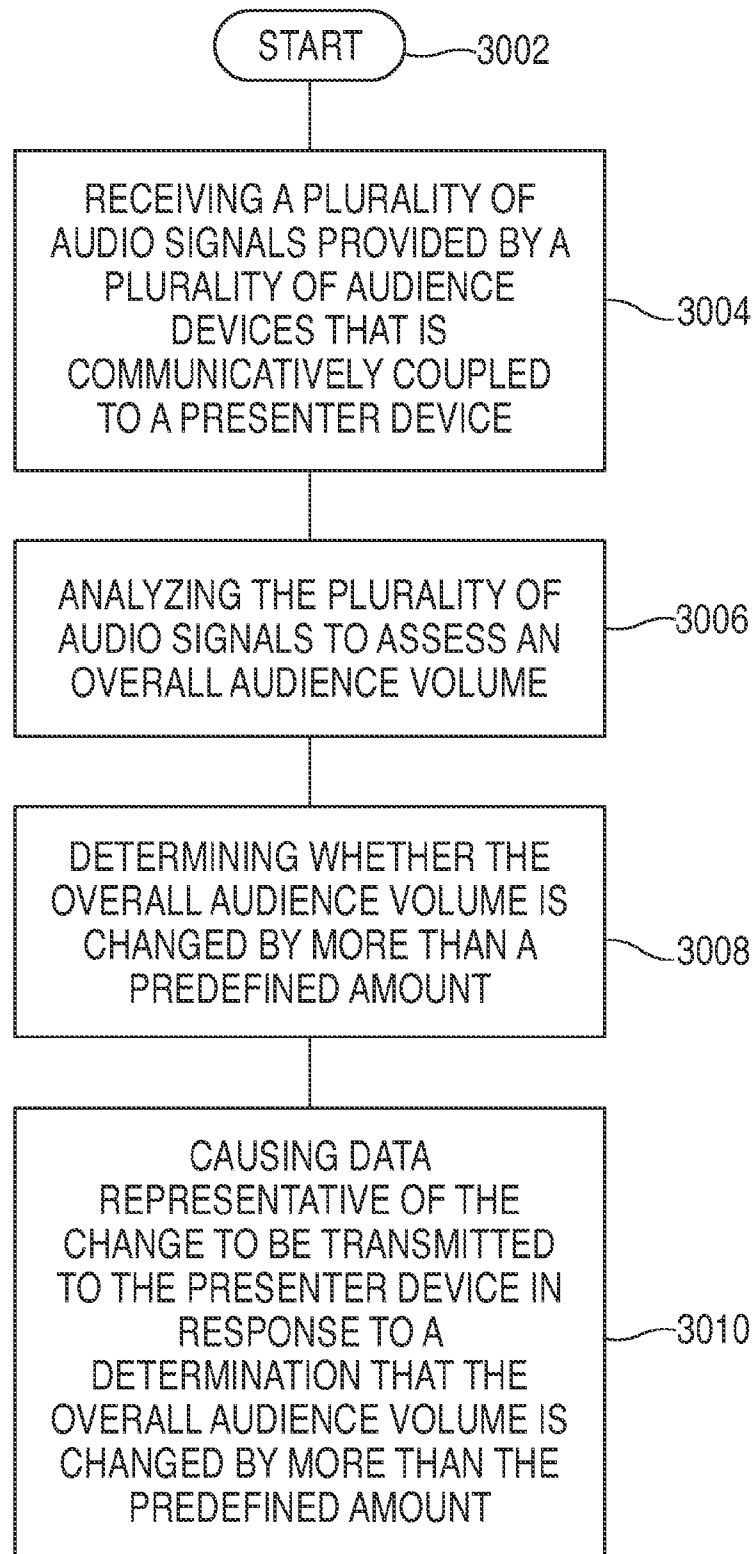


FIG. 28



2900

FIG. 29



3000

FIG. 30

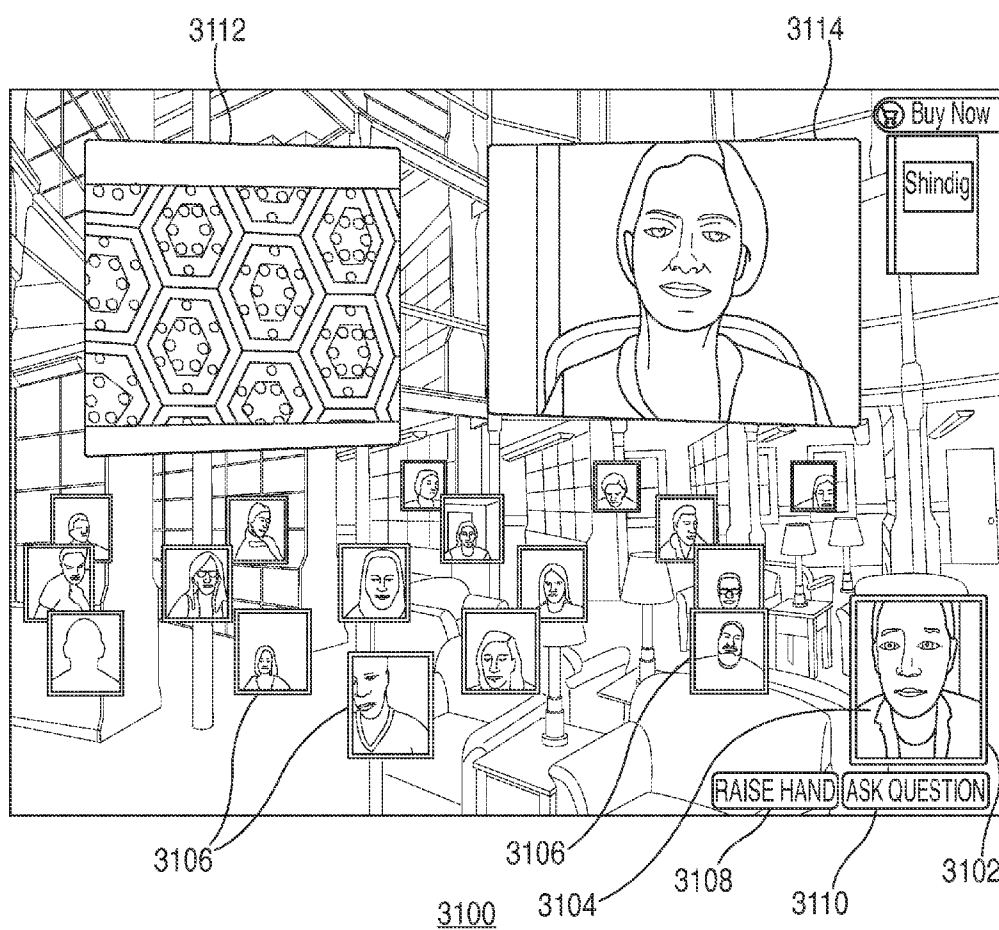
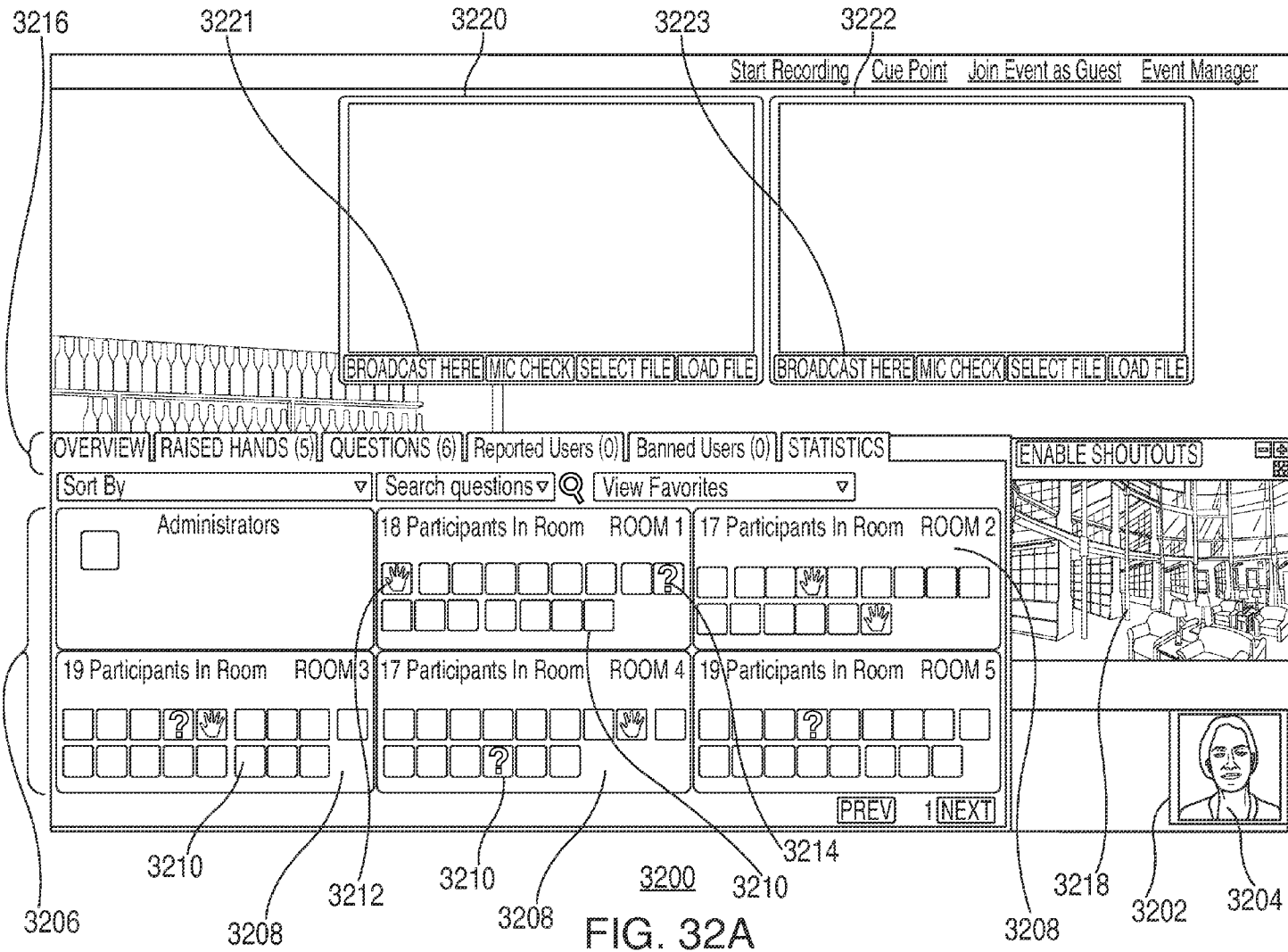
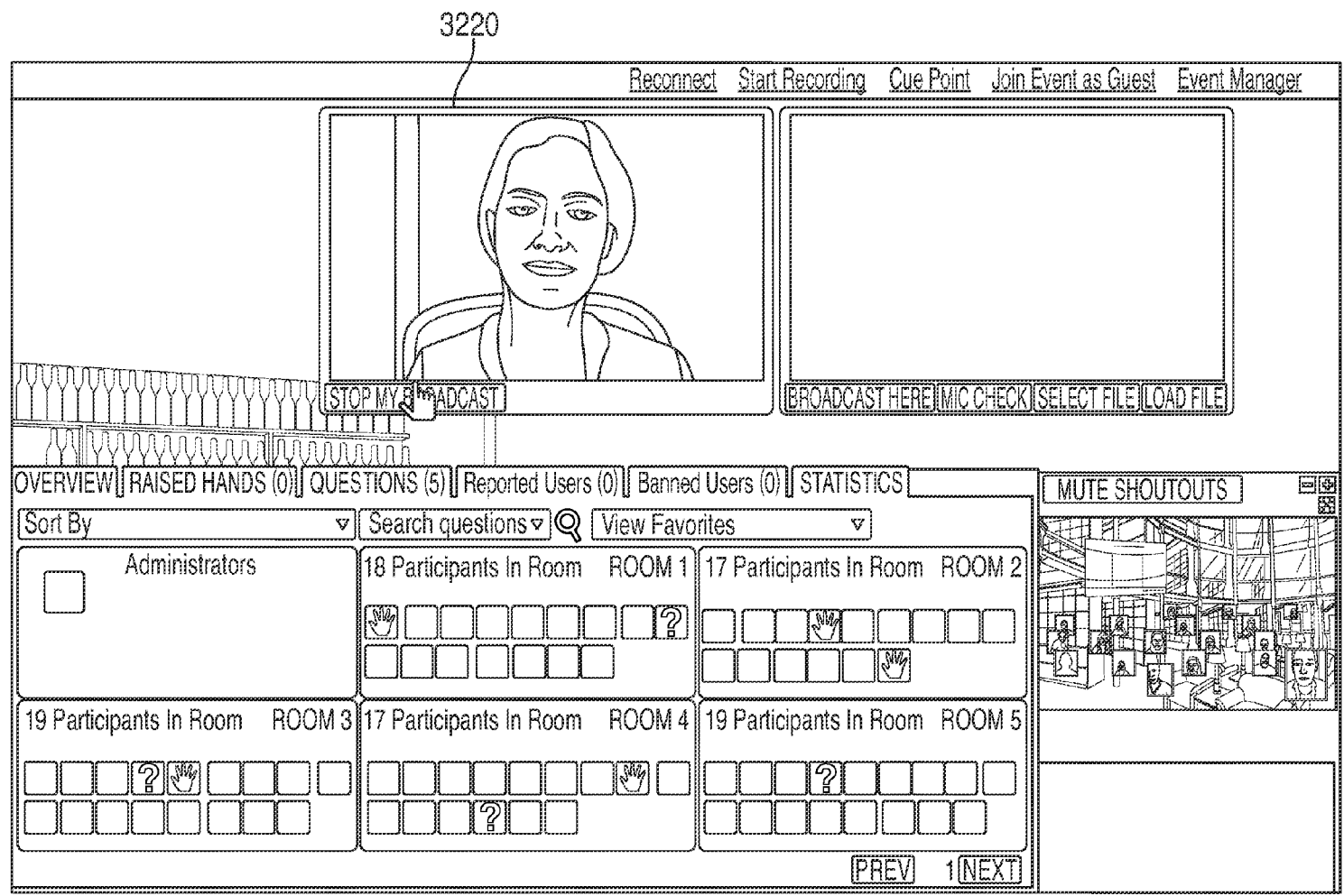


FIG. 31





3200
FIG. 32B

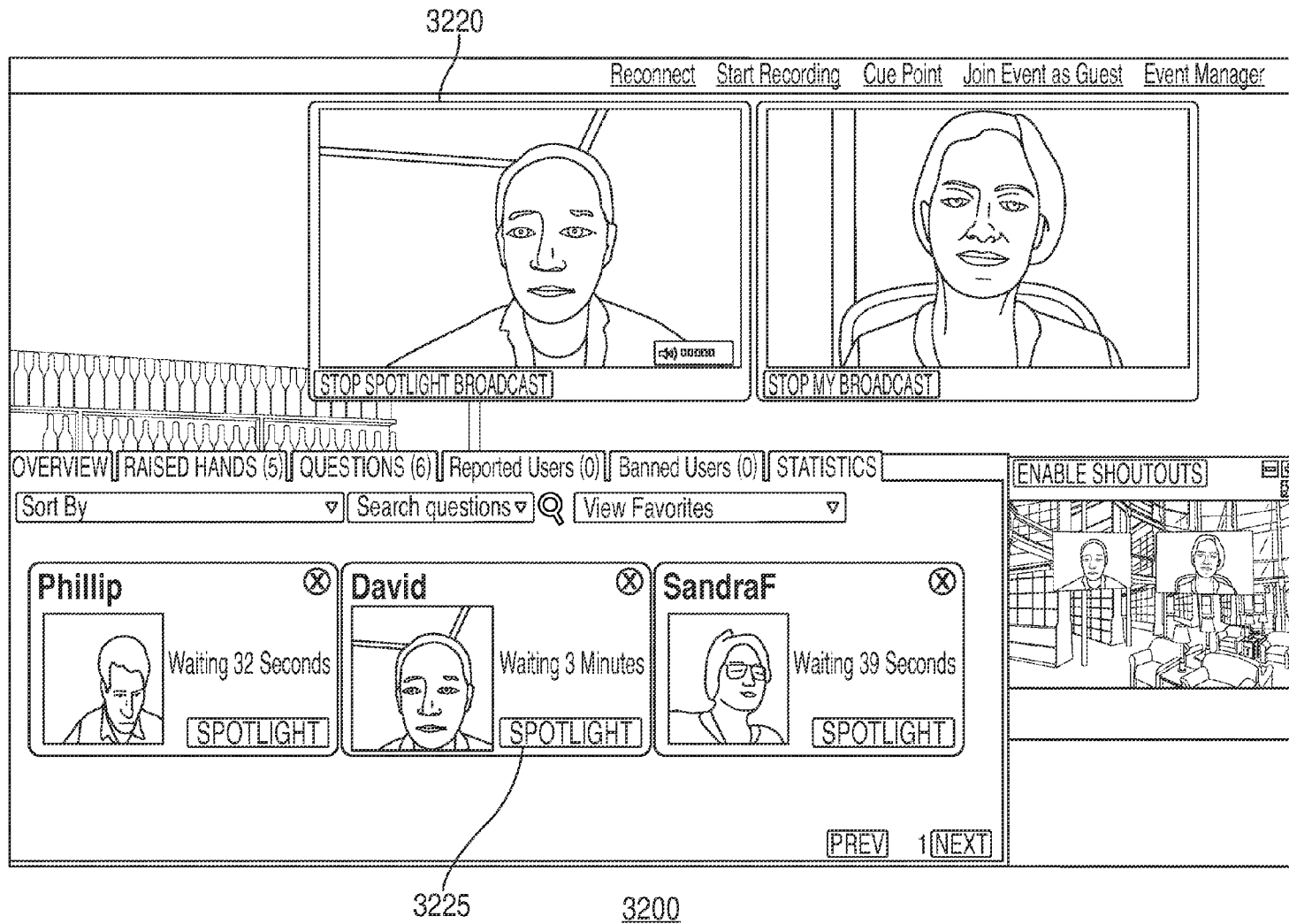


FIG. 32C

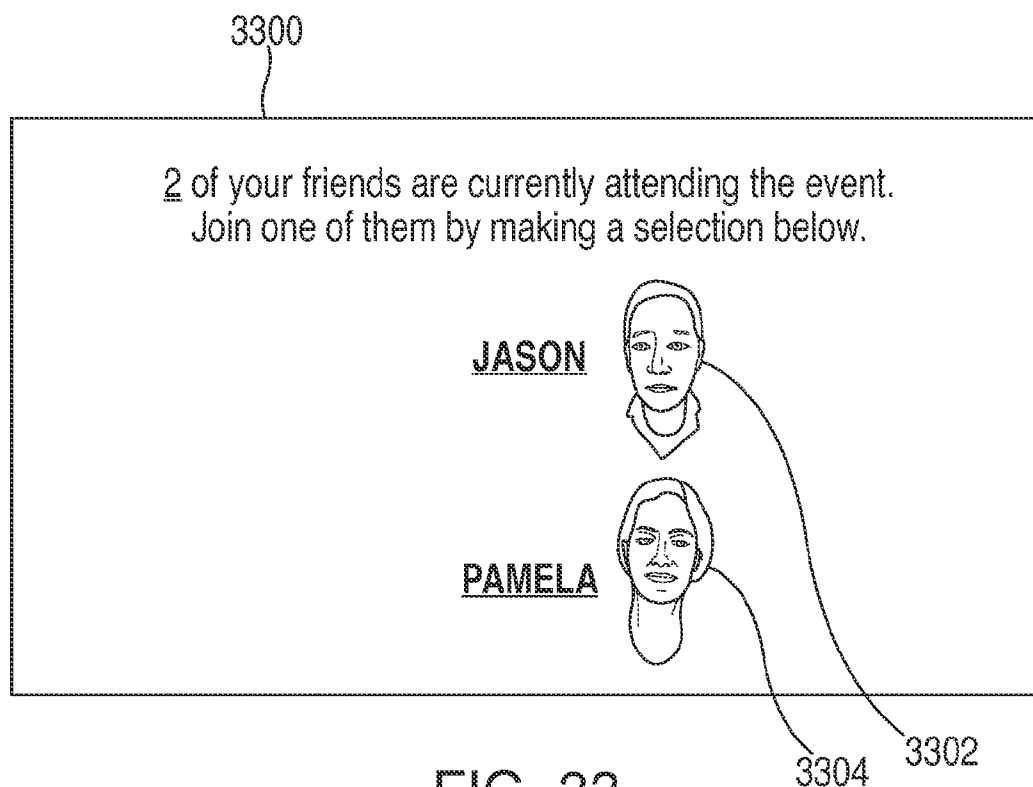


FIG. 33

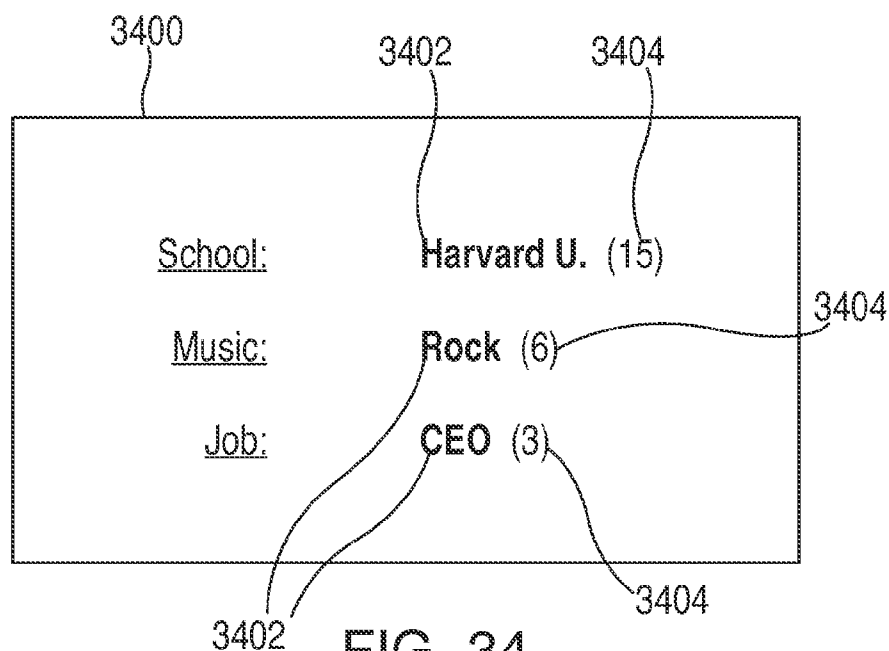


FIG. 34

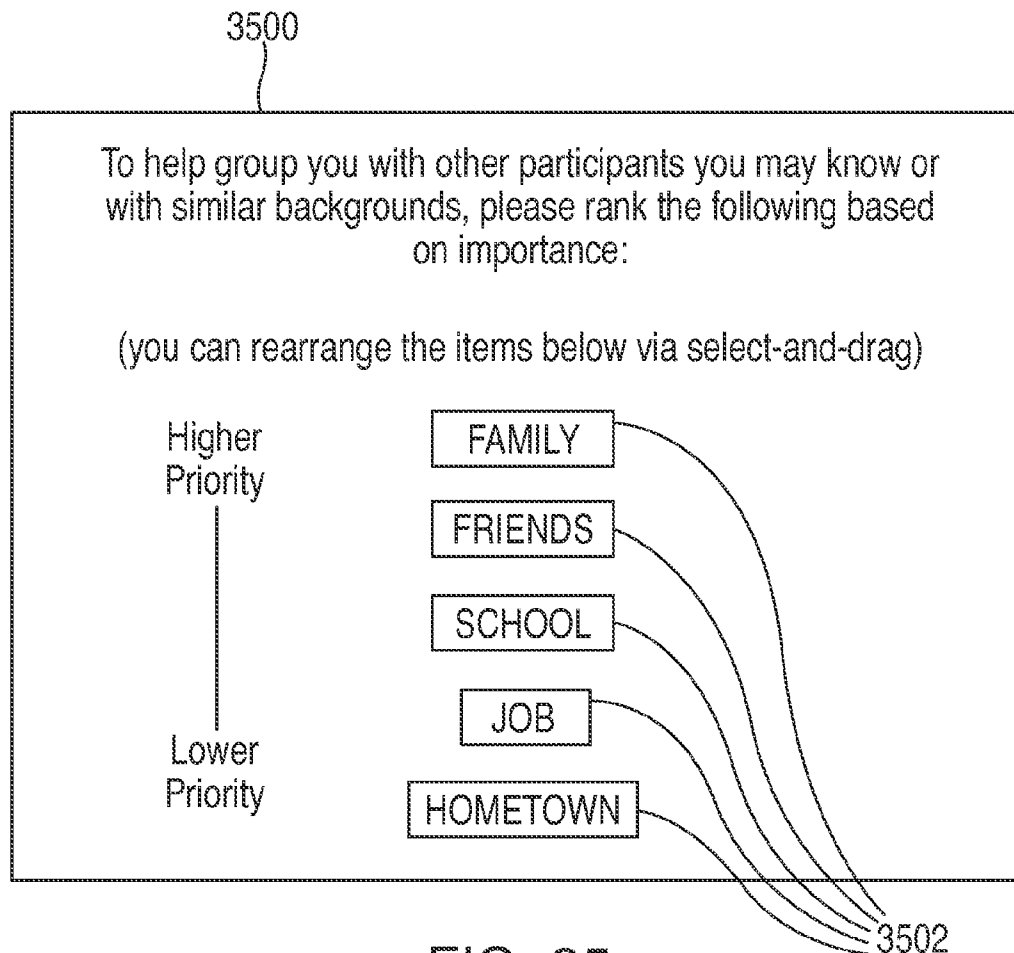


FIG. 35

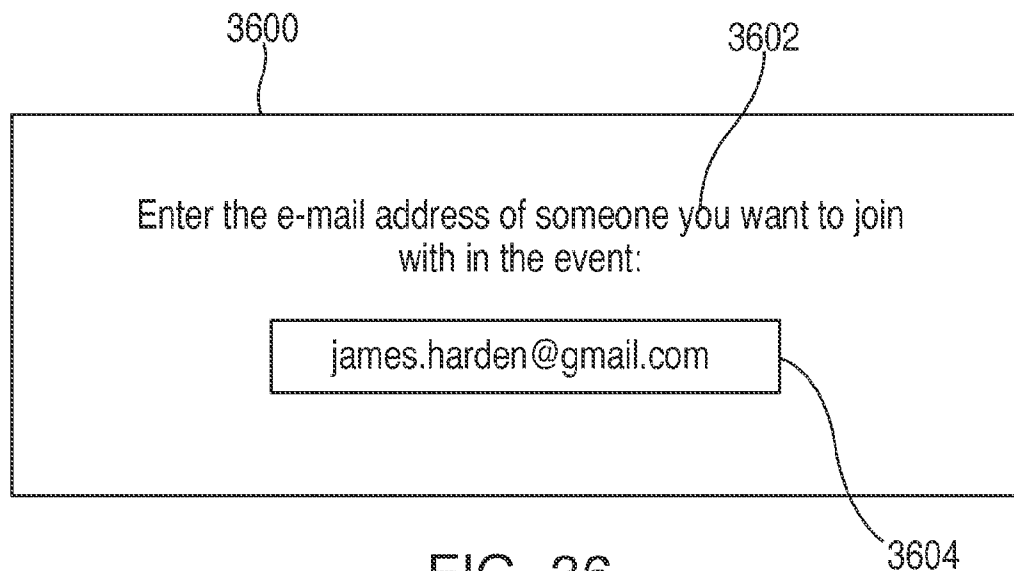
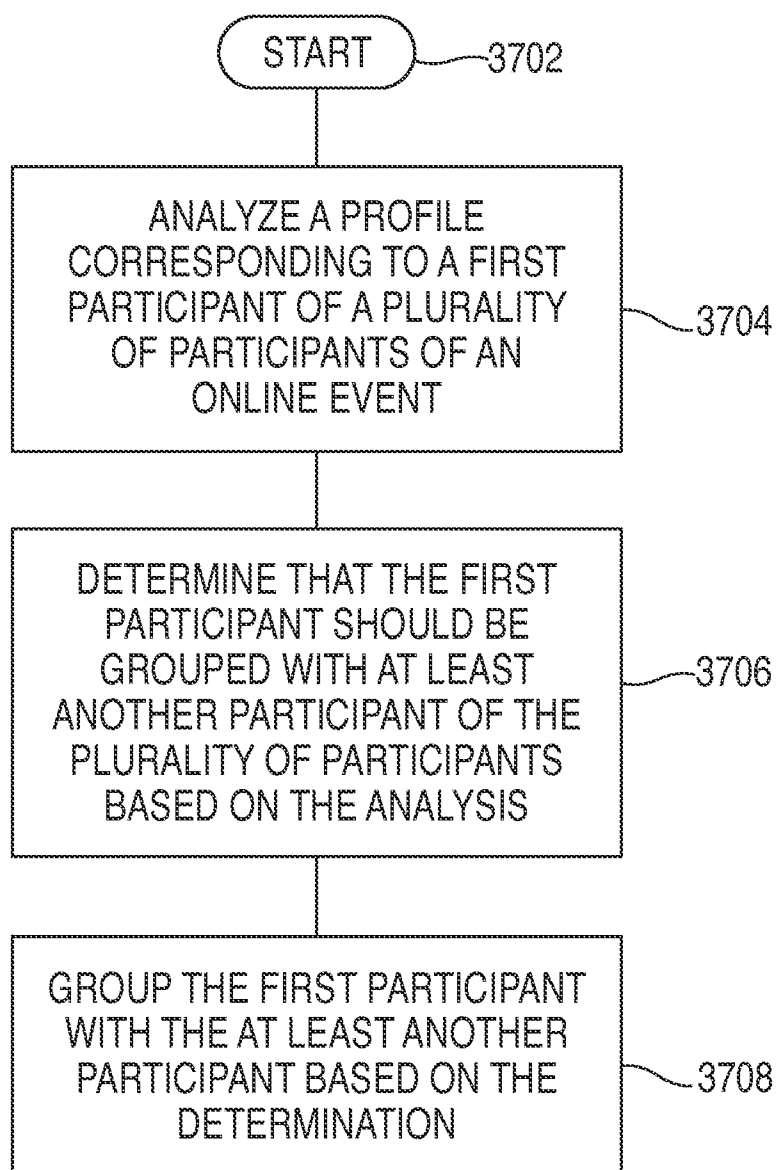
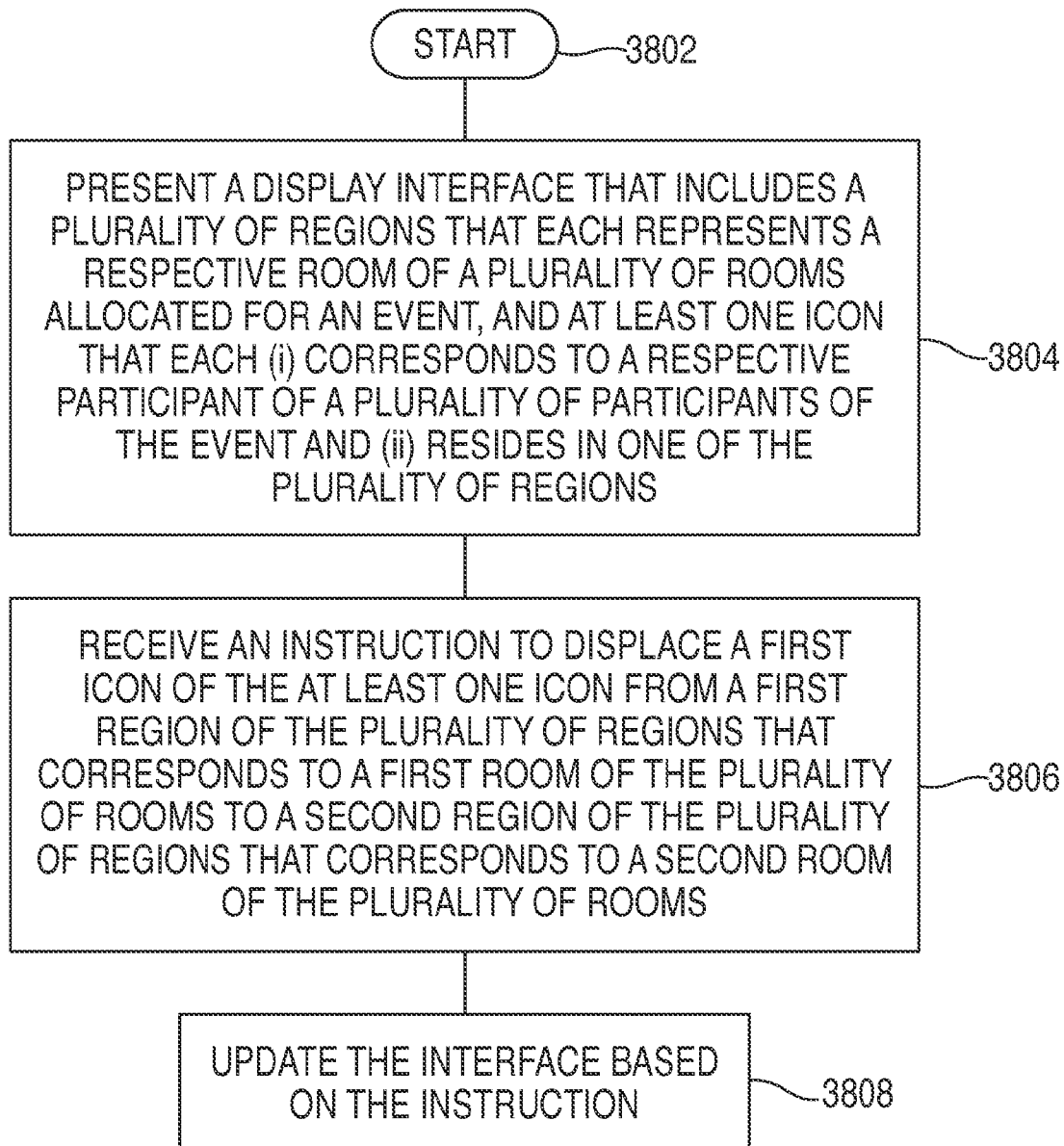


FIG. 36



3700

FIG. 37

3800**FIG. 38**

SYSTEMS AND METHODS FOR GROUPING PARTICIPANTS OF MULTI-USER EVENTS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation-in-part of U.S. patent application Ser. No. 14/068,261, filed Oct. 31, 2013, which is a continuation-in-part of U.S. patent application Ser. No. 13/925,059, filed Jun. 24, 2013, which is a continuation-in-part of U.S. patent application Ser. No. 13/849,696, filed Mar. 25, 2013, which is a continuation of U.S. patent application Ser. No. 12/624,829, filed Nov. 24, 2009 (now U.S. Pat. No. 8,405,702), which claims the benefit of U.S. Provisional Patent Application Nos. 61/117,477, filed Nov. 24, 2008, 61/117,483, filed Nov. 24, 2008, and 61/145,107, filed Jan. 15, 2009. The disclosures of each of these applications are incorporated by reference herein in their entirety.

BACKGROUND OF THE INVENTION

[0002] People often attend live in-person events with family, friends, or colleagues. In online events, however, it can be possible for two or more friends to attend the same event, but be placed into or assigned to different rooms that may be allocated for the event. For example, an online event may include hundreds or even thousands of participants, and thus various rooms, each having a capacity to accommodate a certain number of participants, may be allocated for the event. In many instances, one participant may be placed into or assigned to one of these rooms, but a friend of the participant may be assigned to a different room. This can prevent the two friends from enjoying or experiencing the event together. Thus, it can be advantageous to facilitate online events such that friends or those with similar backgrounds are grouped together, similar to how people may sit or hang out with one another at live in-person events.

[0003] Moreover, because many participants may attend an event, it can be advantageous to provide an administrator panel or interface that gives an administrator or the presenter of the event an overview of all of the participants and the various rooms that are allocated for the event, and that allows administrative changes to be made to various room assignments.

SUMMARY OF THE INVENTION

[0004] This relates to systems, methods, and devices for grouping participants of multi-user events.

[0005] In at least one embodiment, a method for grouping participants of an online event may be provided. The event may be facilitated by at least one server. The method may include analyzing a profile corresponding to a first participant of a plurality of participants accessing the event, determining that the first participant should be grouped with at least another participant of the plurality of participants based on the analysis, and grouping the first participant with the at least another participant based on determining that the first participant should be grouped.

[0006] In at least one embodiment, a system for grouping participants of an online event may be provided. The system may include a communication component configured to communicate with external devices. The system may also include a processing component configured to analyze a profile corresponding to a first participant of a plurality of participants accessing the event, determine that the first participant should

be grouped with at least another participant of the plurality of participants based on the profile, and group the first participant with the at least another participant based on the determination.

[0007] In at least one embodiment, a method for assigning participants of a multi-user online event to rooms allocated for the event. The method may include presenting a display interface that includes a plurality of regions that each represents a respective room of a plurality of rooms, and at least one icon that each (i) corresponds to a respective participant of a plurality of participants and (ii) resides in one of the plurality of regions. The method may also include receiving an instruction to move a first icon of the at least one icon from a first region of the plurality of regions that corresponds to a first room of the plurality of rooms to a second region of the plurality of regions that corresponds to a second room of the plurality of rooms. The method may also include updating the display interface based on the instruction.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] The above and other features of the present invention, its nature and various advantages will be more apparent upon consideration of the following detailed description, taken in conjunction with the accompanying drawings in which:

[0009] FIG. 1 is a block diagram of an illustrative user device, in accordance with at least one embodiment;

[0010] FIG. 2 is a schematic view of an illustrative communications system, in accordance with at least one embodiment;

[0011] FIG. 3 is a schematic view of an illustrative display screen, in accordance with at least one embodiment;

[0012] FIG. 4 is a schematic view of another illustrative display screen, in accordance with at least one embodiment;

[0013] FIG. 5 is a schematic view of yet another illustrative display screen, in accordance with at least one embodiment;

[0014] FIG. 6 is a schematic view of yet still another illustrative display screen, in accordance with at least one embodiment;

[0015] FIG. 7A is a schematic view of an illustrative display screen displaying indicators representing users on a network, in accordance with at least one embodiment;

[0016] FIG. 7B is another schematic view of the illustrative display screen of FIG. 7A, in accordance with at least one embodiment;

[0017] FIG. 7C is a schematic view of another illustrative display screen displaying indicators representing users on a network, in accordance with at least one embodiment;

[0018] FIG. 7D is a schematic view of an illustrative display screen displaying indicators in overlap and in different sizes, in accordance with at least one embodiment;

[0019] FIGS. 7E-7G are schematic views of illustrative display screens of different user devices, in accordance with at least one embodiment;

[0020] FIG. 8 is a schematic view of an illustrative array of indicators, in accordance with at least one embodiment;

[0021] FIG. 9A is a schematic view of an illustrative screen that includes one or more categorized groups of users in an audience, in accordance with at least one embodiment;

[0022] FIG. 9B shows various alerts that can be presented to a presenter on a screen, such as the screen of FIG. 9A, in accordance with at least one embodiment;

[0023] FIG. 10 shows an illustrative call-to-action window, in accordance with at least one embodiment;

[0024] FIGS. 11A and 11B are schematic views of an illustrative audio volume meter representing different overall audience volumes, in accordance with at least one embodiment;

[0025] FIG. 12 shows a schematic view of a combination of audio signals from multiple audience devices, in accordance with at least one embodiment;

[0026] FIG. 13 is a schematic view of an illustrative display screen that allows a presenter of a multi-user event to control the ability of audience devices to manipulate content being presented or broadcasted to the audience devices, in accordance with at least one embodiment;

[0027] FIG. 14 is an illustrative process for displaying a plurality of indicators, the plurality of indicators each representing a respective user, in accordance with at least one embodiment;

[0028] FIG. 15 is an illustrative process for manipulating a display of a plurality of indicators, in accordance with at least one embodiment;

[0029] FIG. 16 is an illustrative process for dynamically evaluating and categorizing a plurality of users in a multi-user event, in accordance with at least one embodiment;

[0030] FIG. 17 is an illustrative process for providing a call-to-action to an audience in a multi-user event, in accordance with at least one embodiment;

[0031] FIG. 18 is an illustrative process for detecting audience feedback, in accordance with at least one embodiment;

[0032] FIG. 19 is an illustrative process for providing a background audio signal to an audience of users in a multi-user event, in accordance with at least one embodiment;

[0033] FIG. 20 is an illustrative process for controlling content manipulation privileges of an audience in a multi-user event, in accordance with at least one embodiment;

[0034] FIG. 21 shows an alert that can be presented on a display of a user's device, in accordance with at least one embodiment;

[0035] FIG. 22 is a schematic view of an illustrative display screen, in accordance with at least one embodiment;

[0036] FIG. 23 shows a broadcast option that can be presented on a display screen of a user's device, in accordance with at least one embodiment;

[0037] FIG. 24 shows an illustrative view of a recording interface of a recording application, in accordance with at least one embodiment;

[0038] FIG. 25 shows an illustrative playback interface that can be associated with the recording application, in accordance with at least one embodiment;

[0039] FIG. 26 shows an illustrative process for preventing unauthorized access to an environment of a user device, in accordance with at least one embodiment;

[0040] FIG. 27 shows an illustrative process for facilitating dynamic communications amongst multiple users, in accordance with at least one embodiment;

[0041] FIG. 28 shows an illustrative process for controlling broadcasting privileges on a multi-user network, in accordance with at least one embodiment;

[0042] FIG. 29 shows an illustrative process for tagging a live recording of a multi-user event, in accordance with at least one embodiment;

[0043] FIG. 30 shows an illustrative process for presenting audience feedback in a multi-user event, in accordance with at least one embodiment;

[0044] FIG. 31 is a schematic view of an illustrative display interface of a user device, in accordance with at least one embodiment;

[0045] FIG. 32A is a schematic view of an illustrative administrator or presenter interface of a presenter's device, in accordance with at least one embodiment;

[0046] FIG. 32B is a schematic view of the interface of FIG. 32A after a presenter of an event selects to broadcast the presenter's live video feed to an audience of the event, in accordance with at least one embodiment;

[0047] FIG. 32C is a schematic view of the interface of FIGS. 32A and 32B after a participant's icon is selected for spotlighting, in accordance with at least one embodiment;

[0048] FIG. 33 shows a message, prompt, or query that a platform hosting or facilitating an event may transmit to a participant's device for display, in accordance with at least one embodiment;

[0049] FIG. 34 shows a notification that a platform hosting or facilitating an event may transmit to a participant's device for display, in accordance with at least one embodiment;

[0050] FIG. 35 shows a prompt that a platform hosting or facilitating an event may transmit to a participant's device for display, in accordance with at least one embodiment;

[0051] FIG. 36 shows an option that a platform hosting or facilitating an event may transmit to a participant's device for display, in accordance with at least one embodiment;

[0052] FIG. 37 shows an illustrative process for grouping participants of an online event, in accordance with at least one embodiment; and

[0053] FIG. 38 shows an illustrative process for assigning participants of a multi-user event to rooms allocated for the event, in accordance with at least one embodiment.

DETAILED DESCRIPTION

[0054] In accordance with at least one embodiment, users can interact with one another via user devices. For example, each user can interact with other users via a respective user device. FIG. 1 is a schematic view of an illustrative user device. User device 100 can include control circuitry 101, storage 102, memory 103, communications circuitry 104, input interface 105, and output interface 108. In at least one embodiment, one or more of the components of user device 100 can be combined or omitted. For example, storage 102 and memory 103 can be combined into a single mechanism for storing data. In at least another embodiment, user device 100 can include other components not shown in FIG. 1, such as a power supply (e.g., a battery or kinetics) or a bus. In yet at least another embodiment, user device 100 can include several instances of one or more components shown in FIG. 1.

[0055] User device 100 can include any suitable type of electronic device operative to communicate with other devices. For example, user device 100 can include a personal computer (e.g., a desktop personal computer or a laptop personal computer), a portable communications device (e.g., a cellular telephone, a personal e-mail or messaging device, a pocket-sized personal computer, a personal digital assistant (PDA)), or any other suitable device capable of communicating with other devices.

[0056] Control circuitry 101 can include any processing circuitry or processor operative to control the operations and performance of user device 100. Storage 102 and memory 103 can be combined, and can include one or more storage mediums or memory components.

[0057] Communications circuitry **104** can include any suitable communications circuitry capable of connecting to a communications network, and transmitting and receiving communications (e.g., voice or data) to and from other devices within the communications network. Communications circuitry **104** can be configured to interface with the communications network using any suitable communications protocol. For example, communications circuitry **104** can employ Wi-Fi (e.g., an 802.11 protocol), Bluetooth®, radio frequency systems (e.g., 900 MHz, 1.4 GHz, and 5.6 GHz communication systems), cellular networks (e.g., GSM, AMPS, GPRS, CDMA, EV-DO, EDGE, 3GSM, DECT, IS-136/TDMA, iDen, LTE or any other suitable cellular network or protocol), infrared, TCP/IP (e.g., any of the protocols used in each of the TCP/IP layers), HTTP, BitTorrent, FTP, RTP, RTSP, SSH, Voice over IP (VOIP), any other communications protocol, or any combination thereof. In at least one embodiment, communications circuitry **104** can be configured to provide wired communications paths for user device **100**.

[0058] Input interface **105** can include any suitable mechanism or component capable of receiving inputs from a user. In at least one embodiment, input interface **105** can include a camera **106** and a microphone **107**. Input interface **105** can also include a controller, a joystick, a keyboard, a mouse, any other suitable mechanism for receiving user inputs, or any combination thereof. Input interface **105** can also include circuitry configured to at least one of convert, encode, and decode analog signals and other signals into digital data. One or more mechanisms or components in input interface **105** can also be electrically coupled with control circuitry **101**, storage **102**, memory **103**, communications circuitry **104**, any other suitable components within device **100**, or any combination thereof.

[0059] Camera **106** can include any suitable component capable of detecting images. For example, camera **106** can detect single pictures or video frames. Camera **106** can include any suitable type of sensor capable of detecting images. In at least one embodiment, camera **106** can include a lens, one or more sensors that generate electrical signals, and circuitry that processes the generated electrical signals. These sensors can, for example, be provided on a charge-coupled device (CCD) integrated circuit. Camera **106** can be electrically coupled with control circuitry **101**, storage **102**, memory **103**, communications circuitry **104**, any other suitable components within device **100**, or any combination thereof.

[0060] Microphone **107** can include any suitable component capable of detecting audio signals. For example, microphone **107** can include any suitable type of sensor capable of detecting audio signals. In at least one embodiment, microphone **107** can include one or more sensors that generate electrical signals, and circuitry that processes the generated electrical signals. Microphone **107** can also be electrically coupled with control circuitry **101**, storage **102**, memory **103**, communications circuitry **104**, any other suitable components within device **100**, or any combination thereof.

[0061] Output interface **108** can include any suitable mechanism or component capable of providing outputs to a user. In at least one embodiment, output interface **108** can include a display **109** and a speaker **110**. Output interface **108** can also include circuitry configured to at least one of convert, encode, and decode digital data into analog signals and other signals. For example, output interface **108** can include cir-

cuitry configured to convert digital data into analog signals for use by an external display or speaker. Any mechanism or component in output interface **108** can be electrically coupled with control circuitry **101**, storage **102**, memory **103**, communications circuitry **104**, any other suitable components within device **100**, or any combination thereof.

[0062] Display **109** can include any suitable mechanism capable of displaying visual content (e.g., images or indicators that represent data). For example, display **109** can include a thin-film transistor liquid crystal display (LCD), an organic liquid crystal display (OLCD), a plasma display, a surface-conduction electron-emitter display (SED), organic light-emitting diode display (OLED), or any other suitable type of display. Display **109** can be electrically coupled with control circuitry **101**, storage **102**, memory **103**, any other suitable components within device **100**, or any combination thereof. Display **109** can display images stored in device **100** (e.g., stored in storage **102** or memory **103**), images captured by device **100** (e.g., captured by camera **106**), or images received by device **100** (e.g., images received using communications circuitry **104**). In at least one embodiment, display **109** can display communication images received by communications circuitry **104** from other devices (e.g., other devices similar to device **100**). Display **109** can be electrically coupled with control circuitry **101**, storage **102**, memory **103**, communications circuitry **104**, any other suitable components within device **100**, or any combination thereof.

[0063] Speaker **110** can include any suitable mechanism capable of providing audio content. For example, speaker **110** can include a speaker for broadcasting audio content to a general area (e.g., a room in which device **100** is located). As another example, speaker **110** can include headphones or earbuds capable of broadcasting audio content directly to a user in private. Speaker **110** can be electrically coupled with control circuitry **101**, storage **102**, memory **103**, communications circuitry **104**, any other suitable components within device **100**, or any combination thereof.

[0064] In at least one embodiment, a communications system or network can include multiple user devices and a server. FIG. 2 is a schematic view of an illustrative communications system **250**. Communications system **250** can facilitate communications amongst multiple users, or any subset thereof.

[0065] Communications system **250** can include at least one communications server **251**. Communications server **251** can be any suitable server capable of facilitating communications between two or more users. For example, server **251** can include multiple interconnected computers running software to control communications.

[0066] Communications system **250** can also include several user devices **255-258**. Each of user devices **255-258** can be substantially similar to user device **100** and the previous description of the latter can be applied to the former. Communications server **251** can be coupled with user devices **255-258** through any suitable network. For example, server **251** can be coupled with user devices **255-258** through Wi-Fi (e.g., a 802.11 protocol), Bluetooth®, radio frequency systems (e.g., 900 MHz, 1.4 GHz, and 5.6 GHz communication systems), cellular networks (e.g., GSM, AMPS, GPRS, CDMA, EV-DO, EDGE, 3GSM, DECT, IS-136/TDMA, iDen, LTE or any other suitable cellular network or protocol), infrared, TCP/IP (e.g., any of the protocols used in each of the TCP/IP layers), HTTP, BitTorrent, FTP, RTP, RTSP, SSH, Voice over IP (VOIP), any other communications protocol, or any combination thereof. In at least one embodiment, each

user device can correspond to a single user. For example, user device **255** can correspond to a first user and user device **256** can correspond to a second user. Server **251** can facilitate communications between two or more of the user devices. For example, server **251** can control one-to-one communications between user device **255** and **256** and/or multi-party communications between user device **255** and user devices **256-258**. Each user device can provide outputs to a user and receive inputs from the user when facilitating communications. For example, a user device can include an input interface (e.g., similar to input interface **105**) capable of receiving communication inputs from a user and an output interface (e.g., similar to output interface **108**) capable of providing communication outputs to a user.

[0067] In at least one embodiment, communications system **250** can be coupled with one or more other systems that provide additional functionality. For example, communications system **250** can be coupled with a video game system that provides video games to users communicating amongst each other through system **250**. A more detailed description of such a game system can be found in U.S. Provisional Patent Application 61/145,107, which has been incorporated by reference herein in its entirety. As another example, communications system **250** can be coupled with a media system that provides media (e.g., audio, video, etc.) to users communicating amongst each other through system **250**.

[0068] While only one communications server (e.g., server **251**) and four communications user devices (e.g., devices **255-258**) are shown in FIG. 2, it is to be understood that one or more servers and user devices can be provided. For example, multiple servers can be provided as needed to handle the communications and processing bandwidth of a specific application or event. For example, in one instance, a single server would suffice, whereby in another instance, 10 servers coupled together might be needed to handle a larger event.

[0069] Each user can have his own addressable user device through which the user communicates (e.g., devices **255-258**). The identity of these user devices can be stored in a central system (e.g., communications server **251**). The central system can further include a directory of all users and/or user devices. This directory can be accessible by or replicated in each device in the communications network.

[0070] The user associated with each address can be displayed via a visual interface (e.g., an LCD screen) of a device. Each user can be represented by a video, picture, graphic, text, any other suitable identifier, or any combination thereof. If there is limited display space, a device can limit the number of users displayed at a time. For example, the device can include a directory structure that organizes all the users. As another example, the device can include a search function, and can accept search queries from a user of that device.

[0071] As described above, multiple communications media can be supported. Accordingly, a user can choose which communications medium to use when initiating a communication with another user, or with a group of users. The user's choice of communications medium can correspond to the preferences of other users or the capabilities of their respective devices. In at least one embodiment, a user can choose a combination of communications media when initiating a communication. For example, a user can choose video as the primary medium and text as a secondary medium.

[0072] In at least one embodiment, a system can maintain communications with different user devices in different com-

munications modes. A system can maintain communications with the devices, of users that are actively communicating together, in an active communication mode that allows the devices to send and receive robust communications. For example, devices in the active communication mode can send and receive live video communications. In at least one embodiment, devices in the active communication mode can send and receive high-resolution, color videos. For users that are in the same group but not actively communicating together, a system can maintain the communications with those users' devices in an intermediate communication mode. In the intermediate communication mode, the devices can send and receive contextual communications. For example, the devices can send and receive intermittent video communications or periodically updated images. Such contextual communications may be suitable for devices in an intermediate mode of communication because the corresponding users are not actively communicating with each other. For devices that are not involved in active communications or are not members of the same group, the system can maintain communications at an instant ready-on mode of communication. The instant ready-on mode of communication can establish a communication link between each device so that, if the devices later communicate in a more active manner, the devices do not have to re-establish new communication links between each other. The instant ready-on mode can be advantageous because it can minimize connection delays when entering groups and/or establishing active communications. Moreover, the instant ready-on mode of communication enables users to fluidly join and leave groups and subgroups without creating or destroying connections. For example, if a user enters a group with thirty other users, the instant ready-on mode of communication between the user's device and the devices of the thirty other users can be converted to an intermediate mode of communication without disrupting the existing communications between the original thirty other users.

[0073] In at least one embodiment, the instant ready-on mode of communication can be facilitated by a server via throttling of communications between the users. For example, a video communications stream between users in the instant ready-on mode can be compressed, sampled, or otherwise manipulated prior to transmission therebetween.

[0074] Once an intermediate mode of communication is established, the user's device can send and receive contextual communications (e.g., periodically updated images) to and from the thirty other users. Continuing the example, if the user then enters into a subgroup with two of the thirty other users, the intermediate mode of communication between the user's device and the devices of these two users can be converted (e.g., transformed or enhanced) to an active mode of communication. For example, if the previous communications through the intermediate mode only included an audio signal and a still image from each of the two other users, the still image of each user can fade into a live video of the user so that robust video communications can occur. As another example, if the previous communications through the intermediate mode only included an audio signal and a video with a low refresh rate (e.g., an intermittent video or a periodically updated image) from each of the two other users, the refresh rate of the video can be increased so that robust video communications can occur. Once a lesser mode of communication (e.g., an instant ready-on mode or an intermediate mode) has been upgraded to an active mode of communication, the user

can send and receive robust video communications to and from the corresponding users. In this manner, a user's device can concurrently maintain multiple modes of communication with various other devices based on the user's communication activities. Continuing the example yet further, if the user leaves the subgroup and group, the user's device can convert to an instant ready-on mode of communication with the devices of all thirty other users.

[0075] As described above, a user can communicate with one or more subgroups of users. For example, if a user wants to communicate with certain members of a large group of users, the user can select those members and initiate a subgroup communication. Frequently used group rosters can be stored so that a user does not have to select the appropriate users every time the group is created. After a subgroup has been created, each member of the subgroup may be able to view the indicators (e.g., representations) of the other users of the subgroup on the display of his device. For example, each member of the subgroup may be able to see who is in the subgroup and who is currently transmitting communications to the subgroup. A user can also specify if he wants to communicate with the whole group or a subset of the group (e.g., a subgroup). For example, a user can specify that he wants to communicate with various users in the group or even just a single other user in the group. As described above, when a user is actively communicating with one or more other users, the user's device and the device(s) of the one or more other users can enter an active mode of communication. Because the instant ready-on mode of communication remains intact for the other devices, the user can initiate communications with multiple groups or subgroups and then quickly switch from any one group or subgroup. For example, a user can specify if a communication is to be transmitted to different groups or different individuals within a single group.

[0076] Recipients of a communication can respond to the communication. In at least one embodiment, recipients can respond, by default, to the entire group that received the original communication. In at least another embodiment, if a recipient chooses to do so, the recipient can specify that his response is sent to only the user sending the initial communication, some other user, or some other subgroup or group of users. However, it is to be understood that a user may be a member of a subgroup until he decides to withdraw from that subgroup and, that during the time that he is a member of that subgroup, all of his communications may be provided to the other members of the subgroup. For example, a video stream can be maintained between the user and each other user that is a member of the subgroup, until the user withdraws from that subgroup.

[0077] In at least one embodiment, the system can monitor and store all ongoing communications. For example, the system can store recorded video of video communications, recorded audio of audio-only communications, and recorded transcripts of text communications. In another example, a system can transcribe all communications to text, and can store transcripts of the communications. Any stored communications can be accessible to any user associated with those communications.

[0078] In at least one embodiment, a system can provide indicators about communications. For example, a system can provide indicators that convey who sent a particular communication, which users a particular communication was directed to, which users are in a subgroup, or any other suitable feature of communications. In at least one embodiment,

a user device can include an output interface (e.g., output interface **108**) that can separately provide communications and indicators about the communications. For example, a device can include an audio headset capable of providing communications, and a display screen capable of presenting indicators about the communications. In at least one embodiment, a user device can include an output interface (output interface **108**) that can provide communications and indicators about the communications through the same media. For example, a device can include a display screen capable of providing video communications and indicators about the communications.

[0079] As described above, when a user selects one or more users of a large group of users to actively communicate with, the communication mode between the user's device and the devices of the selected users can be upgraded to an active mode of communication so that the users in the newly formed subgroup can send and receive robust communications. In at least one embodiment, the representations of the users can be rearranged so that the selected users are evident. For example, the sequence of the graphical representations corresponding to the users in the subgroup can be adjusted, or the graphical representations corresponding to the users in the subgroup can be highlighted, enlarged, colored, made easily distinguishable in any suitable manner, or any combination thereof. The display on each participating user's device can change in this manner with each communication in this manner. Accordingly, the user can distinguish subgroup that he's communicating with.

[0080] In at least one embodiment, a user can have the option of downgrading pre-existing communications and initiating a new communication by providing a user input (e.g., sending a new voice communication). In at least one embodiment, a user can downgrade a pre-existing communication by placing the pre-existing communication on mute so that any new activity related to the pre-existing communication can be placed in a cue to receive at a later time. In at least one embodiment, a user can downgrade a pre-existing communication by moving the pre-existing communication into the background (e.g., reducing audio volume and/or reducing size of video communications), while simultaneously participating in the new communication. In at least one embodiment, when a user downgrades a pre-existing communication, the user's status can be conveyed to all other users participating in the pre-existing communication. For example, the user's indicator can change to reflect that the user has stopped monitoring the pre-existing communication.

[0081] In at least one embodiment, indicators representing communications can be automatically saved along with records of the communications. Suitable indicators can include identifiers of each transmitting user and the date and time of that communication. For example, a conversation that includes group audio communications can be converted to text communications that include indicators representing each communication's transmitter (e.g., the speaker) and the date and time of that communication. Active transcription of the communications can be provided in real time, and can be displayed to each participating user. For example, subtitles can be generated and provided to users participating in video communications.

[0082] In at least one embodiment, a system can have the effect of putting all communications by a specific selected group of users in one place. Therefore, the system can group communications according to participants rather than gener-

alized communications that are typically grouped by medium (e.g., traditional email, IM's, or phone calls that are unfiltered). The system can provide each user with a single interface to manage the communications between a select group of users, and the variety of communications amongst such a group. The user can modify a group by adding users to an existing group, or by creating a new group. In at least one embodiment, adding a user to an existing group may not necessarily incorporate that user into the group because each group may be defined by the last addressed communication. For example, in at least one embodiment, a new user may not actually be incorporated into a group until another user initiates a communication to the group that includes the new user's address.

[0083] In at least one embodiment, groups for which no communications have been sent for a predetermined period of time can be deactivated for efficiency purposes. For example, the deactivated groups can be purged or stored for later access. By decreasing the number of active groups, the system can avoid overloading its capacity.

[0084] In at least one embodiment, subgroups can be merged to form a single subgroup or group. For example, two subgroups can be merged to form one large subgroup that is still distinct from and contained within the broader group. As another example, two subgroups can be merged to form a new group that is totally separate from the original group. In at least one embodiment, groups be merged together to form a new group. For example, two groups can be merged together to form a new, larger group that includes all of the subgroups of the original group.

[0085] In at least one embodiment, a user can specify an option that allows other users to view his communications. For example, a user can enable other users in a particular group to view his video, audio, or text communications.

[0086] In at least one embodiment, users not included in a particular group or subgroup may be able to select and request access to that group or subgroup (e.g., by "knocking"). After a user requests access, the users participating in that group or subgroup may be able to decide whether to grant access to the requesting user. For example, the organizer or administrator of the group or subgroup may decide whether or not to grant access. As another example, all users participating in the group or subgroup may vote to determine whether or not to grant access. If access is granted, the new user may be able to participate in communications amongst the previous users. For example, the new user may be able to initiate public broadcasts or private communications amongst a subset of the users in that group or subgroup. Alternatively, if that group or subgroup had not been designated as private, visitors can enter without requesting to do so.

[0087] In at least one embodiment, it may be advantageous to allow each user to operate as an independent actor that is free to join or form groups and subgroups. For example, a user may join an existing subgroup without requiring approval from the users currently in the subgroup. As another example, a user can form a new subgroup without requiring confirmation from the other users in the new subgroup. In such a manner, the system can provide fluid and dynamic communications amongst the users. In at least one embodiment, it may be advantageous to allow each user to operate as an independent actor that is free to leave groups and subgroups.

[0088] In at least one embodiment, a server may only push certain components of a multi-user communication or event to the user depending on the capabilities of the user's device

or the bandwidth of the user's network connection. For example, the server may only push audio from a multi-user event to a user with a less capable device or a low bandwidth connection, but may push both video and audio content from the event to a user with a more capable device or a higher bandwidth connection. As another example, the server may only push text, still images, or graphics from the event to the user with the less capable device or the lower bandwidth connection. In other words, it is possible for those participating in a group, a subgroup, or other multi-user event to use devices having different capabilities (e.g., a personal computer vs. a mobile phone), over communication channels having different bandwidths (e.g., a cellular network vs. a WAN). Because of these differences, some users may not be able to enjoy or experience all aspects of a communication event. For example, a mobile phone communicating over a cellular network may not have the processing power or bandwidth to handle large amounts of video communication data transmitted amongst multiple users. Thus, to allow all users in an event to experience at least some aspects of the communications, it can be advantageous for a system (e.g., system 250) to facilitate differing levels of communication data in parallel, depending on device capabilities, available bandwidth, and the like. For example, the system can be configured to allow a device having suitable capabilities to enter into the broadcast mode to broadcast to a group of users, while preventing a less capable device from doing so. As another example, the system can be configured to allow a device having suitable capabilities to engage in live video chats with other capable devices, while preventing less capable devices from doing so. Continuing the example, the system may only allow the less capable devices to communicate text or simple graphics, or audio chat with the other users. Continuing the example further, in order to provide other users with some way of identifying the users of the less capable devices, the system may authenticate the less capable devices (e.g., by logging onto a social network such as Facebook™) to retrieve and display a photograph or other identifier for the users of the less capable devices. The system can provide these photographs or identifiers to the more capable devices for view by the other users. As yet another example, more capable devices may be able to receive full access to presentation content (e.g., that may be presented from one of the users of the group to all the other users in the group), whereas less capable devices may only passively or periodically receive the content.

[0089] FIG. 3 is a schematic view of an illustrative display screen. Screen 300 can be provided by a user device (e.g., device 100 or any one of devices 255-258). Screen 300 can include various indicators each representing a respective user on a communications network. In at least one embodiment, all users on a particular communications network can be represented on a display screen. For example, a communications network can include 10 users, and screen 300 can include at least one indicator per user. As another example, a group of users within a communications network can include 10 users, and screen 300 can include at least one indicator per user in that group. That is, screen 300 may only display users in a particular group rather than all users on a communications network. In at least one embodiment, each indicator can include communications from the corresponding user. For example, each indicator can include video communications from the corresponding user. In at least one embodiment, an indicator can include video communications at the center of

the indicator with a border around the video communications (e.g., a shaded border around each indicator, as shown in FIG. 3). In at least one embodiment, each indicator can include contextual communications from the corresponding user. For example, an indicator can include robust video communications if the corresponding user is actively communicating. Continuing the example, if the corresponding user is not actively communicating, the indicator may only be a still or periodically updated image of the user. In at least one embodiment, at least a portion of each indicator can be altered to represent the corresponding user's current status, including their communications with other users.

[0090] Screen 300 can be provided on a device belonging to user 1, and the representations of other users can be based on this vantage point. In at least one embodiment, users 1-10 may all be members in the same group. In at least another embodiment, users 1-10 may be the only users on a particular communications network. As described above, each of users 1-10 can be maintained in at least an instant ready-on mode of communication with each other. As shown in screen 300, user 1 and user 2 can be communicating as a subgroup that includes only the two users. As described above, these two users can be maintained in an active mode of communication. That subgroup can be represented by a line joining the corresponding indicators. As also shown in screen 300, users 3-6 can be communicating as a subgroup. This subgroup can be represented by lines joining the indicators representing these four users. In at least one embodiment, subgroups can be represented by modifying the corresponding indicators to be similar. While the example shown in FIG. 3 uses different shading to denote the visible subgroups, it is to be understood that colors can also be used to make the corresponding indicators appear similar. It is also to be understood that a video feed can be provided in each indicator, and that only the border of the indicator may change. In at least one embodiment, the appearance of the indicator itself may not change at all based on subgroups, but the position of the indicator can vary. For example, the indicators corresponding to user 1 and user 2 can be close together to represent their subgroup, while the indicators corresponding to users 3-6 can be clustered together to represent their subgroup. As shown in screen 300, the indicators representing users 7-10 can appear blank. The indicators can appear blank because those users are inactive (e.g., not actively communicating in a pair or subgroup), or because those users have chosen not to publish their communications activities.

[0091] FIG. 4 is a schematic view of another illustrative display screen. Screen 400 can also be provided by a user device (e.g., device 100 or any one of devices 255-258). Screen 400 can be substantially similar to screen 300, and can include indicators representing users 1-10. Like screen 300, screen 400 can represent subgroups (e.g., users 1 and 2, and users 3-6). Moreover, screen 400 can represent when a user is broadcasting to the entire group. For example, the indicator corresponding to user 9 can be modified to have a bold dotted border around the edge of the indicator to represent that user 9 is broadcasting to the group. In this example, the mode of communication between user 9 and each other user shown on screen 400 can be upgraded to an active mode so that users 1-8 and user 10 can receive the full broadcast. The indicator corresponding to each user in the group receiving the broadcast communication can also be modified to represent that user's status. For example, the indicators representing users 1-8 and 10 can be modified to have a thin dotted border around

the edge of the indicators to represent that they are receiving a group communication from user 9. Although FIG. 4 shows indicator borders having specific appearances, it is to be understood that the appearance of each indicator can be modified in any suitable manner to convey that a user is broadcasting to the whole group. For example, the location of the indicators can be rearranged so that the indicator corresponding to user 9 is in a more prominent location. As another example, the size of the indicators can be changed so that the indicator corresponding to user 9 is larger than the other indicators.

[0092] FIG. 5 is a schematic view of yet another illustrative display screen. Screen 500 can also be provided by a user device (e.g., device 100 or any one of devices 255-258). Screen 500 can be substantially similar to screen 300, and can include indicators representing users 1-10. As shown in screen 500, user 7 can be part of the subgroup of users 1 and 2. Accordingly, the indicator representing user 7 can have a different appearance, can be adjacent to the indicators representing users 1 and 2, and all three indicators can be connected via lines. Additionally, user 8 can be part of the subgroup of users 3-6, and can be represented by the addition of a line connecting the indicator representing user 8 with the indicators representing users 5 and 6. User 8 and user 10 can form a pair, and can be communicating with each other. This pair can be represented by a line connecting user 8 and 10, as well as a change in the appearance of the indicator representing user 10 and at least a portion of the indicator representing user 8. Moreover, the type of communications occurring between user 8 and user 10 can be conveyed by the type of line coupling them. For example, a double line is shown in screen 500, which can represent a private conversation (e.g., user 1 cannot join the communication). While FIG. 5 shows a private conversation between user 8 and user 10, it is to be understood that, in at least one embodiment, the existence of private conversations may not be visible to users outside the private conversation.

[0093] FIG. 6 is a schematic view of yet still another illustrative display screen. Screen 600 can also be provided by a user device (e.g., device 100 or any one of devices 255-258). Screen 600 can be substantially similar to screen 300, and can include indicators representing users 1-10. Moreover, screen 600 can be similar to the status of each user shown in screen 500. For example, screen 600 can represent subgroups (e.g., users 8 and 10; users 1, 2 and 7; and users 3-6 and 8). Moreover, screen 600 can represent when a user is broadcasting to the entire group of interconnected users. In such a situation, regardless of each user's mode of communication with other users, each user can be in an active mode of communication with the broadcasting user so that each user can receive the broadcast. In at least one embodiment, the user indicators can be adjusted to represent group-wide broadcasts. For example, the indicator corresponding to user 9 can be modified to have a bold dotted border around the edge of the indicator, which represents that user 9 is broadcasting to the group. The indicator corresponding to each user in the group receiving the broadcast communication can also be modified to represent that user's status. For example, the indicators representing users 1-8 and 10 can be modified to have a thin dotted border around the edge of the indicator to represent that they are receiving a group communication from user 9. Although FIG. 6 shows indicator borders having specific appearances, it is to be understood that the appearance of each indicator can be modified in any suitable manner to

convey that a user is broadcasting to the whole group, it is to be understood that the appearance of indicators can be modified in any suitable manner to convey that a user is broadcasting to the whole group. For example, the location of the indicators can be rearranged so that the indicator corresponding to user 9 is in a more prominent location. As another example, the size of the indicators can be changed so that the indicator corresponding to user 9 is larger than the other indicators.

[0094] While the embodiments shown in FIGS. 3-6 show exemplary methods for conveying the communication interactions between users, it is to be understood that any suitable technique can be used to convey the communication interactions between users. For example, the communication interactions between users can be conveyed by changing the size of each user's indicator, the relative location of each user's indicator, any other suitable technique or any combination thereof (described in more detail below).

[0095] In at least one embodiment, a user can scroll or pan his device display to move video or chat bubbles of other users around. Depending on whether a particular chat bubble is moved in or out of the viewable area of the display, the communication mode between the user himself and the user represented by the chat bubble can be upgraded or downgraded. That is, because a user can be connected with many other users in a communication network, a display of that user's device may not be able to simultaneously display all of the indicators corresponding to the other users. Rather, at any given time, the display may only display some of those indicators. Thus, in at least one embodiment, a system can be provided to allow a user to control (e.g., by scrolling, panning, etc.) the display to present any indicators not currently being displayed. Additionally, the communication modes between the user and the other users (or more particularly, the user's device and the devices of the other users) on the network can also be modified depending on whether the corresponding indicators are currently being displayed.

[0096] FIG. 7A shows an illustrative display screen 700 that can be provided on a user device (e.g., user device 100 or any of user devices 255-258). Screen 700 can be similar to any one of screens 300-600. Indicator 1 can correspond to a user 1 of the user device, and indicators 2-9 can represent other users 2-9 and their corresponding user devices, respectively.

[0097] To prevent overloading of the system resources of the user device, the user device may not be maintained in an active communication mode with each of the user devices of users 2-9, but may rather maintain a different communication mode with these devices, depending on whether the corresponding indicators are displayed. As shown in FIG. 7A, for example, indicators 2-4 corresponding to users 2-4 can be displayed in the display area of screen 700, and indicators 5-9 corresponding to users 5-9 may not be displayed within the display area. Similar to FIGS. 3-6, for example, users that are paired can be in an active mode of communication with one another. For example, as shown in FIG. 7A, users 1 and 2 can be in an active mode of communication with one another. Moreover, user 1 can also be in an intermediate mode of communication with any other users whose indicators are displayed in screen 700. For example, user 1 can be in an intermediate mode of communication with each of users 3 and 4. This can allow user 1 to receive updates (e.g., periodic image updates or low-resolution video from each of the displayed users). For any users whose indicators are not displayed, the user can be in an instant ready-on mode of com-

munication with those users. For example, user 1 can be in an instant ready-on mode of the communication with each of users 5-9. In this manner, bandwidth can be reserved for communications between the user and other users whose indicators the user can actually view on the screen. In at least one embodiment, the reservation or bandwidth or optimization of a communication experience can be facilitated by an intermediating server (e.g., server 251) that implements a selective reduction of frame rate. For example, the server can facilitate the intermediate mode of communication based on available bandwidth. In at least another embodiment, the intermediate mode can be facilitated by the client or user device itself.

[0098] To display indicators not currently being displayed in screen 700, user 1 can, for example, control the user device to scroll or pan the display. For example, user 1 can control the user device by pressing a key, swiping a touch screen of the user device, gesturing to a motion sensor or camera of the user device, or the like. FIG. 7B shows screen 700 after the display has been controlled by the user to view other indicators. As shown in FIG. 7B, the position of indicator 7 (which was not previously displayed in screen 700 of FIG. 7A) is now within the display area. Because the user can now view indicator 7 on screen 700, the system can upgrade the communication mode between the user device of user 1 and the user device of user 7 from the instant ready-on mode to the intermediate mode. Additionally, indicator 3 (which was previously displayed in the display area of screen 700 of FIG. 7A) is now outside of the display area. Because the user can no longer view indicator 3, the system can downgrade the communication mode between users 1 and 3 from the intermediate mode to the instant ready-on mode. In at least one embodiment, the position of indicator 1 can be fixed (e.g., near the bottom right portion of screen 700) such that user 1 can easily identify and locate his own indicator on screen 700. In these embodiments, because user 1 may still be interacting with user 2 during and after the scrolling or panning of screen 700, indicators 1 and 2 can remain in their previous respective positions as shown in FIG. 7B. In at least another embodiment, the position of each of indicators 1-9 can be modified (e.g., by user 1) as desired. In these embodiments, indicators 1 and 2 can move about within the display area according to the scrolling or panning of the display, but may be restricted to remain within the display area (e.g., even if the amount of scrolling or panning is sufficient to move those indicators outside of the display area).

[0099] Although FIGS. 7A and 7B show indicators 2-9 being positioned and movable according to a virtual coordinate system, it should be appreciated that the positions of indicators 2-9 may be arbitrarily positioned. That is, in at least one embodiment, scrolling or panning of screen 700 by a particular amount may not result in equal amounts of movement of each of indicators 2-9 with respect to screen 700. For example, when user 1 pans the display to transition from screen 700 in FIG. 7A to screen 700 in FIG. 7B, indicator 7 can be moved within the display area of screen 700, and indicator 3 may not be moved outside of the display area.

[0100] In at least one embodiment, the system can additionally, or alternatively, allow a user to control the display of indicators and the modification of the communication modes in other manners. For example, a device display can display different video or chat bubbles on different virtual planes (e.g., background, foreground, etc.). Each plane can be associated with a different communication mode (e.g., instant

ready-on, intermediate, active, etc.) between the device itself and user devices represented by the chat bubbles. For example, in addition to, or as an alternative to providing a scroll or pan functionality (e.g., as described above with respect to FIGS. 7A and 7B), a system can present the various indicators on different virtual planes of the screen. The user device can be in one communication mode with user devices corresponding to indicators belonging to one plane of the display, and can be in a different communication mode with user devices corresponding to indicators belonging to a different plane of the display. FIG. 7C shows an illustrative screen 750 including different virtual display planes. The actual planes themselves may or may not be apparent to a user. However, the indicators belonging to or positioned on one plane may be visually distinguishable from indicators of another plane. That is, indicators 2-9 can be displayed differently from one another depending on which plane they belong to. For example, as shown in FIG. 7C, indicators 1 and 2 can each include a solid boundary, which can indicate that they are located on or belong to the same plane (e.g., a foreground plane). The user devices of users 1 and 2 can be interacting with one another as a pair or couple as shown, and thus, can be in an active communication mode with one another. Indicators 3 and 4 can belong to an intermediate plane that can be virtually behind each of the foreground plane and the intermediate plane, and that can have a lower prominence or priority than the foreground plane. To indicate to a user that indicators 3 and 4 belong to a different plane than indicator 2, indicators 3 and 4 can be displayed slightly differently. For example, as shown in FIG. 7C, indicators 3 and 4 can each include a different type of boundary. Moreover, because the user devices of users 1, 3, and 4 may not be actively interacting with one another, the user device of user 1 may be in an intermediate mode with the user devices of users 3 and 4. Indicators 5-9 can be located on or belong to a different plane (e.g., a background plane that can be virtually behind each of the foreground and intermediate planes, and that can have a lower prominence or priority than these planes). To indicate to a user that indicators 5-9 belong to a different plane than indicators 2-4, indicators 5-9 can also be displayed slightly differently. For example, as shown in FIG. 7C, indicators 5-9 can each include yet a different type of boundary. Moreover, because user devices 1 and 5-9 may not be actively interacting with one another, and because indicators 5-9 may be located on a less prominent or a lower priority background plane, the user device of user 1 can be in an instant ready-on mode with each of the user devices of users 5-9.

[0101] It should be appreciated that the indicators can be represented using different colors, different boundary styles, etc., as long as user 1 can easily distinguish user devices that are in one communication mode with his user device (e.g., and belonging to one plane of the display) from other user devices that are in a different communication mode with his user device (e.g., and belonging to another plane of the display). For example, those indicators on a background plane of the display can be sub-optimally viewable, whereas, those indicators on the foreground plane of the display can be optimally viewable.

[0102] To allow user 1 to change communication modes with users displayed in screen 750, user 1 can select (e.g., by clicking using a mouse, tapping via a touch screen, or the like) a corresponding indicator. In at least one embodiment, when a user selects an indicator corresponding to a user device that is currently in an instant ready-on mode with that user's

device, their communication mode can be upgraded (e.g., to either the intermediate mode or the active mode). For example, when user 1 selects indicator 9, the communication mode between the user devices of users 1 and 9 can be upgraded from an instant ready-on mode to either an intermediate mode or an active mode. As another example, when user 1 selects indicator 4, the communication mode between the user devices of users 1 and 4 can be upgraded from an intermediate mode to an active mode.

[0103] In at least one embodiment, when an indicator is selected by a user, any change in communication mode between that user's device and the selected user device can be applied to other devices whose indicators belong to the same plane. For example, when user 1 selects indicator 5, not only can the user device of user 5 be upgraded to the intermediate or active mode with the user device of user 1, and not only can the boundary of indicator 5 be changed from a dotted to a solid style, but the communication mode between the user device of user 1 and one or more of the user devices of users 6-9 can also be similarly upgraded, and the display style of corresponding indicators 6-9 can be similarly modified. It should be appreciated that, although FIG. 7C has been described above as showing indicators of user devices in any of an instant ready-on mode, an intermediate mode, and an active mode with the user device of user 1, the system can employ more or fewer applicable communication modes (and thus, more or fewer virtual display planes).

[0104] In at least one embodiment, the system can provide a user with the ability to manipulate indicators and communication modes by scrolling or panning the display (e.g., as described above with respect to FIGS. 7A and 7B), in conjunction with selecting indicators belonging to different planes (e.g., as described above with respect to FIG. 7C). For example, when a user selects an indicator that is displayed within a display area of a screen, and that happens to be on the background plane with a group of other indicators, the selected indicator, as well as one or more of the group of indicators, can be upgraded in communication mode. Moreover, any indicators from that group of indicators that may not have previously been displayed in the display area, can be also be "brought" into the display area.

[0105] In at least one embodiment, the system can also provide a user device with the ability to store information about currently displayed indicators. More particularly, indicators that are currently displayed (e.g., on screen 700) can represent a virtual room within which the user is located. The system can store information pertaining to this virtual room and all users therein. This can allow a user to jump or transition from one virtual room to another, simply by accessing stored room information. For example, the system can store identification information for the user devices corresponding to currently displayed indicators (e.g., user device addresses), and can correlate that identification information with the current display positions of those indicators. In this manner, the user can later pull up or access a previously displayed room or group of indicators, and can view those indicators in their previous display positions.

[0106] As another example, the system can store current communication modes established between the user device and other user devices. More particularly, the user may have previously established an active communication mode with some displayed users, and an intermediate communication mode with other displayed users. These established modes can also be stored and correlated with the aforementioned

identification information and display positions. In this manner, the user can later re-establish previously set communication modes with the room of users (e.g., provided that those user devices are still connected to the network). In any instance where a particular user device is no longer connected to the network, a blank indicator or an indicator with a pre-defined message (e.g., alerting that the user device is offline) can be shown in its place.

[0107] The system can store the identification information, the display positions, and the communication modes in any suitable manner. For example, the system can store this information in a database (e.g., in memory **103**). Moreover, the system can provide a link to access stored information for each virtual room in any suitable manner. For example, the system can provide this access using any reference pointer, such as a uniform resource locator (“URL”), a bookmark, and the like. When a user wishes to later enter or join a previously stored virtual room, the user can provide or select the corresponding link or reference pointer to instruct the system to access the stored room information. For example, the system can identify the user devices in the virtual room, the corresponding indicator display positions, and the applicable communication modes, and can re-establish the virtual room for the user. That is, the indicators can be re-displayed in their previous display positions, and the previous communication modes between the user device and the user devices in the room can be re-established.

[0108] The system can allow the user to store or save room information in any suitable manner. For example, the system can allow the user to save current room information via a user instruction or input. Additionally, or alternatively, the system can be configured to automatically store room information. For example, the system can be configured or set to periodically save room information. As another example, the system can be configured to store room information when certain predefined conditions (e.g., set by the user) are satisfied.

[0109] In at least one embodiment, video or chat bubbles can be overlaid on one another, and can be scaled or resized depending on how much the user is interacting with the users represented by these bubbles. This can provide the user with a simulated 3-D crowd experience, where bubbles of those that the user is actively communicating with can appear closer or larger than bubbles of other users. Thus, although FIGS. 7A-7C show the various indicators being positioned with no overlap and each having the same or similar size, it can be advantageous to display some of the indicators with at least partial overlap and in different sizes. This can provide a dynamic three-dimensional (“3D”) feel for a user. For example, the system can display one or more indicators at least partially overlapping and/or masking other indicators, which can simulate an appearance of some users being in front of others. As another example, the system can display the various indicators in different sizes, which can simulate a level of proximity of other users to the user.

[0110] FIG. 7D is an illustrative screen **775** displaying indicators **1**, **3**, **4**, and **9**. As shown in FIG. 7D, for example, the system can display indicators **3** and **9** such that indicator **9** at least partially overlaps and/or masks indicator **3**. This can provide an appearance that indicator **9** is closer or in front of indicator **3**. Moreover, the system can also display indicator **4** in a larger size than indicators **3** and **9**. This can provide an appearance that indicator **4** is closer than either of indicators **3** and **9**. The positions and sizes of these indicators can be modified in any suitable manner (e.g., via user selection of the

indicators). When indicator **3** is selected, for example, the system can display indicator **3** over indicator **9** such that indicator **3** overlaps or masks indicator **9**. Moreover, the size of indicator **3** relative to indicator **4** can also change when indicator **3** is selected.

[0111] In at least one embodiment, the system can determine the size at which to display the indicators based on a level of interaction between the user and the users corresponding to the indicators. For example, the indicators corresponding to the users that the user is currently, or has recently been, interacting with can be displayed in a larger size. This can allow the user to visually distinguish those indicators that may be more important or relevant.

[0112] In at least another embodiment, the system can randomly determine indicator overlap and size. For example, while all indicators may include video streams of a similar size or resolution, they can be randomly displayed on different devices (e.g., devices **255-258**) in different sizes to provide a varying and dynamic arrangement of indicators that is different for each user device. Moreover, in at least one embodiment, the system can periodically modify indicator overlap, indicator size, and overall arrangement of the indicators on a particular user device. This can remind a user (e.g., who may not have engaged in communications for a pre-defined period of time) that he is indeed free to engage in conversation with other users.

[0113] In at least one embodiment, a user can view his or her own video or chat bubble in a centralized location on the display, where bubbles representing other users can be displayed around the user’s own bubble. This can provide a self-centric feel for the user, as if the user is engaged in an actual environment of people around him or her. Thus, the system can arrange indicators on a screen with respect to the user’s own indicator (e.g., indicator **1** in FIGS. 7A-7D), which can simulate a self-centric environment, where other users revolve around the user or “move” about on the screen depending on a position of the user’s own indicator. For example, the user’s own indicator can be fixed at a position on the screen (e.g., at the lower right corner, at the center of the screen, etc.). Continuing the example, if the user selects indicators to initiate communications with, the system can displace or “move” the selected indicators towards the user’s own indicator to simulate movement of users represented by the selected indicators towards the user.

[0114] In at least one embodiment, the system can be independently resident or implemented on each user device, and can manage the self-centric environment independently from other user devices. FIGS. 7E-7G show illustrative screens **792**, **794**, and **796** that can be displayed on user devices of users A, B, and C, respectively, who may each be part of the same chat group or environment. As shown in FIG. 7E, screen **792** of user A’s device can display user A’s own indicator A at a particular position, indicators B and C (representing users B and C, respectively) in other positions relative to indicator A, and an indicator D (representing a user D) in yet another position. In contrast, screen **794** of user B’s device can display user B’s own indicator B at a different position, indicators A and C in positions relative to indicator B, and indicator D in yet another position. Moreover, screen **796** of user C’s device can display user C’s own indicator C at a different position, indicators A and B in other positions relative to indicator C, and indicator D in yet another position. In this way, there may be no need for a single system to create and manage a centralized or fixed mapping of indicator positions

that each user device is constricted to display. Rather, an implementation of the system can be run on each user device to provide the self-centric environment for that user device, such that a view of user indicators on a screen of one user's device may not necessarily correspond to a view of those same indicators on a screen of another user's device.

[0115] In at least one embodiment, a user can view a mingle bar or buddy list of video or chat bubbles on the device display. The user can select one or more of these bubbles to engage in private chats with the corresponding users. This is advantageous because a multi-user communications environment can involve many users, which can be difficult for a particular user to identify and select other users to communicate with. Thus, in at least one embodiment, a system can provide an easily accessible list or an array of indicators from which a user can initiate communications. The system can determine which indicators to provide in the array in any suitable manner. For example, the system can include indicators that represent other users that the user is currently, or has previously communicated with. As another example, the system can include indicators that the user is not currently directly communicating with, but that may be in the same subgroup as the user (e.g., those in an intermediate mode of communication with the user). This can provide the user with instant access to other users, which can allow the user to easily communicate or mingle with one or more other users. In at least one embodiment, the list or array of indicators can correspond to other users that are currently engaged in an event, but may not be in the instant ready-on mode with the user.

[0116] Although not shown, the system can also include an invitation list or array of users that are associated with the user in one or more other networks (e.g., social networks). The system can be linked to these other networks via application program interfaces (APIs), and can allow a user to select one or more users to invite to engage in communications through the system. For example, the invitation list can show one or more friends or associates of the user in a social network. By clicking a user from this list, the system can transmit a request to the user through the API to initiate a communication (e.g., audio or video chat). If the selected user is also currently connected to the system network, the system can allow the user to communicate with the selected user in, for example, the active mode of communication (e.g., a direct chat).

[0117] FIG. 8 is an illustrative array 810 of indicators. As shown in FIG. 8, array 810 can include multiple indicators that each represents a respective user. Each indicator can include one or more of a name, an image, a video, a combination thereof, or other information that identifies the respective user. Although FIG. 8 only shows array 810 including indicators 2-7, array 810 can include fewer or more indicators. For example, array 810 can include other indicators that can be viewed when a suitable user input is received. More particularly, array 810 can include more indicators to the left of indicator 2 that can be brought into view when a user scrolls or pans array 810.

[0118] Each of the indicators of array 810 can be selectable by a user to initiate communications (e.g., similar to how the indicators of screens 300-700 can be selectable). In at least one embodiment, the system can facilitate communication requests in response to a user selection of an indicator. For example, upon user selection of a particular indicator, the system can send a request (e.g., via a pop-up message) to the device represented by the selected indicator. The selected

user can then either approve or reject the communication request. The system can facilitate or establish a communication between the user and the selected user in any suitable manner. For example, the system can join the user into any existing chatroom or subgroup that the selected user may currently be a part of. As another example, the system can pair up the two users in a private chat (e.g., similar to pairs 1 and 2 in FIGS. 7A and 7B). As yet another example, the system can join the selected user into any existing chatroom or subgroup that the user himself may currently be a part of. In any of the above examples, each of the two users can remain in any of their pre-existing subgroups or private chats, or can be removed from those subgroups or chats.

[0119] In at least one embodiment, the system can also utilize the list or array of indicators to determine random chats or subgroups for the user to join. For example, if the user appears to be disengaged from all communications for an extended period of time, the system can offer suggested users from array 810 that the user can initiate communications with. Additionally, or alternatively, the system can automatically select one or more users from array 810 to form subgroups or chats with the user.

[0120] Thus, it should be appreciated that the various embodiments of the systems described above with respect to FIGS. 7A-7D and 8 can provide a graphics display of an illusion of a continuous array of a large number of users or participants in a large scale communications network. Those skilled in the art will also appreciate that the system can be embodied as software, hardware, or any combination thereof. Moreover, those skilled in the art will appreciate that components of the systems can reside on one or more of the user device and a server (e.g., server 251) that facilitates communications between multiple user devices.

[0121] During a live presentation, a presenter or speaker generally has the ability to gauge, in real-time, the reaction of the audience and overall sentiment. For example, a presenter can identify the raising of hands, any whispering or chatting amongst the audience, the overall level of interest of the audience (e.g., excitement, lack of excitement, and any other reactions or sentiments), changes in a rate of any thereof, and the like. It can be advantageous to provide a similar ability to presenters or speakers in an online event.

[0122] In at least one embodiment, a system can detect large group reactions and sentiments in relation to audio, video, or text prompts. For example, audio votes can be collected via transducers such as microphones. The system can collect and analyze data on microphone activity patterns and volume levels in a large scale online event, where microphones are used or are available. In particular, each user or participant in the event may use a microphone to communicate with other users over the system. Data on the microphone levels can be received and monitored to identify significant changes in volume levels of all active microphones. The data can be received and monitored by a server (e.g., server 251), by the presenter's client device, or by one or more of the audience client devices). The analysis yields statistics as to the number of microphones with dramatic changes in volume, sustained changes in volume or patterns of volume change, or the like. Dynamics indicative of laughs, applause, audio responses to multiple choice or yes/no questions can, for example, be tabulated to reflect, degrees of change, percentages, overall enthusiasm, etc. While the analysis may not be as accurate or perfect as speech recognition, the system is

simply to deploy, and can analyze large groups of participants in real-time, with minimal latency.

[0123] The results of the monitoring and analysis existing microphone activity streams can be provided to any participant device (e.g., the presenter's device or any of the audience devices) via an alternative data channel that may be separate from the audio channel through which actual microphone activity is delivered to the device.

[0124] The results of the analysis of any audio, video, or text-based streams from the audience can provide invaluable insight into audience reaction or activity, and can also allow for real-time audio polling, without the need for voice recognition or manual responses from the audience, such as the clicking of buttons. For example, the system may allow a presenter to pose a question or an audio poll in real-time to the online audience, and the audience can simply respond audibly.

[0125] Responses to real-time distributed polling, whether by clicking of buttons, by identifying changes in microphone volume levels, or by identifying predefined sounds occurring in rough synchrony in the audience can be presented to all participants in the event, or only the host, speaker, or presenter (e.g., as determined by the host).

[0126] In at least one embodiment, the audio reaction data of large groups of users in the audience can also be reflected or displayed visually (e.g., by video) in the form of a visible indicator, such as a color-coded graphic display, and additionally, or alternatively, can be tracked and added to transcripts of the event, or time stamped as an edit point in a digital recording of the event.

[0127] In at least one embodiment, the analysis can be effected by comparing different samples of microphone activity. For example, statistics, such as average, moving average, standard deviation of one or more data samples of participant activity, or more particularly, their microphone activity, can be compared with other samples of microphone data streams.

[0128] In at least another embodiment, synchronous movements of sound can be identified, and a mix of such sounds (or representative sounds) or a sample of the mix can be provided to the presenter or speaker, or even to all participants to give everyone a sense of the moment via a "crowd sound."

[0129] In at least one embodiment, an input (e.g., microphone activity) from each participant or user in the audience can be received, and can be matched to prestored audio that corresponds with various sentiments (e.g., positive or negative sentiments, such as applause or clapping, booing, or the like). In at least another embodiment, microphone activity can be scanned to identify audio that may match generalized profiles of the prestored audio.

[0130] In some embodiments, even if the microphone is turned on or activated and is capable of receiving audio inputs, the system (as implemented on the client or user device) may be configured to perform analyses and/or assessments on the microphone audio inputs, and can send both the actual microphone audio signals themselves as well as the analysis data to the server. The server can then determine whether or not to actually forward the microphone audio signals to recipients or other participants (e.g., based on user settings or designations), but will still have the benefit of the data analyses on the microphone audio from each client device, and can use these data to generate statistics of all received user microphone audio in an event. In fact, in some embodiments, microphone audio signals may not even be

transmitted to the server itself, let alone recipients or other participants. Rather, in these embodiments, only data regarding the microphone signals may be transmitted to the server.

[0131] In some embodiments, each client or user device may be configured to process and communicate the microphone signals such that only dynamics of a certain type or level are communicated to the server or system, which may reduce the amount of data that needs to be communicated by the client devices over the network. For example, the system, as implemented on the client or user device, may be configured to only send microphone signals that exceed a predefined amplitude level or that exhibit characteristics of certain sound patterns.

[0132] Moreover, it should be appreciated that the system (e.g., as implemented on the server) may be configured to monitor and provide microphone audio level statistics, regardless of whether actual microphone audio signals are being received from each user device in the audience. That is, the system may provide analyses or assessments of the overall audience even if only some client or user devices in the audience actually have their microphones turned on and active while others do not.

[0133] In some embodiments, the system may sample predefined audio snippets from all received microphone signals, and may combine them to create a combined audio track or signal that represents an audio feed of the audience, and that can be provided to each of the user devices in the audience as a sort of "crowd sound." To prevent any one voice of the users in the audience from being recognizable (e.g., to disguise individuals' speech), the audio snippets may be sampled at a sufficiently small size (e.g., shorter than full words of speech). In this way, the system may provide a crowd-like experience similar to that in a live in-person gathering, without sacrificing privacy.

[0134] In at least one embodiment, the system as implemented on a client or user device may still send or transmit microphone audio signals to the server, regardless of whether a user of the device has designated or set not to do so. In these embodiments, the server may perform analyses on the received microphone audio to generate statistics on all received microphone audio signals from participants in an event.

[0135] In at least one embodiment, the system can monitor composite microphone audio levels of all participants in an event (e.g., all of those in the audience), not specifically to detect sudden changes in volume (e.g., indicative of applause, laughter, or response to a specific prompt such as a question), but rather to detect or gauge changes in audience engagement (e.g., conversations with one another during the event). This would allow for visual monitoring of the composite level in an online event, which can help to create the equivalent of the "room noise level" that a speaker can typically use to gauge their "losing" the audience in a live in-person event. The results or statistics of the analysis can be added to a digital video recording of the event (e.g., as data in a separate audio channel, as a color-coded dot in a corner of the video recording, as a data report showing times of excess audio, or the like) for easy reference and guidance to a presenter to improve his or her performance or presentation in the future.

[0136] In at least one embodiment, the system can track the number of raised hands or written or typed questions occurring in frequency clusters, which can enable speakers or presenters in a large scale event to understand when they are failing to be clear. This can allow the statistics of simulta-

neous reactions to themselves serve as actionable data in the event. As with composite audio level data, these frequency cluster events can be stored with a digital recording of the event for post event analysis.

[0137] As described above, the behavior, reaction, or status of users in an audience of a multi-user event can be detected or analyzed, and can be reported to a presenter of the event. For example, the webcam streams, or microphone captured audio of one or more members in the audience can be analyzed so as to categorize the audience into groups. The presenter can use this information to determine if the audience is not paying attention, and the like, and can engage in private chat with one or more members that have been categorized in these groups. In particular, a system can provide a user with the ability to host a multi-user event, such as a web-based massive open online course (“MOOC”). For example, the system can allow a host or presenter to conduct the event on a presenter device (e.g., user device **100** or any of devices **255-258**) to an audience of users of other similar audience devices. In a real-life event, a presenter can typically readily assess the behavior or level of engagement of the audience. For example, a presenter can identify the raising of hands, any whispering or chatting amongst the audience, the overall level of interest of the audience (e.g., excitement, lack of excitement, and any other reactions or sentiments), changes in a rate of any thereof, and the like. Thus, to provide a presenter hosting a large scale online event with a similar ability, the system can include an audience evaluator that evaluates or assesses one or more of the behavior, status, reaction, and other characteristics of the audience, and that filters or categorizes the audience into organized groups based on the assessment. The system can additionally provide the results of the categorization to the presenter as dynamic feedback that the presenter would not normally otherwise receive during a MOOC, for example. This information can help the presenter easily manage a large array of audience users, as well as dynamically adjust or modify his presentation based on the reactions of the audience. The system can also store any information regarding the evaluation, such as the time any changes occurred (e.g., the time when a hand was raised, the time when a user became inattentive, such as eyes looking away from the screen, etc., and the like). Moreover, the system can provide the presenter with the ability to interact with one or more of the users in the categorized groups (e.g., by engaging in private communications with one or more of those users).

[0138] The audience evaluator can be implemented as software, and can include one or more algorithms or modules suitable for evaluating, or otherwise analyzing the audience (e.g., known video analysis techniques, including facial and gesture recognition techniques). Because the audience devices can be configured to transmit video and audio data or streams (e.g., provided by respective webcams and microphones of those devices), the audience evaluator can utilize these streams to evaluate the audience. In at least one embodiment, a server (e.g., such as server **251**) can facilitate the transfer of video and audio data or streams between user devices, as described above with respect to FIG. 2, and the audience evaluator can evaluate the audience by analyzing these streams.

[0139] The audience evaluator can be configured to determine any suitable information about the audience. For example, the audience evaluator can be configured to determine if one or more users are currently raising their hands

(e.g., to ask a question), engaged in chats with one or more other users, looking away, being inattentive, typing or speaking specific words or phrases (e.g., if the users have not set their voice or text chats to be private), typing or speaking specific words or phrases repeatedly during a predefined period of time set by the presenter, typing specific text in a response window associated with a questionnaire or poll feature of the event, and the like. The audience evaluator can also classify or categorize the audience based on the analysis, and can provide this information to the presenter (e.g., to the presenter device).

[0140] In at least one embodiment, the audience evaluator is provided in a server (e.g., server **251** or any similar server). In these embodiments, the server can perform the analysis and categorization of the streams, and can provide the results of the categorization to the presenter device. In at least another embodiment, the audience evaluator can be provided in one or more of the presenter device and the audience devices. In yet at least another embodiment, some components of the audience evaluator is provided in one or more of the server, the presenter device, and the audience devices.

[0141] The system can dynamically provide the audience evaluation results to the presenter device, as the results change (e.g., as the behavior of the audience changes). The system can provide these results in any suitable manner. For example, the system can provide information that includes a total number of users in each category. Moreover, the system can also display and/or move indicators representing the categorized users. This can alert the presenter to the categorization, and can allow the presenter to select and interact with one or more of those users. FIG. 9A shows an illustrative screen **900** that includes one or more categorized groups of users in an audience. Screen **900** can be provided on any presenter device. As shown in FIG. 9A, screen **900** can display content **901** (e.g., a slideshow, a video, or any other type of content that is currently being presented by the presenter device to one or more audience devices). Screen **900** can also include categories **910** and a number of users **920** belonging to each category. Screen **900** can also display one or more sample indicators **930** that each represents a respective user in the particular category. The audience evaluator can determine which indicators to display as sample indicators **930** in any suitable manner (e.g., arbitrarily or based on any predefined criteria). For example, each indicator **930** can correspond to the first user that the audience evaluator determines to belong to the corresponding category.

[0142] Categories **910**, numbers **920**, and indicators **930** can each be selectable by a presenter (e.g., by clicking, touching, etc.), and the system can facilitate changes in communications or communication modes amongst the participants based on any selection. For example, if the presenter selects an indicator **930** for the category of users whose hands are “raised,” the user(s) corresponding to selected indicator **930** can be switched to a broadcasting mode (e.g., similar to that described above with respect to FIG. 4). The selected indicator can also be displayed in a larger area of screen **900** (e.g., in area **940**) of the presenter device, as well as at similar positions on the displays of the other audience devices. As another example, if the presenter selects an indicator **930** for the category of users who are engaged in chats (e.g., private or not) with users in the audience or with other users, the presenter can form a subgroup with all of those users, and can upgrade a communication mode between the presenter device and the audience devices of those users. In this way, the

presenter can communicate directly with one or more of those users (e.g., by sending and receiving video and audio communications), and can request that those users stop chatting. This subgroup of users can be displayed on the screen of the presenter device, similar to the screens shown in FIGS. 7A-7D, and can represent a virtual room of users that the presenter can interact with.

[0143] In at least one embodiment, the system can also categorize the audience based on background information on the users in the audience. For example, the system can be configured to only include users in the “hand raised” category, if they have raised their hands less than a predetermined number of times during the event (e.g., less than 3 times in the past hour). This can prevent one or two people in the audience from repeatedly raising their hands and drawing the attention of the presenter. As another example, the system can be configured to only include users in a particular category if they have attended or are currently attending a particular university (e.g., those who have attended Harvard between the years of 1995-2000). This can help the presenter identify any former classmates in the audience. Other background information can also be taken into account in the categorization, including, but not limited to users who have entered a response to a question (e.g., posed by the presenter) correctly or incorrectly, users who have test scores lower than a predefined score, and users who speak a particular language. It should be appreciated that the system can retrieve any of the background information via analysis of the communications streams from the users, any profile information previously provided by the users, and the like.

[0144] It should be appreciated that, although FIG. 9A only shows four categories of users, screen 900 can display more or fewer categories, depending on the preferences of the presenter. More particularly, the audience evaluator can also provide an administrative interface (not shown) that allows the presenter to set preferences on which categories are applicable and should be displayed.

[0145] In at least one embodiment, the administrative interface can provide an option to monitor any words or phrases (e.g., typed or spoken) that are being communicated amongst the audience more than a threshold number of times, and to flag or alert the presenter when this occurs. When this option is set and customized, the audience evaluator can monitor and evaluate or analyze data transmitted by the audience devices to detect any such words or phrase that are being repeatedly communicated.

[0146] Because the number of users in the audience can be large, it can be a drain on the resources of a server (e.g., that may be facilitating the event) or the presenter device to evaluate or analyze the streams from each of the audience devices. Thus, in at least one embodiment, the system can additionally, or alternatively, be provided in one or more of the audience devices. More particularly, each user device in the audience (e.g., that is attending an event) can include a similar audience evaluator for analyzing one or more streams captured by the user device itself. The results of the analysis can then be provided (e.g., as flags or other suitable type of data) to the server or to the presenter device for identification of the categories. In this way, the presenter device or server can be saved from having to evaluate or analyze all of the streams coming from the audience devices. The audience evaluator of each audience device can also provide information similar to that shown in FIG. 9A to a user of that device. This can allow the user to view content being presented by the presenter

device, as well as categorization of other users in the audience. For example, the user can view those in the audience who have their hands raised, and can engage in communications with one or more of these users by clicking an indicator (e.g., similar to indicator 930). As another example, the user can identify those in the audience who have or are currently attending a particular school, and can socialize with those users. In at least one embodiment, each of the audience devices can also provide an administrative tool that is similar to the administrative tool of the presenter device described above. This can allow the corresponding users of the audience devices to also set preferences on which categories to filter and display.

[0147] It should be appreciated that screen 900 can also include indicators for all of the users in the audience. For example, screen 900 can be configured to show indicators similar to those shown in the screens of FIGS. 7A-7D, and can allow the presenter to scroll, pan, or otherwise manipulate the display to gradually (e.g., at an adjustable pace) transition or traverse through multiple different virtual “rooms” of audience users. The presenter can select one or more indicators in each virtual room to engage in private chats or to bring up to be in broadcast mode (e.g., as described above with respect to FIG. 4).

[0148] Although FIG. 9A shows categories 910 being presented at the bottom left of screen 900, it should be appreciated that categories 910 can be displayed at any suitable position on screen 900. Moreover, categories 910 can be shown on a different screen, or can only be displayed on screen 900 when the presenter requests the categories to be displayed.

[0149] In at least one embodiment, the categories may not be displayed at all times, but can be presented (e.g., as a pop-up) when the number of users in a particular category exceeds a predefined value. FIG. 9B shows various alerts 952 and 954 that can be presented to a presenter on screen 900 when certain conditions are satisfied. For example, the system can show an alert 952 when five or more people have their hands raised simultaneously. As another example, the system can show an alert 954 when over 50% of the audience is not engaged in the event or has stepped away from their respective user devices. This can be advantageous, for example, because it can help the presenter identify or determine moments when he or she may not be so clear in the presentation (e.g., where many hands are raised in a frequency cluster or nearly simultaneously, where many questions are typed out by the audience and directed to the presenter, or the like). As described above, the presenter can be alerted (e.g., via pop-ups or the like) when such clustered responses from the audience occur, and statistics of such responses (e.g., large number of hands being raised after the presenter makes certain remarks) can serve as actionable data for the presenter to use for adjusting or improving his or her presentation in real-time.

[0150] Although not shown, the categories of users can also be displayed to the presenter in the form of a pie chart. For example, each slice of the pie chart can be color-coded to correspond to a particular category, and the size of each slice can indicate the percentage of users in the audience that have been classified in the corresponding category.

[0151] In at least another embodiment, a system can analyze or otherwise determine the total number of active microphones and their amplitude, level, or volume (e.g., cumulatively, on average, etc.) in real-time during an online event,

which can also help a presenter or speaker gauge the reaction of the audience to his or her presentation. This system can be implemented as an audience meter that analyzes or otherwise determines when certain thresholds of microphone volume over predefined durations are reached. For example, the system can determine when there is a low level of microphone activity overall (e.g., near silent) over a period of time. As another example, the system can determine when there is a relatively high microphone activity overall over a period of time.

[0152] Because some users may value their privacy and thus have their webcam and/or microphones deactivated during interactive events, it can be advantageous to be able to analyze microphone activity even when some microphones are not activated and thus not providing audio signals. Thus, the microphone activity analysis can be effected as long as some microphones are turned on. That is, microphone data can be advantageously captured even without users clicking a button to send microphone audio. In fact, the data can even be construed when taken from a group of active users and assessed in real-time as group reactions to some prompt (e.g., question or poll) by a presenter or speaker.

[0153] It should be appreciated that, while the analysis may not be 100% accurate (e.g., may not completely capture the microphone activity for all of the users in an event), the larger the group of users encompassed in the analysis, the more likely synchronous activity can be interpreted as a response to some prompt. That is, even if microphones may pick up unrelated room sounds or other non-voice room sounds, or even if some users may have their headphones on, preventing the user's speech to be picked up, the analysis can, in general, identify low levels of group microphone activity when users are paying attention or listening to the presenter or speaker, and higher levels of activity when users are generally conversing or outputting speech or related sounds. In this way, at least a general indication of the degree of conversation or other voice input of the users during an event and/or an indication that the audience is paying attention or listening to a speaker can be ascertained.

[0154] In at least one embodiment, data on microphone levels can be monitored to identify significant changes in volume of all active microphones. This analysis can yield summary information or statistics as to the number of microphones undergoing dramatic changes in volume, sustained changes in volume, or patterns of volume change. These dynamics can be indicative of laughs, applause, audio responses to multiple choice or yes/no questions, and degree of the changes can be tabulated to reflect audience enthusiasm. While the analysis may not be as perfect as speech recognition, this system is simple to deploy and can be used to analyze large groups of users in real-time, at low latency.

[0155] The system can be implemented (e.g., in the form of a software application) by a server (e.g., server 251), a presenter device, or by each of the audience or client devices. In embodiments where the system is implemented on the audience devices, significant changes to the volume level of the microphone belonging to that audience device can be detected, and microphone activity streams to be sent to the server can be flagged to indicate the change in activity, or can be communicated to the server through an alternate data channel separate from the stream.

[0156] Results of the analysis can be provided in the form of summary information (e.g., an audience meter or summary interface, which may be similar to or be included as a part of

screen 900 of FIG. 9A) to the speaker or presenter, and can be invaluable in evaluating or understanding the reactivity of the audience to a presentation, or can even allow for real-time audio polling without the need for voice recognition or manual responses such as the clicking of buttons. In an online event, a presenter may prompt (e.g., by asking a question, putting up a poll or survey, or the like) the audience for input, and the audience may respond by speaking, gesturing, or entering text. Audio input (e.g., votes) from the users in the audience can be collected via respective transducers (e.g., microphones of the various user devices), and can be used to determine audience reaction to the presenter's prompts. In some embodiments, the results can even be presented to a system administrator or host and/or any or all users in the audience (e.g., as set by the host). In this way, real-time distributed polling, for example, to which an audience can audibly respond, can be shown to some or all of the participants in the event.

[0157] In at least one embodiment, during moments when the audience as a whole is expressing a particular detected synchronous sentiment or reaction, the audio captured from the overall audio can be mixed or otherwise combined to form a crowd sound, which can then be provided (e.g., in the form of a sample) to the speaker as well as to some or all users in the audience to enhance the experience of an event (e.g., to make it seem as if the users are in a live event with a crowd in the background).

[0158] In at least one embodiment, the system can store a plurality of audio signals that each corresponds with a particular sentiment or sound. For example, the system can store audio associated with positive and negative sentiments, applauding, clapping, or booing, or the like. When audio is received from the various microphone activity, the system can match them with those stored to determine the overall sentiment or reaction of the audience (e.g., to determine that the overall audience is applauding). Thus, the microphone activity can be scanned as a whole and sounds that may be occurring in rough synchrony within the audience can be compared with the stored sounds to identify the overall sentiment or reaction.

[0159] In at least one embodiment, the received audio signals can be analyzed based on only samples of the signals (e.g., selected over a predefined time). The signals may not necessarily be stored, but statistics regarding the signals (e.g., average volume, moving average values, standard deviations, or the like) may be calculated, retained, and used to provide the summary information on audience feedback.

[0160] It should be appreciated that, in various embodiments, video, rather than audio, can instead be received from the audience, and can be analyzed to identify the overall audience sentiment or reaction. In these embodiments, for example, video analysis can be performed on the overall video streams received from the users to identify common or synchronous user movements and/or gestures (e.g., raising of hands, laughing, or the like). In some embodiments, overall sentiment or reaction can be determined based on analyses of both audio and video received from the audience. For example, video streams of the joining of hands along with clapping sounds can indicate to the system that the audience is generally applauding.

[0161] Exemplary embodiments are now described in more detail below. As explained above, the behavior, reaction, or status of users in an audience of a multi-user event can be analyzed and reported to a presenter of the event. For

example, the webcam streams, or microphone captured audio of one or more members in the audience can be analyzed so as to categorize the audience into groups. The presenter can use this information to determine if the audience is not paying attention.

[0162] In at least one embodiment, the system can include an audience interest detector that analyzes and reports to a presenter of a multi-user event the volume of live audio feedback from an audience in the event (e.g., as detected from the audience's individual microphones). This can, for example, help the presenter gauge audience reaction to his presentation (e.g., loud laughter in response to a joke). In other words, as explained above, a presenter can typically readily identify feedback from an audience during a live in-person presentation or event. For example, during a live comedy event, a comedian can easily determine (in real-time) whether the audience is responding to his jokes with laughter. In contrast, a presenter at a live web-based presentation is typically unable to identify mass audience reactions. Thus, in at least one embodiment, a system can receive feedback, and more particularly, audio feedback, from one or more users in the audience, and can provide this feedback to a presenter in an easily understandable manner.

[0163] The system can be implemented as software, and can be resident on a server (e.g., server **251**) or a user device (e.g., device **100** or any of devices **255-258**) of the presenter, or audience devices. The system can be configured to receive one or more media streams from the audience devices, and can include one or more algorithms (e.g., known audio analysis techniques). Because the audience devices can be configured to transmit video and audio data or streams (e.g., provided by respective webcams and microphones of those devices), the system can utilize these streams to evaluate the audience. In at least one embodiment, a server (e.g., such as server **251**) can facilitate the transfer of video and audio data or streams between user devices, as described above with respect to FIG. 2, and the system can determine audio characteristics by analyzing these streams. More particularly, the system can be configured to determine any changes in volume level of audio signals received from the audience, patterns of the volume change, and the like. Because one or more participants or users in the audience may have an audio input component (e.g., microphone) and a video capture component (e.g., webcam) active on their respective user devices, the media streams can be a culmination of one or more signals provided by these components. In at least one embodiment, the system can receive the audio portions of the media streams from the audience device, and can analyze the audio signals to determine or identify changes in volume (e.g., by continuously monitoring the audio streams). Any change in volume of the audio signals can indicate to the presenter that the audience (e.g., as a whole, or at least in part) is reacting to the presentation.

[0164] The system can monitor the received audio signals and determine changes in volume level in any suitable manner. For example, the system can receive all audio signals from some or all of the audience devices, determine an average volume or amplitude of each audio signal, and calculate an overall average volume of the audience by taking another average of all of the determined average volumes. As another example, the system can receive all audio signals, but only use a percentage or portion of the audio signals to determine the overall audience volume. Regardless of the technique(s)

employed to determine an overall audience volume, this information can be presented to the presenter as an indication of audience feedback.

[0165] In at least one embodiment, the presenter in a multi-user event can send a call-to-action (e.g., a pop-up message or a display change instruction, such as preventing display of content) to members in the audience. This call-to-action can request some form of interaction by the audience, such as completion of a task. That is, a system can provide a presenter with the ability to send a request (e.g., a call-to-action) to one or more of the audience devices for user input or response (e.g., to each of the users in the audience, to pre-selected users in the audience, to users in predefined groups or subgroups, etc.). For example, the presenter can pose a question to the audience, and can request that the system trigger the audience devices to display a response window or otherwise provide a request to the users in the audience (e.g., via a video, etc.). The users in the audience can respond via one or more button presses, voice, gestures, and the like. During a live multi-user web-based event, it can also be advantageous to allow a presenter to employ a call-to-action to restrict or limit a presentation of content on the audience devices, unless or until appropriate or desired action is taken by the audience users. This can allow a presenter to control the audience's ability to participate (or continue to participate) in an event. For example, after providing an introductory free portion of a presentation, the presenter may wish to resume the presentation only for those users who submit payment information. Thus, in at least one embodiment, the system can allow a presenter to set a call-to-action requesting payment information, and can send the request to one or more of the audience devices.

[0166] The system can allow the presenter to set a call-to-action in any suitable manner. For example, the system can include an administrative tool or interface (not shown) that a presenter can employ to set the call-to-action (e.g., to set answer choices, vote options, payment information fields, etc.). The system can then send or transmit the call-to-action information to one or more of the audience devices (e.g., over a network to devices **255-258**). A corresponding system component in the audience devices can control the audience devices to display or otherwise present the call-to-action information. FIG. 10 is an illustrative call-to-action window **1000** that can be displayed on one or more audience devices. As shown in FIG. 10, window **1000** can include one or more fields or option **1010** requesting user input. For example, fields **1010** can include selection buttons that correspond to "YES" or "NO" answers, or any other answers customizable by a presenter or the audience users. As another example, fields **1010** can include input fields associated with payment information (e.g., credit card information, banking information, etc.). The system can facilitate the sending of any inputs received at each audience device back to the presenter as a response to the call-to-action request.

[0167] In at least one embodiment, non-responsive users in the audience (e.g., those who fail to input a desired response to the call-to-action) can lose their ability to participate (or continue to participate) in the event or receive and view presentation content at their respective audience devices. For example, the system can terminate the presentation of content on the audience devices if the corresponding user does not provide payment information (e.g., within a predefined time).

[0168] In at least one embodiment, the volume of live audio feedback from an audience in a multi-user event (e.g., as

detected from the audience's individual microphones) can be analyzed and reported to a presenter of the event. This can, for example, help the presenter gauge audience reaction to his presentation (e.g., loud laughter in response to a joke). In other words, as explained above, a presenter can typically readily identify feedback from an audience during a live in-person presentation or event. For example, during a live comedy event, a comedian can easily determine (in real-time) whether the audience is responding to his jokes with laughter. In contrast, a presenter at a live web-based presentation is typically unable to identify mass audience reactions. Thus, in at least one embodiment, a system can receive feedback, and more particularly, audio feedback, from one or more users in the audience, and can provide this feedback to a presenter in an easily understandable manner.

[0169] The system can be implemented as software, and can be resident on either a server (e.g., server 251) or a user device (e.g., device 100 or any of devices 255-258) of the presenter and/or audience devices. The system can be configured to receive one or more media streams from the audience devices (e.g., similar to that described above with respect to FIGS. 9A and 9B), and can analyze these streams to determine audio characteristics. More particularly, the system can be configured to determine any changes in volume level of audio signals received from the audience, patterns of the volume change, and the like. Because one or more participants or users in the audience may have an audio input component (e.g. microphone) and a video capture component (e.g., webcam) active on their respective user devices, the media streams can be a culmination of one or more signals provided by these components. In at least one embodiment, the system can receive the audio portions of the media streams from the audience device, and can analyze the audio signals to determine or identify changes in volume (e.g., by continuously monitoring the audio streams). Any change in volume of the audio signals can indicate to the presenter that the audience (e.g., as a whole, or at least in part) is reacting to the presentation.

[0170] The system can monitor the received audio signals and determine changes in volume level in any suitable manner. For example, the system can receive all audio signals from all the audience device, determine an average volume or amplitude of each audio signal, and calculate an overall average volume of the audience by taking another average of all of the determined average volumes. As another example, the system can receive all audio signals, but only use a percentage or portion of the audio signals to determine the overall audience volume. Regardless of the technique employed to determine an overall audience volume, this information can be presented to the presenter as an indication of audience feedback.

[0171] Returning now to audio stream analyses described above, results of audio stream analyses (e.g., overall audience volume levels) can be provided to the presenter in any suitable manner (e.g., visually, audibly, haptically, etc.). FIGS. 11A and 11B show an audio volume meter 1100 that can be displayed on a presenter device (e.g., as a part of screen 900). Volume meter 1100 can include bars 1110 each representing a level of audio volume of the audience (e.g., where bars higher up in the meter signify a higher overall audience volume). The system can associate a different overall audience volume level with a different bar 1110, and can "fill" that bar, as well as the bars below it as appropriate. For example, the overall audience volume at one moment may be determined

to correspond to the second bar 1110 from the bottom up. In this example, the first two bars from the bottom up of volume meter 1100 can be filled as shown in FIG. 11A. As another example, the overall audience volume at another moment may be determined to be high enough to correspond to the sixth bar 1110 from the bottom up. In this example, the first six bars from the bottom up of volume meter 1100 can be filled as shown in FIG. 11B. The change in overall audience volume represented by a simple volume meter (or the relative difference in the overall volume) can allow a presenter to quickly determine whether the audience is reacting to his presentation. Although FIGS. 11A and 11B show audio volume meter 1100 being presented in a vertical configuration, it should be appreciated that an audio volume meter can be presented in any suitable manner (e.g., horizontally, in a circular fashion, etc.), as long as it can convey changes in audio volume level of the audience.

[0172] In at least one embodiment, the system (or at least some component of the system) can be provided on each audience device, and can be configured to monitor voice and audio data captured by microphones of the devices. The system can also be configured to determine the volume level of the data. This information can be transmitted from each audience device to a server (e.g., server 251) and/or the presenter device for analysis. The server and/or presenter device can determine if the cumulative audio level of the audience (e.g., the voices of the audience as a whole) is changed. Any such change can be alerted to the presenter, for example, via volume meter 1100. In this manner, the server and the presenter device can be saved from having to evaluate or analyze all of the streams coming from the audience devices.

[0173] It should be appreciated that the system can also be leveraged by the presenter for real-time audio polling purposes. For example, the presenter can invoke or encourage participants or users in the audience to answer questions, where any change in the audio level of the audience can represent a particular answer. Continuing with the example, if the presenter asks the audience to answer "YES" if they satisfy a certain condition, any dramatic increase in the audio level can indicate to the presenter that a large part of the audience answered "YES." If the presenter then asks the audience to answer "NO" if they do not satisfy the condition, a less of an increase in the audio level can indicate to the presenter that a smaller portion of the audience answered "NO."

[0174] In at least one embodiment, live audio captured by the microphones of one or more members in the audience can be combined to generate a background audio signal. This background signal can be provided to the presenter as well as each member in the audience to simulate noise of an actual crowd of people. That is, during a live in-person event, any noise emitted by one or more people in the audience can be heard by the presenter, as well as by others in the audience. It can be advantageous to provide a similar environment in a multi-user web-based event. Thus, in at least one embodiment, a system can receive audio signals from one or more audience devices (e.g., similar to user device 100 or any of devices 255-258), and can combine the received audio signals to generate a "crowd" or background audio signal. The system can receive audio signals from all of the audience devices. Alternatively, the system can receive audio signals from a predefined percentage of the audience devices. The combined audio can be transmitted to each of the audience devices so as to simulate a live in-person event with back-

ground noise from the overall audience. FIG. 12 shows a schematic view of a combination of audio signals from multiple audience devices. As shown in FIG. 12, a system can receive audio signals 1255-1258 (e.g., from one or more user devices 255-258), and can combine the received audio signals to provide a combined background audio signal 1260.

[0175] The system can reside in one or more of a presenter device (e.g., similar to the presenter device described above with respect to FIGS. 9A and 9B) and a server (e.g., server 251). Background audio signal 1260 can be provided to each of the audience devices, as well as to the presenter device. In this manner, all of those present in or otherwise accessing the event can experience a simulated crowd environment similar to that of a live in-person event.

[0176] The system can combine the received audio in any suitable manner. For example, the received audio signals can be superimposed using known audio processing techniques. The system can also combine audio signals or streams from the presenter device along with the audio signals from the audience devices prior to transmission of signal 1260 to the audience devices. In this manner, the audience devices can receive presentation data (e.g., audio, video, etc.) from the presenter device, as well as overall crowd background audio.

[0177] Moreover, the system can process each received audio signal prior to, during, or after the combination. For example, each received audio signal can be processed prior to combination in order to eliminate any undesired extraneous noise. Continuing with the example, the system can be configured to analyze the received audio signals, and can be configured to only consider or combine components of the audio signals that exceed a predefined threshold or volume level. As another example, the audio signals can be processed during combination such that some audio signals may have a higher amplitude than other audio signals. This may simulate spatial audio effects (where, for example, noise from a user located closer to the presenter may be louder than noise from a user located farther away). The determination of whether one audio signal should have a higher amplitude than another can be made based on any suitable factor (e.g., the real-life distance between the presenter device and the user device outputting that audio signal, etc.).

[0178] In at least one embodiment, the presenter in a multi-user event can allow participants or members in the audience to play, pause, or otherwise manipulate the content being presented, thus providing a joint control capability. During a web-based multi-user event, content being presented is typically streamed from the presenter device to audience devices, and the presenter is usually in exclusive control of the presentation of the content, even when displayed or presented at the audience devices. For example, if the presenter is presenting a video, the presenter can typically rewind, fast-forward, and pause the video and the same effects can be observed or reflected at the audience devices. However, it can be desirable to provide those in the audience with at least limited control of the presentation content on their respective user devices and/or even of the presented content on all other user devices including the presenter's device. That is, it can be advantageous to allow users in the audience to rewind, fast-forward, or otherwise manipulate the presentation content on their own devices, such manipulation being effected on other user devices participating in the event (e.g., control signals can be sent from the individual user devices to other user devices in the event such that a change in playback of the content on one device can result in a similar or the same change in playback

of the content presented on other devices). Thus, in at least one embodiment, a system can provide users in an audience with the ability to control, or otherwise manipulate content currently being streamed or presented to their devices. In some embodiments, the system can additionally or alternatively provide a presenter with the ability to control whether or not (or when) those in audience can control the content at their respective devices such that the manipulation is only effected on their own devices, but not other user devices in the event (e.g., where a change in playback of the content on one device does not result in a similar or the same change in playback of the content on other user devices in the event). In this way, an audience can experience at least some freedom in controlling presentation content on their own devices.

[0179] The system can be embodied as software, and can be configured to generate control signals for allowing or preventing the audience devices from manipulating content being presented. FIG. 13 shows an illustrative presenter screen 1300 that allows a presenter to control the ability of audience devices to manipulate presented content. As shown in FIG. 13, screen 1300 can display content 1310 (e.g., a slideshow, a video, or any other type of content) that is currently being presented by the presenter and transmitted to audience devices.

Screen 1300 can include one or more input mechanisms 1320 that the presenter can select to control, or otherwise manipulate the presentation of content 1310 that is being transmitted to the audience devices. For example, input mechanisms 1320 can include one or more of a rewind, a fast-forward, a pause, and a play mechanism for controlling the presentation of content 1310. In at least one embodiment, the audience devices can also include a screen that is similar to screen 1300. For example, the screen can include input mechanisms similar to input mechanisms 1320 that can allow audience users to manipulate the presentation content (e.g., play, pause, rewind, and fast-forward buttons of a multimedia player application that can receive and be controlled by the aforementioned control signals generated by the system).

[0180] To allow the presenter to set whether those in the audience can control or manipulate content 1310 that has been transmitted to the respective audience devices, screen 1300 can also include an audience privilege setting feature. The audience privilege setting feature can provide various types of functionality that allows the presenter to control the ability of the audience to manipulate presented content on their respective devices. More particularly, audience privilege setting feature can include one or more settings or buttons 1340 (or other similar types of inputs) each for configuring the system to control the ability of the audience to manipulate the content in a respective manner. When any of these settings or buttons 1340 are selected (e.g., by a presenter), the system can generate the corresponding control signals to control the audience devices. For example, one setting 1340 can correspond to one or more control signals for allowing the audience devices to rewind the presented content. As another example, another setting 1340 can correspond to one or more control signals for allowing the audience devices to fast-forward the presented content. As yet another example, another setting 1340 can correspond to one or more control signals for only allowing the audience devices to rewind, but not fast-forward the presented content. As still another example, another setting 1340 can correspond to one or more control signals for allowing the audience devices to either rewind or fast-forward the presented content, whenever the

presenter pauses the presentation on the presenter device. As yet another example, another setting **1340** can correspond to one or more control signals for causing the audience devices to reset the play position of presentation content on the devices, whenever the presenter resumes the presentation on the presenter device. In this example, the presentation can resume for all audience devices at a common junction, even if the audience devices may have rewound or fast-forwarded the content.

[0181] As described above, the system can provide the aforementioned functionalities, and the like, in the form of software and control signals. When the presenter sets the audience privilege setting feature (e.g., to prevent fast-forwarding of the presentation by the audience devices), the control signals can be embedded or otherwise transmitted along with content **1310** to the respective audience devices, and can be processed by the audience devices (e.g., to prevent fast-forwarding of the received content).

[0182] Although FIG. 13 shows input mechanisms **1320** and audience privilege settings **1340** being included in screen **1300**, it should be appreciated they can be provided in any suitable manner. For example, they can be provided as buttons that are separate from screen **1300** (e.g., separate buttons of the device). As another example, they can be provided as voice control functions (e.g., the presentation of the content can be rewound, fast-forwarded, and the like, via one or more voice commands from the presenter).

[0183] It should be appreciated that, although the system has been described above as allowing a presenter to limit presentation manipulation by all users in the audience, the system can also allow the presenter to apply the content manipulation limitations only to some users in the audience. For example, the system can allow the presenter to apply content manipulation limitations only to certain users selected by the presenter.

[0184] It should also be appreciated that, although the system has been described above as streaming, transmitting, or otherwise presenting content **1310** from the presenter device to the audience devices, the system can additionally, or alternatively, facilitate the streaming, transmitting, or presenting of content from an external device (e.g., a remote server, such as server **251** or any other data server) to the audience devices. Moreover, the system can still be configured to employ the audience privilege setting feature to control the ability of the audience devices to manipulate the presented content, even if the content is not being provided directly by or from the presenter device. Additionally, it should be appreciated that the content does not have to be streamed during the presentation. For example, the content can be previously transmitted (e.g., downloaded) to each of the audience devices before the event, and can be accessible to the audience when the event begins. Moreover, even in this case, the system can still be configured to employ the audience privilege setting feature to control the ability of the audience devices to manipulate the previously downloaded content (e.g., by controlling a corresponding system component on each of the audience devices to seize control of any multimedia player applications of the audience devices that may be used to play or execute the content).

[0185] FIG. 14 is an illustrative process **1400** for displaying a plurality of indicators, the plurality of indicators each representing a respective user. Process **1400** can begin at step **1402**. At step **1404**, process **1400** can include displaying a first group of the plurality of indicators on a display of a

device. The device may be in communication with a first group of users in a first mode and with a second group of users in a second mode, and the first group of users may be represented by the first group of indicators, and the second group of users may be represented by a second group of the plurality of indicators. For example, process **1400** can include displaying a first group of users including users **3** and **4** on screen **700** of FIG. 7A. The device can be in an intermediate communication mode with users **3** and **4**. Moreover, the device can also be in an instant ready-on communication mode with a second group of users including user **7** of FIG. 7A.

[0186] At step **1406**, process **1400** can include adjusting the display to display the second group of indicators based on receiving an instruction from a user. For example, process **1400** can include adjusting screen **700** to display the second group of users including user **7**, as shown in FIG. 7B, based on receiving a user instruction at the device to adjust screen **700**. The user instruction can include a scroll, a pan, or other manipulation of screen **700** of the device. Moreover, process **1400** can include removing at least one user of the first group of users from a display area of the display. For example, process **1400** can include removing user **3** of the first group of users from a display area of screen **700** (e.g., as shown in FIG. 7B).

[0187] At step **1408**, process **1400** can include changing the communication mode between the device and the second group of users from the second mode to the first mode based on the received instruction. For example, process **1400** can include changing the communication mode between the device and the device of user **7** from the instant ready-on mode to the intermediate mode.

[0188] In at least one embodiment, process **1400** can also include changing the communication mode between the device and at least one user of the first group of users from the first mode to the second mode. For example, process **1400** can include changing the communication mode between the device and user **3** from the intermediate mode to the instant ready-on mode.

[0189] FIG. 15 is an illustrative process **1500** for manipulating a display of a plurality of indicators. Process **1500** can begin at step **1502**. At step **1504**, process **1500** can include displaying a plurality of indicators on an electronic device, where the plurality of indicators each represents a respective user. For example, process **1500** can include displaying a plurality of indicators, as shown in FIG. 7D.

[0190] At step **1506**, process **1500** can include determining that a communication status between a user of the electronic device and a first user of the respective users satisfies a predefined condition. For example, process **1500** can include determining that a communication status between user **1** and user **3** satisfies a predefined condition. The predefined condition can include a request being received from user **1** to initiate communications with user **3** (e.g., a user selection of indicator **3**). The predefined condition can additionally, or alternatively, include information regarding a recent or previous communication between users **1** and **3** (e.g., stored data indicating that users **1** and **3** have recently communicated with one another).

[0191] At step **1508**, process **1500** can include adjusting the display of the first indicator in response to determining. As one example, a previous step can include at least partially overlaying indicator **9** on indicator **3**, as shown in FIG. 7D. In this example, step **1508** can include switching the overlaying by overlaying indicator **3** on indicator **9**. As another example,

a previous step can include displaying indicator 3 at a first size. In this example, step 1508 can include displaying indicator 3 at a different size (e.g., a larger size similar to that of indicator 4 of FIG. 7D). As yet another example, a previous step can include displaying an indicator of the user of the electronic device (e.g., indicator 1 of FIG. 7D), and displaying indicator 3 away from indicator 1. In this example, step 1508 can include displacing or moving indicator 3 towards indicator 1. More particularly, indicator 3 can be displaced, or otherwise moved towards indicator 1 such that indicators 1 and 3 form a pair (e.g., similar to the pairing of indicators 1 and 2, as shown in FIGS. 7A-7C).

[0192] FIG. 16 is an illustrative process 1600 for dynamically evaluating and categorizing a plurality of users in a multi-user event. Process 1600 can begin at step 1602. At step 1604, process 1600 can include receiving a plurality of media streams, where each of the plurality of media streams corresponds to a respective one of the plurality of users. For example, process 1600 can include receiving a plurality of video and/or audio streams that each corresponds to a respective user and user device (e.g., user device 100 or any of user devices 255-258).

[0193] At step 1606, process 1600 can include assessing the plurality of media streams. For example, process 1600 can include analyzing the video or audio streams. This analysis can be performed using any video or audio analysis algorithm or technique, as described above with respect to FIG. 9.

[0194] At step 1608, process 1600 can include categorizing the plurality of users into a plurality of groups based on the assessment. For example, process 1600 can include categorizing the plurality of users into a plurality of groups or categories 910 based on the analysis of the video and/or audio streams. The users can be categorized based on their behavior (e.g., raising of hands, being inattentive, having stepped away, etc.), or any other characteristic they may be associated with (e.g., lefties, languages spoken, school attended, etc.). In at least one embodiment, process 1600 can also include providing the categorization to a presenter of the multi-user event. For example, process 1600 can include providing the categorization information on the plurality of users, as described above with respect to FIG. 9.

[0195] At step 1610, process 1600 can include facilitating communications between a presenter and at least one of the plurality of groups. For example, process 1600 can include facilitating communications between the presenter device and at least one of the plurality of categorized groups, as described above with respect to FIG. 9.

[0196] FIG. 17 is an illustrative process 1700 for providing a call-to-action to an audience in a multi-user event. Process 1700 can begin at step 1702. At step 1704, process 1700 can include facilitating presentation of content to a plurality of audience devices. For example, process 1700 can include presenting content from a presenting device to a plurality of audience devices (e.g., as described above with respect to FIGS. 9A, 9B, and 10).

[0197] At step 1706, process 1700 can include receiving a user instruction during facilitating to set a call-to-action, where the call-to-action requests at least one input from a respective user of each of the plurality of audience devices. For example, process 1700 can include, during facilitating presentation of the content to the audience devices, receiving a user instruction from a presenter of the presenter device to set a call-to-action via an administrative tool or interface, as described above with respect to FIG. 10.

[0198] At step 1708, process 1700 can include transmitting the call-to-action to each of the plurality of audience devices. The call-to-action can be presented to the audience users in the form of a response window displayed on each of the audience devices (e.g., window 1000), and can include one or more requests (e.g., fields 1010) for inputs from the respective users of the audience devices.

[0199] Process 1700 can also include restricting the facilitation in response to receiving the user instruction. For example, process 1700 can include restricting the presentation of the content at one or more of the audience devices when the user instruction from the presenter is received. In this manner, the audience devices can be restricted from displaying or otherwise providing the presented content to the respective users, until those users perform an appropriate action (e.g., answer a proposed question, cast a vote, enter payment information, etc.).

[0200] In at least one embodiment, process 1700 can also include receiving the at least one input from at least one user of the respective users. For example, process 1700 can include receiving inputs at fields 1010 from one or more users in the audience. Process 1700 can also include resuming facilitating on the audience devices whose users responded to the call-to-action. For example, process 1700 can include resuming the facilitation of the content on those audience devices whose users suitably or appropriately responded to the call-to-action.

[0201] FIG. 18 is an illustrative process 1800 for detecting audience feedback. Process 1800 can begin at step 1802. At step 1804, process 1800 can include receiving a plurality of audio signals, where each audio signal of the plurality of audio signals is provided by a respective audience device. For example, process 1800 can include receiving a plurality of audio signals provided by respective audience devices, as described above with respect to FIGS. 11A and 11B.

[0202] At step 1806, process 1800 can include analyzing the plurality of audio signals to determine an overall audience volume. For example, process 1800 can include analyzing the plurality of audio signals to determine an overall audience volume, as described above with respect to FIGS. 11A and 11B. This analysis can include taking averages of amplitudes of the audio signals, and the like.

[0203] At step 1808, process 1800 can include presenting the overall audience volume. For example, process 1800 can include presenting the overall audience volume to a presenter device in the form of a volume meter, such as volume meter 1100 of FIGS. 11A and 11B.

[0204] In at least one embodiment, process 1800 can also include monitoring the plurality of audio signals to identify a change in the overall audience volume. For example, process 1800 can include monitoring the plurality of audio signals to identify an increase or a decrease in the overall audience volume. Process 1800 can also include presenting the changed overall audience volume. In at least one embodiment, process 1800 can only identify changes in the overall audience volume if the change exceeds a predetermined threshold (e.g., if the change in overall audience volume increases or decreases by more than a predetermined amount).

[0205] In at least one embodiment, the various steps of process 1800 can be performed by one or more of a presenter device, audience devices, and a server (e.g., server 251) that interconnects the presenter device with the audience devices.

[0206] FIG. 19 is an illustrative process 1900 for providing a background audio signal to an audience of users in a multi-user event. Process 1900 can begin at step 1902. At step 1904, process 1900 can include receiving a plurality of audio signals, where each audio signal of the plurality of audio signals is provided by a respective audience device. For example, process 1900 can include receiving a plurality of audio signals provided by respective audience devices, as described above with respect to FIG. 12.

[0207] At step 1906, process 1900 can include combining the plurality of audio signals to generate the background audio signal. For example, process 1900 can include combining audio signals 1255-1258 to generate background audio signal 1260. As described above with respect to FIG. 12, audio signals 1255-1258 can be combined using any suitable audio process technique (e.g., superimposition, etc.).

[0208] At step 1908, process 1900 can include transmitting the background audio signal to at least one audience device of the respective audience devices. For example, process 1900 can include transmitting background audio signal 1260 to at least one audience device of the respective audience devices. In at least one embodiment, prior to the transmitting, process 1900 can also include combining output data from a presenter device with the background audio signal. For example, as described above with respect to FIG. 12, prior to transmitting background audio signal 1260, background audio signal 120 can be combined with video or audio data from a presenter device.

[0209] FIG. 20 is an illustrative process 2000 for controlling content manipulation privileges of an audience in a multi-user event. Process 2000 can begin at step 2002. At step 2004, process 2000 can include providing content to each of a plurality of audience devices. For example, process 2000 can include providing content 1310 from a presenter device to each of a plurality of audience devices (e.g., user device 100 or any of user devices 255-258).

[0210] At step 2006, process 2000 can include identifying at least one content manipulation privilege for the plurality of audience devices, where the at least one content manipulation privilege defines an ability of the plurality of audience devices to manipulate the content. For example, process 2000 can include identifying at least one content manipulation privilege that can be set by a presenter of the presenter device (e.g., via the audience privilege setting feature described above with respect to FIG. 13). The content manipulation privilege can define an ability of the audience devices to manipulate (e.g., rewind or fast-forward) content 1310 that is being streamed or presented (or that has been downloaded) to the audience devices.

[0211] At step 2008, process 2000 can include generating at least one control signal based on the at least one content manipulation privilege. For example, process 2000 can include generating at least one control signal based on the at least one content manipulation privilege set by the presenter at the presenter device.

[0212] At step 2010, process 2000 can include transmitting the at least one control signal to each of the plurality of audience devices. For example, process 2000 can include transmitting the at least one control signal from the presenter device (or from a server) to one or more of the audience devices. Moreover, the control signals can be transmitted during providing of the content. For example, the control

signals can be transmitted while the presenter device (or other data server) is presenting or providing content 1310 to the audience devices.

[0213] In some embodiments, the system may be configured to automatically disconnect participant devices from a video chat platform to prevent eavesdropping or surveillance of inactive video chat users. In this way, a user device's microphone and/or camera may be turned off or otherwise deactivated in order to prevent other users, who may be able to click or select a particular user to join into a conversation and thus connect to the particular user's live video and microphone audio stream (e.g., environment) without express individual consent, from continuing to access the particular user's environment when the particular user is inactive or away. The system may prevent unintentional use of the video chat platform as surveillance or to eavesdrop by alerting users whenever they seem to have forgotten that the system has been left in an open state (e.g., connectable by other users without express consent) by not actively engaging in conversation for a specific duration of time. Thus, a demand for confirmation may be alerted to a particular user that his or her microphone audio stream and/or live video may be accessible to others on the system, and if no response is received from the user, the audio and video streams may be turned off, or the device may be logged off from the system entirely.

[0214] Because a user can easily join groups or subgroups and engage in communications with other users (without necessarily requiring confirmation from the other users), there may be a risk of eavesdropping or invasion of privacy. As an example, a user X may be connected to the network, and may not have engaged or initiated communications with other users, but may have left the vicinity of his or her user device (e.g., user device 100) to perform other tasks. If one or more other users initiated communications with user X (without requiring confirmation from user X), these other users may be able to view the webcam or camera feed and listen to the audio captured from the microphone of user X's device, despite user X not being present at the device. Even if this eavesdropping or surveillance is unintentional, this may nevertheless constitute an undesired invasion of privacy. For example, the user may be in a private setting, such as a bedroom, and may not want others to observe what he or she is doing, or what others in the bedroom may be doing. If the user forgets that his device is still connected to the network, the happenings in his bedroom and the conversations or other sounds that may be ongoing or present (e.g., overall environment) can be observed and heard by other users connected to his device over the network.

[0215] In other instances, user X may have connected to the network, and may have joined one or more groups or subgroups in conversation. If user X steps away from his device, and forgets to return for a period of time, users already joined in conversation with user X may be able to continue viewing the camera or webcam feed and listening to the audio captured from the microphone of user X's device.

[0216] Thus, in at least one embodiment, a system is configured to alter a status of a user device if it is determined that the user device is currently inactive or is not currently being used for communications with other users on the network. According to at least one embodiment, the system can be implemented on a server (e.g., server 251) that is facilitating the communications between user devices. In at least another embodiment, the system can be implemented on a user device (e.g., user device 110). Regardless of where the system is

implemented, it can be configured to determine whether a corresponding user is still actively communicating using the user device. The system can be configured to determine this by detecting the presence of the user based on information provided by one or more components of the user device. In one example, the system can analyze video signals captured by the camera (e.g., camera **106**) of the user device. In another example, the system can analyze audio signals captured by the microphone (e.g., microphone **107**) of the user's device. In yet another example, the system can determine if keyboard or other input device inputs are or have been recently entered into the device. In yet a further example, the system can interface or otherwise interact with the operating system of the user's device to determine if the user is still currently using the device.

[0217] In some embodiments, the system can determine whether the user is present or active by analyzing one or more of the abovementioned data over a predefined period of time (e.g., 1 minute, 5 minutes, 15 minutes, or any other suitable time period). For example, the system may determine that the user is inactive or not present if no video signals representative of the user have been captured by the camera in over five minutes. As another example, the system may determine that the user is inactive or not present if no audio signals representative of the user's voice have been captured by the microphone in over fifteen minutes.

[0218] If the system determines that the user is inactive or not present, the system can take any suitable steps to prevent the possibility of eavesdropping or surveillance of the user's environment. According to at least one embodiment, the system can disconnect or log the user device off of the network. Additionally, or alternatively, the system can turn off or deactivate one or more of the camera or microphone of the user device. Either of these can involve sending one or more signals to the user device to effect the deactivation or disconnecting.

[0219] The system can also be configured to offer the user a chance to remain logged onto the network or to maintain activation of the camera or microphone before the predefined time passes. In at least one embodiment, the system can generate an alert or a pop-up message that prompts a response from the user. FIG. **21** shows an alert **2100** that can be presented on the display of the user's device. As shown in FIG. **21**, alert **2100** can include an option **2110** that, when selected (e.g., via clicking or touchscreen), signals to the system that the user is still active on or present near the device. It should be appreciated, however, that option **2110** may not be necessary. For example, if, after alert **2100** is displayed, the user returns to the device, video or audio signals may again be captured by the camera and microphone, and the system can automatically determine that the user is active or present.

[0220] In some embodiments, the system may allow for multi-device sensitive large scale deployment. In particular, a large scale (e.g., multi-user) communication system event may offer differing views depending on whether a particular participant or user is participating in the event using a mobile device, a larger tablet device, a desktop computer, or even on a voice phone bridge with no visual display capabilities. The system can be configured to detect the various capabilities of the devices participating in the event to determine the best or optimal view or interfaces to provide to each user. These capabilities can include screen size and bandwidth, for example. In at least one embodiment, this capability detection can be overridden in instances where a device's capability is

enhanced (e.g., when a device with a minimal display capability is coupled to a larger display having better display capabilities). Thus, by regulating how each user experiences the event depending on the device being used, various modes or ways of communication and presenting communications may be available.

[0221] According to at least one embodiment, the system can assess the display features of each user device on the network as part of determining the devices' capabilities. That is, a system for conducting multi-user events can be deployed in a manner that is sensitive to various device types. More particularly, the system can obtain information regarding the display of the user device, and can determine what type of quality of content to facilitate to and from each device based on this information. For example, a smartphone may have a display screen that has a smaller resolution than that of a personal computer or laptop. In this example, the system can deliver only lower resolution graphics of the event to the smartphone, but can deliver higher resolution graphics to a personal computer or laptop. As another example, a less capable mobile phone may not have display screen features suitable for displaying any complex graphics. In this example, the system can allow the less capable mobile phone to only participate in a multi-user event via a voice phone bridge, with no visualization of the graphical content of the event.

[0222] In at least one embodiment, the system can dynamically adjust the facilitation of event content to and from a user device in response to a change in the display capabilities of the user device. For example, if a laptop with a small display screen is connected to a larger higher resolution display, the system can detect this upgrade and can automatically upgrade the delivery of graphics from that at a lower resolution to that at a higher resolution.

[0223] In some embodiments, an enhanced podium or broadcast panel mode for small to medium size meeting management can be provided. In particular, the system may be used as a meeting platform with a number of broadcast screens or windows at the center of an interface screen, where individual users or participants in the meeting can utilize to chat amongst themselves or promote themselves to podium/broadcast mode in the meeting. Because a broadcast mode may only accommodate a lead broadcaster and a number of other users, the lead broadcaster may be able to lock or leave the panel open for joining. If the panel is open, and the number of allowable broadcasters is exceeded (e.g., by a non-broadcaster clicking or otherwise selecting to join the podium), one or more users may be bounced or bumped off the podium.

[0224] As described above with respect to FIG. **4**, a user can broadcast communications to a group of other users. It should be appreciated, however, that the number of broadcasters may not be limited to one. Rather, according to at least one embodiment, the system advantageously allows multiple users to enter into the broadcast mode. This can allow users to simulate being on a podium or stage with a panel of other broadcasters entertaining or hosting an audience of users. FIG. **22** is a schematic view of an illustrative display screen **2200**. Screen **2200** can also be provided by a user device (e.g., device **100** or any one of devices **255-258**). Screen **2200** can be substantially similar to screens **400**, **500**, and **600**, and can include indicators representing users **1-11**. Like screen **400**, screen **2200** can represent when a user is broadcasting to the entire group. However, rather than just a single user **9** broad-

casting to the group, user **11** is also broadcasting to the group. As with the indicator for user **9**, the indicator for user **11** also has a bold dotted border around the edge of the indicator to represent that user **11** is also broadcasting to the group. Although, screens **400** and **2200** only show one or two broadcasters, it should be appreciated that more than two users can broadcast to a group at a time.

[0225] In at least one embodiment, one of the broadcasting users can be designated the leader or moderator of the panel of broadcasters. The leader or moderator can have the ability to upgrade users to the panel and downgrade or otherwise bounce broadcasters off of the panel (e.g., and return to being a regular user in the group). Although not shown in FIG. **22**, the leader of the panel can be provided with one or more options for electing users to join or be bounced off of the panel.

[0226] In at least another embodiment, each user in the group can be provided the opportunity to join the broadcasting panel. FIG. **23** shows a broadcast option **2300** that can be presented on a display screen of a user device (e.g., user device **100**). The user of the user device can click on or otherwise select the broadcast option to join the panel. As described above, upon becoming a broadcaster, the visual effects of the indicator representing that user can change to indicate to other users in the group that the user has become a broadcaster. In at least one embodiment, a user's selection of option **2300** can be translated into a request to join the panel. More particularly, in instances where the panel has a leader, the leader can be prompted with an alert or message (not shown) regarding the user's request to join, and can either allow or deny the request.

[0227] Because many users in a group may opt to join the panel at a given time, the panel can be limited to a predefined number of broadcasters. In embodiments where the panel includes a leader, the leader can also have the option of setting the maximum number of broadcasters allowed on the panel at a given time, and can leave open the option of joining the panel until all available broadcaster slots have been filled.

[0228] In at least one embodiment, if a panel is full, the system can automatically bounce a current broadcaster off of the panel to make room for others to join. The system can implement the bouncing of broadcasters in any suitable manner. In one example, the system can determine which broadcasting user to bounce by determining each broadcasting user's level of contribution on the panel (e.g., if the user has not been actively broadcasting, he may be selected to be bounced). In another example, the system can determine who to bounce by prompting one or more of the broadcasters for their own willingness to be bounced. In yet another example, the system can prompt non-broadcasters in the group to nominate one or more broadcasting users to bounce. In yet a further example, the system can determine how much the information in a broadcaster's profile (e.g., prestored information about the user, such as name, gender, age, school attended, interests, chat history, etc.) correlates with the current topic being discussed in the group or on the panel. Continuing this example, the system can perform one or more of video, audio, or text analysis to determine the current topic being discussed and can match this with the profile of one or more broadcasters. The system can bounce one or more of those users whose profile suggests that they are not suitable for remaining on the panel.

[0229] In some embodiments, a system can be provided that records all communications of an online event, and that

allows marking of edit points in the recording such that, after the live event, the edit points may be reviewed, approved and/or moved, and new edits can be added and executed. This can allow finished and edited recordings to be produced far more rapidly with the direct input of the either the speaker, presenter, or host facilitating the event. As one example, a question being asked by a participant in the event may lead to an interesting interchange, and can be marked by the speaker in the recording such that thereafter, on review, the edit point can be moved or edited up to include the beginning of the question or the lead up to the question.

[0230] In at least one embodiment, the video, audio, images, text, and other content being transmitted during a multi-user event or presentation between the presenter device and the audience devices can be recorded. According to at least one embodiment, the server (e.g., server **251**) facilitating the event can include a recording application configured to record these event data. The recording application can be configured to record one or more of each data type separately. For example, the recording application can record video data, audio data, image data, text data, and other content data in respective channels. The recording application can also record these in any suitable format (e.g., MP4, MPEG, MP3, JPEG, BMP, etc.). The recorded data can be stored and associated with one another in a storage similar to storage **102** of user device **100**. In at least one embodiment, all of the data of the event can be combined into a playable format, such as a video file. The video file may be generated such that it is suitable for transfer onto a portable medium, such as a flash drive or a DVD for playback. In at least one embodiment, the recording application can produce one or more files that reference to and pull together each of the recorded data automatically during playback, or during selection by a user. In this way, a user can review certain aspects of a recorded presentation (e.g., only audio) and ignore others.

[0231] To allow a user to locate certain points of interest in a recorded event, it can be advantageous to provide the presenter (or other user coordinating the recording) with the ability to insert bookmarks or tags during recording. Accordingly, in at least one embodiment, the system can provide a recording interface that allows tags to be inserted during recording. FIG. **24** shows an illustrative view of a recording interface **2400**. As shown in FIG. **24**, recording interface **2400** includes a record button **2410** and a tag button **2420**. Record button **2410** can be selected to initiate recording of the data of a live event. Tag button **2420** can be selected to insert a tag or a bookmark to tag a specific position during recording. It should be appreciated that, in addition to allowing a user to tag a current point during a live event recording, the interface can also allow a user to, during recording, move (e.g., via a mouse, a keyboard, a touchscreen, etc.) backward in the recorded data and insert tags using tag button **2420**. Recording interface **2400** can also include a tag locator button that allows a user to jump to various portions of a recording that have been tagged. The ability to add references to different portions of a recording during recording can simplify and make the review process thereof more convenient.

[0232] The system can tag the recording in any suitable manner. For example, the system can add metadata (including any statistics or relevant data) and can associate it with the recorded content at the time of insertion, which can be subsequently reviewed after the recording is made. As another example, the system can tag the recording by storing other

data, such as audio data in an audio channel separate from the recorded audio data of the event.

[0233] Because a presenter may be busy during a presentation, the tags he or she inserts during recording may not be positioned at the optimal point in the recording. For example, the presenter may find a question from a member in the audience interesting, but may tag the recording at a position after the question is asked. Thus, it can be advantageous to allow the tags inserted during recording to be moved thereafter. FIG. 25 shows an illustrative playback interface 2500 that can be associated with or can be a part of the above-described recording application. As shown in FIG. 25, playback interface 2500 includes a display area 2510 for playing back recorded data such as video, a time bar 2520 that indicates the length or position of the playback, a current playback position indicator 2525, and tags 2530 that have been inserted. Playback interface 2500 can be configured to allow any of tags 2530 to be moved along time bar 2520 to change the tagged location in the recording. For example, if a tag is inserted after a question of interest is raised by a user in the audience, that tag can be moved (e.g., via a select-and-drag operation, or the like) to a position in the recording preceding the beginning of the question or the lead up to the question. Although not shown in FIG. 24, recording interface 2400 can also provide a similar function for adjusting the position of inserted tags.

[0234] With tags that can be inserted and adjusted anytime during and after recording, the production of finished recordings of an event can be done far more rapidly. These tags can be used, for example, to determine how to split a recording into separate sections or files, when sounds can be inserted into a recording to indicate transitions between sections in the recording, and the like.

[0235] As described above, the system can include the ability to dynamically tag recordings of an event based on the behavior of the audience. For example, data associated with the audience evaluator, the audience meter, or audio volume meter 1100 (described with respect to FIGS. 11A and 11B) can be used to insert tags. In at least one embodiment, for example, the recording application can interface with the audience evaluator to identify moments when many hands are raised and/or when many questions are being typed by the audience and directed to the presenter. In at least another embodiment, the recording application can interface with the audio volume meter data to detect moments during the event when the audience is becoming more or less noisy (e.g., audience engagement, conversations, or the like). The system can determine, for example, when the level of “noise” from the audience changes by more than a predefined amount, which can indicate that the audience is losing focus and not paying attention. In automatically determining and tagging these moments in an event, a presenter can easily jump to specific portions of his or her presentation during review of the recording, and assess his or her performance to identify improvements that can be made in the future.

[0236] Tags associated with audience feedback can be added to the recording, similar to how tags can be manually inserted as described above with respect to FIGS. 24 and 25. Moreover, these tags can be added as data in points can be added, for example, as data in a separate audio channel, as a color-coded dot embedded or overlaid on a video portion of the recording, and the like. Alternatively, the system can generate a data report showing the times during the presentation when there is excess audio from the audience.

[0237] FIG. 26 is an illustrative process 2600 for preventing unauthorized access to an environment of a user device. The user device (e.g., user device 100) can be connected to a multi-user network or communications system, such as system 250 of FIG. 2. Process 2600 can begin at step 2602. At step 2604, process 2600 can include determining whether the user device is being actively used for communicating with at least one remote device connected to the multi-user network. For example, process 2600 can include determining whether user device 100 is being actively used for communicating with at least one remote device (e.g., any of user devices 255-258) connected in network 250.

[0238] In at least one embodiment, step 2604 can include detecting a presence of at least one user proximate the user device. For example, step 2604 can include detecting a presence of at least one user proximate user device 100. This can include using a camera (e.g., camera 106) of user device 100 to capture at least one image of the environment of user device 100, and performing at least one facial recognition analysis on the at least one image to detect if a user is present. This can additionally, or alternatively, include using a microphone (e.g., microphone 107 of user device 100) to capture at least one audio signal from the environment of user device, and performing at least one voice recognition analysis on the captured at least one audio signal to detect if the user is present. Moreover, step 2604 can also include determining whether the user device has been used for communicating with the at least one remote device within a predefined period. For example, step 2604 can include determining whether user device 100 has been used for communicating with the at least one remote device within a predefined period (e.g., five minutes) that is set by an administrator or a user of user device 100.

[0239] At step 2606, process 2600 can include causing a status of the user device to be altered in response to a determination that the user device is not being actively used for communicating with the at least one remote device. For example, process 2600 can include causing a status of user device 100 to be altered in response to a determination that user device 100 is not being actively used for communicating with the at least one remote device. In at least one embodiment, step 2606 can occur in response to a determination that the user device has not been used for communicating within a predefined period (e.g., five minutes) that is set by an administrator or a user of user device 100. Moreover, step 2606 can include one or more of disconnecting the user device from the network, powering off the user device, and causing at least one of a camera and a microphone of the user device to be deactivated. For example, step 2606 can include one or more of disconnecting user device 100 from network 250, powering off user device 100, and causing at least one of a camera (e.g., camera 106) and a microphone (e.g., microphone 107) of user device 100 to be deactivated.

[0240] FIG. 27 is an illustrative process 2700 for facilitating dynamic communications amongst multiple users. Process 2700 can be performed by a communication system (e.g., system 250 shown in FIG. 2). In some embodiments, process 2700 can be performed by multiple user devices communicating in a network that includes a server (e.g., devices 255-258 shown in FIG. 2), a server in a network with multiple user devices (e.g., server 251 shown in FIG. 2) or any combination thereof. In some embodiments, process 2700 can be performed by multiple user devices (e.g., multiple instances of device 100) communicating in an ad-hoc network without a

server (e.g., communicating through a peer-to-peer network). Process 2700 can begin at step 2702. At step 2704, process 2700 can include receiving communications. The communications can be sent by a transmitting device and directed to a receiving device. Process 2700 can include receiving communications through any suitable mode of communication. For example, the communications can be received through an intermediate mode of communication or an active mode of communication. An individual user device (see, e.g., device 100 shown in FIG. 1 or one of devices 255-258 shown in FIG. 2), a communication server (see, e.g., communications server 250 shown in FIG. 2), or any combination thereof can receive the communications at step 2704.

[0241] At step 2706, process 2700 can include determining a display capability of the receiving device. For example, the display resolution or the display size of a display of user device 100 can be determined. Any suitable technique can be employed to determine the display capability. For example, the server can access and retrieve information regarding user device 100 from user device 100 itself or from data regarding device 100 stored elsewhere (e.g., a database accessible to server 251).

[0242] At step 2708, process 2700 can include deriving, from the received communications, contextual communications based at least on the display capability determined in step 2706. For example, the contextual communications can be derived to include less information than the received communications. In some embodiments, the contextual communications can be derived to include an amount of information from the received communications that is suitable for the display capability. The contextual communications can include, for example, an intermittent video or periodically updated image based on the received communications. In some embodiments, the contextual communications can include a low-resolution or grayscale communication based on the received communications. An individual user device (see, e.g., device 100 shown in FIG. 1 or one of devices 255-258 shown in FIG. 2), a communication server (see, e.g., communications server 250 shown in FIG. 2), or any combination thereof can derive the contextual communications at step 2708. In at least one embodiment, step 2708 can include removing video communications from the received communications when the display capability of the receiving device is less than a predefined minimum capability. The predefined minimum capability can, for example, be a set display resolution (e.g., 1080p), display aspect ratio (e.g., 1910×1080), or other display-related size. If the display capability exceeds this minimum capability, step 2708 can include keeping or otherwise include any video communications in the received communications.

[0243] At step 2710, process 2700 can include transmitting the contextual communications to the receiving device. For example, the contextual communications derived at step 2708 can be transmitted to the receiving device.

[0244] FIG. 28 is an illustrative process 2800 for controlling broadcasting privileges on a multi-user network. Process 2800 can be implemented on a server, such as server 251. Process 2800 can begin at step 2802. At step 2804, process 2800 can include receiving a request from a first user device to join a broadcast panel. The broadcast panel is associated with a broadcast mode of communication that allows any communications sent by a user device on the network in the broadcast mode to be broadcasted to other user devices on the network, as described above with respect to FIG. 7. For

example, process 2800 can include receiving, with a server, a request from user device 100 to enter the broadcast mode to join a panel of broadcasting user devices, as described above with respect to FIG. 7.

[0245] At step 2806, process 2800 can include determining whether the first user device is eligible to join the panel. For example, process 2800 can include determining whether user device 100 should be allowed to join the panel of broadcasting user devices.

Process 2800 can determine this in any suitable manner. In at least one embodiment, the panel can include a leading broadcasting user device. This device can, for example, be associated with a leading broadcasting user who is moderating a group of users. In these embodiments, step 2806 can include querying the leading broadcasting user device for permission to add the first user device to the panel.

[0246] At step 2808, process 2800 can include, in response to a determination that the first user device is eligible to join, adding the first user device to the panel, and setting a mode of communication of the first user device to the broadcast mode. For example, process 2800 can include adding user device 100 to the panel, and setting user device 100 to the broadcast mode to allow it to broadcast communications to other user devices on the network (e.g., those user devices who are in the same group as the first user device).

[0247] In at least one embodiment, process 2800 can also include, receiving an instruction from the leading broadcasting user device to remove the first user device from the panel. As described above with respect to FIG. 7, when space on the panel is limited (e.g., due to a maximum number of broadcasters allowed on the panel set by the leading broadcaster), it can be advantageous to bounce one or more users from the panel to make room for other broadcasters to join. Thus, in at least one embodiment, process 2800 can include determining whether the panel has reached a preset maximum number of broadcasting user devices, and if so, removing at least one other broadcasting user device from the panel. In this way, the panel can be adjusted to accommodate the first user device. It should be appreciated that other criteria can be used to determine if a user device is eligible to join the panel or if an existing broadcasting device should be removed from the panel, as described above with respect to FIG. 7. Moreover, it should also be appreciated that if the first user device is determined to be ineligible, the first user device can be maintained in whichever mode of communication that it is currently in.

[0248] FIG. 29 is an illustrative process 2900 for tagging a live recording of a multi-user event. The event can include communications being transmitted between multiple user devices, such as user device 100 and user devices 255-258. Process 2900 can begin at step 2902. At step 2904, process 2900 can include recording the communications. For example, process 2900 can include using a recording application as described above with respect to FIG. 9 to record the communications.

[0249] At step 2906, process 2900 can include receiving an instruction to tag the communications during recording. For example, process 2900 can include receiving a user instruction from a presenter or a recording administrator to tag the communications during recording. The instruction can be received at any time during recording.

[0250] At step 2908, process 2900 can include associating a tag with a portion of the recorded communications in response to receiving. For example, process 2900 can include

associating a tag with a select portion of the recorded communications in response to receiving the instruction, as described above with respect to FIG. 25. The tag can include any one of video data, audio data, image data, and text data. In at least one embodiment, process 2900 can also include storing the tag separately from the recorded communications. For example, process 2900 can include storing the tag in a channel different from the channels used for recording the communications (e.g., an audio channel or signal, such as a bell or a chirp, that is different or separate from any audio channel or signal recorded from the event).

[0251] In at least one embodiment, process 2900 can also include playing back the recorded communications. For example, process 2900 can include playing back the recording as described above with respect to FIG. 10. Moreover, after recording, process 2900 can include receiving a user command to locate the portion of the recorded communications associated with the tag. For example, process 2900 can include receiving a selection of a tag locator button as described above with respect to FIG. 25 to locate any portions of the recording that have been tagged. In response to receiving the user command, process 2900 can also include playing back (e.g., using playback interface 1000) the recorded communications from the portion of the recorded communications.

[0252] To allow a user to move inserted tags to different portions of a recording, process 2900 can also include, after associating, receiving a user input to associate the tag with a different portion of the recorded communications. For example, after a tag is inserted (e.g., using recording interface 2400 or playback interface 2500) and associated with a particular portion of the recording, the tag can be changed to be associated with a different portion of the recording using the interfaces. This can include receiving a select-and-move (e.g., via an input device such as a mouse, keyboard, touchscreen, or the like) operation, via any one of interfaces 2400 and 2500, on the tag from one location of the recording to another location of the recording.

[0253] FIG. 30 is an illustrative process 3000 for presenting audience feedback in a multi-user event. The audience feedback can be provided by multiple audience devices that are communicatively coupled to a presenter device, such as user device 100. Process 3000 can begin at step 3002. At step 3004, process 3000 can include receiving a plurality of audio signals provided by the plurality of audience devices. For example, process 3000 can include receiving a plurality of audio signals provided by audience devices 255-258. Each of audio signals can be captured by a microphone (e.g., similar to microphone 107) of a respective one of the audience devices.

[0254] At step 3006, process 3000 can include analyzing the plurality of audio signals to assess an overall audience volume. For example, process 3000 can include analyzing the plurality of audio signals to determine an overall audience volume, as described above with respect to FIGS. 11A and 11B. This analysis can include taking averages of amplitudes of the audio signals, and the like, which can include adding or otherwise combining the plurality of audio signals together.

[0255] At step 3008, process 3000 can include determining whether the overall audience volume is changed by more than a predefined amount. The predefined amount can be user selected, and can be an amount sufficient to indicate increasing or decreasing noise level in the audience. The predefined amount can be determined from live events. For example, it

can be determined that an increase by a particular amplitude or level of audio corresponds to audible whispering amongst the audience, and that particular amplitude or level can be set as the predefined amount.

[0256] In at least one embodiment, process 3000 can also include causing data representative of the change to be transmitted to the presenter device in response to a determination that the overall audience volume is changed by more than the predefined amount. For example, process 3000 can include causing data representative of the change, in the form of an alert such as a pop-up, a volume meter such as volume meter 800, and the like, to be transmitted to user device 100 in response to a determination that the overall audience volume is changed by more than the predefined amount. In this way, an increase or a decrease in the noise generated by the audience as a whole can be alerted to a presenter of an event.

[0257] At step 3010, process 3000 can include recording communications transmitted between the presenter device and the plurality of audience devices. For example, process 3000 can include recording communications transmitted between user device 100 and user devices 255-258 using a recording application as described above with respect to FIGS. 24 and 25. Process 3000 can also include associating a tag with a portion of the recorded communications in response to the determination. The tag can serve as a bookmark of the portion of the recorded communications. For example, process 3000 can include associating a tag with a portion of the recorded communications in response to determining that the overall audience volume is changed by more than the predefined amount, as described above with respect to FIGS. 11A and 11B. In this way, changes in the noise level of the audience can be tagged in a recording of an event, which can be easily referenced to during review of the recording.

[0258] As described above, a server (e.g., server 251) can include one or more software platforms or applications that enable the server to facilitate one or more multi-user online events. Such events can, for example, be hosted on the server, and can be run by one or more presenters and attended by one or more users or participants (e.g., audience members). Any presenters and all participants may connect to the server via respective user devices (e.g., user device 100 or any one of devices 255-258) that each includes one or more similar or counterpart software applications configured to enable the device to communicate or otherwise interact with the server. In at least one embodiment, the server may host events via a software platform that can be accessible via a web browser application resident on the user devices. In these embodiments, a presenter may utilize a user device (e.g., a presenter device) to log on or otherwise connect to the server, and to access features that enable the presenter to administer and/or conduct an event (e.g., such as those features described above with respect to FIGS. 9A through 11B, and 13). Similarly, participants may utilize respective user devices (e.g., participant devices, such as user device 100) to log on or otherwise connect to the server, and to access features that enable the participants to participate in the event (e.g., such as those features described above with respect to FIGS. 3 through 7G, 9A through 11B, and 13).

[0259] Exemplary embodiments related to such events are now described in more detail below. FIG. 31 is a schematic view of an illustrative display interface 3100. Interface 3100 can be provided by a participant device (e.g., device 100 or any one of devices 255-258) that a user or a participant may

use to attend and/or participate in an online event. Interface **3100** can be similar to any one of screens **300**, **400**, **500**, **600**, and **700**, and the previous descriptions of some or all of the latter can be applied to the former. The participant device may be equipped with one or more software applications (e.g., such as a web browser application and other associated software modules for interacting with web applications) that provide interface **3100**.

[0260] As shown in FIG. 31, interface **3100** may include indicator **3102** that shows image **3104** of the participant, similar to that shown in FIG. 7. Image **3102** may be a live image of the participant captured by a camera of the device (e.g., similar to camera **106**). Interface **3100** may also include various indicators **3106** that each represents another participant of the event, similar to those shown in FIG. 7. As with indicator **3102**, one or more of indicators **3106** may also include live images of the corresponding participants.

[0261] Because an online event may be large, involving hundreds or even thousands of participants, it may not be simple or feasible to have each participant's device display every single indicator. This would certainly be possible if bandwidth (e.g., of each participant's device, of the network connections between the devices and the server facilitating the event, etc.) is not an issue. However, in cases of limited bandwidth, the quality of various aspects of an online event may suffer. For example, the continual or periodic updates of the live indicator images of the participants can be slow or laggy. To avoid this problem, in at least one embodiment, the server's platform may be configured to group subsets of all of the participants of an event into "rooms" of manageable sizes. In these embodiments, each participant may still use his or her device to participate in the event (e.g., to receive presentation content from the presenter, to ask questions, to broadcast to everyone in the room or in the event, and the like), but may be restricted to forming groups or subgroups for private conversations only with other participants that are present in the same room as that participant. Of course, the restriction may or may not be a hard restriction. For example, in at least one of these embodiments, a participant assigned to one room may nevertheless be able to initiate conversations or communications with participants assigned to other rooms, for example, but may not be able to do so as easily as with other participants already assigned to the same room. More particularly, a participant in one room may be able to, e.g., in one gesture or in a simple manner, initiate connections or communications with other users assigned to the same room, but may be required to utilize other tools in order to connect with other participants assigned to other rooms. For example, the participant may be required to utilize a mingle bar, a buddy list, or an indicator array (e.g., as described above with respect to FIG. 8), a user search tool or function (e.g., provided by the server for searching users on the platform based on any suitable user identification information, such as e-mail address, username, etc.), or the like, to connect with these other participants. In some embodiments, various communication features of the platform may be similarly limited to in-room use. For example, a shoutout feature or a push-to-talk feature (which may be provided by the server for allowing participants to broadcast or have their audio and/or video feed output to other participants), the broadcast or podium feature (e.g., as described above with respect to FIGS. 22 and 23), a text or message feature (which may be provided by the server for allowing participants to message other participants), or the like, may be similarly limited such that a participant in a

room may only be able to shoutout to other participants assigned to that same room, host a broadcast panel for that room, or text other participants assigned to that room. In essence, participants assigned to the same room have a greater sense of awareness of one another in the room, and thus conversations amongst these participants can be initiated more seamlessly than with participants assigned to other rooms.

[0262] As shown in FIG. 31, interface **3100** presented on a participant device may only display the participant's own indicator and indicators corresponding to other participants who have been placed into or otherwise assigned to the same room, while indicators corresponding to other participants located in other rooms may not be shown. As will be described in more detail below, the software platform or system on the server may be configured to set or limit the number of participants assigned to each room.

[0263] As shown in FIG. 31, interface **3100** may also include options **3108** and **3110** that allow the participant to interact with the presenter of an event. Option **3108** may be a "raise hand" option that may be similar to the raising of hands described above with respect to FIGS. 9A and 9B. A user selection of option **3108** (e.g., via a mouse click, a touch screen selection, or the like) may cause an indication to be presented (e.g., audibly, visually, or the like) to the presenter via the presenter's device. Option **3110** may be an "ask question" option associated with textual inputs that may be similar to the written or typed questions described above with respect to FIGS. 9A and 9B. A user selection of option **3110** may cause a text box to appear (not shown) on interface **3100** with one or more fields for the participant to type or otherwise input question(s) for transmission to the presenter's device.

[0264] Interface **3100** may also include one or more event windows for displaying live views of the presenter and any content (e.g., slides, documents, videos, audio, or the like) that the presenter may present during the event. These may be similar to broadcasts described above with respect to FIGS. 6 and 22. As shown in FIG. 31, interface **3100** may include event windows **3112** and **3114** that may each be configured to display a live image of the presenter and/or content being presented (e.g., an image or a video). In this way, each participant may, in his or her assigned room, be allowed to communicate with other participants in the room, as well as receive presentation content. Although interface **3100** has been described above as including two event windows, it should be appreciated that interface **3100** can be configured to include more or fewer event windows.

[0265] As briefly described above, the number (e.g., maximum number) of participants per room can be set via the software platform hosting the event. Furthermore, the total number of rooms allocated for the event can be set via the platform. It should be appreciated that any other suitable or similar event parameters may additionally or alternatively be set via the platform. In at least one embodiment, the platform may include an administrator panel or interface that provides options for setting or controlling such parameters. The administrator panel can be accessible directly at a computing device associated with the server (e.g., one of the computers that forms the server) or via a distinct device similar to user device **100**. In these embodiments, event parameters can be set by an administrator of an event and/or by one or more presenters of the event. For example, if a presenter of an event prefers not to be bothered with the administrative aspects of the event, and rather only wants to be occupied with his or her

presentation to the participants, then a separate administrator may be given administrative rights or privileges on the platform to set the event parameters (e.g., via the administrator panel). In contrast, if the presenter prefers to have sole administrative control or to share administrative control of the event, then both an administrator and the presenter may be able to access the administrator panel using individual user devices and to effect shared administration of the event. In at least another embodiment, some or all event parameters may be coded in the platform and set as default for each event (e.g., the default room size may be set at twenty participants per room).

[0266] FIG. 32A is a schematic view of an illustrative administrator or presenter interface **3200**.

Interface **3200** can be provided by a server that is hosting an event (e.g., server **251**) or a user device (e.g., device **100** or any one of devices **255-258**) communicatively coupled to the server. Interface **3200** can be utilized by an administrator or one or more presenters to administer and/or conduct an online event, and can provide a visualization of the event via various video chat symbols, icon, images, or the like. For the sake of brevity, the following description of interface **3200** assumes a scenario where a presenter of an online event desires to administrate an event alone, without the assistance of an administrator. It should be appreciated that interface **3200** may alternatively be employed by an administrator to either solely administer the event or to share such administrative control with the presenter.

[0267] As shown in FIG. 32A, interface **3200** may include indicator **3202** that shows image **3204** of the presenter. Image **3204** may be a live image of the presenter captured by a camera of the presenter's device (e.g., similar to camera **106**).

[0268] As described above with respect to interface **3100**, subsets of the participants of the event may be grouped into rooms in order to provide a more manageable event experience. In at least one embodiment, interface **3200** can include one or more options (not shown) that allow the presenter to set various event parameters. The options can include, for example, an option to allocate a total or maximum number of rooms for the event (e.g., five rooms, at twenty participants per room). As an example, the presenter may be aware that an event coordinator only sent out a certain number of event invites, and thus may allocate a certain number of rooms to accommodate all potential guests. Alternatively, the platform may, based on predefined system parameters, automatically determine and set the number of rooms and the maximum or minimum number of participants per room, for example. In at least one embodiment, the platform may also be configured to automatically add rooms as needed (e.g., rooms may be added as more and more participants log onto the platform to join an event). The platform may allocate rooms by utilizing computing resources (e.g. memory) in any known or suitable manner.

[0269] As shown in FIG. 32A, interface **3200** may include room overview **3206** that provides an overview of the various rooms that are allocated for an event. Room overview **3206** may include various regions **3208** that each corresponds to or represents one of the rooms.

Icons **3210** each representing a participant assigned to the corresponding room may also be shown in the corresponding regions **3208**. Thus, room overview **3206** may provide the presenter with a general view of the placement or assignment of participants to the various rooms (as well as any administrators or presenters that may be hosting or running the event).

Each of icons **3210** may also be user selectable (e.g., by hovering or rolling over a mouse pointer over that icon, by touch screen selection, or the like), and when selected, may cause an enlarged live image to be displayed (e.g., in a pop-up window or the like). The enlarged image can be similar to images **3104** and **3204**. Moreover, as shown in interface **3200**, participants that may be in a subgroup or group within a room can also be represented with icons **3210** that are situated closer to one another (e.g., similar to that shown in FIGS. **3-6** and **7A-7C**). Although interface **3200** shows icons **3210** as appearing blank, it should be appreciated that, in some embodiments, the icons may instead include still images or periodic updates of live images of the corresponding participants, or any other suitable graphical representations.

[0270] In at least one embodiment, icons **3210** can also be individually selectable via interface **3200** and moved from one region to another (e.g., via a select-and-drag operation). For example, any icon **3210** in a first region **3208** can be selected and dragged or otherwise displaced into or over a second region **3208**. The platform may substantially simultaneously relocate or otherwise reassign (e.g., in memory, virtual memory, or via any suitable computing process) the participant from a first room corresponding to the first region to a second room corresponding to the second region, and the corresponding participant device display screen (e.g., interface **3100**) may also update to reflect this change. More particularly, the participant may no longer see the indicators corresponding to participants in the first room, but will instead see the indicators corresponding to participants in the second room. In this way, a presenter and/or administrator of an event may assign or reassign various participants to different rooms of the event as needed (e.g., at the participant's request or for any other reason). Thus, an administrator of an event can see or view the arrangement of participants in an event, and may be able to move or relocate one or more of these participants from room to room based on any suitable any criteria or participant behavior. In some embodiments, if a particular room is full, and if the presenter attempts to move an icon **3210** into a region corresponding to the full room, the platform may provide an alert to notify the presenter or administrator of this.

[0271] As described above with respect to interface **3100**, each participant of an event may be allowed to interact with the presenter (e.g., by selecting one or more options, such as raising hand option **3108** and ask question option **3110**). Interface **3200** may be configured to present these participant inputs to a presenter. For example, a participant who has "raised" his or her hand may have hand depiction **3212** displayed within his or her corresponding icon on interface **3200**. As another example, a participant who has "asked" a question may have question mark depiction **3214** displayed within his or her corresponding icon on interface **3200**. Any other suitable participant status information can also be shown on interface **3200** in the form of similar depictions.

[0272] In at least one embodiment, interface **3200** may also include status bar **3216** that provides statistical information about the participants to the presenter. As shown in FIG. 32A, for example, interface **3200** may include status bar **3216** and corresponding tabs that include various event related information, including, but not limited to, the total number of participants who have their hands raised and the total number of participants who have asked a question. This information may be tabulated in the form of status bar **3216**, and may allow the presenter to quickly and easily review the status of

the participants in the event, similar to what has been described above with respect to FIGS. 9A and 9B. Such information may, for example, be helpful to a presenter in determining points in time during the presentation where the presenter is being unclear, and thus many participants are confused and asking questions.

[0273] As shown in FIG. 32A, interface 3200 may also include a shoutout window 3218 corresponding to a shoutout feature that allows one or more participants in a room to broadcast or have their audio and/or video feed output to all other participants in the room. Any shoutouts may be presented in window 3218. The shoutout feature function as a “push-to-talk” channel directed to all participants in the room, but that may be regulated or otherwise controlled by an administrator. For example, the shoutout feature may be configured or set to only allow the participant to broadcast for a predefined duration of time (e.g., so as to prevent individuals from disturbing the event). In some embodiments, the shoutout feature may be similar to any one of the broadcasting features described above with respect to FIGS. 4, 6, 9, and 22.

[0274] Many live in-person events involve not only physical presence of one or more presenters, but also presentation content that the presenter may use to conduct the event. To allow the presenter of an online event to present content to the audience, in at least one embodiment, the platform can be configured to not only provide a window showing a live video of the presenter, but also one or more windows for presenting additional content, such as videos, audio, or the like. As shown in FIG. 32A, for example, interface 3200 may include broadcast features 3220 and 3222 that may allow the presenter to broadcast a live view of himself or herself as well as presentation content to the participants. Broadcast features 3220 and 3222 may be similar to one another, and any one of these features may be utilized to broadcast the presenter’s live video or presentation content. For example, broadcast feature 3220 may include a broadcast option 3221 that, when selected (e.g., via touch screen input), allows the presenter to broadcast his or her own live video feed to the audience. As another example, broadcast feature 3222 includes a similar broadcast option 3223 that, when selected, allows the presenter to broadcast the presentation content (not shown) to the audience (e.g., content that may be stored on the presenter’s device, or remotely accessible from one or more external devices, such as a YouTube™ video). FIG. 32B is a schematic of illustrative interface 3200 after the presenter selects to broadcast his or her live camera feed to the audience. As shown in FIG. 32B, interface 3200 includes a live video of the presenter in broadcast feature 3220.

[0275] In live in-person events, presenters often call upon one or more people in the audience to either come onto stage or to be spotlighted during the presentation so that attention can be drawn to these people. In some embodiments, the platform may be configured to allow a similar “spotlighting” of participants in the event. FIG. 32C shows interface 3200 after a participant’s icon (e.g., one of icons 3210) is selected for spotlighting. This can occur, for example, when that icon is selected (e.g., via mouse click or touch screen selection), and a spotlight option 3225 is selected. It should be appreciated, however, that the spotlighting of one or more participants can be effected in any suitable manner. For example, the platform may allow a participant to be spotlighted by merely selecting the participant’s corresponding icon 3205 and dragging it onto any one of broadcast features 3220 and 3222. As shown in FIG. 32C, interface 3200 includes a live video of the spotlight

participant in broadcast feature 3220. When a participant is spotlighted in this manner, the participant’s live video feed, microphone audio output, and any other suitable outputs may be transmitted to some or all of the participants for output (e.g., via interfaces 3100 of the participant devices, speakers of the devices, etc.).

[0276] As described above, people often attend live in-person events with family, friends, or colleagues. In online events, however, it can be possible for two or more friends to attend the same event, but be placed into or assigned to different rooms. For example, a participant of an online event may be placed into or assigned to a particular room, but a friend of the participant may be assigned to a different room. This can prevent the two friends from enjoying or experiencing the event together. Thus, it can be advantageous to facilitate online events such that friends or those with similar backgrounds are grouped together, similar to how people may sit or hang out with one another at a live in-person event. In this way, if two or more users are identified as similar (e.g., are friends on a social network such as Facebook™, previously had conversations with one another on the platform, are from the same school, have similar interests, are in similar professions, etc.) and thus would probably be a good fit together in the same room, these users may be placed into or assigned to the same room with one another, offering them a better experience at an event.

[0277] The platform can be configured with one or more tools to group participants into various rooms based on predefined criteria (e.g., information either prepopulated in their profile data fields or collected by the platform). More particularly, the tools can categorize or otherwise sort participants into different pairings or groupings based on information about those participants. The tools can be implemented as one or more software algorithms configured to group participants automatically or dynamically, and may additionally or alternatively be configured to receive manual inputs from participants to help identify those groupings. The algorithms can either be distinct from, or be a part of, the platform that facilitates online events. Accordingly, pre-arranged room assignments can be achieved based on certain profile data fields. Thus, rooms can dynamically fill up and participants be grouped or sorted automatically based on user selected or predetermined criteria (e.g., that may be received in real-time and/or accessed dynamically from a database). Rooms can thus be populated and can even be characterized by the profiles of those in the room. For example, a room can essentially include all participants who are interested in rock music, and thus be characterized as a rock music room. One or more rooms may have some or all users specific to one category, or may have users as one or more teams that may go well with one another. In this way, certain cohorts of users may be able to find themselves in a common room when they attend an event.

[0278] In at least one embodiment, the platform can encourage or provide participants the option of being assigned or reassigned to particular rooms so as to balance the rooms and the flow of participants from room to room. The platform can, for example, provide one or more messages (described in more detail below) prompting one or more participants to change rooms, and can determine when or whether to provide such messages based on activity level of the various participants (e.g., those participants who have not interacted via text or joined groups or subgroups in their current room may be prompted to be relocated to a different

room). In some embodiments, the balancing and flow of participants across the various rooms can be implemented so as to avoid any room having just one or two newcomers to the platform being the only ones in the room. A newcomer, can, for example, be any participant for whom the server may not yet have sufficient information to decide on how to assign or reassign the participant to a room.

[0279] In at least one embodiment, the platform may assign participants to rooms of an event based on the geographic locations of the participants. In this way, the latency of connectivity between the various participants (e.g., via the server) can be reduced and controlled since the transmission time of communications between the devices of participants located near one another is much lower than the transmission time between devices of participants located far away from one another. For example, participants who are located in the same town, city, state, country, or any other defined geographic region, can be assigned to the same room. The platform can identify participant location information in any suitable manner. For example, the platform may detect the internet protocol (IP) address of each participant logging onto the platform, and may use this to determine the geographic location of that participant. As another example, the platform may retrieve profile or any other information regarding each participant, and may identify and utilize any data that may be relevant to where that participant is located in assigning the participant to a room (e.g., a telephone number having the area code **212** may indicate that the participant is located in New York City).

[0280] In at least one embodiment, the platform may additionally or alternatively assign participants to rooms based on the capabilities of the participant's devices. As described above, the server or platform may be configured to receive device capability information from each participant device. For example, each participant device may provide to the server one or more messages indicative of device information (e.g., smartphone, PC, Mac, etc.), display screen size information, camera availability, microphone availability, bandwidth, or the like. In the event that a participant device transmits only limited information about its capabilities, the platform may be configured to deduce its capabilities. For example, if the device only indicates to the platform that it has a particular display screen resolution that is typical of what a smartphone may have, the platform may deduce that the device is a smartphone equipped with a camera and a microphone. Device capability information and/or communication bandwidth or speed, whether received or deduced by the platform, can then be used by the platform to assign participants to rooms. As one example, those participants whose devices are webcam-equipped may be grouped together. As another example, those participants using smartphones may be grouped together, and those using PCs or MACs can be grouped together. As yet another example, those participants that are connected to the server at greater bandwidth may be grouped together. In this way, participants can share similar experiences in an event based on their expectations, avoiding the possibility that a participant with a PC and webcam setup ends up being in a room with participants who are using less capable smartphones.

[0281] In at least one embodiment, as rooms are dynamically added by the platform or as more participants log onto the platform to join an event, one or more algorithms may identify participants (e.g., based on various criteria, such as profile information) in already existing rooms and prompt

one or more of these participants for rearrangement into different rooms to join participants just logging in. As one example, some or all participants may be members of an external social network (e.g., Facebook™), and may have profile data stored on the social network. In at least one embodiment, the platform may have access to this profile data (e.g., via permission from the participants), and may use this to identify suitable pairings or groupings of participants for online events.

[0282] As another example, some or all participants may be registered with the platform, and thus may have profile information (e.g., stored on server **251**) that the platform may utilize to identify suitable groupings.

[0283] Profile data can include any type of information, including, for example, a person's family and/or friends, school(s), job or profession, hometown, age or age group, hobbies and interests, music preferences, gender, and the like.

[0284] Persons of ordinary skill in the art will appreciate that many ways can be employed to group participants based on profile data. The following are descriptions of some of these techniques, but it is to be understood that any of these techniques can be modified or combined, without departing from the spirit and scope of the inventive concepts.

[0285] In some embodiments, if two participants are identified as similar or have matching profile data, where a first one of these participants is currently assigned to a first room that is full, and where a second one of these participants is just logging onto the platform to join the event, the platform may "place" the second participant in a new room (e.g., an entirely new room or a room that can accommodate at least another two participants), and may notify or alert the first participant to change rooms to the new room to "meet" or join the second participant. Doing so would open up one participant space in the first room, which would allow a new participant who may meet criteria for joining this first room (e.g., if this new participant is identified as similar or associated with an existing participant in the first room) to now join the first room. In this manner of dynamic arrangement and/or redirecting of participants just logging onto the platform, even if a particular room is already full and thus cannot accommodate any further participants that may be similar or associated with one or more participants in that room, the participants can be rearranged into different rooms such that desired room profiles can be achieved. Moreover, in instances of irregular attendance by certain participants, the likelihood that any such participants are not sorted or categorized into a particular "team" and thus end up in empty rooms by themselves is reduced. Rather, these participants would end up in rooms other than what they probably would have preferred, but not empty rooms.

[0286] In at least one embodiment, participants may (e.g., upon logging onto the platform to join an event) be notified (e.g., via a pop-up message, alert, or the like) that one or more of the participant's friends are currently attending the event, and may provide the participant with an option for joining one of these friends.

[0287] The platform can determine whether any of the participant's friends are currently attending the event in any suitable manner. For example, if the participant is part of a social network (e.g., Facebook™), then the platform can retrieve the participant's social network profile and analyze the participant's friends list to identify one or more friends who may be currently attending the event. As another example, if the participant has previously attended prior

events, and have made friends and added or stored one or more other users as friends (e.g., via the mingle bar described above with respect to FIG. 8), then the platform can analyze the participant's stored friends list, and identify one or more friends who may currently be attending the event.

[0288] In some embodiments, the platform may also provide a participant with the ability to invite one or more other people to an online event and to join that participant in his or her room. For example, the platform may allow a participant to send invites to users in the participant's social network (e.g., Facebook™) to join or attend the event with the participant. The platform may provide this capability via the invitation array or tool (described above), for example. The platform may additionally or alternatively allow a participant to send such invites via a messaging application (e.g., e-mail, chat, or the like) that may be linked with the platform. The platform may transmit these requests via the social network or messaging application by way of suitable APIs, etc., and may automatically assign any users who are responding to the invitations (e.g., by logging onto the platform) to the same room as the inviting participant.

[0289] FIG. 33 shows a message 3300 that the platform may transmit to the participant's device for display. In some embodiments, message 3300 may be a prompt, a query, or the like. As shown in FIG. 33, message 3300 may indicate that the participant currently has two friends attending the event, and may indicate these in the form of options 3302 and 3304. These options may include the name, an image, and or any other suitable information regarding the two friends. When any one of options 3302 and 3304 is selected, the platform may assign the participant to the same room as the selected friend.

[0290] In some embodiments, when a participant logs onto the platform to join an event, the platform may instead notify the participant that other participants (who have already joined the event) have profile information that match or are similar to that of the participant. The platform can provide this notification in any suitable manner. For example, the platform may cause the participant device to display the various profile fields of the participant's profile and information on how many and/or which other participants of the event have matching information. FIG. 34 shows notification 3400 that can be presented on a participant's device. Notification 3400 may include profile fields 3402 and corresponding quantities 3404. As shown in FIG. 34, for example, there may be fifteen other participants who went to the same school as the participant, three other participants who are in the same profession as the participant, and six other participants who prefer the same type of music as the participant. The participant may be able to select (e.g., via mouse click, touch screen input, or the like) one of these profile fields. In some embodiments, upon selection of one of profile fields 3402, the participant device may transmit data regarding the selection to the platform, and the platform may randomly, or based on any suitable algorithm, place or assign the participant to a room corresponding to one or more of the identified participants. In other embodiments, a selection of any one of profile fields 3402 may cause the participant device to display icons or indicators representative of the other participants identified for that profile field, and any subsequent selection (e.g., via mouse click, touch screen input, or the like) can cause the platform to assign the participant to the same room as the selected participant.

[0291] It should be appreciated that the platform may identify participants already logged onto the event in any suitable

manner. For example, the platform may maintain a database storing information regarding each participant that is currently attending an event, and may access this database to perform profile data checks and/or comparisons and to identify potential pairings or groupings. As another example, the platform may maintain a database storing profile data for participants currently attending an event. Rather, in this example, for each new participant that logs onto the event, the platform may access or retrieve profile data for all participants currently logged on to the event, and may perform individual profile data checks and/or comparison against the new participant to identify potential pairings or groupings.

[0292] In at least another embodiment, participants may (e.g., upon logging onto the platform to join an event), be prompted or queried (e.g., via a pop-up message or alert) to select one or more criteria for assigning them to a room (e.g., to select an algorithm to use to assign them to a room).

[0293] The criteria can include various profile fields of profile data corresponding to the participant. For example, if the participant is part of a social network (e.g., Facebook™), the platform can retrieve the user's social network profile, identify the various profile fields, and prompt the participant to select, rank, or otherwise prioritize how the participant would like to be grouped with other participants. As another example, if the participant is not a part of a social network, but has previously provided profile information (or is willing to register with the platform and provide profile data), the platform may analyze this profile data, and query the participant on how the participant would like to be grouped with other participants.

[0294] FIG. 35 shows a prompt 3500 that the platform may transmit to the participant's device. As described above, a participant's profile may include information on the participant's family and/or friends, school(s), job or profession, hometown, age or age group, hobbies and interests, music preferences, gender, and the like. Some or all of these may be included in prompt 3500 as fields objects. As shown in FIG. 35, prompt 3500 may ask the participant to select from, rank, or prioritize criteria, including family, friends, school, job, and hometown. The platform may group the participant with other participants of similar background based on the participant's selection. For example, the prompt may allow select-and-drag of each field and may ask the participant to rearrange the fields in any order, where priority decreases down the list (e.g., as shown in FIG. 35). It should be appreciated that prompt 3500 can be configured to allow participants to rank the fields using any suitable method, including for example, dropdown menus for each field where a priority value can be selected. Moreover, it will be appreciated there are a plethora of prioritizations that a participant may make, and that there are many scenarios that exist and many ways that a grouping can ultimately be made based on the prioritization.

[0295] As one example, if the participant selects "school" to be the highest priority, the platform may identify one or more participants from the same school as the participant, and may assign the participant to one of these people's rooms.

[0296] As another example, if the participant selects "family" or "friends" to be the highest priority, the platform may identify one or more family members or friends of the participant that are already assigned to rooms, and may assign the participant to one of these people's rooms.

[0297] As yet another example, if the participant selects "friends" to be the highest priority, and there happen to be two

other friends of the participant and present in the same room, the platform may assign the participant to that same room.

[0298] As still another example, if the participant selects “friends” to be the highest priority, and there happens to be two friends that are already logged onto the event, that do not know one another or have not identified one another as friends in their respective profiles, but that are assigned to different rooms, the platform may transmit a prompt or query to the participant (e.g., to the participant’s device) indicating that he or she has two friends in separate rooms. The platform may then request that the participant select one of these friends to be grouped with, and may assign the participant to the same room as the selected friend. If, however, the room that the selected friend is assigned to is full, the platform may prompt the selected friend with a message indicating that the participant would like to join him or her and that the current room is full, and may query the selected friend on whether he or she is willing to transfer to a room that still has capacity to accommodate the participant. If the selected friend agrees, the platform may transfer the selected friend to a different room, and may substantially simultaneously assign the participant to this room.

[0299] In some embodiments, for the very first participant who logs onto the platform to attend an event, that participant may be randomly assigned to a room (e.g., the first allocated room). Even so, however, that participant may also be prompted with a message similar to prompt **3500**, for example, in order to determine how the participant prefers to be grouped in the event. The platform may simply assign one or more participants (who may subsequently log onto the event) to the same room as that very first user, if, for example, those subsequent participants are friends with or have similar backgrounds as that of the first user.

[0300] In at least another embodiment, the platform may be configured to group participants based on a preset prioritization of criteria. For example, the platform may be set (e.g., either by default or via an administrator) to place higher priority to certain profile data over others. Continuing the example, the platform may rank “family” higher in priority than “friends,” and “friends” higher in priority than “school,” etc. When a participant logs onto the platform to join an event, for example, the platform may retrieve or otherwise access the participant’s profile and group the participant with one or more other participants based on the preset priority. In some embodiments, the platform may prompt participants upon logging onto the event with a prompt such as prompt **3500**, and if any participant declines to choose or select a priority (e.g., by not responding to the prompt within a preselected time, by cancelling or closing the prompt via some user input, or the like), the platform may resort to the default or preset priority to assign the participant to a room.

[0301] In some embodiments, the platform may allow any participant to request to be assigned to a particular room, to transfer to another room, or to otherwise be joined or grouped with one or more other participants. This can occur at any point, for example, when a participant first logs onto the platform to join the event or after the participant has already been assigned to a particular room.

[0302] In some embodiments, the platform may provide a participant (who has just logged onto the platform) to request to be joined with one or more participants that may already be attending the event and that have already been assigned to corresponding rooms. In these embodiments, the participant’s device may include an option that allows the user to

make such a request. FIG. **36** shows an option **3600** that may be provided by the platform to the participant’s device for display. Option **3600** may include a message **3602** and a field **3604**. While FIG. **36** only shows one field, it should be appreciated that option **3600** may include any number of suitable fields or similar options for a participant to identify other participants to be grouped with. These fields or options can include platform user ID, name, phone number, social network user ID, or the like. As shown in FIG. **36**, for example, field **3604** may allow the participant to enter information, such as one or more e-mail addresses that identify one or more other participants (who may or may not have already logged onto the platform). When the participant enters one or more e-mail address, the platform may receive this from the participant’s device and search and/or match this with one or more other participants whose information (e.g., e-mail addresses) may be previously stored by the platform. When one or more matches are found (e.g., based on those who have already logged onto the platform), the platform may notify the participant of this, and may join the participant with one or more of the matched participants. If more than one match is found, the platform can proceed in any suitable manner. For example, if two matches are found and those matched participants are currently assigned to separate rooms, the platform may prompt the participant as well as the matched participants to facilitate the grouping. As another example, the platform may randomly join the participant with one of the matched participants. When no matches are found, however, the platform may save or store this request and set an instruction or command to join the participant with any participants who subsequently log onto the platform and whose email addresses match those in the stored request.

[0303] In other embodiments, the platform may provide a participant who has already been assigned to a room to request to transfer to a different room. In these embodiments, the participant’s device may show an option similar to option **3600** that may allow the participant to enter similar information (e.g., one or more e-mail addresses) to identify one or more other participants to be grouped with. Moreover, in some embodiments, the platform may (e.g., at any suitable time) dynamically identify and group participants together even though the participants may already be logged onto the platform and already assigned to respective rooms. That is, at any time, the platform may identify or otherwise determine that one or more participants (who have already logged onto the platform and have already been assigned to different rooms) should be grouped together in a room, and may reassign one or more of these participants such that they are grouped in the same room.

[0304] It should be appreciated that any of prompts, messages, or options **3300**, **3400**, **3500**, and **3600** may be transmitted by the platform (e.g., the server) to any of the participants’ devices. In some embodiments, the platform may send data associated with any of these prompts to the participants’ devices, and the participants’ devices themselves may generate and display the prompts. It should also be appreciated that any responses to these prompts can also be transmitted by the participants’ devices back to the platform (e.g., server). Any suitable type of data or signals may be transmitted with regard to the prompts and any responses.

[0305] FIG. **37** shows an illustrative process **3700** for grouping participants of an online event. As described above, a platform that facilitates online events may be implemented on a server (e.g., server **251**). An event may be hosted or run

on the server, and participants of the event may employ respective participant devices (e.g., device 100 or any one of user devices 255-258) to communicate with the server and to participate in or experience the event. The platform may make the event more manageable by allocating a plurality of rooms for the event for accommodating the various participants.

[0306] Process 3700 can begin at step 3702. At step 3704, process 3700 can analyze a profile corresponding to a first participant of a plurality of participants of an event. For example, process 3700 can analyze a social network (e.g., Facebook™) profile or any other previously stored profile corresponding to a first participant of the event, as described above with respect to the various ways of grouping participants.

[0307] At step 3706, process 3700 can determine that the first participant should be grouped with at least another participant of the plurality of participants based on the analysis. For example, process 3700 can determine that the first participant should be grouped with family or friends of the first participant or any other participants having similar backgrounds as the first participant based on the analysis, as described above with respect to grouping participants.

[0308] At step 3708, process 3700 can group the first participant with the at least another participant based on the determination. For example, process 3700 can group the first participant with any other participants, such as the first participant's family members or friends, or those with similar backgrounds as the first participant, based on the determination, as described above with respect to grouping participants.

[0309] It should be appreciated that any portion of the descriptions of the grouping of participants (including the descriptions above with respect to FIGS. 33-36) may be included in or applicable to process 3700. That is, process 3700 may include additional steps based on what has been described above, including, for example, performing the analysis of the participant's profile when the participant logs onto the system to join the event, prompting a participant to rank profile fields, filling up event rooms such that rooms have specific profiles of participants (e.g., all rock music lovers), etc.

[0310] FIG. 38 shows an illustrative process for assigning participants of a multi-user event to rooms allocated for the event. As described above, an event platform may include an interface (e.g., interface 3200) that provides an overview of the various rooms that are allocated for an event. The interface may include regions (e.g., regions 3208) that each corresponds to one of the rooms. Icons (e.g., icons 3210) each representing a respective participant assigned to the corresponding room may also be shown in the corresponding regions. Each of icons may also be selectable and displaceable from one region to another region (e.g., via a select-and-drag operation). For example, any icon in a first region can be selected and dragged into a second region. The platform may substantially simultaneously relocate or otherwise reassign the participant from a first room corresponding to the first region to a second room corresponding to the second region, and the corresponding participant device display screen (e.g., interface 3100) may be also updated to reflect this change.

[0311] Process 3800 can begin at step 3802. At step 3804, process 3800 can present a display interface that includes a plurality of regions that each represents a respective room of a plurality of rooms, and at least one icon that each (i) corresponds to a respective participant of a plurality of participants

and (ii) resides in one of the plurality of regions. For example, process 3800 can present interface 3200 that includes a plurality of regions 3208 that each represents a respective room of a plurality of rooms, and at least one icon 3210 that each (i) corresponds to a respective participant of a plurality of participants and (ii) resides in one of regions 3208, as described above with respect to FIG. 32A.

[0312] At step 3806, process 3800 can receive an instruction to displace a first icon of the at least one icon from a first region of the plurality of regions that corresponds to a first room of the plurality of rooms to a second region of the plurality of regions that corresponds to a second room of the plurality of rooms. For example, process 3800 can receive an instruction (e.g., a select-and-drag option via mouse input or touch screen input) to displace a first icon (e.g., any of icons 3210) from one of regions 3208 that corresponds to a first room of the plurality of rooms to a another one of regions 3208 that corresponds to a second room of the plurality of rooms, as described above with respect to FIG. 32A.

[0313] At step 3808, process 3800 can update the interface based on the instruction. For example, process 3800 can update display of interface 3200 based on the instruction, as described above with respect to FIG. 32A.

[0314] In some embodiments, the platform may provide a "seating assignment" function that automatically assigns participants to particular rooms based on past room assignments. In these embodiments, the platform may automatically assign each participant to a particular room (e.g., automatically "seated" in the room) based on where and/or how that participant was previously seated in one or more prior events (e.g., with other like users, with social network friends, etc.). This can be advantageous, especially if a current event is part of a series of events and participants may expect to have their seat assignment replicated throughout the series. For example, an overall course can be segmented into individual class sessions or events hosted or conducted by the same host or presenter. The platform may advantageously allow participants attending such a course to be seated similarly during each class session.

[0315] It is to be understood that the steps for any of the processes described above are merely illustrative and that existing steps may be modified or omitted, additional steps may be added, and the order of certain steps may be altered.

[0316] It should also be appreciated that the various embodiments described above can be implemented by software, but can also be implemented in hardware or a combination of hardware and software. The various systems described above can also be embodied as computer readable code on a computer readable medium. The computer readable medium can be any data storage device that can store data, and that can thereafter be read by a computer system. Examples of a computer readable medium include read-only memory, random-access memory, CD-ROMs, DVDs, magnetic tape, and optical data storage devices. The computer readable medium can also be distributed over network-coupled computer systems so that the computer readable code is stored and executed in a distributed fashion.

[0317] The above described embodiments are presented for purposes of illustration only, and not of limitation.

What is claimed is:

1. A method for grouping participants of an online event, the event being facilitated by at least one server, the method comprising:

- analyzing a profile corresponding to a first participant of a plurality of participants accessing the event;
determining that the first participant should be grouped with at least another participant of the plurality of participants based on the analysis; and
grouping the first participant with the at least another participant based on determining that the first participant should be grouped.
2. The method of claim 1, wherein the profile comprises information regarding at least one of:
family members, friends, schools, jobs, hometown, age, hobbies, music preferences, and gender.
3. The method of claim 1, further comprising:
retrieving the profile from an external network prior to analyzing.
4. The method of claim 3, wherein the external network is a social network to which the first participant is registered.
5. The method of claim 1, further comprising:
detecting, prior to analyzing, that the first participant has joined the event.
6. The method of claim 5, wherein analyzing is effected in response to detecting that the first participant has joined the event.
7. The method of claim 5, wherein detecting comprises detecting that a user device corresponding to the first participant has been communicatively coupled to the server.
8. The method of claim 1, further comprising:
allocating a plurality of rooms for accommodating the plurality of participants.
9. The method of claim 8, wherein analyzing is effected after the first participant has already been assigned to a particular room of the plurality of rooms.
10. The method of claim 8, wherein grouping the first participant with the at least another participant comprises assigning each of the first participant and the at least another participant to the same room of the plurality of rooms.
11. The method of claim 1, wherein determining comprises identifying that the first participant is one of associated with and similar to the at least another participant based on the analysis.
12. The method of claim 1, further comprising:
prompting, prior to determining, the first participant to specify how the profile should be used to group the first participant.
13. The method of claim 12, wherein prompting comprises transmitting a prompt from the server to a user device corresponding to the first participant.
14. The method of claim 13, wherein the prompt comprises an instruction instructing the first participant to at least one of select from and prioritize a plurality of data items of the profile.
15. The method of claim 13, further comprising:
receiving, after prompting, but prior to determining, a response to the prompt from the user device.
16. The method of claim 15, wherein determining is further based on the response.
17. The method of claim 1, further comprising:
querying, prior to determining, the first participant for permission to group the first participant with the at least another participant.
18. The method of claim 17, wherein querying comprises transmitting at least one query from the server to a user device corresponding to the first participant.
19. The method of claim 17, further comprising:
receiving, after querying, but prior to grouping, at least one response to the at least one query from the user device.
20. The method of claim 19, wherein grouping is further based on the at least one response.
21. The method of claim 1, further comprising:
querying, prior to determining, the at least another participant for permission to group the first participant with the at least another participant.
22. The method of claim 21, wherein querying comprises transmitting at least one query from the server to at least one user device, each of the at least one user device corresponding to one of the at least another participant.
23. The method of claim 22, further comprising:
receiving, after querying but prior to determining, at least one response to the at least one query from the at least one user device.
24. The method of claim 23, wherein determining is further based on the at least one response.
25. The method of claim 8, further comprising:
assigning, prior to determining, the at least another participant to a first room of the plurality of rooms.
26. The method of claim 25, further comprising:
identifying, prior to grouping, that the first room is full.
27. The method of claim 26, wherein grouping is further based on identifying that the first room is full, and wherein grouping comprises:
transferring the at least one participant to a second room; and
assigning the first participant to the second room.
28. A system for grouping participants of an online event, comprising:
a communication component configured to communicate with external devices; and
a processing component configured to:
analyze a profile corresponding to a first participant of a plurality of participants accessing the event;
determine that the first participant should be grouped with at least another participant of the plurality of participants based on the profile; and
group the first participant with the at least another participant based on the determination.
29. A method for assigning participants of a multi-user online event to rooms allocated for the event, the method comprising:
presenting a display interface that comprises:
a plurality of regions that each represents a respective room of a plurality of rooms; and
at least one icon that each (i) corresponds to a respective participant of a plurality of participants and (ii) resides in one of the plurality of regions;
receiving an instruction to move a first icon of the at least one icon from a first region of the plurality of regions that corresponds to a first room of the plurality of rooms to a second region of the plurality of regions that corresponds to a second room of the plurality of rooms; and
updating the display interface based on the instruction.
30. The method of claim 29, wherein the instruction is a user instruction that is input via the display interface.
31. The method of claim 30, wherein the user instruction is a select-and-drag operation applied to the first icon.
32. The method of claim 29, wherein updating comprises displacing the first icon from the first region to the second region.

33. The method of claim **32**, further comprising:
reassigning a first participant that corresponds to the first icon from the first room to the second room based on the instruction.

34. The method of claim **33**, wherein updating and reassigning are effected at substantially the same time.

35. The method of claim **33**, wherein the first icon is associated with a user device that the first participant employs to participate in the event, and wherein reassigning the first participant causes the user device to modify display contents of the user device.

36. The method of claim **29**, wherein the interface further comprises:

at least one option for adjusting at least one parameter associated with the plurality of rooms.

37. The method of claim **29**, wherein the at least one parameter comprises a parameter for setting a maximum number of participants that each room of the plurality of rooms can accommodate.

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