US 20060172860A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2006/0172860 A1

Estrella (43) Pub. Date: Aug. 3, 2006

(54) SYSTEM AND METHOD FOR THE DETECTION OF AN UNCONTROLLABLE CHANGE IN A PERSON'S PHYSIOLOGY

(76) Inventor: **Hector Jose Estrella**, Santo Domingo (DO)

Correspondence Address:
MALLOY & MALLOY, P.A.
2800 S.W. Third Avenue
Historic Coral Way
Miami, FL 33129 (US)

(21) Appl. No.: **11/109,499**

(22) Filed: **Apr. 19, 2005**

Related U.S. Application Data

(63) Continuation-in-part of application No. 10/418,518, filed on Apr. 18, 2003, now abandoned.

Publication Classification

(51) **Int. Cl.**
A63B 71/00 (2006.01)

(52) **U.S. Cl.** **482/8**

(57) **ABSTRACT**

A system for the detection of an uncontrollable change in a person's physiology, such as occurs during an orgasm. The system includes a sensor assembly structured to monitor at least one preselected bodily function during an activity monitoring period. The sensor assembly is structured to transfer at least one activity data set corresponding to the preselected bodily function to a central processing unit, which interprets the activity data set and detects a predetermined change in the preselected bodily function, where present, the predetermined change being indicative of a particular sensation a person is experiencing. In addition, at least one configuration of the system includes an output device structured to generate an indication, such as an audible or visible alarm, when the central processing unit detects a predetermined change in the preselected bodily function. A method is also provided for the detection of an uncontrollable change in a person's physiology.

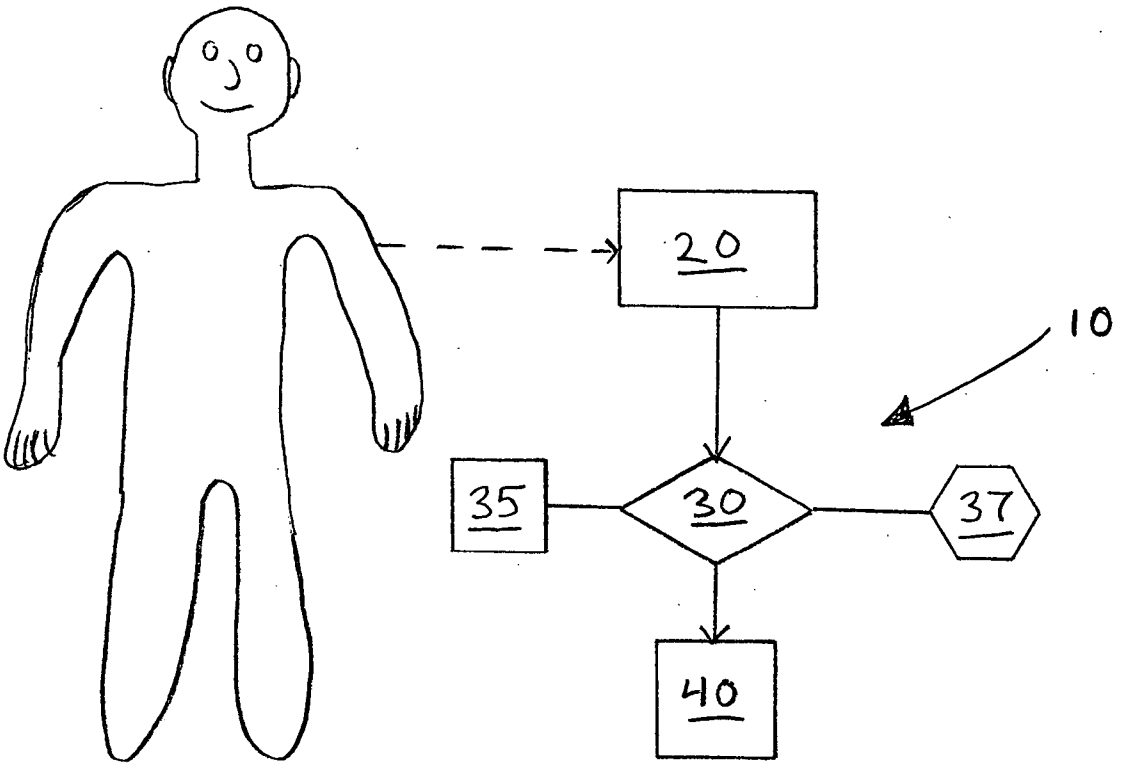
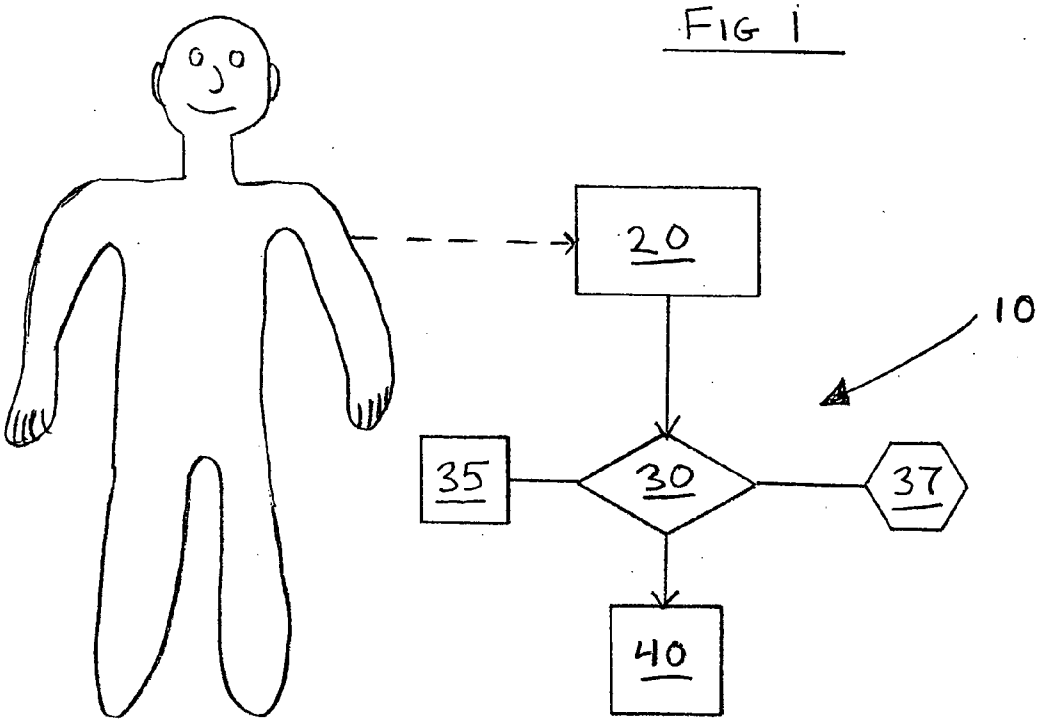


FIG 1



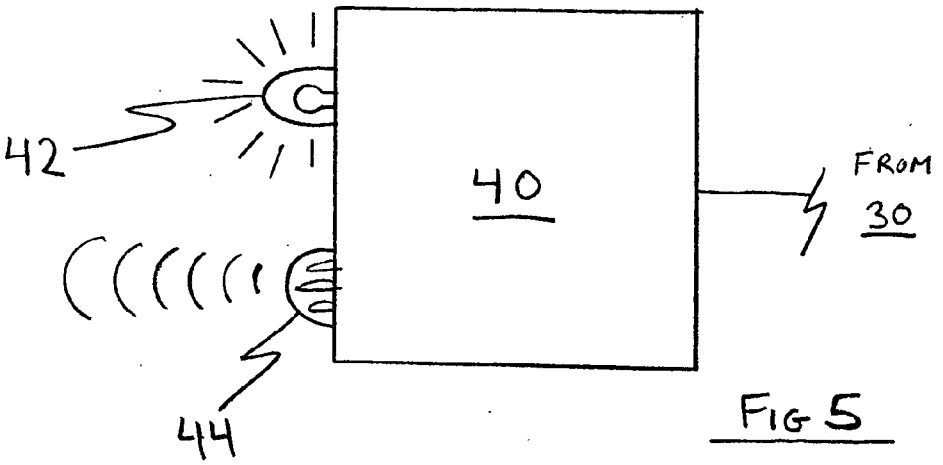


FIG 5

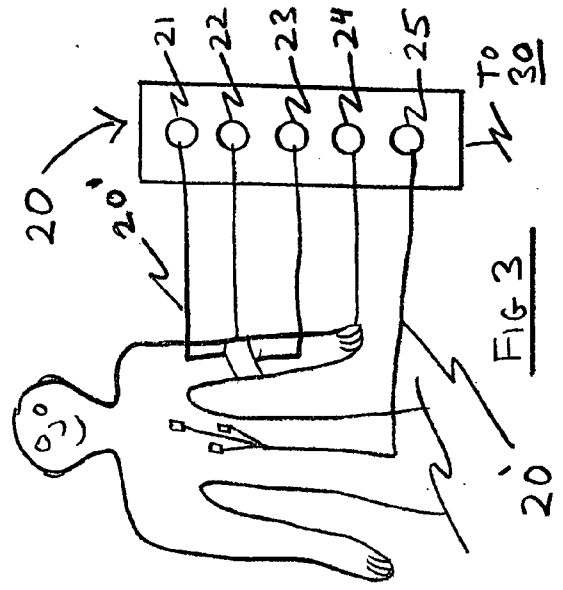


FIG 3

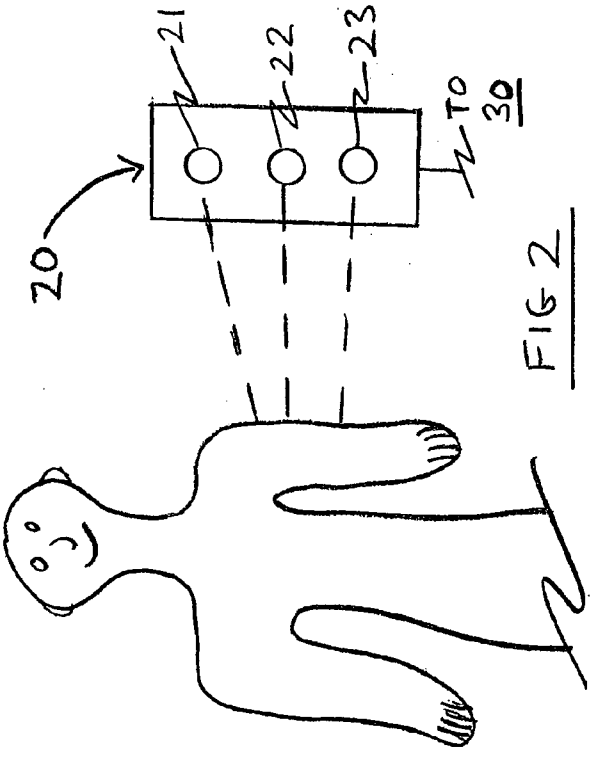


FIG 2

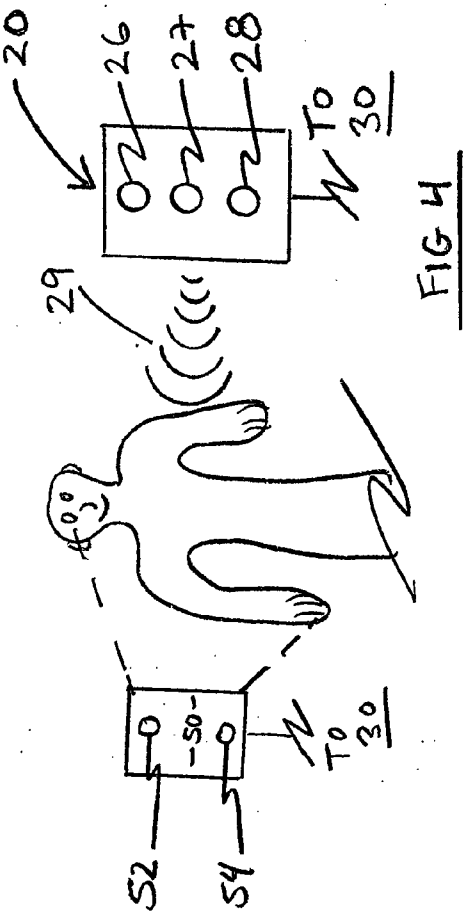


FIG 4

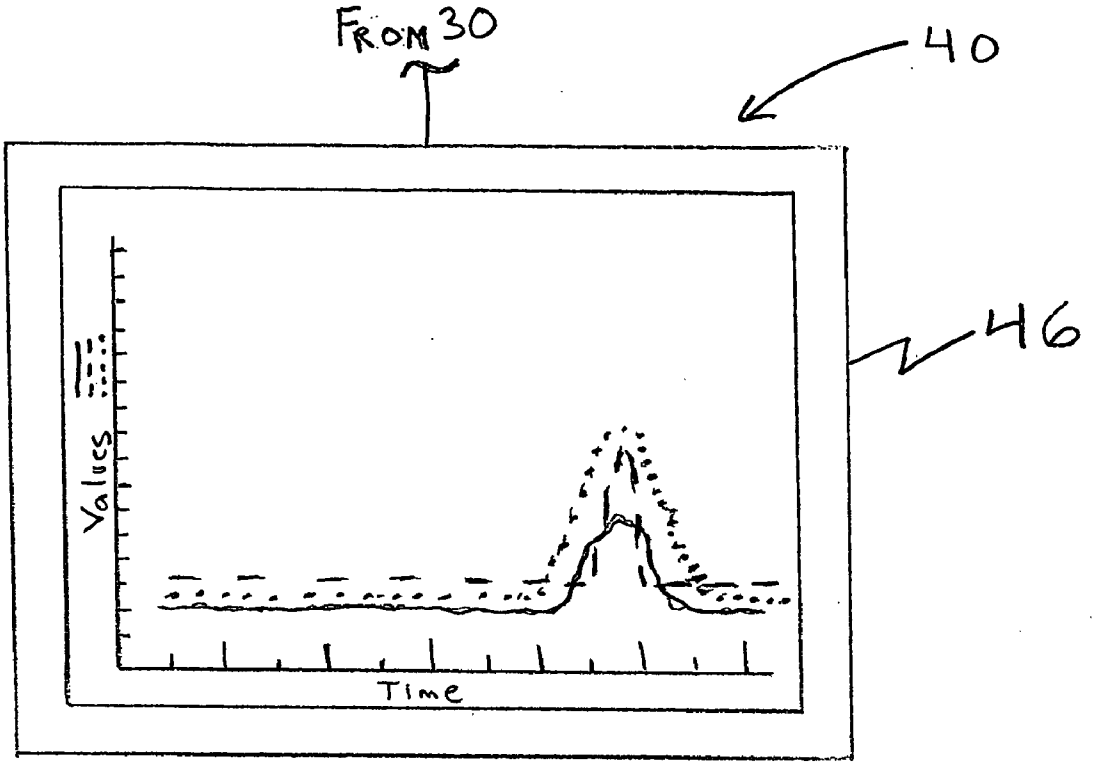


FIG 6

SYSTEM AND METHOD FOR THE DETECTION OF AN UNCONTROLLABLE CHANGE IN A PERSON'S PHYSIOLOGY

CLAIM OF PRIORITY

[0001] The present application is a continuation-in-part patent application of the previously filed and currently pending U.S. patent application having Ser. No. 10/418,518, filed on Apr. 18, 2003, incorporated herein by reference.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present invention relates to a system for the detection of an uncontrollable change in a person's physiology, such as occurs in a person experiencing fear or an orgasm. More in particular, the present invention comprises a sensor assembly structured to monitor at least one bodily function during a baseline monitoring period and an activity monitoring period, and a central processing unit structured to interpret activity data obtained from the sensor assembly, and in particular, to detect a predetermined change in the at least one bodily function during the activity monitoring period. The system may also comprise an output device structured to provide an indication when the predetermined change in bodily function is detected. The present invention also teaches a method for the detection of an uncontrollable change in a person's physiology, such as occurs during orgasm or when a person experiences fear.

[0004] 2. Description of the Related Art

[0005] Through the ages, various devices, systems, and methods have been developed to monitor a variety of physiological properties of a person. The interest in monitoring such properties often stem from medical necessity or medical research in hopes of determining the impact of certain ailments, afflictions, and/or other stimuli on one or more bodily functions of a person. For example, during even the most routine visit to a medical doctor, certain physiological properties or bodily functions are almost always measured and noted in a patient's file before the doctor ever sees the patient, such as blood pressure, temperature, and pulse rate. This is due in part to the fact that the normal values of these particular bodily functions are well established, and a deviation in one or more of these parameters may be indicative of a specific ailment or affliction. It is further know that abrupt changes in certain physiological parameters or bodily functions may be indicative of certain stimuli to which the patient has been exposed and/or sensations a person is experiencing.

[0006] Given the significance of certain bodily functions as an indicator of a person's health and/or present state of being, a number of devices have been developed to permit one or more of these functions to be readily measured and/or monitored. For example, one such diagnostic device comprises a glove member structured to fit on a user's hand which is interconnected via a transmission cable to an interface/command center. The glove member includes a variety of diagnostic sensors structured to measure such parameters as EKG, blood pressure, pulse rate, and/or temperature. This device may also be structured to allow measurement of blood oxygen levels as well as the detection of sound waves generated by the patient's heart and lungs when the glove member is positioned over the chest of the user, via an auscultation device. The interface/command center is structured to transmit the data collected to a remote location, for example, via an internet connection, wherein the data is interpreted by trained personnel, such as a doctor or nurse, who then provide medical advice and/or instruction to the user.

[0007] While the foregoing device provides a means for a person to measure the values of a variety of bodily functions, the device requires the person to be physically interconnected to the interface/command center via the cable, which limits use of the device to locations where such an interface/command center is located, and further limits the data collected to the brief period of time in which the person is physically interconnected. Additionally, while the aforementioned device permits the collection of data corresponding to the various bodily functions, it requires trained personnel to interpret the data collected before it is of value to the user.

[0008] A number of portable devices have also been developed which allow a user to measure various bodily functions. One such device permits the user to monitor such bodily functions as blood pressure, temperature, and pulse rate, and includes a display screen to provide the user with real time data. This device also allows for the storage of data collected over a period of time for retrieval and analysis at a later time, such as may be requested or required by trained medical personnel.

[0009] Other portable devices include an electrocardiogram monitor which allow a user to monitor their electrocardiogram on a viewable screen, and a cardiac meter which is structured to be worn on a user's wrist. Such portable devices afford a user a degree of privacy while monitoring certain bodily functions, and it is known that monitoring of bodily functions in private may be desirable in certain instances. For example, while monitoring the bodily functions of a person engaged in sexual activity, certain person's may prefer or in fact insist that such monitoring be conducted privately. Of course, the monitoring and interpretation of certain physiological parameters of persons engaged in sexual activity, and particularly the involuntary or uncontrollable changes in certain bodily functions which occur during orgasm, are believed to provide useful information which may assist persons in understanding and improving sexual techniques, thereby providing them with the benefits of a more fulfilling sex life.

[0010] At least one device has been developed to identify a contraction of certain muscles in an attempt to determine the occurrence of an orgasm of the user. Specifically, the device is structured to identify the contraction of the anal sphincter and associated muscles of the person being monitored. While it appears that this device may be utilized in private by the user, the device must be inserted into the anal canal, which many users may find overly intrusive and/or uncomfortable, particularly while engaging in sexual activity, thereby precluding widespread usage and benefit.

[0011] As such, it would be beneficial to provide a system which may be utilized in private by a user to monitor one or more bodily functions while the person is engaged in various activities, such as sexual activity. It would further be helpful if such a system allowed the bodily functions to be monitored in a non-intrusive manner, to assure widespread acceptance and usage of any such system. Additionally, such a

system would preferably provide the user with results which are interpreted without requiring the assistance of specially trained personnel and/or equipment. More specifically, it would be beneficial to provide a system which allows a user to monitor and detect uncontrollable changes in certain bodily functions which are indicative of a particular sensation a person is experiencing, such as fear or an orgasm. In particular, it would be preferable to provide a system which a user may utilize in a non-intrusive, private manner for the detection of an orgasm. It would further be beneficial to provide a method which a user may utilize in a non-intrusive, private manner for the detection of an orgasm. A further benefit would be to monitor and detect baseline values for certain bodily functions.

SUMMARY OF THE INVENTION

[0012] As indicated above, the present invention is directed to a system for detecting an uncontrollable change in a person's physiology. The system comprises a sensor assembly which is disposed in a monitoring relation with the person. More in particular, the sensor assembly comprises at least one sensor structured to monitor at least one preselected bodily function of the person during an activity monitoring period, however, in at least one embodiment, the sensor assembly comprises a plurality of sensors structured to monitor a plurality of bodily functions. The sensor assembly may be physically attached to one or more portions of the person's body, or it may be structured to monitor the bodily function or functions of the person remotely, such as, by way of example only, via infrared, microwave, optical, sound or light waves, or other remote signal.

[0013] The sensor assembly may be structured to monitor one or more of a plurality of bodily functions including, but not limited to blood pressure, pulse, temperature, respiration, muscular contractions, caloric expenditure, blood oxygen level, release of sweat and/or other components such as endorphins, pheromones, adrenaline, etc., as well as sound waves generated either vocally or via the pulse, heart beat, and/or respiration of the person being monitored.

[0014] Additionally, the present invention also includes a central processing unit which is disposed in a communicating relation with the sensor assembly, which is to say that the sensor assembly is structured to transfer at least one activity data set to the central processing unit corresponding to the at least one preselected bodily function being monitored during the activity monitoring period. In at least one embodiment, however, the sensor assembly is structured to transfer a plurality of activity data sets, each corresponding to a different one of the preselected bodily functions being monitored during the activity monitoring period. In yet another embodiment, the sensor assembly may be structured to transfer a plurality of activity data sets, each corresponding to a different one of the preselected bodily functions being monitored during each of a different one of a plurality of activity monitoring periods.

[0015] Also in accordance with the present invention, the central processing unit is structured to interpret each activity data set transferred by the sensor assembly and to detect a predetermined change in the preselected bodily function to which each activity data set corresponds. Also, the system may include an output device which is operatively associated with the central processing unit and is structured to generate an indication upon detection of the predetermined change in one or more of the preselected bodily functions, by the central processing unit.

[0016] In at least one embodiment of the system of the present invention, the central processing unit comprises a data memory module structured to store at least one, but preferably a plurality of activity data sets, each corresponding to one of the plurality of bodily functions monitored during each of a plurality of activity monitoring periods. The data memory module is further structured to permit the central processing unit to correlate each of the plurality of activity data sets. In one further embodiment, the central processing unit comprises an external data transmission port structured to transmit the plurality of activity data sets to an external data processing device to provide additional storage and facilitate further analysis of the plurality of activity data sets.

[0017] The system of the present invention, in at least one embodiment, is utilized to measure an uncontrollable change in the physiology of other living creatures including, but not limited to dogs, cats, mice, rats, birds, and horses, among others.

[0018] The bodily functions and/or parameters which may be obtained and/or monitored utilizing the system of the present invention may further include shockwaves, electrowaves, brainwaves, and/or the aura generated by the person. In one further embodiment, the system may utilize hair recognition technology to detect the size, diameter and/or length, density, color, etc, of the hair located on a portion of the person's body.

[0019] In addition, the system may comprise the measurement of geometrical and special dimensions of various portions of the person's body including, but not limited to measurement of the person's nose, ears, eyes, penis, or vagina, just to name a few.

[0020] One further embodiment of the present invention provides for the measurement and monitoring of the amount of heat absorbed or heat released by the person's body. Further, the system may be utilized to measure and monitor fluids, hormones, proteins, gases, odors, particulate matter, sounds and/or sound waves expelled from or absorbed by the person's body, including macro-, micro-, and/or nano-measurement of the same. At least one other embodiment of the system may be utilized for the detection of any contraction of the body, including contractions of the muscles and/or organs, as well as any voluntary and/or involuntary movement or contraction of the body, such as may be detectible by a motion sensor or otherwise.

[0021] The system of the present invention may also be utilized to monitor, measure, and calculate the amount, concentration, rate of absorption or adsorption, rate of expulsion, degree of contraction, and/or frequency (where applicable) of at least the physical parameters identified herein. Any number of the physical parameters identified herein may also be present and monitored in the environment surrounding the person being monitored.

[0022] One other embodiment of the present invention may be utilized to monitor skin color, hair color, stains, physiological and/or biological changes in the body due to illness or external stimuli. The values of any the parameters detected, monitored, stored, and/or analyzed by at least one

embodiment of the system of the present invention may be expressed in terms of percentages, exact amounts, estimated or approximated amounts, and/or scaled values. In one further embodiment, the system has storage capability for the baseline and activity data sets, the baseline and activity biometric parameters, and any calculated values generated utilizing the same, which may be stored and/or transmitted by the system.

[0023] At least one embodiment of the system of the present invention includes capacity for wired and/or wireless data transmission for receiving and/or transmitting data to or from external devices including, but not limited to, external processing units and/or external output devices. More specifically, the system is capable of exchanging data with any external equipment or mechanism.

[0024] Additionally, the sensor assembly in at least one embodiment may utilize laser, infrared, ultraviolet, or other electromagnetic radiation waves, magnetic, non-magnetic, electrical, audible, or visual energy to effect wireless data and/or signal transmission between components of the system.

[0025] One further embodiment of the present invention may be comprise a secure activation mechanism utilizing a biometric identification device to measure any of a variety of biometric parameters including, but not limited to, fingerprint patterns, iris patterns, voice and/or other sound patterns, wave energy patterns emitted form the body, hair patterns, including density, color, size, i.e. diameter and/or length, skin porosity patterns, geometrical and spatial dimensions of portions of the person's body, and respiration patterns, just to name a few. Other biometric parameters may include biological secretions from the body, and energy waves generated by the body, for example, the person's aura.

[0026] The system of the present invention may further employ barcodes, magnetic, and/or non-magnetic systems to secure access and activation of the system. The system may further provide for encryption and decryption of the data received, transmitted, stored, analyzed, or otherwise utilized by the system.

[0027] Yet one further embodiment of the system of the present invention comprises internal or external global positioning technology, cellular and non-cellular communications capacity, and is structured to store and play any media which may be scanned and/or read into the system in any data format.

[0028] In addition to the system described above, the present invention also provides a method for detecting an uncontrollable change in a person's physiology. Specifically, the method comprises monitoring at least one preselected bodily function of the person during an activity monitoring period, and transferring an activity data set corresponding to the preselected bodily function for analysis. At least one embodiment of the present invention provides for monitoring a plurality of preselected bodily functions during the activity monitoring period.

[0029] The method also provides for interpreting one or more one activity data sets by comparing each activity data set to a table containing a value or range of values of a predetermined change in one or more preselected bodily functions being monitored and detecting a predetermined change in the preselected bodily function to which each activity data set corresponds. In at least one embodiment, the method comprises interpreting each of the plurality of activity data sets via a central processing unit and detecting the predetermined change. Additionally, the method of the present invention may comprise generating an indication upon detection of the predetermined change in the at least one preselected bodily function.

[0030] These and other objects, features and advantages of the present invention will become more clear when the drawings as well as the detailed description are taken into consideration.

BRIEF DESCRIPTION OF THE DRAWINGS

[0031] For a fuller understanding of the nature of the present invention, reference should be had to the following detailed description taken in connection with the accompanying drawings in which:

[0032] **FIG. 1** is a schematic view of one embodiment of a system of the present invention.

[0033] **FIG. 2** is a schematic view of one embodiment of a sensor assembly of the system of the present invention.

[0034] **FIG. 3** is a schematic view of one other embodiment of a sensor assembly of the system of the present invention.

[0035] **FIG. 4** is a schematic view of yet another embodiment of a sensor assembly of the present invention.

[0036] **FIG. 5** is a side elevation of one embodiment of an output device of the present invention.

[0037] **FIG. 6** is a front elevation of another embodiment of an output device of the present invention.

[0038] Like reference numerals refer to like parts throughout the several views of the drawings.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0039] While this invention is susceptible of embodiment in many different forms, there is shown in the drawings and will herein be described in detail at least one specific embodiment, with the understanding that the present disclosure is to be considered as an exemplification of the principles of the invention and is not intended to limit the invention to the embodiment illustrated.

[0040] Once again, as indicated above, the present invention is directed to a system, generally as shown at **10**, for detecting an uncontrollable change in a person's physiology. While person's have been known to control and/or mask measurable changes in certain bodily functions, for example, pulse and/or respiration rates, under numerous and varied conditions such as physical stress, exertion, etc., it is also known that certain sensations can result in measurable changes in one or more of these bodily functions which are involuntary or uncontrollable. For example, it is known that a person experiencing the sensation of fear exhibits measurable changes in certain bodily functions which cannot be controlled or masked. Similarly, it is known that a person experiencing the sensation of an orgasm exhibits measurable changes in several bodily functions which are also beyond the person's ability to control or mask. The system **10** of the present invention permits the detection of these uncontrol-

lable changes in bodily function(s), and as a result, it allows detection of a particular sensation which a person is experiencing, including, by way of example only, fear or orgasm.

[0041] The system **10** comprises a sensor assembly, generally illustrated at **20**, disposed in a monitoring relation to the person. The sensor assembly **20** comprises at least one sensor structured to monitor at least one preselected bodily function of the person during a baseline monitoring period. The baseline monitoring period, in one preferred embodiment, comprises a period when the person is not exposed to any stimuli which may alter the normal value of the preselected bodily function during the baseline monitoring period. More in particular, the person should be in their normal state of health and should be at rest and not engaged in any physical or mental activity, or exposed to any excessive environmental conditions such as lighting, temperature, or noise levels, such that the data obtained during the baseline monitoring period establish the normal values of the preselected bodily function for that person. In one preferred embodiment of the present invention, the sensor assembly **20** comprises a plurality of sensors structured to monitor a plurality of preselected bodily functions of the person during the baseline monitoring period, thereby establishing normal values for a plurality of preselected bodily functions for that person.

[0042] The sensor assembly **20** is further structured to monitor at least one preselected bodily function of the person being monitored during an activity monitoring period. The activity monitoring period is any period of time during which the person is exposed to a particular form of stimulation including, by way of example only, the period of time during which a person is engaged in sexual activity, preferably including at least an amount time both before and after the person experiences the sensation of an orgasm. In one preferred embodiment of the present invention, the sensor assembly **20** comprises a plurality of sensors structured to monitor a plurality of preselected bodily functions during the activity monitoring period. Yet another embodiment provides that the sensor assembly **20** is structured to monitor one or more of the plurality of preselected bodily functions during each of a plurality of activity monitoring periods.

[0043] The preselected bodily functions of the person which may be monitored by the sensor assembly **20** of the present invention may include, but are in no way limited to, blood pressure, pulse, temperature, respiration, muscular contractions, caloric expenditure, blood oxygen level, release of sweat and/or other components such as endorphins, pheromones, adrenaline, etc., as well as sound waves generated either vocally or via pulse, heart beat, and/or respiration of the person being monitored. It is understood that other bodily functions exhibit uncontrollable changes when a person experiences certain sensations, and the scope of the system **10** of the present invention encompasses monitoring such other preselected bodily functions to allow detection of other sensations which the person may experience.

[0044] As indicated above, the sensor assembly **20** of the present invention is structured to detect at least one, but preferably a plurality of preselected bodily functions, and as such, the sensor assembly **20** comprises at least one, but preferably a plurality of detectors, each of which is disposed in a communicative relation to the person being monitored. As illustrated in **FIG. 2**, one preferred embodiment of the sensor assembly of the present invention comprises a temperature detector or thermal sensor **21**, a blood pressure detector **22**, and a pulse rate detector **23**. It is understood, however, that other embodiments of the sensor assembly **20** of the present invention may comprise either additional or alternate detectors, as illustrated in **FIGS. 3 and 4**, respectively.

[0045] More in particular, **FIG. 3** illustrates the sensor assembly **20** of **FIG. 2** further comprising an oxygen detector or oximeter **24**, structured to monitor the person's blood oxygen level, and an electrocardiograph detector **25**, structured to monitor the person's cardiovascular activity during the baseline and activity monitoring periods. Alternately, as illustrated in **FIG. 4**, the sensor assembly **20** may comprise a respiration rate detector **26**, an electromyograph detector **27**, structured to monitor a frequency of muscular contraction of the person, and a caloric expenditure detector or calorimeter **28**, structured to monitor the amount of calories expended by the person during a baseline monitoring period as well as during an activity monitoring periods, and more in particular, during at least a portion thereof.

[0046] In the embodiment illustrated in **FIG. 3**, the plurality of detectors **21** through **25** physically engage the person and are structured to transmit electrical, optical, audible, and/or other signals to the sensor assembly **20** via a plurality of signal carriers **20'** which may include, by way of example only, electrical wires or fiberoptic cables, thereby establishing a data communicative relationship with the sensor assembly **20**.

[0047] As illustrated in **FIG. 4**, however, in one preferred embodiment the sensor assembly **20** is disposed in a remote monitoring relation to the plurality of detectors **21** through **25**, which physically engage the person being monitored. Specifically, the "remote monitoring relation" as used herein is at least partially defined by the sensor assembly **20** being disposed in a wireless data communicative relationship with the plurality of detectors, including at least detectors **21** through **28**, via one or more remote signals **29** which are transmitted between the plurality of detectors **21** through **28** and the sensor assembly **20** without requiring a physical connection between the sensor assembly **20** and the plurality of detectors **21** through **28**, such as, by way of example only, an electrical wire or a fiberoptic cable.

[0048] For example, an infrared signal may be utilized to remotely and non-intrusively monitor and transfer data corresponding to the person's body temperature via the temperature detector or thermal sensor **21**, without requiring a physical wired connection between the temperature detector or thermal sensor **21** and the sensor assembly **20**. As another example, a sound or light wave may be remotely and non-intrusively directed towards the person's body and the person's blood pressure may be remotely monitored and transferred from the blood pressure detector **22** to the sensor assembly **20** via a remote Doppler signal, resulting from the Doppler effect on the reflected sound or light. Yet another example may include various optical signals transmitted to and/or from the person's body, either directly or to one or more detectors interconnected thereto, which allows the sensor assembly **20** to remotely monitor any number of other preselected bodily functions.

[0049] The remote monitoring relation of the sensor assembly **20** with the person may be particularly desirable in certain applications wherein physical interconnection between the plurality of detectors **21** through **28** and the sensor assembly **20**, such as by electrical wires or fiberoptic cables, as illustrated in **FIG. 2**, may detract from the overall sensation the person is experiencing. The detraction resulting from the physical interconnection to the sensor assembly **20** may be exceptionally bothersome, for example, during sexual activity, particularly during the period of time before and after orgasm.

[0050] The system **10** of the present invention further comprises a central processing unit, generally as shown at **30**, disposed in a communicating relation with the sensor assembly **20**. More specifically, the sensor assembly **20** is structured to transfer a baseline data set and at least one activity data set to the central processing unit **30** which correspond to the values of at least one bodily function of the person being monitored during the baseline monitoring period and at least one activity monitoring period. In addition to the value of the bodily function being monitored, each baseline and/or activity data set may further comprise, by way of example only, an identifier of the bodily function, date and/or time stamps for each value of the bodily function obtained, and other identifying information as may be necessary to permit efficient interpretation of the baseline and/or activity data set. In one embodiment, at least one biometric parameter of the person, as discussed in more detail below, is associated with specific baseline and activity data sets, thereby providing a means to secure access to the person's data by requiring identification and verification of the biometric parameter as a condition to access the data sets. In addition, each activity data set may comprise an audio and/or video data component. The sensor assembly **20** may transfer the baseline and activity data sets to the central processing unit **30** via any one of a number of data transmission mechanisms including, by way of example only, hard wired connections or any of the myriad of wireless transmission mechanisms utilizing remote signals **29** including, by way of example only, light and/or sound waves. Further, in one preferred embodiment, the sensor assembly **20** is structured to transfer the baseline and activity data sets to the central processing unit **30** as a continuous data stream thereby approximating real time data which the central processing unit **30** interprets.

[0051] Of course, in accordance with at least one previously described embodiment, the sensor assembly **20** may be structured to transfer a plurality of baseline data sets and a plurality of activity data sets to the central processing unit **30** wherein each of the plurality of baseline and activity data sets corresponds to a different one of a plurality of bodily functions being monitored during the baseline and activity monitoring periods. In yet another embodiment, also described above, the sensor assembly **20** is structured to transfer a plurality of activity data sets to the central processing unit **30**, wherein each of the plurality of activity data sets corresponds to at least one bodily function being monitored during each of a different one of a plurality of activity monitoring periods. In at least one further embodiment, the sensor assembly **20** is structured to transfer a plurality of activity data sets each corresponding to one of a plurality of bodily functions being monitored during each of different ones of a plurality of activity monitoring periods.

[0052] The central processing unit **30** of the present invention is structured to interpret at least each baseline data set and each activity data set transferred by the sensor assembly **20** and to detect a predetermined change in the preselected bodily function between the baseline monitoring period and the activity monitoring period for which each activity data set corresponds. As such, the central processing unit **30** comprises a data memory module **35** which is structured to store at least one baseline data set, and a value or range of values of a predetermined change corresponding to at least one preselected bodily function. In one preferred embodiment, the central processing unit **30** comprises a data memory module **35** structured to store a plurality of values or ranges of values of a predetermined change each corresponding to a different one of a plurality of preselected bodily functions. The central processing unit **30** is further structured to compare each activity data set with the value or range of values of the predetermined change for the preselected bodily function corresponding to the activity data set, and to detect each predetermined change therefrom. The central processing unit **30**, in one preferred embodiment, is further structured to identify the magnitude or intensity of each predetermined change detected.

[0053] In addition to storing the plurality of values or ranges of values of each predetermined change, the data memory module **35** of the present invention may also be structured to store at least select ones of the baseline data sets and the plurality of activity data sets transferred to the central processing unit **30** by the sensor assembly **20**. Further, the data memory module **35** of the present invention may be structured to store the baseline and activity data sets which correspond to plurality of persons. In addition, the data memory module **35** may be structured to store the results for one or more of the predetermined changes detected by the central processing unit **30**, either alone or in combination with the corresponding activity data set in which the predetermined change was detected.

[0054] At least one embodiment of the central processing unit **30** of the present invention comprises an external data transmission port **37** structured to transmit at least one but preferably a plurality of baseline and activity data sets to an external data processing device, such as, by way of example only, a personal computer, laptop computer, or personal digital assistant, to provide additional data storage capacity and/or to facilitate further processing of the plurality of baseline and activity data sets, either in real time or at a future time selected by the user. As noted above with respect to the data memory module **35**, the external data processing device may be structured to store, in addition to the baseline data set and the plurality of activity data sets, the results for one or more of the predetermined changes detected, either alone or in combination with the corresponding activity data set in which the predetermined change was detected. Thus, the external data processing device, for example, may be utilized to facilitate comparison of various activity data sets collected during a plurality of discreet periods of time, occurring, perhaps, over a period of years, which will allow the user to compare the intensity of the predetermined changes detected under a variety of different circumstances, as well as to identify trends and/or potential shifts in the value or range of values of the predetermined change in the preselected bodily functions being monitored.

[0055] In one embodiment of the system **10** of the present invention, the central processing unit **30** is structured to detect a predetermined change in the blood pressure of the person being monitored, and more specifically, an increase in blood pressure. For example, the predetermined change may correspond to an increase in the person's blood pressure in a range of between approximately 30 to 40 millimeters of mercury. In another embodiment, the central processing unit **30** is structured to detect a predetermined change in the pulse rate of the person being monitored. Once again, by way of example only, the predetermined change may be an increase in pulse rate in a range of between approximately 20 to 30 beats per minute. In yet one other embodiment, the central processing unit **30** is structured to detect a predetermined change in body temperature such as, again, by way of example only, an increase in a range of between approximately 0.75 to 1.25 degrees Fahrenheit.

[0056] Additional predetermined changes which the central processing unit **30** of the present invention may be structured to detect may include, but are not limited to, an increase in frequency of a muscular contraction, and in particular a muscular contraction in at least one pelvic muscle, wherein a predetermined change may be in a range of, for example, between approximately 1.0 to 1.5 cycles per second, or an increase in an amount of caloric expenditure, wherein a predetermined change may be, once again by way of example, in a range of between approximately 450 to 500 calories, during at least a portion of the specified period, such as, during an orgasm.

[0057] It is understood that the aforementioned ranges of values for predetermined changes are solely for illustrative purposes. In practice, the value or range of values for a predetermined change of a bodily function may vary from person to person depending on such factors as their respective ages, weights, health, etc., and may be higher or lower or encompass a broader or narrower ranges between different persons. In addition, the value or range of values for a predetermined change of a particular bodily function may vary for the same person depending on such factors as their age, level of physical activity, stress, health, etc., and once again may be higher or lower or encompass a broader or narrower range.

[0058] Thus, in at least one embodiment of the present invention, the value or range of values of the predetermined change of a bodily function may be set and/or reset by user input to the central processing unit **30**. In addition, the central processing unit **30** may be further structured and disposed to accept and store the value or range of values of the predetermined change of one or more bodily functions for a plurality of users, which may be accessed by each user, for example, via a plurality of password protected storage areas, or thorough identification and verification of at least one biometric parameter of the person, as indicated above and described in more detail below. Alternatively, the central processing unit **30**, and more specifically, the data memory module **35**, may be programmed with one or more preset values or range of values of the predetermined change of one or more bodily functions. Such preset values may, for example, correspond to one or more of the age, sex, weight, etc., of the person being monitored.

[0059] While the central processing unit **30** of the present invention may be structured to detect any one of the predetermined changes described above, in at least one preferred embodiment, the central processing unit **30** is structured to detect a plurality of predetermined changes, such as, by way of example only, the predetermined changes in blood pressure, pulse rate, and temperature of the person being monitored, each of which are known to be indicative of a person experiencing the sensation of an orgasm. Thus, by structuring the central processing unit **30** to detect a plurality of predetermined changes known to be indicative of a person experiencing a particular sensation, the ability and accuracy of the system **10** of the present invention to detect when the person is experiencing such a sensation is greatly improved.

[0060] At least one preferred embodiment of the present invention further comprises an output device, as generally shown at **40**, which is operatively associated with the central processing unit **30**. The output device **40**, in one embodiment, is structured to generate an indication upon detection of a predetermined change in at least one of the preselected bodily functions by the central processing unit **30**. In one preferred embodiment, the output device **40** is structured to generate an indication upon detection of a predetermined change in each of a plurality of predetermined bodily functions being monitored during an activity monitoring period by the central processing unit **30**.

[0061] The indication may comprise an audible alarm **42** and/or a visible alarm **44**, as illustrated in **FIG. 5**, or any other means sufficient to indicate to the person, or to any observer, that the at least one predetermined change has been detected by the central processing unit **30**. Thus, the output device **40** of the present invention provides the person with results which are readily understood without the assistance or interpretation of specially trained personnel.

[0062] In one other embodiment, the output device **40** may comprise a video display screen **46** on which a report is directly viewed directly, wherein the report may include a variety of information such as the preselected bodily function or functions being monitored, the values of the preselected bodily function comprising the baseline data set, the values of the preselected bodily function comprising the corresponding activity data set, the value or range of values for the predetermined change of the preselected bodily function, and the point in time in the activity monitoring period where the predetermined change is detected. **FIG. 4** provides an illustration of one embodiment of such a video display screen **46**. It is clear that the report displayed on the video display screen **46** could be transmitted to a printer or saved for future use in the data memory module **35** or the external data processing device via the external data transmission port **37**. It is further understood that the embodiment of the present invention comprising the video display screen **46** may also comprise the audible alarm **42** and/or the visible alarm **44** described above.

[0063] As indicated above, at least one embodiment of the present invention comprises a biometric identification device, generally as shown at **50**, which is disposed in a communicative relation with the central processing unit **30**. The biometric identification device **50** may be utilized to obtain at least one baseline biometric parameter from a person including, by way of example only, a fingerprint pattern, an iris recognition pattern, a voice and/or other sound recognition sample, and/or other patterns obtained from the person's body such as hair pattern, skin porosity,

patterns, skin structure patterns, just to name a few. For example, as illustrated in **FIG. 4**, the biometric identification device may comprise an iris scanner **52** structured to obtain a baseline iris pattern from the person during the baseline monitoring period, the baseline data set thereafter being associated and accessible only upon subsequent measuring and confirmation of a match of an active iris pattern provided by the person via the iris scanner **52**. Similarly, the biometric identification device **50** may comprise a fingerprint scanner **54** to obtain a baseline fingerprint pattern of the person and for subsequent measurement and confirmation of the same. As will be appreciated, any of the numerous other biometric parameters may be measured by a corresponding detection device and incorporated into the system of the present invention.

[**0064**] The present invention further comprises a method for detecting an uncontrollable change in a person's physiology. The method includes monitoring at least one preselected bodily function of the person during a baseline monitoring period, transferring a baseline data set to a central processing unit, such as central processing unit **30** described above, and storing the baseline data set on the central processing unit. The method further comprises monitoring the at least one preselected bodily function during an activity monitoring period, such as may be accomplished utilizing a sensor assembly **20** as described above. In one preferred embodiment, the method of the present invention comprises monitoring a plurality of preselected bodily functions during the baseline monitoring period as well as during at least one activity monitoring period. In yet another embodiment, the present method comprises monitoring a plurality of preselected bodily functions during the baseline monitoring period and each of a plurality of different activity monitoring periods.

[**0065**] The method of the present invention further comprises transferring an activity data set corresponding to a preselected bodily function being monitored during an activity monitoring period to the central processing unit. In at least one embodiment, the present method comprises transferring a plurality of activity data sets, each of which corresponds to a different one of a plurality of preselected bodily functions being monitored during at least one, but preferably, during each of a plurality of different activity monitoring periods.

[**0066**] At least one further embodiment, the method of the present invention comprises interpreting at least one activity data set utilizing the central processing unit, and detecting a predetermined change in the preselected bodily function between the baseline monitoring period and the activity monitoring period to which the activity data set corresponds. A preferred embodiment comprises interpreting a plurality of activity data sets and detecting a predetermined change in each preselected bodily function between the baseline monitoring period and the activity monitoring period to which one of the plurality of activity data sets corresponds.

[**0067**] In yet another embodiment, the method of the present invention comprises interpreting at least one but preferably a plurality of activity data sets manually, by comparing the value of each of the plurality of preselected bodily functions with one or more tables containing a value or range of values for the predetermined change for each of the plurality of preselected bodily functions.

[**0068**] Additionally, the method of the present invention comprises generating an indication upon detection of the predetermined change in the at least one preselected bodily function. In one preferred embodiment, the method comprises generating an indication upon detection of a predetermined change in each one of a plurality of preselected bodily functions being monitored during an activity monitoring period.

[**0069**] At least one embodiment of the method of the present invention further comprises obtaining at least one baseline biometric parameter from the person being monitored, for example, utilizing a biometric identification device **50**, as described above. In addition, the method of this embodiment includes transferring the at least one baseline biometric parameter to the central processing unit **30**, and storing the baseline biometric parameter thereon. This embodiment further comprises identifying the person via the biometric identification device **50** such as, for example, an iris scanner **52** or a fingerprint scanner **54**, as described above, by measuring at least one active biometric parameter of the person and confirming a match with the baseline biometric parameter stored on the central processing unit **30**, thereby positively identifying the person.

[**0070**] Since many modifications, variations and changes in detail can be made to the described preferred embodiment of the invention, it is intended that all matters in the foregoing description and shown in the accompanying drawings be interpreted as illustrative and not in a limiting sense. Thus, the scope of the invention should be determined by the appended claims and their legal equivalents.

[**0071**] Now that the invention has been described,

What is claimed is:

1. A system for detecting an uncontrollable change in a person's physiology, comprising:

a sensor assembly disposed in a remote monitoring relation with the person,

said sensor assembly structured to monitor at least one preselected bodily function of the person during a baseline monitoring period,

said sensor assembly further structured to monitor said at least one preselected bodily function of the person during an activity monitoring period,

a central processing unit disposed in a communicating relation with said sensor assembly,

said sensor assembly structured to transfer a baseline data set to said central processing unit corresponding to said preselected bodily function during said baseline monitoring period,

said sensor assembly further structured to transfer an activity data set to said central processing unit corresponding to said preselected bodily function during said activity monitoring period,

said central processing unit being structured to interpret said baseline data set and said activity data set and to detect a predetermined change in said preselected bodily function between said baseline monitoring period and said activity monitoring period, and

an output device operatively associated with said central processing unit, said output device being structured to generate an indication upon detection of said predetermined change in said preselected bodily function.

2. A system as recited in claim 1 wherein said preselected bodily function is a pulse rate.

3. A system as recited in claim 1 wherein said preselected bodily function is a body temperature.

4. A system as recited in claim 1 wherein said preselected bodily function is a blood pressure.

5. A system as recited in claim 1 wherein said preselected bodily function is a sound wave generated by the person.

6. A system as recited in claim 1 wherein said sensor assembly is structured to monitor a plurality of preselected bodily functions during said baseline monitoring period and said activity monitoring period.

7. A system as recited in claim 1 wherein said remote monitoring relation comprises at least one remote signal, said remote signal comprising a Doppler signal.

8. A system as recited in claim 1 wherein said remote monitoring relation comprises at least one remote signal, said remote signal comprising an optical signal.

9. A system for detecting an uncontrollable change in a person's physiology, comprising:

a biometric identification device structured to measure at least one biometric parameter being utilized to positively identify the person,

a sensor assembly disposed in a monitoring relation with the person,

said sensor assembly structured to monitor a plurality of preselected bodily functions of the person during a baseline monitoring period,

said sensor assembly further structured to monitor a plurality of preselected bodily functions of the person during an activity monitoring period,

a central processing unit disposed in a communicating relation with said sensor assembly,

said sensor assembly further structured to transfer a plurality of baseline data sets to said central processing unit wherein each of said plurality of baseline data sets corresponds to a different one of said preselected bodily functions during said baseline monitoring period,

said sensor assembly further structured to transfer a plurality of activity data sets to said central processing unit wherein each of said plurality of activity data sets corresponds to a different one of said preselected bodily functions during said activity monitoring period,

said central processing unit being structured to interpret each of said plurality of baseline data sets and said plurality of activity data sets and to detect a predetermined change corresponding to at least one of said plurality of preselected bodily functions between said baseline monitoring period and said activity monitoring period, and

an output device operatively associated with said central processing unit, said output device being structured to generate an indication upon detection of said predetermined change corresponding to said at least one of said plurality of preselected bodily functions.

10. A system as recited in claim 9 wherein said sensor assembly comprises at least a temperature detector.

11. A system as recited in claim 9 wherein said sensor assembly comprises at least a blood pressure detector.

12. A system as recited in claim 9 wherein said sensor assembly comprises at least a pulse rate detector.

13. A system as recited in claim 9 wherein said sensor assembly comprises at least a calorimeter.

14. A system as recited in claim 9 wherein said sensor assembly comprises at least an oximeter.

15. A system as recited in claim 9 wherein said sensor assembly comprises at least an electromyograph detector.

16. A system as recited in claim 9 wherein said central processing unit is further structured to interpret each of said plurality of activity data sets and to detect said predetermined change corresponding to each of said plurality of preselected bodily functions during said activity monitoring period.

17. A system as recited in claim 16 wherein said output device is structured to generate said indication upon detection of said predetermined change corresponding to each of said plurality of preselected bodily functions.

18. A system as recited in claim 9 wherein said indication comprises an audible alarm.

19. A system as recited in claim 9 wherein said indication comprises a visible alarm.

20. A system as recited in claim 19 wherein said indication further comprises an audible alarm.

21. A system as recited in claim 9 wherein said output device comprises a video display screen.

22. A system as recited in claim 9 wherein said predetermined change is indicative of an orgasm.

23. A system as recited in claim 9 wherein said central processing unit further comprises an external data transmission port structured to transmit said plurality of activity data sets to an external data processing device.

24. A system for the detection of an uncontrollable change in a person's physiology, comprising:

a sensor assembly disposed in a monitoring relation with the person,

said sensor assembly structured to monitor at least one preselected bodily function of the person during a baseline monitoring period,

said sensor assembly further structured to monitor at least one preselected bodily function during at least one activity monitoring period,

a central processing unit disposed in a communicating relation with said sensor assembly,

said sensor assembly structured to transfer a baseline data set to said central processing unit corresponding to said preselected bodily function during said baseline monitoring period,

said central processing unit comprising a data memory module structured to store said baseline data set corresponding to said baseline monitoring period A

said sensor assembly structured to transfer an activity data set to said central processing unit corresponding to said preselected bodily function during said at least one activity monitoring period,

said data memory module further structured to store said activity data set corresponding to said at least one activity monitoring period, and

said central processing unit structured to interpret said baseline data set and said activity data set and to detect a predetermined change corresponding to said preselected bodily function between said baseline monitoring period and said activity monitoring period.

25. A system as recited in claim 24 wherein said predetermined change comprises an increase in blood pressure.

26. A system as recited in claim 24 wherein said predetermined change is an increase in pulse rate.

27. A system as recited in claim 24 wherein said predetermined change comprises an increase in body temperature.

28. A system as recited in claim 24 wherein said predetermined change comprises an increase in frequency of muscular contraction.

29. A system as recited in claim 28 wherein said increase in frequency of muscular contractions occurs in at least one pelvic muscle.

30. A system as recited in claim 24 wherein said predetermined change comprises an amount of caloric expenditure.

31. A system as recited in claim 24 wherein said sensor assembly is further structured to transfer a plurality of activity data sets to said central processing unit corresponding to said preselected bodily function during each of a plurality of activity monitoring periods.

32. A method for detecting an uncontrollable change in a person's physiology, comprising:

obtaining at least one baseline biometric parameter from the person,

transferring the at least one baseline biometric parameter to a central processing unit,

storing the at least one baseline biometric parameter on the central processing unit,

identifying the person via a biometric identification device by measuring at least one active biometric parameter of the person and confirming a match with the at least one baseline biometric parameter stored on the central processing unit to positively identify the person,

monitoring at least one preselected bodily function of the person during a baseline monitoring period,

transferring a baseline data set corresponding to the at least one preselected bodily function during the baseline monitoring period to the central processing unit,

storing the baseline data set corresponding to the at least one preselected bodily function during the baseline monitoring period on the central processing unit,

monitoring the least one preselected bodily function of the person during an activity monitoring period,

transferring an activity data set corresponding to the at least one preselected bodily function during the activity monitoring period to the central processing unit,

interpreting the baseline data set and the activity data set and detecting a predetermined change in the preselected bodily function between the baseline monitoring period and the activity monitoring period, and

generating an indication upon detection of the predetermined change in the at least one preselected bodily function.

* * * * *