SYSTEMS AND METHODS FOR CONTENT DELIVERY AND MANAGEMENT

TECHNICAL FIELD

[0001] This application generally relates to systems and methods for delivering content from a remote content provider to a mobile device based on one or more inaudible signals received by the device.

SUMMARY OF THE INVENTION

[0002] According to an aspect of the present invention, there is provided a method of content delivery and management, comprising: detecting a human-inaudible acoustic signal at a content delivery device, the human-inaudible acoustic signal being in the form of a modulated code of a series of logic 0 and 1 bits, supplying an indication of receipt of the inaudible signal from the content delivery device to a content management system, responding to the indication of receipt of the inaudible signal by providing content to the content delivery device for presentation to a user of the content delivery device, wherein the content is provided to the content delivery device in conjunction with a trigger description, the method further comprising permitting access to the content upon satisfaction of a threshold condition set forth in the trigger.

[0002a] Various non-limiting embodiments of the present disclosure will now be described to provide an overall understanding of the principles of the structure, function, and use of the content delivery and management systems and processes disclosed herein. One or more examples of these non-limiting embodiments are illustrated in the accompanying drawings. Those of ordinary skill in the art will understand that systems and methods specifically described herein and illustrated in the accompanying drawings are non-limiting embodiments. The features illustrated or described in connection with one non-limiting embodiment may be combined with the features of other non-limiting embodiments. Such modifications and variations are intended to be included within the scope of the present disclosure.

[0003] Reference throughout the specification to "various embodiments," "some embodiments," "one embodiment," "some example embodiments," "one example embodiment," or "an embodiment" means that a particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment. Thus, appearances of the phrases "in various embodiments," "in some embodiments," "in one embodiment," "some example embodiments," "one example embodiment, or "in an embodiment" in places throughout the specification are not necessarily all referring to the same embodiment. Furthermore, the particular features, structures or characteristics may be combined in any suitable manner in one or more embodiments.

~~What is claimed:~~Claims

1. A method of content delivery and management, comprising:

detecting a human-inaudible acoustic signal at a content delivery device, the human-inaudible acoustic signal being in the form of a modulated code of a series of logic 0 and 1 bits,

supplying an indication of receipt of the inaudible signal from the content delivery device to a content management system,

responding to the indication of receipt of the inaudible signal by providing content to the content delivery device for presentation to a user of the content delivery device~~.~~, wherein the content is provided to the content delivery device in conjunction with a trigger description, the method further comprising permitting access to the content upon satisfaction of a threshold condition set forth in the trigger.

2. The method of claim 1 wherein the content delivery device is a portable multifunction device, and the indication of receipt is delivered wirelessly to the content management system.

~~3. The method of claim 1 wherein the content delivery device periodically queries acoustic signals received at the device to detect a human-inaudible acoustic signal.~~

43. The method of claim 1 wherein the content delivery device detects the human-inaudible acoustic signal by use of one or more of: an on-board microphone, an on-board speaker, an audio input, and an audio output.

~~5~~4. The method of claim 1 wherein the human-inaudible acoustic signal is embedded in human-audible audio content comprising one or more of: speech, music and background sound.

~~6. The method of claim 1 wherein the human-inaudible acoustic signal is embedded in human-audible audio content being produced by the content delivery device.~~

~~7. The method of claim 1 wherein the human-inaudible acoustic signal is at a frequency outside a common range of human hearing.~~

~~8. The method of claim 7 wherein the human-inaudible acoustic signal is at a frequency at one or more of below 20 Hz and above 20 kHz.~~

~~9. The method of claim 1 wherein the human-inaudible acoustic signal is in the form of a modulated code of a series of logic 0 and 1 bits.~~

~~10~~5. The method of claim ~~9~~ 1 wherein the modulated code is repeatedly incorporated in the human-inaudible signal.

~~11~~6. The method of claim 1 wherein the modulated code is transmitted to the content management system to indicate receipt of the inaudible signal.

~~12~~7. The method of claim ~~11~~ 6 wherein, in addition to the modulated code, the indication of receipt transmitted to the content management system comprises one or more of: time data, date data, accelerometer data, geographic data, demographic data, content delivery device data, and content delivery device owner data.

~~13~~8. The method of claim 1 further comprising storing the content delivered from the content management system in the content delivery device for presentation to a user of the content delivery device at a selected time after receipt.

~~14. The method of claim 1 wherein the content provided to the content delivery device comprises one or more of: video, audio, images, and text.~~

~~15~~9. The method of claim 1 wherein the content provided to the content delivery device comprises one or more of concert video or stills, artist photographs or videos, produced music videos, artist interviews, movies, commercials, or portions or combinations thereof.

~~16~~10. The method of claim 1 wherein the content provided to the content delivery device comprises one or more of prerecorded music, ringtones, musical works in digital form, still pictures, artwork, logos, wallpapers, lyrics, quotations, coupons, passwords, pass codes, coupon codes, messages, email addresses, text message addresses, instant messages, advertisements, education content, or portions or combinations thereof.

~~17. The method of claim 1 wherein the content is provided to the content delivery device in conjunction with a trigger description, and further comprising permitting access to the content upon satisfaction of a threshold condition set forth in the trigger.~~

~~18~~11. The method of claim ~~17~~ wherein the threshold condition comprises one or more of a number of times the inaudible signal has been received, a number of times a song has been played, attendance at a venue, and receipt of a second human-inaudible acoustic signal at a venue.

~~19~~12. The method of claim 1 wherein the content is delivered to an electronic mailbox associated with the content delivery device or with a user of the content delivery device.

~~20~~13. The method of claim 1 wherein the human-inaudible acoustic signal is transmitted from a second portable multifunction device, the signal embedding peer-to-peer networking information for the transmitting device, comprising one or more of: a public IP address, a private IP address, a port number, a wireless network identification, and a local area network identification.

~~21~~14. The method of claim ~~20~~ 13 further comprising communicating between the portable multifunction devices one or more of:

a key to unlock a door within the human-inaudible acoustic signal;

payment or coupon information;

entertainment content;

contact information;

data;

data pointers;

currency or value exchanges;

mesh network originated content gathered by or transmitted to the devices.