SYSTEM FOR CONTENT ARCHIVING AND MANAGEMENT WITH CODE READERS

Abstract: The present invention relates to a system for content archiving and management with code readers. The system comprises a combination code comprising a number of code elements, said combination code having a plurality of combinations and capable of interacting with trigger conditions; a code reader for detecting said combination code and trigger conditions upon activation; a content database communicably linked to said code reader, wherein said content database is divided into a plurality of partitions based on different combinations of said combination code and an identity of a user; an output device communicably linked to said code reader and said content database; wherein said output device retrieves and outputs content stored in a corresponding partition of said content database upon said code reader detecting a combination of said combination code.

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Description

Title of Invention: SYSTEM FOR CONTENT ARCHIVING AND MANAGEMENT WITH CODE READERS

Technical Field

[0001] The present invention relates to the field of content archiving, in particular to a system for content archiving and management with code readers.

Background Art

[0002] Advancing technology in the field of content sharing, either through social media or peer to peer sharing, leads to more and more information being exposed to the user every single day. However, human bonds are not enriched but instead diluted through this mode of information overflow. Only a small portion of those shared information is actually valuable to the user, which is either center to one's memorable experience in life or in cultivating bonds with close friends and partners. Furthermore, privacy of the saved content is sometimes compromised, as some content may be shared around publicly beyond the user's willful control. On the other hand, access to the saved content is also sometimes not straightforward or convenient enough. Therefore, a system for content archiving and management that provides a high degree of privacy and access control, while upkeeping distribution with ease, and enhance the user's interaction, experience sharing and relationship bonding is devised.

Summary of Invention

[0003] In light of the foregoing background, a system for content archiving and management with code readers is provided. The system of the present invention allows a user to assign content to a partition in a content database, which can only be accessed when an authenticated code reader detects a specific combination of the combination code. The content is then output through an output device for the user to view.

Solution to Problem

[0004] In one embodiment, the system comprises a combination code comprising a number of code elements, said combination code having a plurality of combinations; a code reader for detecting said combination code; a content database communicably linked to said code reader, wherein said content database is divided into a plurality of partitions based on different combinations of said combination code and an identity of a user; an output device communicably linked to said code reader and said content database; wherein said output device retrieves and outputs content stored in a corresponding partition of said content database upon said code reader detecting a combination of said combination code

[0005] In a preferred embodiment, each of said plurality of partitions is shareable with other
users. In a further embodiment, each user has a determined combination code for accessing a shared partition.

[0006] In a preferred embodiment, said code reader comprises an authentication module for confirming said identity of said user.

[0007] In a preferred embodiment, said content stored in said content database is multimedia content. In another embodiment, said output device outputs said multimedia content by augmented reality.

**Advantageous Effects of Invention**

[0008] The system of the present invention allows a user to archive specific content into different partitions with a different combination of combination code for accessing. Each partition can be shared with other users and only such users can access the content in the shared partition, thus ensuring privacy and security. The combination code can be provided through a wearable device for ease of access.

**Brief Description of Drawings**

[0009] The present invention is further explained below with the accompanying drawings and embodiments.

**Fig.1**

[0010] [fig.1] is a block diagram of a system for content archiving and management with code readers of the present invention.

**Fig.2**

[0011] [fig.2] is a block diagram of a code reader of a system for content archiving and management with code readers according to an embodiment of the present invention.

**Fig.3**

[0012] [fig.3] is a block diagram of a system for content archiving and management with code readers of the present invention with sharing of content.

**Description of Embodiments**

[0013] The present invention is further explained below along with the accompanying drawings. The drawings only illustrate the structures or steps that are relevant to the present invention, it is obvious that one skilled in the art will understand that modifications or variations can be made without departing from the scope of the invention to achieve any expected functions as desired.

**Examples**

[0014] A first embodiment of a system for content managing with code readers is shown in Fig. 1. The system comprises a combination code 20 having a plurality of code
elements, a code reader 22 for detecting the combination code 20, a content database 24 communicably linked to the code reader 22, and an output device 26 communicably linked to the code reader 22 and the content database 24.

[0015] The plurality of code elements of the combination code 20 allows the combination code 20 to have a plurality of possible combinations. In the embodiment as shown in Fig. 1, there are three code elements in the combination code 20, and each code element can have multiple configurations including white and black. It is obvious that each code element can possess any number of configurations, and different numbers of configurations are possible across different code elements in a combination code 20. Each code element can vary in shape, size, color etc. for determining the number of possible combinations. Some example code elements are alphanumerals, signs, numbers or characters, an item or accessory, or a landmark at a specific location etc. The code elements can also be in a spatial or temporal sequence or both when forming the combination code 20.

[0016] In an exemplary embodiment as shown in Fig. 2, the code reader 22 comprises a detection module 28 such as a camera for detecting the combination code 20. The code reader 22 also comprises an authentication module 30 that receives user input and confirms the identity of the user, and the authentication module 30 can adopt traditional password or biometric information such as fingerprint or other methods for authentication. A communication module 32 is connected to the detection module 28 for communicating with the content database 24 and the output device 26. In an exemplary embodiment, the code reader 22 is a mobile phone. The code reader 22 can also be a smart watch or other wearable devices with detecting or scanning capabilities.

[0017] Referring back to Fig. 1, the content database 24 is divided into a plurality of partitions. Each partition corresponds to a combination of the combination code 20 for an authenticated user, hereinafter referred to as “user”. In the figure, each row of partitions corresponds to one user, and different rows means there are different distinct users. It is also possible that a user possesses multiple code readers 22, in that case all code readers 22 belonging to a same user shall share the same row of partitions. The number of partitions available to a user shall be equal to the number of possible combinations for the combination code 20. It is possible that different users may have different number of partitions available or accessible. In a preferred embodiment, the content stored in the content database is limited to multimedia content with specific formats that are supported by the output device 26 to ensure that the output device 26 can readily output the content when instruction is received.

[0018] When the code reader 22 detects the combination code 20, the code reader 22 sends a signal to the output device 26 and/or the content database 24. The signal includes the combination being detected by the code reader 22 and the identity of the user as au-
thentication by the code reader 22. The output device 26 then retrieves the content from
the corresponding partition of the content database 24, either directly or through the
code reader 22. The retrieved content is then output to the user for viewing.

[0019] In various embodiments, the video data of the multimedia content is output by
augmented reality or by projection onto a flat or contoured surface, or projected into
the air. Augmented reality is shown on a display screen and overlays the multimedia
content on background data such as a live camera view, providing a more realistic ex-
perience to users. On the other hand, projection allows the content to be shown in a
larger area and also allows a group of users to view the content at the same time. In an
exemplary embodiment, the output device 26 is a display of a mobile phone or a
projector connected to a mobile phone. The output device 26 can also be the same
device as the code reader 22.

[0020] In a preferred embodiment, detection of the combination code 20 by the code reader
22 is further controlled by conditional triggers. For example, the code reader 22 is only
activated for detection when certain conditions are fulfilled, such as at a certain time of
the day, or having another code reader 22 in proximity. Alternately, the code reader 22
is activated for detection at all times but communication with content database 24 and
output device 26 is only initiated when the conditions are fulfilled, which could be es-
ablishing an internet connection with a specific known network, the code reader 22
moving from one location to another, or after a certain time delay etc.

[0021] In a preferred embodiment, the content output by the output device 26 is further
customized through display rendering settings. For example, the output device 26 can
output the content with a different background when the combination code 20 is
detected at day time or night time, or at specific hours or a specific day of the year
such as a birthday. The background can also dependent on an environmental climate or
temperature, a location of the code reader 22, or conditions that relate to other code
readers 22 such as a distance between other code readers 22. Other parameters can also
be changed, such as contrast of display, or a depth of view if a three dimensional
display is employed. The display rendering settings can be stored locally in the code
reader 22 or the output device 26, or stored in a server and retrieved every time with
the content in the content database 24.

[0022] In one embodiment, a known number of combinations for the combination code 20 is
provided to the user through a holder device. The holder device allows a user to set a
combination code from a predetermined number of selected code elements. The holder
device is preferably portable such that the user can access the desired content at any
time.

[0023] In an alternate embodiment, the content stored in the content database 24 is an
encrypted content file instead of multimedia clip. The entire protected file is only able
to be accessed when a group of code readers 22 are within a predetermined distance of each other, and all code readers 22 detects the combination code 20 at the same time or within a predetermined period of time. The output device 26 retrieves the file from the content database 24 and may further allow editing or other actions. Each code reader 22 can be set to access a part of the file, and the part can be either readable as if a word file is separated into a few segments, or not readable through an encryption algorithm that is only meaningful when all parts are combined.

[0024] In a preferred embodiment as shown in Fig. 3, content stored in a partition can be shared between a group of users. Each user may share a same combination or have a different combination linked to the shared partition, and the content can be shared to any number of users. In a preferred embodiment, a user interface is provided at the code reader 22, the output device 26 or at another terminal to allow the user to manage the partitions, such as assigning content to the partition, sharing a partition to other users, or configuring display rendering settings and setting conditional triggers.

[0025] An example process flow of using the present system is explained below. First, a user registers to a service provider platform thereby allowing the code reader to authenticate the user. The registered user can then upload and assign specific content to different combinations of a combination code through the user interface. Once the content is assigned, the user can then send invites to a group of users for sharing the content stored inside a partition. The other users in the group by accepting the request gains access to the partition, and each user can assign a combination of his choice for the partition. Users that are not invited cannot access the partition even if they know the combination, therefore the content is highly secure. Other users in the group may be granted the right to edit the content as well, such as appending another video clip to the current video clip, or customizing display settings regarding to condition triggers. The platform may provide a method to merge multiple clips together or play the content files in order. In addition to the code reader itself, the above flow may also be performed using a PC or other devices that does not have a scanning device, provided that the device can communicate with the service provider.

[0026] The preferred embodiments of the present invention are hereby disclosed. The preferred embodiments only explain the present invention by way of example, but not limitation. It is obvious that a person skilled in the art can make various modifications and adjustments to the details without departing from the spirit and concept of the present invention. The scope of the present invention is not limited to the specification but is defined by the scope of the claims.
Claims

[Claim 1] A system comprising:
a combination code comprising a number of code elements, said combination code having a plurality of combinations, said combination code can operate in isolation or upon activation in association with trigger conditions;
a code reader for detecting said combination code;
a content database communicably linked to said code reader, wherein said content database is divided into a plurality of partitions based on different combinations of said combination code and an identity of a user;
an output device communicably linked to said code reader and said content database;
wherein said output device retrieves and outputs content stored in a partition of said content database upon said code reader detecting a corresponding combination of said combination code.

[Claim 2] The system according to claim 1, wherein each of said plurality of partitions is shareable with other users.

[Claim 3] The system according to claim 2, wherein each user has a determined combination code for accessing a shared partition.

[Claim 4] The system according to claim 1, wherein the code reader can detect said combination code, and interact with the trigger conditions if activated.

[Claim 5] The system according to claim 1, wherein said code reader comprises an authentication module for confirming said identity of said user.

[Claim 6] The system according to claim 1, wherein said content stored in said content database is multimedia content.

[Claim 7] The system according to claim 1, wherein said content stored in said content database is an encrypted content file.

[Claim 8] The system according to claim 1, wherein said output device outputs said content by augmented reality.

[Claim 9] The system according to claim 1, wherein said output device outputs said content depending on display rendering settings.

[Claim 10] The system according to claim 1, wherein said code reader detects said combination code based on conditional triggers.
A. **CLASSIFICATION OF SUBJECT MATTER**

G06F 17/30(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. **FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database consulted during the international search (name of database and, where practicable, search terms used)

CNPAT; WPI; EPODOC; CNKI; IEEE: combination, code, tag, reader, scan, detect, content, database, divide, partition, block, identity, authenticate, output, user, share

C. **DOCUMENTS CONSIDERED TO BE RELEVANT**

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Form PCT/ISA/210 (second sheet) (January 2015)
### INTERNATIONAL SEARCH REPORT

**Information on patent family members**

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