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(54) **METHOD AND SYSTEM FOR GENERATION OF IMAGES BASED ON BIORHYTHMS**

(71) Applicant: **Kristin Elizabeth Slater**, St. Louis, MO (US)

(72) Inventors: **Kristin Elizabeth Slater**, St. Louis, MO (US); **Fred S. Wolflink**, Boston, MA (US)

(73) Assignee: **Kristin Elizabeth Slater**, St. Louis, MO (US)

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A61B 5/00	(2006.01)
H04M 1/00	(2006.01)
G08B 1/00	(2006.01)
H04N 5/232	(2006.01)

(52) **U.S. Cl.**
CPC ***H04N 5/232*** (2013.01)

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CPC H04N 7/18; H04M 1/00; A61B 5/00
See application file for complete search history.

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Primary Examiner — Sath V Perungavoor
Assistant Examiner — Patricia I Young
(74) *Attorney, Agent, or Firm* — Harness, Dickey & Pierce, P.L.C.

(57) **ABSTRACT**

Certain embodiments of the invention may include apparatus, systems, and methods for exchanging pictures, images, audio files, and videos over social networks. Said communications comprise transcribed media such as voice recordings, photographs, digitally manipulated images, or videos. A method is described wherein a predictive analytics engine using predetermined biorhythm criterion, such as heart rate, inferred from historical data, determines the appropriate time to capture images and when to transmit them to social networks, and which networks to transmit the media to as well as which users to authorize to view the content.

19 Claims, 3 Drawing Sheets

Conceptual Schematic Diagram of the Biorhythm Detector As Worn By A User

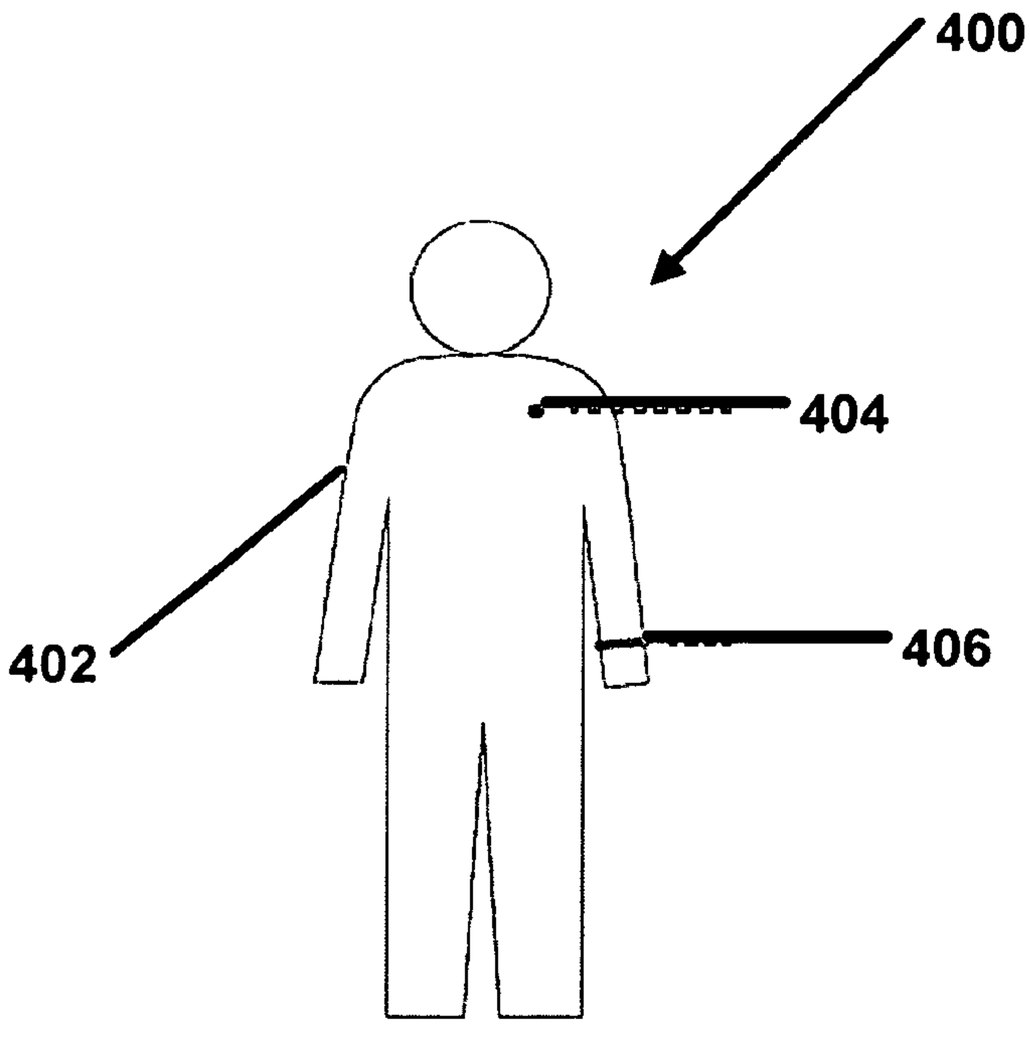

FIG. 1. Conceptual Schematic Diagram of the Biorhythm Detector

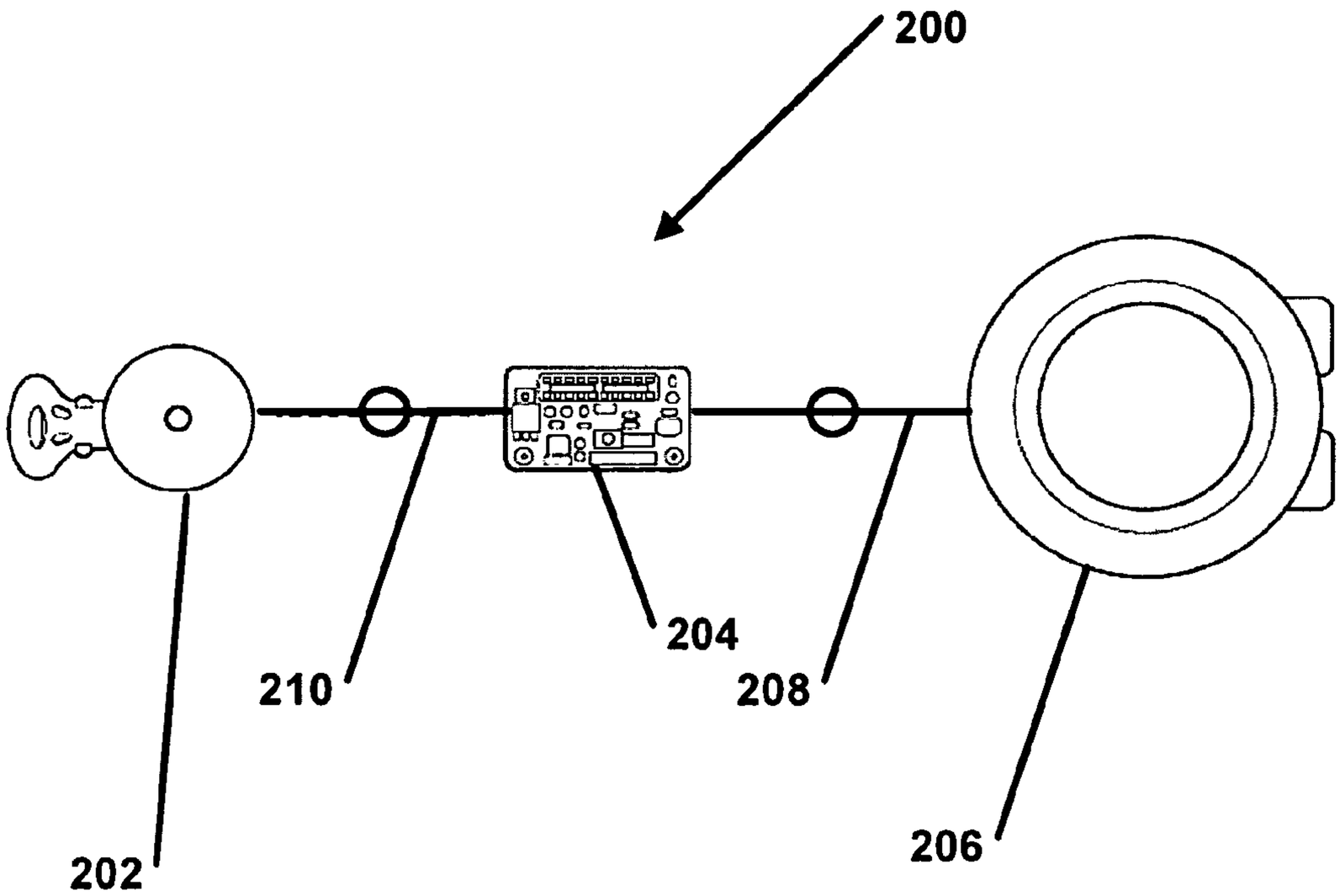

FIG. 1

FIG. 2. Conceptual Schematic Diagram of the Biorhythm Detector As Worn By A User

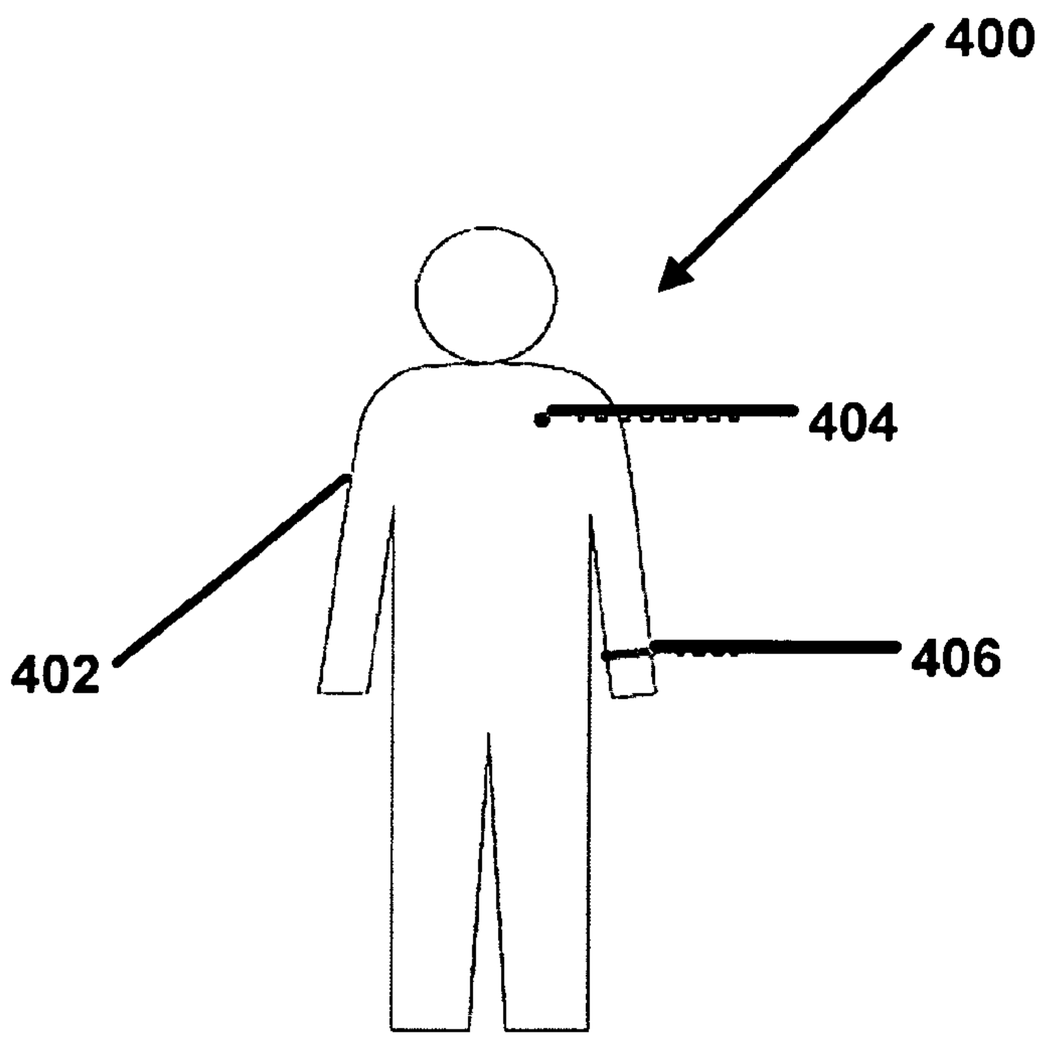

FIG. 2

FIG. 3. Conceptual Flowchart of Application of Device

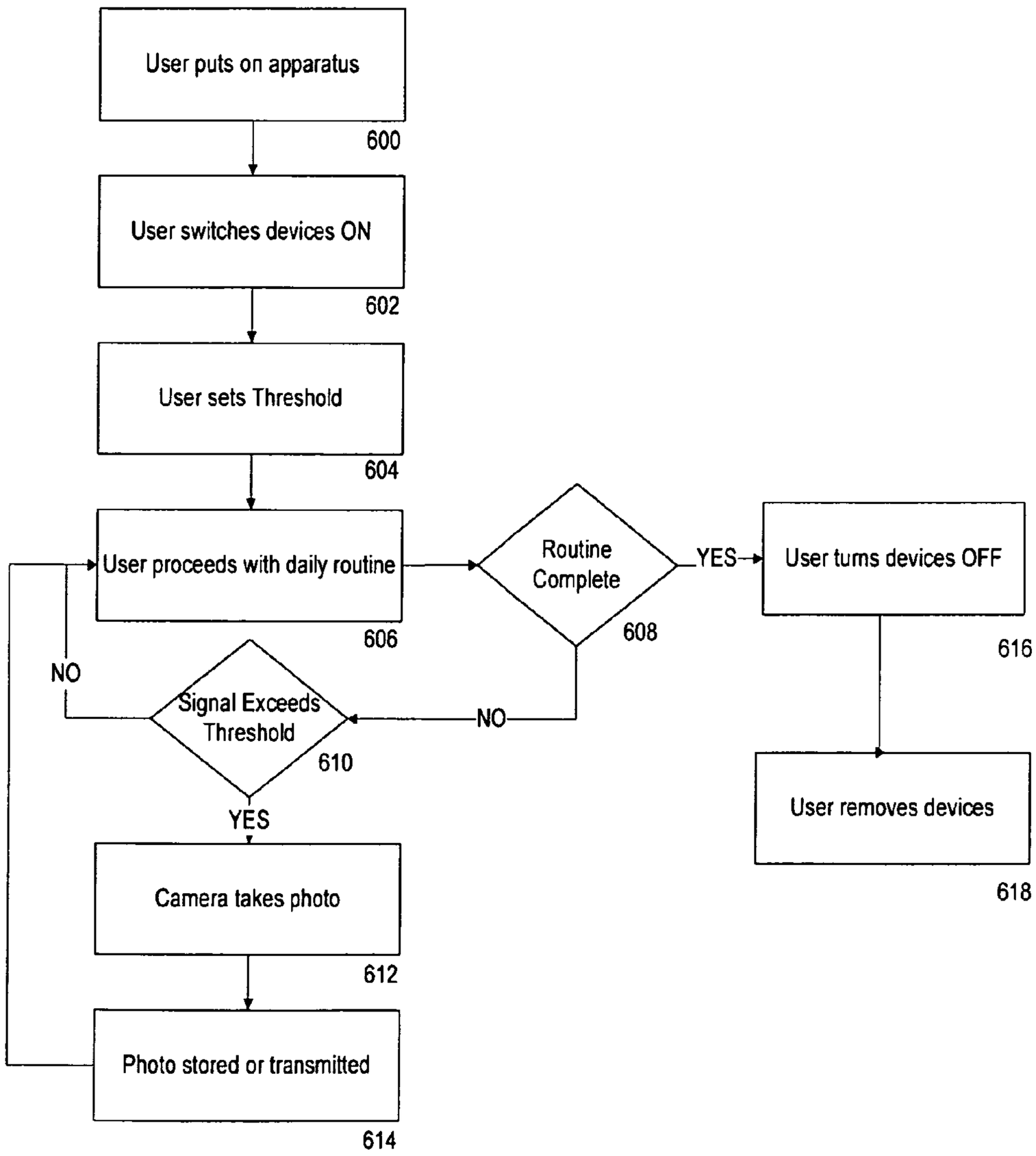

FIG. 3

METHOD AND SYSTEM FOR GENERATION OF IMAGES BASED ON BIORHYTHMS

TECHNICAL FIELD

The present invention relates generally to generating images based on biorhythms.

BACKGROUND

Currently users of smartphones take pictures on demand based on the actions of the user or after a short delay specified by the user. Said pictures are then transmitted via such means as e-mail, texting, Internet relay chat [IRC], instant messages [IMs], via Facebook, via blog posts, via Twitter, via Pinterest, or by another means to others on social networks. In a conventional social network, a typical user of a smartphone communicates with other such users by providing pictures and video generated by the user on the smartphone. Such pictures and video are then posted to social network websites in a manner that is accessible to other users of said social media websites. For example, a user of a social networking website might post pictures and video taken by said user, showing daily live and special events such as the Super Bowl or a musical concert. The user may also post pictures and videos from their smartphone showing recent acquisitions such as the purchase of a new automobile or TV set. Other users, who have access to the user's posted information, may contact the user to comment or review information about common shared interests or for other reasons.

There is a trend for social networking websites to focus on images as proven by the success of Pinterest.com and many other such websites. There is a need for a way to generate many images from each 24-hour period with minimal user interaction with their smartphone.

A variety of systems and methods may be implemented according to the present invention, and they may operate in a variety of environments. Some embodiments of the present invention provide systems and methods for communicating images taken by a user's smartphone with the triggering event, i.e., the event that causes the camera in the smartphone to activate, being based on biorhythms instead of active control of the camera by the user. A means to capture moments digitally with minimal user interaction with their smartphone based on biological processes such as increased heart rate, respiration rate, or another means is missing in the current art.

A social network environment provides the opportunity for frequent, automatic notification of changes in the information posted by other users. In one embodiment of the current invention, such automatic notification enables the user and those the user has selected to see images triggered by biorhythms on a specific day at a specific time.

A social network environment provides the opportunity to accumulate extensive historical data about users' transmissions of images and videos. In one embodiment of the current invention, predictive analytics operations on such historical data from a variety of web-accessible databases enables forecasting of appropriate selections of images and/or videos from a pre-determined array of images and/or videos taken during a particular event or occasion.

Social networks, such as Facebook, Google+, LinkedIn, Yahoo Groups, and Twitter, have rapidly deployed around the world engaging hundreds of millions of users and providing an opportunity for global reach within authenticated social networks. In one embodiment of the present invention, image and video distribution is facilitated by storage of images and videos for later transmission to social networks.

Social network providers such as Facebook, Google+, LinkedIn, Twitter, and Yahoo Groups, and Social API have platforms that the present invention can utilize. They provide profiles and interest or affinity information about users, a means of forming authenticated communities, and a wealth of historical data on which the communication and analytics engines of the present invention can operate. However, there are many critical features of the present invention that fall outside their scope, e.g., triggering the capturing of images and videos based on biorhythms.

The purpose of this introduction is to give the reader an overview of the general subject matter of the invention. By no means is the invention limited to such subject matter or by the illustrative embodiments of the invention. These embodiment are mentioned not to limit or define the invention, but to provide examples of some embodiments of the invention to aid in the understanding thereof. Illustrative embodiments are discussed in the Detailed Description, and further description of the invention is provided there. Advantages offered by the various embodiments of the present invention may be further understood by examining this specification.

Some or all of the above needs may be addressed by certain embodiments of the invention. Certain embodiments of the invention may include systems and methods for retaining valuable images until an appropriate event occurs, for instance, retaining an outdoor scene until the intended recipient moves into an appropriate living space that will accommodate a large reproduction of the image. The present invention overcomes the limitations of conventional approaches by providing a full range or images and storage until the most appropriate time. Aspects and advantages of the invention will be set forth in part in the following description, or may be obvious from the description, or may be learned through practice of the invention.

Variations and modifications can be made to these exemplary embodiments of the present disclosure. Other embodiments and aspects of the invention are described in detail herein and are considered a part of the claimed invention. Such other embodiments and aspects can be understood with reference to the following detailed description, accompanying drawings, and claims.

SUMMARY OF THE INVENTION

A method and system for capturing images and videos with minimal user interaction with their smartphone triggered by the user's biorhythms, such as their heart rate, is described. A user, wearing apparatus containing a smartphone and biosensors, goes about their normal daily life and the system captures at specific points, say when the user's heart rate is in a specific range, images and videos for instantaneous transmission to the Internet and social networks or for storage and future transmission to said social networks. Audio files could be captured and transcribed into other media such as documents. These and other aspects, features, implementations, and advantages, and combinations of them, can be expressed as methods, apparatus, systems, components, program products, business methods, and means or steps for performing functions, or combinations of these.

Other features, aspects, implementations, and advantages will become apparent from the description, the drawings, and other specifications of the invention.

BRIEF DESCRIPTION OF THE FIGURES

A full and enabling disclosure of the present invention, including the best mode thereof, directed to one of ordinary

skill in the art, is set forth in the specification, which makes reference to the appended figures, which are not necessarily drawn to scale, and wherein:

FIG. **1** illustrates an exemplary schematic diagram of an apparatus

FIG. **2** illustrates an exemplary arrangement of an apparatus on a user's body

FIG. **3** is an exemplary flowchart of a functional application

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

In a social network, such as an extended family, communications of images, audio files, and videos often take place for holidays, at anniversaries, such as birthdays, special occasions, such as bar mitzvahs or first communions, or on the occasion of milestone events, such as high school or college graduation, the birth of a child, or a promotion or attainment of an achievement award. The present invention facilitates such communications at a pre-selected time even when the user of the apparatus and system is asleep.

FIG. **1** illustrates an exemplary environment, **200**, showing the biorhythm detector. In FIG. **1**, the pulse sensor for detecting the user's heart beats per minute, **202**, is connected to a processor which contains software code that tracks heart beats per minute, **204**, by a wired signal or by a wireless signal or by Bluetooth wireless connection technology or by near field communication, NFC, which is labeled **210**. Said processor is connected to a wearable camera, **206**, by a wired signal or by a wireless signal or by Bluetooth wireless connection technology or by NFC, labeled **208**.

FIG. **2** illustrates an exemplary arrangement, **400**, of the apparatus of FIG. **1** on a user's body. In FIG. **2**, the user of said apparatus, **402**, is wearing a camera for taking photographs or videos, **404**. Also shown, **406**, is a wristband that houses the processor and pulse sensor of FIG. **1**.

FIG. **3** is an exemplary flowchart of a functional application. In FIG. **3**, the user puts on the apparatus, **600**, of FIG. **1** and switches said apparatus on, **602**, and the user sets the biorhythm threshold at which pictures and/or video will be recorded, **604**, then, **606**, the user proceeds about their normal routine. At this point if the user is done with their normal routine for the day the user turns the device off, **616**. Then the user removes the device, **618**. If the biorhythm signal exceeds the pre-selected threshold, **610**, while the device is turned on, the camera takes a photo or a video is captured, **612**, and then the photo or video is stored or transmitted to a pre-selected person in a social network or a group of such person.

As desired, embodiments of the invention may include the biosensors with more or fewer of the components illustrated.

The invention is described above with reference to block and flow diagrams of systems, methods, apparatuses, and/or computer program products according to exemplary embodiments of the invention. In one embodiment of the invention users may access the social network by desktop or laptop computers. In another embodiment users may access the social network by mobile smart phones. In another embodiment of the invention users may access the social network by tablet computers or any commercial computing device connected to the Internet. In one embodiment of the invention the transmission and storage of captured images, audio files, and videos may be constructed to operate on the Internet independent of existing social networks using technology known to anyone skilled in the art. In another embodiment of the invention the transmission of captured media may operate using existing social networks, e.g., Facebook, as platforms using existing application interfaces open to website developers skilled in the art. It will be understood that one or more blocks of the block diagrams and flow diagrams, and combinations of blocks in the block diagrams and flow diagrams, respectively, can be implemented by computer-executable program instructions. Likewise, some blocks of the block diagrams and flow diagrams may not necessarily need to be performed in the order presented, or may not necessarily need to be performed at all, according to some embodiments of the invention.

These computer-executable program instructions may be loaded onto a general-purpose computer, a special-purpose computer, a processor, or other programmable data processing apparatus to produce a particular machine, such that the instructions that execute on the computer, processor, or other programmable data processing apparatus create means for implementing one or more functions specified in the flow diagram block or blocks. These computer program instructions may also be stored in a computer-readable memory that can direct a computer or other programmable data processing apparatus to function in a particular manner, such that the instructions stored in the computer-readable memory produce an article of manufacture including instruction means that implement one or more functions specified in the flow diagram block or blocks. As an example, embodiments of the invention may provide for a computer program product, comprising a computer-usable medium having a computer-readable program code or program instructions embodied therein, said computer-readable program code adapted to be executed to implement one or more functions specified in the flow diagram block or blocks. The computer program instructions may also be loaded onto a computer or other programmable data processing apparatus to cause a series of operational elements or steps to be performed on the computer or other programmable apparatus to produce a computer-implemented process such that the instructions that execute on the computer or other programmable apparatus provide elements or steps for implementing the functions specified in the flow diagram block or blocks.

Accordingly, blocks of the block diagrams and flow diagrams support combinations of means for performing the specified functions, combinations of elements or steps for performing the specified functions and program instruction means for performing the specified functions. It will also be understood that each block of the block diagrams and flow diagrams, and combinations of blocks in the block diagrams and flow diagrams, can be implemented by special-purpose, hardware-based computer systems that perform the specified functions, elements or steps, or combinations of special purpose hardware and computer instructions.

While the invention has been described in connection with what is presently considered to be the most practical and various embodiments, it is to be understood that the invention is not to be limited to the disclosed embodiments, but on the contrary, is intended to cover various modifications and equivalent arrangements included within the scope of the appended claims. While the invention has been described by reference to certain preferred embodiments, it should be understood that these embodiments are within the spirit and scope of the inventive concepts described. This written description uses examples to disclose the invention, including the best mode, and also to enable any person skilled in the art to practice the invention, including making and using any devices or systems and performing any incorporated methods. The patentable scope of the invention is defined in the claims, and may include other examples that occur to those skilled in the art. Such other examples are intended to be

within the scope of the claims if they have structural elements that do not differ from the literal language of the claims, or if they include equivalent structural elements with insubstantial differences from the literal language of the claims. Although specific terms are employed herein, they are used in a generic and descriptive sense only and not for purposes of limitation. Accordingly, it is intended that the invention not be limited by the embodiments, but that it have the full scope permitted by the language of the following claims.

We claim:

1. An apparatus for taking pictures or videos triggered by pre-selected changes in a user's biorhythms, the apparatus comprising:

at least one biosensor configured to detect at least one biorhythm of a user and to generate a biorhythm signal based on the detected at least one biorhythm of the user;

a wearable camera configured to be worn by the user; and

at least one processor configured to receive the biorhythm signal from the at least one biosensor, the processor configured to compare the biorhythm signal to a biorhythm threshold and, in response to the biorhythm signal exceeding the biorhythm threshold, to simultaneously trigger the wearable camera to take one or more pictures or videos.

2. The apparatus of claim **1** wherein the at least one biosensor is configured to detect a heart rate of the user.

3. The apparatus of claim **1** further comprising at least one signaling device configured to send the biorhythm signal from the biosensor to the processor.

4. The apparatus of claim **3** wherein said signaling device is configured to send the biorhythm signal from the biosensor to the processor(s) via a wireless connection.

5. The apparatus of claim **1** further comprising at least one wristband that houses the processor and the biosensor.

6. A computer system for taking pictures and videos triggered by pre-selected changes in a user's biorhythms, the computer system comprising:

at least one biosensor configured to detect at least one biorhythm of a user and to generate a biorhythm signal based on the detected at least one biorhythm of the user;

a wearable camera configured to take pictures and/or videos; and

at least one processor configured to receive the biorhythm signal from the at least one biosensor, the processor configured to compare the biorhythm signal to a biorhythm threshold and, in response to the biorhythm signal exceeding the biorhythm threshold, to simultaneously trigger the wearable camera to take one or more pictures or videos.

7. The computer system of claim **6** wherein the at least one biosensor is configured to detect a heart rate of the user.

8. The computer system of claim **6** further comprising at least one signaling device configured to send the biorhythm signal from the biosensor to the processor.

9. The computer system of claim **8** wherein said signaling device is configured to send the biorhythm signal from the biosensor to the processor(s) via a wireless connection.

10. The computer system of claim **6** further comprising at least one wristband that houses the processor and the biosensor.

11. A computer-implemented method for taking pictures and videos triggered by pre-selected changes in a user's biorhythms, the method comprising:

detecting, via at least one biosensor, at least one biorhythm of a user;

comparing the detected biorhythm of the user to a biorhythm threshold; and

in response to the detected biorhythm of the user exceeding the biorhythm threshold, simultaneously triggering a wearable camera to take one or more pictures or videos.

12. The computer-implemented method of claim **11** wherein detecting at least one biorhythm of the user includes detecting a heart rate of the user.

13. The computer-implemented method of claim **11** wherein simultaneously triggering the wearable camera includes simultaneously triggering the wearable camera to take one or more pictures or videos while the wearable camera is worn by the user.

14. The computer-implemented method of claim **11** wherein the biosensor is supported by a wristband worn by the user.

15. The apparatus of claim **1**, wherein the processor is configured to receive the biorhythm threshold as an input from the user.

16. The apparatus of claim **4**, wherein the wireless connection is a Bluetooth wireless connection or a near field communication wireless connection.

17. The apparatus of claim **1**, wherein the wearable camera or the processor is configured to transmit the picture(s) or video(s) taken by the camera to a network.

18. The apparatus of claim **17**, wherein the network is a social network.

19. The apparatus of claim **1**, wherein the processor is configured to simultaneously trigger the wearable camera to take one or more pictures or videos via a wireless signal.

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