



US009565535B2

(12) **United States Patent**
Conti

(10) **Patent No.:** **US 9,565,535 B2**

(45) **Date of Patent:** **Feb. 7, 2017**

(54) **MOBILE INTERFACE TO A SHOW**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **14/861,031**

(22) Filed: **Sep. 22, 2015**

(65) **Prior Publication Data**

US 2016/0150379 A1 May 26, 2016

Related U.S. Application Data

(63) Continuation of application No. 14/055,511, filed on Oct. 16, 2013, now Pat. No. 9,141,330.

(60) Provisional application No. 61/714,499, filed on Oct. 16, 2012.

(51) **Int. Cl.**

H04L 29/06 (2006.01)
H04W 4/04 (2009.01)
G06F 3/14 (2006.01)
H04W 4/02 (2009.01)
H04N 5/445 (2011.01)
H04W 4/06 (2009.01)

H04W 4/18 (2009.01)

H04W 4/20 (2009.01)

(52) **U.S. Cl.**

CPC **H04W 4/04** (2013.01); **G06F 3/1446** (2013.01); **H04N 5/44591** (2013.01); **H04W 4/021** (2013.01); **H04W 4/06** (2013.01); **H04W 4/18** (2013.01); **H04W 4/206** (2013.01)

(58) **Field of Classification Search**

USPC 455/414.3, 456.3
See application file for complete search history.

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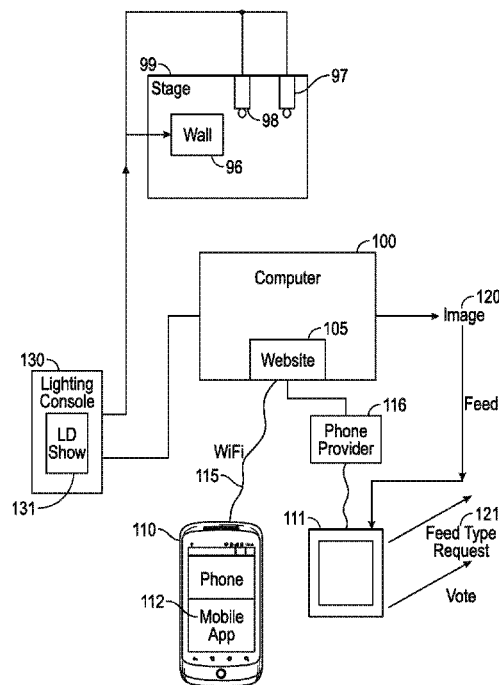
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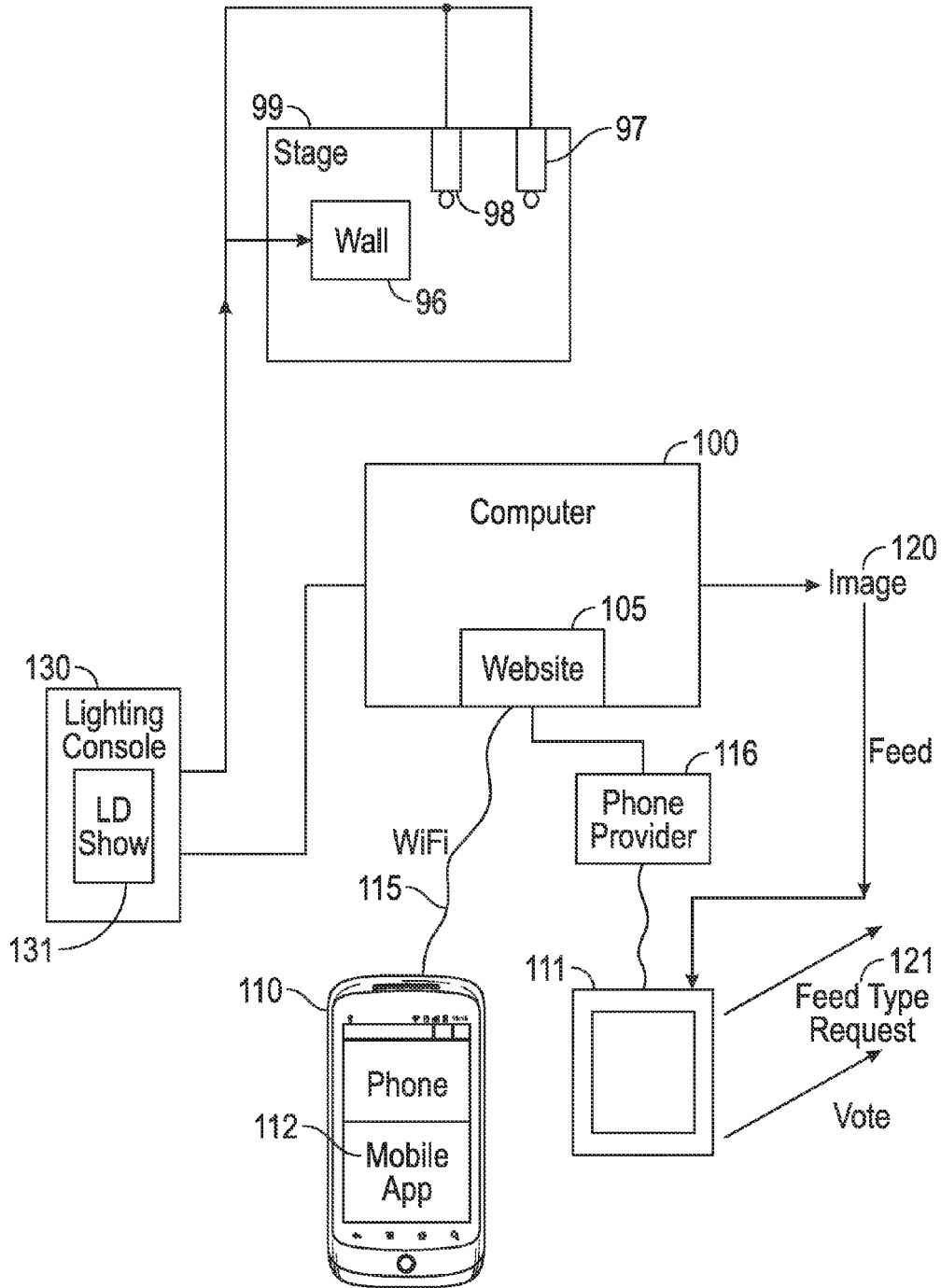
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(57) **ABSTRACT**

A computer system that communicates with information indicative of a lighting show, and provides information to users in the audience to allow their phones to be interactive with the show. In one embodiment a lighting designer or show promoter can provide information R that extends the lighting effect on to the user's phone. In another embodiment, the show promoter may provide information indicative of the venue. The information can be location specific, for example information that is provided to a specific client device can be based on the specific location of the client device. This can provide location sensitive lighting information, or maps, or in seat specific information about the venue.

21 Claims, 1 Drawing Sheet





MOBILE INTERFACE TO A SHOW

This application is a continuation application of U.S. Ser. No. 14/055,511 filed Oct. 16, 2013, now U.S. Pat. No. 9,141,330 issued Sep. 22, 2015, which claims priority from provisional application No. 61/714,499 filed Oct. 16, 2012, the entire contents of which are herewith incorporated by reference.

BACKGROUND

People at public gatherings and shows often take interactive actions. One example is at a concert where people will often raise lights of various types such as lighters or flashlights. The shows can include concerts, football games and other venues. The individual interactivity thus creates an effect that includes different parts from different people at different locations in the audience.

SUMMARY

Embodiments describe different ways of choreographing and controlling this individual interactivity of the audience at a public venue, e.g., a show.

BRIEF DESCRIPTION OF THE DRAWINGS

the figures show aspects of the invention.

Specifically:

FIG. 1 shows a block diagram.

DETAILED DESCRIPTION

The inventor recognizes that choreography of audience interactivity can create effects that can be matched with the effects created by the professional lighting experience. The choreography of the audience can provide the audience members at an event with a personal interactive experience. It can expand designers creative designs to have greater interactivity with audiences. For example, lighting designer can include effects done by the audience as part of the light experience they provide as part of the stage lighting being controlled by the lighting designer.

Effects as described herein include location based interactivity, where different people in different locations can interact with the show depending on input from the show designer. This also provides event promoters and organizers a direct channel to audience members to present information and feedback.

An embodiment, called the Mobile iMag, uses a computer system **100** that communicates with both information indicative of the lighting show, and also with audience members. In one embodiment, the mobile iMag can be a computer running a website **105** that interacts with a mobile application **112** on user's phones or PDAs shown generically as **110**, **111**, but it being understood that there could be thousands of such phones interacting with the website **105**. In order to maximize the usability of the system, the mobile app **112** should run on his many different kinds of mobile platforms as possible, regardless of operating systems or service providers.

The operation can connect the phone directly via Wi-Fi to the computer **100**, shown as **115** in one embodiment. In another embodiment, the phone **111** connects to the website via their cellular provider **116**.

In one embodiment, the operation is location sensitive, that is, different results are given to users at different locations.

The mobile app **112** can be downloaded, for example by using a QR Bar code on a ticket or on promotional literature.

Once this website or app is accessed, the audience members are provided content that is related to the specific show. Audience members can interact with the show or event that they are attending, and customize their experience. Some of the ways audience members can interact with the show include the following.

The website **105** can send, and hence the clients can receive, a streamed video signal of the image magnification **120** (iMag), which is commonly displayed on large video screens at events. This is received over the wireless channel. For example, in one embodiment, the iMag can only be received over the local Wi-Fi channel **115** based on information that is provided by the mobile application **112**. As another example, this can be received directly from the website.

The users can customize their own iMag feed that is being displayed on their mobile device by making a selection from a group of iMag feeds at **121**. For example, these can be different feeds such as a video of the main artists, of the audience, video showing other artists, feed of the stage or of the stage background being displayed, or any other feed that may be available.

Using the app **112**, users can vote or provide feedback to the artists and or event organizers on the previous or upcoming event content. For example, the app **112** can periodically ask users what they think of various parts of the show, and the users can provide voting such as thumbs-up/thumbs down, or other kinds of voting.

Users can receive prompting like music lyrics to sing along. This can also be used for example as part of a karaoke event.

Users can receive synced or non synced control signals from lighting, video, scenic, and or audio equipment that trigger specific colors, intensity states and or specific video content play back to extend an events onstage creative design out and into the audience. Example, the computer **100** can be connected to the lighting console **130**, that includes instructions such as **131** created by a lighting designer and representing the lighting portion of the show. The lighting console produces an output **135** that controls lighting devices associated with the show such as a video wall **96** as well as lights **97,98**. More generally, any light that shines on the stage can be controlled by the lighting console. The instructions **131** represent the lighting designer's design of the show. These instructions **131** can also be communicated to the computer **100**, and can include instructions for display on different user's phones. In one embodiment, the locations where the users are sitting in the audience can be obtained by the phone, using automatic location detection, or by entering it into the phone and receiving the information from scanning a QR code on the user's ticket. The individual information sent to the user's phone can be specific to the area of the concert where the users are located. For example, users on stage left may receive pink screens while users on stage right may receive blue screens in order to create an interactive audience experience.

In addition to lighting effects, the promoter can use the application to Provide general information, like venue maps, seating information, as well as general announcements like time left in an intermission locations where refreshments can be obtained, and other information about the venue.

The application can also receive dedicated and directed advertising associated with the application, in a way that it is likely to be looked at by the users.

The application can provide direct public safety announcements in the event of an emergency.

The application can provide pre event, and post event information and highlights.

The application can be used for in-seat purchasing of event concessions and promotional items like swag. In the embodiment where the system has received the user seat number, users can order food and drinks, or order promotional merchandise to be delivered to their seat.

The above has described 2 types of location-based interactivity. The location information can be ascertained not only via the standard methods commonly found on mobile devices, like WiFi, Cellular, and GPS but also via user specified information like seat section and number, ticket number, and or QR bar code on a ticket, promotional literature, and or signage.

The location-based interactivity can also allow for other applications as described herein.

The audience member's mobile device acts as a single pixel in a large audience based video screen.

Display event content that would be unique to the location where the audience member is. For example, when the user is in a specific seat location, they may be receiving specific views or view blockages that can be compensated by the application by streaming a video that shows what is behind the blockage.

Receive synced or non synced control signals from lighting, video, scenic, and or audio equipment that trigger location specific colors, intensity states and or location specific video content play back.

Provide location specific general information like closest vendors, bathrooms, or exits.

Provide location specific advertising.

Have in seat purchased concessions and promotional items, like swag, delivered directly to the audience member's seat or location. That is, the user can indicate their seat or have their seat detected by a location sensitive part, and order food or items to be delivered.

Different embodiments allow the device to be operable on both open and closed dedicated and or non-dedicated networks via Wi-Fi or Cellular signals.

In one embodiment, only people who have the tickets can use the application, and each ticket can have a scannable code or integer code to allow only that person to use the application. That code can also provide the user's location to the system to enable the location sensitive information.

Another embodiment can allow the application to be open to the general public, so anyone can use the application and receive the information.

Mobile iMag can receive Lighting, Audio, Video and or Scenic information via industry standard communication protocols.

Although only a few embodiments have been disclosed in detail above, other embodiments are possible and the inventors intend these to be encompassed within this specification. The specification describes specific examples to accomplish a more general goal that may be accomplished in another way. This disclosure is intended to be exemplary, and the claims are intended to cover any modification or alternative which might be predictable to a person having ordinary skill in the art. For example, other applications can be used, and other functions can be carried out.

Those of skill would further appreciate that the various illustrative logical blocks, modules, circuits, and algorithm

steps described in connection with the embodiments disclosed herein may be implemented as electronic hardware, computer software, or combinations of both. To clearly illustrate this interchangeability of hardware and software, various illustrative components, blocks, modules, circuits, and steps have been described above generally in terms of their functionality. Whether such functionality is implemented as hardware or software depends upon the particular application and design constraints imposed on the overall system. Skilled artisans may implement the described functionality in varying ways for each particular application, but such implementation decisions should not be interpreted as causing a departure from the scope of the exemplary embodiments.

The lights which are described herein can be computer-controlled, and can be controlled for example over a network or DMX connection by sending remote controls over that connection. These lights can also, for example, be remotely controllable for pan and tilt.

Also, the inventor(s) intend that only those claims which use the words "means for" are intended to be interpreted under 35 USC 112, sixth paragraph. Moreover, no limitations from the specification are intended to be read into any claims, unless those limitations are expressly included in the claims.

The previous description of the disclosed exemplary embodiments is provided to enable any person skilled in the art to make or use the present invention. Various modifications to these exemplary embodiments will be readily apparent to those skilled in the art, and the generic principles defined herein may be applied to other embodiments without departing from the spirit or scope of the invention. Thus, the present invention is not intended to be limited to the embodiments shown herein but is to be accorded the widest scope consistent with the principles and novel features disclosed herein.

What is claimed is:

1. A mobile phone system, comprising:

a mobile telephone that includes a processor that runs applications, and includes a screen that displays display information, and said mobile telephone includes a user interface that receives input that receives input information from a user, and said mobile telephone including a detection location part for detecting location of the mobile telephone;

said mobile telephone running a first application which interfaces with entry information for a show or event to receive authorization information into the mobile telephone, said authorization information indicating that the mobile telephone is authorized for the show or event,

and to receive input information on the user interface, from a user, said input information selecting which of a plurality of different video feeds to be received to the mobile telephone, where the video feeds include at least a first video feed of a first artist performing at the show or event, a second video feed of a second artist different from the first artist at the show or event, and a third video feed indicative of stage background at the show or event, as a selected video feed;

and to receive display information indicative of the selected video feed on the screen of the mobile telephone,

where at least one of the different video feeds is also displayed on a display screen at the show or event,

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and wherein said mobile telephone also receives venue information about a location of the venue that is close to the user, based on said location of the user detected by said location detecting part.

2. The system as in claim 1, further comprising said mobile telephone running said application for obtaining said authorization information by obtaining information from a ticket to the show or event, and provides said display information to a first mobile telephone associated with the user who has the ticket to the show or event and does not provide said display information to a second mobile telephone associated with a second user who does not have the ticket to the show or event.

3. The system as in claim 2, wherein said authorization information includes a code associated with an entry ticket.

4. The system as in claim 1, wherein said venue information includes location of vendors, bathrooms, and exits at the venue relative to the user's detected location.

5. The system as in claim 1, wherein said venue information includes information enabling items to be delivered to a location of the user at their seat in the venue of the show or event.

6. The system as in claim 1, wherein said information received from the user includes feedback on different parts of the show or event.

7. The system as in claim 1, wherein said venue information includes map information about the venue of the show or event based on said detected location.

8. The system as in claim 1, wherein said venue information includes lighting information, where different mobile telephones receive different parts of the lighting information based on said detected location.

9. The system as in claim 8, wherein said lighting information to said mobile telephone is only a part of an overall lighting effect to be created, and forms an individual pixel of said overall lighting effect, where said different mobile telephones define other pixels of the overall lighting effect and where said individual pixel is displayed along with said other pixels of other mobile telephones to create said overall lighting effect.

10. The system as in claim 1, wherein said plurality of different video feeds include a fourth video feed indicative of showing scenes of an audience.

11. A method of operating a mobile phone, comprising: running applications on a mobile telephone,

displaying information on a screen of the mobile telephone, said information that is displayed on the screen includes information from the applications;

receiving input from a user of the mobile telephone, said input including input information that is used for said applications;

a first of said applications being an application associated with a show or event in a venue;

running said first application in said mobile telephone which interfaces with entry information for a show or event to obtain authorization information indicating that the mobile telephone is authorized for the show or event,

said running said application to receive input information from the user indicative of which of a plurality of different video feeds to be received by the mobile telephone, where the video feeds include at least a first video feed of a first artist performing at the show or event, a second video feed of a second artist different from the first artist at the show or event, and a third video feed indicative of stage background at the show or event, as a selected video feed;

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said running said application to receive display information from a remote location, said information indicative of the selected video feed on the screen of the mobile telephone,

where at least one of the different video feeds is also displayed on a display screen at the show or event, said running said application for said mobile telephone also determining a location of the user, and receiving venue information about a location of the venue that is close to the user based on a detected location of the user.

12. The method as in claim 11 wherein said interfacing with said entry information comprises obtaining show attendance information from a ticket to the show or event, and providing said display information to a first mobile telephone associated with the user who has the ticket to the show or event and not providing said display information to a second mobile telephone associated with a second user who has not purchased the ticket to the show or event.

13. The method as in claim 12 wherein said show attendance information includes a code associated with an entry ticket.

14. The method as in claim 11 wherein said venue information includes location of vendors, bathrooms, and exits at the venue relative to the user's detected location.

15. The method as in claim 11, wherein said venue information includes information enabling items to be delivered to a location of the user at their seat in a venue of the show or event.

16. The method as in claim 11, wherein said information received from the user includes feedback on different parts of the show or event.

17. The method as in claim 11, wherein said venue information is lighting information, where different mobile telephones receive different parts of the lighting information based on said detected location.

18. The method as in claim 17, wherein said lighting information to said mobile telephone is only a part of an overall lighting effect to be created, and forms an individual pixel of said overall lighting effect, where said different mobile telephones define other pixels of the overall lighting effect and where said individual pixel is displayed along with said other pixels of said other mobile telephones to create said overall lighting effect.

19. A mobile phone system, comprising:

a mobile telephone that includes a processor that runs applications, and includes a screen that displays display information, and said mobile telephone includes a user interface that receives input that receives input information from a user;

said mobile telephone running a first application which interfaces with entry information for a show or event to receive authorization information into the mobile telephone, said application to obtain authorization information from an entry ticket to a show or event, indicating that the mobile telephone is authorized for the show or event,

and to receive input information from a user indicative of which of a plurality of different video feeds to be received to the mobile telephone if the mobile telephone is authorized for the show or event and not receiving the input information from a user indicative of which of a plurality of different video feeds to be received to the mobile telephone if the mobile telephone is not authorized for the show or event, where the video feeds include at least a video feed of a first item at the show or event, a second video feed

of a second item at the show or event different from the first item at the show or event, and a third video feed indicative of a background at the show or event, as a selected video feed;

and to receive display information indicative of the 5
selected video feed on the screen of the mobile telephone if the mobile telephone is authorized for the show or event and not receiving the display information from the user indicative of which of a plurality of different video feeds to be received to the 10
mobile telephone if the mobile telephone is not authorized for the show or event,

and wherein said mobile telephone also receives venue information about a location of the venue that is close to the user, based on said location of the user 15
detected by said location detecting part.

20. The system as in claim **19**, wherein said venue information includes location of vendors, bathrooms, and exits at a venue relative to the user's detected location.

21. The system as in claim **19**, wherein venue information 20
includes map information about a venue of the show or event based on said location of the user.

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