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TITLE OF THE INVENTION

System and Method for Lighting

CROSS-REFERENCE TO RELATED APPLICATIONS

~~[0001] [Not Applicable]~~

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BACKGROUND OF THE INVENTION

[0002] The present invention generally relates to a lighting system. More particularly, the present invention relates to a lighting system wherein light data is wirelessly transmitted to a lighting apparatus.

[0003] Electrical lighting is a common feature in most households and buildings. Electrical lights are available in a variety of different types and color. Generally, lights are controlled through a switch or button on the lighting device itself, or through a switch on the wall which has a wired connection to the lighting device itself. In some instances, lights are controlled using a wireless remote. These controls can be used to turn a light on and off. In some instances, the controls can also be used to adjust the intensity of the light emitted. Additionally, some lighting devices can be set to stay on for a specific period of time. Lighting devices can also be set to turn on at a specified time. For most lighting devices, a user is present at the source of the light to adjust these settings.

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[0004] Additionally, some lighting devices have the ability to emit light of different colors. U.S. Pat. No. 8,314,571 discloses a light with changeable color temperature. This patent discloses a lighting apparatus that uses multiple LEDs to adjust the color and intensity of light. Additionally, the company LIFX makes a light bulb that is WiFi enabled and can be controlled by a smartphone to adjust color and brightness. This requires selecting a color from a wheel containing every color possible for the light bulb to emit.

[0005] Lights have been used for other purposes besides just visibility. Previously, lights emitting ultraviolet light have been used for the purpose of killing germs. Many of these lights are handheld. One example is the Glo Germ LED Ultra Violet Light. This device is a small flashlight. Using this light to clean requires that a user be present to perform the cleaning. The Glo Germ LED Ultra Violet Light requires a user to manually position the flashlight over all surfaces they would like to clean. This lighting device is also battery powered, so a user is required to replace the battery routinely. Fixed ultraviolet lights require a user's presence to activate and deactivate the lights. Violet light has also been shown to kill germs.

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[0006] Lights have also been used for visual therapy. Visual therapy using lighting has been found to be effective in treating both physiological and psychological conditions. Different colors have been shown to cause emotional changes as well as physiological changes. For example, color has been shown to effect blood pressure, metabolism, and eye strain. Psychologists also believe that the color yellow can stimulate the brain, blue and purple can affect sleep, yellow and orange can cause positivity, green and blue can have a calming effect, blue can decrease blood pressure, and red and orange can increase blood pressure, among many other effects.

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[0007] Physiological parameters, like blood pressure can be monitored by a variety of devices. U.S. Pat. Application No. 2012/0330109 discloses a health monitoring appliance. That ^{system} application discloses a heart monitoring system in which a device determines a patient's vital signs, and the patient data is transmitted and received over a wireless network. While data is transmitted and received, device requires that this data

must still be analyzed and a method of treatment must be determined and administered to the patient.

[0008] U.S Pat. Application No. 2012/0316458 discloses a data-capable band for medical diagnosis, monitoring, and treatment. This ~~application~~ ^{system} discloses a system in which a medical band gathers data associated with a symptom of a medical condition, stores that data and uses an application to respond to that data by providing a notification. This ~~application~~ ^{system} provides for a variety of different notifications including vibration as well as audio and visual signals. These notifications can be about drug regimens, diet, or the need for a user to increase movement. It is necessary for a user to detect the notification and respond to the notification in order to treat themselves.

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[0009] The iHealth Blood Pressure Wrist monitor measures a patient's systolic/diastolic ~~numbers~~ ^{values}, hear rate and pulse wave, and allows a user to track ~~those~~ ^{them} on their smartphone. As with U.S Pat. Application No. 2012/0316458, this device requires a user to monitor their physiological data and respond by pursuing a proper treatment. This requires a user to notice the physiological data and make a correct decision on treatment. This also requires a user to have their smartphone on their person.

BRIEF SUMMARY OF THE INVENTION

[0010] One or more of the embodiments of the present invention provide a method for emitting light. A selection of data representing a stored wavelength of light is performed using a user interface of a data communication device. The selection of data representing a stored wavelength of light is transmitted by a wireless transmitter that is electronically connected to the user interface. A wireless receiver of a lighting device then receives the selection of data representing a stored wavelength of light. In response, an electrical lamp of the lighting device that is electronically connected to the transceiver emits light at a wavelength represented by the data representing a stored wavelength of light.

[0011] One or more of the embodiments of the present invention provide a lighting system including a data communication device, including a memory, a user interface, and a transmitter, a network transceiver; and a lighting device including an electrical lamp and a receiver. The memory stores a plurality of data representing a preset wavelength of light. A selection of data is made using the user interface, wherein the selection of data is a selection of one of the plurality of data representing a preset wavelength of light. In response, the transmitter of the data communication device transmits the selection of data to the network receiver. In response to receiving the selection of data, the network receiver transmits the data to the receiver of the lighting device. In response to receiving the selection of data at the receiver, the electrical lamp emits light at a wavelength represented in the selection of data.

[0012] One or more of the embodiments of the present invention provide a lighting system including a monitoring device, including a sensor and a transmitter, a server, and a lighting device including an electrical lamp and a receiver. The sensor collects data representing a physiological data parameter. The transmitter transmits the data representing a physiological data parameter to the server. Data representing a set of values for the physiological data parameter and a data representing a wavelength of light are stored at the server. The data representing a physiological data parameter is compared to the data representing a set of values for the physiological data parameter at the server, and in response to a difference between the data representing a physiological data parameter and the data representing a set of values for the physiological data parameter, the data representing a wavelength of light is transmitted to the receiver of the lighting device. In response to receiving the data representing a wavelength of light at the receiver, the electrical lamp emits light at a wavelength represented in the data representing a wavelength of light. ✓

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] Figure 1 illustrates a lighting system according to an embodiment of the present invention.

[0014] Figure 2 illustrates a lighting system according to an embodiment of the present invention.

[0015] Figure 3 illustrates a lighting system according to an embodiment of the present invention.

[0016] Figure 4 illustrates a graphical display of the user interface shown in Figure 1 according to an embodiment of the present invention.

[0017] Figure 5 illustrates a graphical display of the user interface shown in Figure 2 according to an embodiment of the present invention.

[0018] Figure 6 illustrates a graphical display of the user interface shown in Figure 2 according to an embodiment of the present invention.

[0019] Figure 7 illustrates a flowchart of an embodiment of a lighting system like the lighting system depicted in Figure 1.

[0020] Figure 8 illustrates a flowchart of an embodiment of a lighting system like the lighting system depicted in Figure 2.

[0021] Figure 9 illustrates a flowchart of an embodiment of a lighting system like the lighting system depicted in Figure 3.

DETAILED DESCRIPTION OF THE INVENTION

[0022] Fig. 1 illustrates a lighting system 100. The lighting system 100 includes a data communication device 110, a network transceiver 150, and a lighting device 160. The data communication device 110 contains a memory 120, a transmitter 130, and a user interface 140. The lighting device 160 includes a wireless receiver 170, an electrical lamp 180, and a timer 190. In the present embodiment, the data communication device 110 is a cellular phone. In the present embodiment, the transmitter 130 is a wireless transmitter. In the present embodiment, the user interface 140 is a cellular phone touch sensitive screen. In the present embodiment, the network transceiver 150 is a wireless router. In the present embodiment, the lighting device 160 is a Wi-Fi enabled adjustable LED light bulb. In the present embodiment the electrical lamp 180 is an LED.

[0023] In the lighting system 100, the user interface 140 is electronically connected to the memory 120 of the data communication device 110 and the transmitter 130 of the data communication device 110. The memory 120 of the data communication device 110 is electronically connected to the transmitter 130 of the data communication device 110. The transmitter 130 is in electronic communication with the network transceiver 150. The network transceiver 150 is in electronic communication with the wireless receiver 170 of the lighting device 160. The wireless receiver 170 of the lighting device 160 is electronically connected with the electrical lamp 180 of the lighting device 160 and the timer 190 of the lighting device 160. The electrical lamp 180 of the lighting device 160 is electronically connected to the timer 190 of the lighting device 160.

[0024] In operation, data is delivered from the data communication device 110 to the lighting device 160 in a series of steps. First, data representing a wavelength in the violet spectrum, that is stored in the memory 120 of the data communication device 110, is selected when an option is pressed using the user interface 140 of the data communication device 110. Second, data representing the length of time for light to be emitted, which is stored in the memory 120 of the data communication device 110, is selected using the user interface 140 of the data communication device 110. The data selected using the user interface 140, which includes the data representing a wavelength in the violet spectrum and the data representing the length of time for light representing a wavelength in the violet spectrum to be emitted is transmitted from the transmitter 130 of the data communication device 110 to the network transceiver 150. Once the data is received by the network transceiver 150, the data is transmitted to the wireless receiver 170 of the lighting device 160. Once the data is received by the wireless receiver 170, the electrical lamp 180 of the lighting device 160 and the timer 190 of the electrical device 180 respond by emitting light at a wavelength in the violet spectrum represented by the data, and by emitting the light for the length of time represented by the data.

[0025] In one alternative embodiment, the network transceiver 150 is in wireless communication with a server. In this embodiment, the transmitter 130 of data communication device 110 transmits a data request to the network transceiver 150 in response to a selection on the user interface 150. In response to receiving the data request, the network transceiver 150 transmits the data request to the server. Data representing a wavelength in the violet light range is stored at the server. In response to receiving the data request, the server transmits the data representing a wavelength in the

violet light range to the network transceiver 150. In response to receiving the data representing a wavelength in the violet light range, the network transceiver 150 transmits the data representing a wavelength in the violet light range to the receiver 170 of the lighting device 160. In response to receiving the data representing a wavelength in the violet light range, the electrical lamp 180 emits light at the wavelength in the violet range represented by the data.

[0026] In another alternative embodiment, the timer 190 located in the lighting device 160 is instead located in the data communication device 110. In this embodiment, the timer is electrically connected to the user interface 140, the memory 120, and the transmitter 130. In this embodiment the data representing a wavelength in the violet spectrum is sent as shown in the present embodiment in Figure 1 and described above. In this embodiment, the data representing the length of time for light to be emitted is not sent. Instead, when the time expires in the timer in data communication device 110. The transmitter 130 of data communication device 110 transmits data representing the wavelength of light that was emitted by the electrical lamp 180 before the data representing a wavelength in the violet spectrum was transmitted. In response, the electrical lamp 180 then emits light at the wavelength represented in the data representing the wavelength of light that was emitted by the electrical lamp 180 before the data representing a wavelength in the violet spectrum was transmitted.

[0027] In another alternative embodiment, the electrical lamp 180 stops emitting light at the wavelength in the violet range represented by the data when a selection is made on the user interface 140 to transmit a signal to the electrical lamp 180 that directs the electrical lamp 180 to cease emitting light at the wavelength in the violet range

represented by the data. In this embodiment, the signal is transmitted in the same manner as described for the data in the present embodiment shown in Figure 1 and described above.

[0028] In another alternative embodiment, the electrical lamp stops emitting light at the wavelength in the violet range represented by the data when a light switch is changed from on to off.

[0029] In another alternative embodiment, the data communication device 110 contains a global positioning system. In this embodiment, the global positioning system detects when the data communication device 110 is in a predetermined proximity to the lighting device 160. In this embodiment, the global positioning system is electronically connected to the transmitter. When the global position system detects that the data communication device is in the predetermined proximity to the lighting device 160, the transmitter transmits a signal to the wireless receiver as shown in Figure 1 and described above, and in response, the electrical lamp stops emitting light at the wavelength in the violet range represented by the data.

[0030] One alternative to the user interface 140 is a cellular phone screen controlled by a cellular phone keypad.

[0031] One alternative embodiment to the data communication device 110 is a laptop computer. In this embodiment, the user interface consists of a laptop screen, keyboard, and mouse. In this embodiment, the transmitter 130 is a wireless network card.

[0032] In another alternative embodiment, the data communication device 110 is a laptop computer. In this embodiment, the transmitter is a network card and is

connected to the network transceiver 150 through a wired connection. In this embodiment, the network transceiver 150 can be a wireless router that allows a network connection or a wired network router.

[0033] In another alternative embodiment, the network transceiver can be a wired network router. In this embodiment, there are wired connections between the data communication device 110 and the network transceiver 150 are connected through a wired connection. In this embodiment, the network transceiver 150 and the wireless receiver 170 are connected through a wired connection. In this embodiment, the wireless receiver 170 can also accept a wired connection.

[0034] In another alternative embodiment, the data communication device 110 is a desktop computer. In this embodiment, the user interface consists of a computer monitor, a keyboard, and a mouse. In this embodiment, the transmitter 130 is a wireless network card or a network card connected to the network transceiver 150 through a wired connection.

[0035] In another alternative embodiment, the data communication device 110 is a tablet computer.

[0036] In another alternative embodiment, the data communication device 110 is a portable media player device such as a portable music player, a portable DVD player, an eReader, or a portable videogaming device.

[0037] In another alternative embodiment, data communication device 110 is a video game console.

[0038] In one alternative embodiment, the data can be communicated from the data communication device 110 to the wireless receiver 170 through radio communication.

[0039] In one alternative embodiment, the data can be communicated from data communication device 110 to the wireless receiver 170 through internet communication.

[0040] In one alternative embodiment, the network transceiver 150 is a cellular phone tower. In this embodiment, the transmitter 130 is a cellular transmitter. In this embodiment, the wireless receiver 170 is a cellular receiver. In this embodiment, the cellular transmitter transmits the data to the cellular phone tower. In response to receiving the data, the cellular phone tower transmits the data to the cellular receiver.

[0041] Alternatively, electrical lamp 180 may be an incandescent light bulb, a halogen lamp, a carbon arc lamp, a discharge lamp, or any other similar light emitting device.

[0042] In one alternative embodiment, the lighting system 100 transmits data representing a wavelength of light in the ultraviolet range. In this embodiment, the electrical lamp 180 emits light at a wavelength represented by the data representing a wavelength of light in the ultraviolet range.

[0043] In another alternative embodiment, the lighting system 100 transmits data representing a wavelength in the infrared range. In this embodiment, the electrical lamp 180 emits light at a wavelength represented by the data representing a wavelength of light in the infrared range.

[0044] In another alternative embodiment, the lighting system 100 transmits data representing a wavelength in the x-ray range. In this embodiment, the electrical lamp 180 emits light at a wavelength represented by the data representing a wavelength of light in the x-ray range.

[0045] In another alternative embodiment, the lighting system 100 transmits data representing a wavelength in the visible light range. In this embodiment, the electrical lamp 180 emits light at a wavelength represented by the data representing a wavelength of light in the visible light range.

[0046] Fig. 2 illustrates a lighting system 200. The lighting system 200 includes a data communication device 210, a network transceiver 250, a server 255 and a lighting device 260. The data communication device 210 includes a memory 220, a transmitter 230, and a user interface 240. The lighting device 260 includes a receiver 270, an electrical lamp 280, and a timer 290. In the present embodiment, the data communication device 210 is a cellular phone. In the present embodiment, the transmitter 230 is a wireless transmitter. In the present embodiment, the user interface 240 is a cellular phone touch sensitive screen. In the present embodiment, the network transceiver 250 is a wireless router. In the present embodiment, the lighting device 260 is a Wi-Fi enabled adjustable LED light bulb. In the present embodiment the electrical lamp 280 is an LED.

[0047] In the lighting system 200, the user interface 240 is electronically connected to the memory 220 of the data communication device 210 and the transmitter 230 of the data communication device 210. The memory 220 of the data communication device 210 is electronically connected to the transmitter 230 of the data communication device 210. The transmitter 230 is in electronic communication with the network

transceiver 250. The network transceiver 250 is in electronic communication with the server 255. The network transceiver 250 is in electronic communication with the wireless receiver 270 of the lighting device 260. The wireless receiver 270 of the lighting device 260 is electronically connected with the electrical lamp 280 of the lighting device 260 and the timer 290 of the lighting device 260. The electrical lamp 280 of the lighting device 260 is electronically connected to the timer 290 of the lighting device 260.

[0048] In operation, data is delivered to the lighting device 260. First, a selection is made when an option is pressed using the user interface 240 of the data communication device 210 between data representing a selection of one of multiple preset wavelengths of light stored on the memory 220 of data communication device 210 and a data request for user created light data. When data representing a selection of one of multiple preset wavelengths of light stored in the memory 220 of the data communication device 210 is selected using the user interface 240 of the data communication device 210, the data representing a selection of one of multiple preset wavelengths of light is transmitted by the transmitter 230 of the data communication device 210 to the network transceiver 250. In response to receiving the data representing a selection of one of multiple preset wavelengths of light, the network transceiver 250 transmits the data to the receiver 270 of the lighting device 260. In response to receiving the data representing a selection of one of multiple preset wavelengths of light from the network transceiver 250, the electrical lamp 280 of the lighting device 260 emits light at the wavelength represented by the data representing a selection of one of multiple preset wavelengths of light.

[0049] When the data request for user created light data is selected using the interface 240 of the data communication device 210, the data request for user created

light data is transmitted by transmitter 230 of the data communication device 210 to the network transceiver 250. In response to receiving the data request for user created light data, the network transceiver 250 transmits the data request for user created light data to the server 255. In response to receiving the data request for user created light data from the network transceiver 250, the user created light data is retrieved from the server 255. Then, the server 255 transmits the user created light data to the network transceiver 250. In response to receiving the user created light data from the server 255, the network transceiver 250 transmits the user created light data to the receiver 270 of the lighting device 260. In response to receiving the user created light data from the network transceiver 250, the electrical lamp 280 of the lighting device 260 emits light at a wavelength represented by the user created light data. In the present embodiment, the user created light data corresponds to a value for a wavelength of light selected and named by a user or an alteration to a wavelength for one of the multiple preset wavelengths of light selected by the user.

[0050] In one alternative embodiment, a time is programmed using user interface 240 of data communication device 210 for the transmitter 230 of data communication device 210 to transmit the data representing a selection of one of multiple preset wavelengths of light stored on the memory 220 of data communication device 210 or the data request for user created wavelength data to the network transceiver 250. In this embodiment, a time is selected using user interface 240 of the data communication device 210. Then, data representing a selection of one of multiple preset wavelengths of light or a data request for user created wavelength data is selected using user interface 210. At the time selected, the data representing a selection of one of multiple preset wavelengths

of light or the data request for user created wavelength data are transmitted by the transmitter 230 of data communication device 210 to the network transceiver 250. The data or data request then follow the embodiment represented in Figure 2 described above.

[0051] In another alternative embodiment, a length of time is selected over which the wavelength of the light emitted by the electrical lamp 280 transitions from the current wavelength of the light emitted by the electrical lamp to the wavelength of light selected by the user as described for the embodiment represented in Figure 2 above. In this embodiment, a length of time is selected using user interface 240 of communication device 210. Then, data representing a selection of one of multiple preset wavelengths of light or a data request for user created wavelength data is selected using user interface 210. As the length of time progresses, data is transmitted as described in Figure 2 above representing wavelengths of light that are nearer on the visible light spectrum to the wavelength represented by the data selected by the user periodically until light having the wavelength represented by the data selected by the user is emitted by the electrical lamp 280 at the end of the length of time selected by the user.

[0052] The user created light data, which represents a wavelength of light selected by a user and has a name selected by a user can also be shared over social media. In one alternative embodiment, a data request is transmitted for another user's user created light data. Data for another user's user created light data is also stored at the server 255. The data request is transmitted from the transmitter 230 and to the server 255 in the manner described for Figure 2 above. The data for another user's user created light data is then retrieved from the server 255. The data for another user's user created light data is then transmitted as described for Figure 2 above. In this embodiment, the

electrical lamp emits light at a wavelength represented by the data for another user's user created light data.

[0053] In another alternative, users share their user created light data with other users by transmitting the data directly from their data communication device to another user's data communication device. In this embodiment, the transmitter 230 of the data communication device 210 is a transceiver.

[0054] In another alternative embodiment, the data representing a selection of one of multiple preset wavelengths of light is stored at the server and not in the memory 220 of the data communication device 210. In this embodiment, a data request is transmitted to the server for the data representing a selection of one of multiple preset wavelengths of light in the same manner that the data request for user created light data is transmitted as described for Figure 2 above.

[0055] In another alternative embodiment, the user created light data is stored in the memory 220 of the data communication device 210. In this embodiment, the user created light data is selected and transmitted in the same way as described for the data representing a selection of one of multiple preset wavelengths of light in the embodiment shown in Figure 2. The electrical lamp then emits light at a wavelength represented in the user created light data.

[0056] One alternative to the user interface 240 is a cellular phone screen controlled by a cell phone keypad.

[0057] One alternative embodiment to the data communication device 210 is a laptop computer. In this embodiment, the user interface consists of a laptop screen, keyboard, and mouse. In this embodiment, the transmitter 230 is a wireless network card.

[0058] In another alternative embodiment, the data communication device 210 is a laptop computer. In this embodiment, the transmitter is a network card and is connected to the network transceiver 250 through a wired connection. In this embodiment, the network transceiver 250 can be a wireless router that allows a network connection or a wired network router.

[0059] In another alternative embodiment, the data communication device 210 is a desktop computer. In this embodiment, the user interface consists of a computer monitor, a keyboard, and a mouse. In this embodiment, the transmitter 230 is a wireless network card or a network card connected to the network transceiver 250 through a wired connection.

[0060] In another alternative embodiment, the data communication device 210 is a tablet computer.

[0061] In another alternative embodiment, the data communication device 210 is a portable media player device such as a portable music player, a portable DVD player, an eReader, or a portable videogaming device.

[0062] In another alternative embodiment, data communication device 210 is a video game console.

[0063] In one alternative embodiment, the data can be communicated from the data communication device 210 to the wireless receiver 270 through radio communication.

[0064] In one alternative embodiment, the data can be communicated from data communication device 210 to the wireless receiver 270 through internet communication.

[0065] In one alternative embodiment, the network transceiver 250 is a cellular phone tower. In this embodiment, the transmitter 230 is a cellular transmitter. In this embodiment, the wireless receiver 270 is a cellular receiver.

[0066] Alternatively, electrical lamp 280 may be an incandescent light bulb, a halogen lamp, a carbon arc lamp, a discharge lamp, or any other similar light emitting device.

[0067] Fig. 3 illustrates a lighting system 300. The lighting system 300 includes a monitoring device 303, a data communication device 310, a network transceiver 350, a server 355, and a lighting device 360. The monitoring device 303 includes a sensor 305 and a transmitter 307. The data communication device 310 includes a global positioning system 320 and a transceiver 330. The lighting device 360 includes a wireless receiver 370 and an electrical lamp 380. In the present embodiment, the monitoring device 303 is an iHealth wireless blood pressure wrist monitor. In the present embodiment, the data communication device 310 is a cellular phone. In the present embodiment, the transmitter 330 is a wireless transmitter. In the present embodiment, the network transceiver 350 is a wireless router. In the present embodiment, the lighting device 360 is a Wi-Fi enabled adjustable LED light bulb. In the present embodiment the electrical lamp 380 is an LED.

[0068] In the lighting system 300, the sensor 305 of the monitoring device 303 is electronically connected to the transmitter 307 of the monitoring device 303. The transmitter 307 is in electronic communication with the transceiver 330 of the data communication device 310. The transceiver 330 of the data communication device 310 is electronically connected to the global positioning system 320 of the communication device 310. The transceiver 330 of the data communication device 310 is in electronic communication with the network transceiver 350. The network transceiver 350 is in electronic communication with the server 355. The network transceiver 350 is in electronic communication with the wireless receiver 370 of the lighting device 360. The wireless receiver 370 of the lighting device 360 is electronically connected to the electrical lamp 380.

[0069] In operation, data is detected by the sensor 305 of the monitoring device 303. The data detected by the sensor 305 of the monitoring device 303 is transmitted by the transmitter 307 of monitoring device 303 to the transceiver 330 of the data communication device 310. Once the data is received by the transceiver 330, the global positioning system 320 of the data communication device 310 detects whether the data communication device is located in a preprogrammed area. If the global positioning system 320 detects that the data communication device 310 is located in the preprogrammed area, the transceiver 330 of the data communication device 310 transmits the data to the network transceiver 350. In response to receiving the data from the transceiver 330 of the data communication device 310, the network transceiver 350 transmits the data to the server 355. In response to receiving the data from the network transceiver 350, the data is compared to a data set stored at the server 355. When the data

differs from a value in the stored data set, the server 355 transmits a data representing a wavelength of light to the network transceiver 350. In response to receiving the data representing a wavelength of light from the server 355, the network transceiver 350 transmits the data to the wireless receiver 370 of the lighting device 360. In response to the wireless receiver the data representing a wavelength of light at the wireless receiver 370, the electrical lamp 380 emits light at a wavelength represented by the data representing a wavelength of light. In the present embodiment, the data detected by the sensor, is a series of values representing blood pressure. In the present embodiment, the data set stored at the server is values representing a range of healthy blood pressures. In the present embodiment, the data representing a wavelength of light is data representing a wavelength of light in the blue range.

[0070] In one alternative embodiment, the data representing a wavelength of light is data representing a wavelength of light in the visible light range with the exception of the red range of light.

[0071] Alternatively, the data detected by the sensors can be data for heart rate, blood glucose levels, cardiac rhythm, cardiac output, saturated percentage of oxygen in the blood, end-tidal carbon dioxide concentration, respiratory rate, intracranial pressure, bispectral index, body temperature, or any other similar measurable physiological parameter. In this embodiment, the data set stored at the server would represent values for that physiological parameter in a healthy human being.

[0072] In another alternative embodiment, the data detected by the sensor is values representing physiological measurements for depression. In this embodiment, the data set stored at the server is values representing a range of values for physiological

parameter values of a person not suffering from depression. In the present embodiment, the data representing a wavelength of light is data representing a wavelength of light in the yellow and orange range

[0073] In one alternative embodiment, the data detected by the sensor is compared to the data set stored at the server, and if the data set detected by the sensor is equal to a value stored in the data set stored at the server, then the server 355 transmits a data representing a wavelength of light to the network transceiver 350.

[0074] In one alternative embodiment, the transmitter 307 of the monitoring device 303 is a transceiver. In this embodiment, the transceiver 307 of monitoring device 303 is in electronic communication with the network transceiver 350, as well as the transceiver 330 of the data communication device 310. In this embodiment, transceiver 307 transmits a request for data to the transceiver 330 of data communication device 310. In response to receiving the request for data, the global positioning system 320 of data communication device 310 determines whether data communication device 310 was located in a preprogrammed area. When the data device 310 is located in the preprogrammed area, the transceiver 330 of the data communication device 310 sends a signal to transceiver 307 of monitoring device 303. In response to receiving the signal from the transceiver 330 of data communication device 310, the transceiver 307 of monitoring device 303 would transmit the data recorded by the sensor 305 of the monitoring device 303 to the network transceiver 350.

[0075] In another alternative embodiment in which the transmitter 307 is a transceiver that is also in electronic communication with the network transceiver 350, the transmitter 330 of the data communication device 310 transmits a signal to the

transceiver 307 of the monitoring device 310 when the global positioning system 320 of the data communication device 310 detects that the data communication device 310 is located in a preprogrammed area. In response, to receiving the signal from the transceiver 330 of the data communication device 310, the transceiver 307 of the monitoring device 303 transmits the data detected by the sensor 305 of the monitoring device 303 to the network transceiver 350. When the global positioning system 320 of the data communication device 310 detects that the data communication device 310 is not located in the preprogrammed area, the transceiver 330 of the data communication device 310 transmits a signal to the transceiver 307 of the monitoring device 303. In response to receiving the signal from the transceiver 330, the transceiver 303 stops transmitting the data detected by the sensor 305 to the network transceiver 350.

[0076] In one alternative embodiment, when the server transmits data representing a wavelength of light to the network transceiver 350, it also translates data representing an audio file to the network transceiver 350. In this embodiment, the network transceiver 350 then transmits the data representing an audio file to the data communication device 310. In this embodiment, the data communication device 310 contains a speaker that is in electronic communication with the transceiver 310. When the transceiver 310 receives the data representing an audio file, the speaker plays that audio file to the user. In one embodiment, the sound of waves is stored in the audio file. In another embodiment, the sound of rain is stored in the audio file. In another embodiment, the sound of wind in the trees is stored in the audio file. Alternatively, any similar sounds can be stored in the audio file. In another alternative embodiment, the

user can select from a group of audio files which audio file will be retrieved from the server.

[0077] One alternative embodiment to the data communication device 310 is a laptop computer.

[0078] In another alternative embodiment, the data communication device 310 is a desktop computer.

[0079] In another alternative embodiment, the data communication device 310 is a tablet computer.

[0080] In another alternative embodiment, the data communication device 310 is a portable media player device such as a portable music player, a portable DVD player, an eReader, or a portable videogaming device.

[0081] In another alternative embodiment, data communication device 310 is a video game console.

[0082] In one alternative embodiment, the data can be transmitted through radio communication.

[0083] In one alternative embodiment, the data can be transmitted internet communication.

[0084] Alternatively, electrical lamp 380 may be an incandescent light bulb, a halogen lamp, a carbon arc lamp, a discharge lamp, or any other similar light emitting device.

[0085] Figure 4 illustrates a present embodiment of a graphical display 400 of the user interface 140. The graphical display 400 includes a cleanse on/off button 410, a time length selection menu 420 and a light On/Off button 430.

[0086] In operation, a button or menu is selected by pressing on the identified location of the user interface 140 and the data represented by that button or menu is then transmitted through the lighting system 100 as shown in Figure 1. When the light on/off button 430 is selected, the electric lamp 180 emits light. When the light on/off button 430 is selected again, the electrical lamp 180 stops emitting light. When the cleanse on/off button 410 is selected, the stored data representing a wavelength of data in the violet range is transmitted by transmitter 130 through the lighting system 100 as described for Figure 1. In response, the electrical lamp 180 emits light having the wavelength represented in the stored data. When the cleanse on/off button 410 is selected another time, the electrical lamp 180 stops emitting light having the wavelength represented in the stored data, and emits light at the wavelength of the light the electrical lamp 180 was emitting before the cleanse on/off button 410 was selected the first time. The time length menu 420 allows users to select a length of time. When a length of time is selected, the data is transmitted through a system such as lighting system 100 as shown in Figure 1. In response, the electric lamp 180 emits light having the wavelength represented in the stored data for the length of time selected using the time length menu 420.

[0087] One alternative embodiment to the cleanse on/off button 410 is to have a separate cleanse on button and a separate cleanse off button.

[0088] One alternative embodiment to the light on/off button 430 is to have a separate light on button and a separate cleanse off button.

[0089] One alternative embodiment to the time length menu is to have a clock face displayed. In this embodiment, the user can select a length of time by manipulating the image of the clock face.

[0090] In one alternative embodiment, the cleanse on/off button would be a bar representing data for a multitude of wavelengths in the violet range. In this embodiment, a user could touch a section of the bar that represents the wavelength in the violet range that the user would like emitted. Alternatively, the bar representing data for a multitude of wavelengths in the violet range could be a wheel representing data for a multitude of wavelengths in the violet range.

[0091] Figure 5 illustrates a present embodiment of a graphical display 500 of the user interface 240. The graphical display 500 includes a multitude of preset light module buttons, a tools button 510, and a multitude of user light module buttons. In the present embodiment, the multitude of preset light buttons include a standard lighting button 505, a brain power button 515, a sleep support button 520, an uplift button 525, a serenity now! button 530, and a blood pressure relief button 535. In the present embodiment, the multitude of user light modules includes a user light module 1 button 540, a user light module 2 button 545, and a user light module 3 button 550. In the present embodiment, the user interface 240 is the user interface of a smartphone. In the present embodiment, the standard light button 505 represents data representing a wavelength of light emitted by the electrical lamp 280 before the light has been altered by any other modules. In the present embodiment, the brain power button 515 represents data representing a wavelength of light in the yellow range. In the present embodiment, the sleep support button 520 represents data representing a wavelength of light in the blue and violet range.

In the present embodiment, the uplift button 525 represents data representing a wavelength of light in the yellow and orange range. In the present embodiment, the serenity now! button 330 represents data representing a wavelength of light in the green and blue range. In the present embodiment, the blood pressure relief button 535 represents data representing a wavelength of light in the blue range, and not in the red and orange range. In the present embodiment, the multitude of user light modules are selections of a light wavelength and name that are stored at the server.

[0092] In one alternative embodiment, the data selected for each button emphasizes the corresponding wavelengths described above and reduces other wavelengths.

[0093] In operation, a button is selected by pressing on an identified location on the user interface 240 and the data represented by that button is then transmitted through the lighting system 200 as described for Figure 2. When one of the multitude of preset light module buttons is selected on the user interface 240, the data for the wavelength represented by the button is transmitted by the transmitter 230. When one of the multitude of user light module buttons is selected on the user interface 240, the request for data for the wavelength represented by the button is transmitted by the transmitter 230. When the tools button is selected, a graphics display 600 is accessed on the user interface 240.

[0094] Figure 6 shows the present embodiment of a graphical display 600 of the user interface 240. The graphical display 600 contains a light module selection menu 605, a time menu 610, a transition time menu 615, a user light data creator button 620, and a preset modification button 625.

[0095] In operation, the graphical display 600 is accessed when the tools button 510 is pressed on the identified location of the user interface 240. The light module selection menu 605 is used to select one of the preset light modules shown on graphical display 500 of Figure 5. The time menu 610 is selected to set a time when the data represented in the selected preset light module selected using the light module selection menu will be transmitted by the transmitter 230. The transition time menu 615 is selected to set a time over which the wavelength of the light emitted by the electrical lamp 280 transitions to the wavelength of light represented by the light module selected using the light module selection menu 605. When the user light data creator button 620 is selected, a different graphical display is accessed that allows a user to select a wavelength of light and a name, and assign it to one of the multitude of user light data buttons displayed by graphical display 500. When the preset modification button 625 is pressed, a different graphical display is accessed that allows a user to select the preset light modules and change the wavelength represented by the data for those modules.

[0096] One alternative to the start time menu 610 is to have a clock face displayed. In this embodiment, a user would select a time by clicking the clock face in an area representing that time.

[0097] In one alternative embodiment, the light data creator button 620 would not access another graphical display. Instead there would be a wavelength selection tool available on the graphical display and a name input menu. The wavelength selection menu may be a bar of color representing different wavelength data values. The wavelength selection menu could also be represented numerically as nanometer values. The wavelength selection menu may also be represented as a color wheel.

[0098] Figure 7 illustrates a flowchart 700 of an embodiment for a lighting system, for example, the lighting system depicted in Figure 1 above. First, at step 710, data representing a length of time for emitting light is selected. Next, in step 720, data representing a stored wavelength of light in the violet range is selected. At step 730, data, including the data representing a length of time for emitting light and the data representing a stored wavelength of light in the violet range, is transmitted from a transmitter of a data communication device to a network transceiver. At step 740, the data is received by the network transceiver. At step 750, the data is transmitted from the network transceiver to a wireless receiver of a lighting device. At step 760, data is received from the network transceiver at the wireless receiver of the lighting device. At step 770, the lighting device emits light at the wavelength represented in the data for the length of time represented in the data.

[0099] In one alternative embodiment, a data request for light wavelength data is selected in step 720. In this embodiment, additional steps occur after the data request for light wavelength data is received from the transmitter to the network receiver. First, the network receiver transmits the data request to a server. Then, the server receives the data request for light wavelength data. Next, the server retrieves light wavelength data corresponding to the data request for light wavelength data. Then, the server transmits the data to the network receiver. After the network receiver receives the data from the server, the remaining steps are the same as described for Figure 7 above.

[00100] In one alternative embodiment, time length data is not transmitted. Instead, when the time represented in the time length data expires, the transmitter transmits a data from the transmitter through the same path described for Figure 7 above

to the electrical lamp. The electrical lamp then emits light at the wavelength it was at, before it began emitting light having a wavelength represented in the stored data. Alternatively, a signal can be sent to stop the lamp from emitting light.

[00101] In another alternative embodiment, a time length is not selected at step 710. Instead, the lighting device stops emitting the light at the wavelength represented in the stored data at a time when a user selects to turn it off.

[00102] In another embodiment, there are additional steps in which it is determined if the data communication device is in a predetermined proximity to the lighting device. If the data communication device is in predetermined proximity, the electrical lamp stops emitting light at the wavelength represented by data representing stored wavelength of light in the violet range.

[00103] Figure 8 illustrates a flowchart 800 of an embodiment for a lighting system, for example, the lighting system 200 depicted in Figure 2 above. First, at step 805, a selection is made of either a data representing a selection of one of multiple stored wavelengths of light stored on the memory of a data communication device and a data request for user created light data. In step 810, the data or the data request is transmitted by the transmitter to the network transceiver. In step 815, the data or data request is received by the network transceiver. In step 820, a determination is made whether the transmission is a data or a data request. If it is a data, the flowchart proceeds to step 845. If the transmission is a data request, the flowchart proceeds to step 825. In step 825, the data request is transmitted from the network transceiver to a server. In step 830 the data requested in the data request is retrieved from the server. In step 835, the data is transmitted from the server to the network transceiver. In step 840, the data is received

from the server at the network transceiver. In step 845, the data is transmitted from the network transceiver to a wireless receiver of a lighting device. In step 850, the data is received from the network transceiver at the wireless receiver of the lighting device. At step 855, an electric lamp emits light having a wavelength represented in the data.

[00104] In one alternative embodiment, there is an additional step at the beginning of the flowchart consisting of selecting a time for the data or data request to be transmitted from the transmitter to the network transceiver. The transmitter then transmits the data or data request to the server at that time.

[00105] In another alternative embodiment, there is an additional step at the beginning of the flowchart consisting of selecting a length of time over which data representing wavelengths will be transmitted to the electrical lamp. Over this time, the transmitter will periodically transmit data or data requests as described for Figure 8 above. Here the data or data requests represent wavelengths that are increasingly similar to the data or data request selected by the user in step 805. At the end of the length of time, the data or data selected by the user is transmitted.

[00106] Figure 9 illustrates a flowchart 900 of an embodiment for a lighting system like the lighting system 300 depicted in Figure 3 above. First, at step 905, a data is detected by a sensor of a monitoring device. Then, at step 910, the data detected by the sensor is transmitted by a transmitter of the monitoring device to a transceiver of a data communication device. At step 915, the transceiver of the data communication device receives the data detected by the sensor from the transmitter. At step 920 a global positioning system of the data communication device determines if the data communication device is in a preprogrammed location. In the preferred embodiment, this

would be a user's place of residence. When the data communication device is located in the preprogrammed location, the transceiver of the data communication device transmits the data detected by the sensor to a network transceiver in step 925. In step 930, the network transceiver receives the data detected by the sensor from the transceiver. In step 935, the network transceiver transmits the data detected by the sensor to a server. In step 940, the server receives the data detected by the sensor from the network transceiver. In step 945, the server compares the data detected by the sensor to a stored set of data. In step 950, a determination is made whether the data detected by the sensor matches a value in the stored set of data. When the data detected by the sensor does not match a value in the stored data set, in step 955, data representing a wavelength of light is retrieved from the server. In step 960, the data representing a wavelength of light is transmitted by the server to the network transceiver. In step 965, the data representing a wavelength of light is received from the server by the network transceiver. In step 970, the data representing a wavelength of light is transmitted by the network transceiver to a receiver of a lighting device. In step 975, the data representing a wavelength of light is received by the receiver of the lighting device from the network transceiver. In step 980, an electrical lamp emits light at a wavelength represented by the data representing a wavelength of light.

[00107] In one alternative embodiment, steps 910 through 930 are replaced. In this embodiment, one step is to transmit a data request from a transceiver of the data monitoring device to the transceiver of the data communication device. In response to the data request, the transceiver of the data communication device sends a signal to the data monitoring device when the global positioning system determines that the data

communication device is in a preprogrammed area. In response to receiving the signal, the transceiver of the data monitoring device transmits the data detected at the sensor to the network transceiver. Steps 935 through 980 are same as described for Figure 9 above.

[00108] In another alternative embodiment, steps 910 through 930 are replaced. In this embodiment, the first step is to determine whether the data communication device is in a preprogrammed location. When the data communication device is in a predetermined location, the next step is to transmit a signal from the transceiver of the data communication device to a transceiver of the data monitoring device. Upon receipt of the signal, the next step is to transmit the data detected by the sensor from the transceiver of the data monitoring device to the network transceiver. Then, steps 935 to 980 are followed as described for Figure 9 above. When the global positioning system determines that the data communication device is not in the preprogrammed area, the transceiver of the data communication device sends a signal instructing the data monitoring device to stop transmitting data. The next step is to stop transmitting data detected by the sensor from the transceiver of the data monitoring device to the network transceiver.

[00109] In one alternative embodiment, when the server transmits light wavelength data from the server, there is an additional step to transmit audio file data from the server to the network transceiver. There is another additional step to transmit audio file data from the network transceiver to the transceiver of the data communication device. There is then an additional step to play the audio file through a speaker connected to the data communication device.

[00110] In summary, the embodiments of the present invention provide numerous advantages over the prior art.

[00111] The present embodiment for the lighting system 100 has numerous advantageous over current lighting systems that use UV light for cleaning purposes. The lighting system 100 ^{can} allow a user to display violet light over long periods of time which can have a germ killing effect similar to UV light. The present embodiment allows a user to wirelessly transmit a preset wavelength of light in the violet spectrum from a wireless communication device. This data is eventually received by a wireless receiver in a lighting device and an electrical lamp in the lighting device emits light at the wavelength represented in the data. The ability to wirelessly choose a preset wavelength is an improvement over the prior devices because it provides a user more freedom as to when and where they can activate the lighting system to clean their home. The fact that it is a preset option ^{can} also allow a user to easily cause their lights to emit the necessary wavelength without having to scroll through all of the color options available on the lighting device. ^{This} embodiment is an improvement over the Glo Germ LED Ultra Violet light because it does not require the user to manually position the light over surfaces where the user ^{would} like to kill germs. The lighting system ^{could} effectively cover large areas at the click of a button on the wireless communication device. The user would also not ^{need} to worry about replacing batteries as they would with the Glo Germ LED Ultra Violet light. Additionally, there ^{can} be some negative side effects associated with ultraviolet light. A user is less likely to suffer those side effects when using violet light. ^{Alternative} embodiments also provide new advantages. ^{The} ability to transmit the data representing a wavelength of light over the internet further provides users with more

work on logical flow of ideas

suppose B

for example

options as to where and when the lighting system cleaning ability can be activated. In another alternative embodiment, a global positioning system is contained in the wireless communication device, and the lighting device stops emitting light in the violet spectrum when that wireless communication device is located within the specified range of the lighting device. This makes it easier for a user to leave their residence containing the lights, cause the lighting device to emit light in the violet range for cleaning purposes and return without having to readjust the lights to a setting preferable for visibility.

[00112] The present embodiment of the lighting system 200 also provides numerous advantages over previous lighting systems. While other systems allow users to select wavelengths of light, in allowing data for multiple preset wavelengths of light to be selected the present embodiment allows easier access to specific light wavelengths. This aids the user in no longer having to remember those wavelengths, or from having to manually scroll through a wide variety of wavelengths. This can benefit a user's psychological health. Because different colors of light can have beneficial psychological effects, the preset wavelengths give the user faster access to psychologically beneficial lighting options. This eases the burden on a user of having to remember how different wavelengths of light effect their emotions. The alternative embodiments also provide a user with the ability to select a data representing a wavelength of light and a name, and store the data as a preset option. This also gives the user instant access to the light wavelengths that they prefer or that they find creates a certain psychological effect. In alternative embodiments, users are also able to select a time for the electrical lamp to begin emitting a selected wavelength of light and a time over which the wavelength of light emitted by the electrical lamp transitions to a selected wavelength of light. These

*mention
more differences
from p 35*

options, along with the fact that preferred selections of data representing wavelengths of light are preset, allow a user more control over the effect of lighting on their psychological health.

[00113] The present embodiment of the lighting system 300 can be beneficial for treating physiological issues. When a monitoring device detects changes in a physiological parameter such as blood pressure and these values are compared to a healthy values at the server, a light setting that has been found to treat the physiological issue can be immediately emitted in response. This is an improvement over the prior art, because it allows an immediate response without the user having to check their own physiological values and deciding to treat themselves. This alleviates many potential problems. ^{for example} In U.S. Pat. Application No. 2012/0330109, physiological parameter data could be detected and transmitted over a wireless network. However, this does not provide for treatment. The data still needs to be evaluated and a course of treatment needs to be decided upon. ^{covered} Under the present embodiment, treatment occurs automatically. This ~~means~~ ^{means} that a patient will receive treatment faster, and that the treatment ~~will~~ ^{will} be more uniform than if using the system in U.S. Pat. Application No. 2012/0330109. ^{additionally} U.S Pat. Application No. 2012/0316458 discloses a monitoring device that detected a physiological parameter, diagnosed medical conditions and notified a user that they needed to pursue a course of treatment. The present embodiment has a significant advantage in that treatment is automatic. In the system for U.S Pat. Application No. 2012/0316458, a user may fail to notice a notification. A user may also fail to provide themselves with proper treatment. It may also take a user a significant amount of time to determine the proper course of action. The present embodiment ~~would~~ ^{would}

connects these concepts in a logical flow.

eliminate these possibilities of user error by automatically adjusting to unwanted physiological parameter values. Similarly, the iHealth Blood Pressure Wrist Monitor tracks physiological parameter data and allows a user to access it on their smartphone. Again, the present embodiment would prevent the possibility of a user failing to notice the unwanted physiological parameter reading or failing to pursue the correct treatment because it would automatically provide treatment. The present embodiment would also not require a user to constantly have their smartphone on their person.

[00114] While particular elements, embodiments, and applications of the present invention have been shown and described, it is understood that the invention is not limited thereto because modifications may be made by those skilled in the art, particularly in light of the foregoing teaching. It is therefore contemplated by the appended claims to cover such modifications and incorporate those features which come within the spirit and scope of the invention.

selecting a length of time, wherein said selecting is performed using said data communication device,
transmitting a data representing said length of time,
wherein said transmitting is performed by said wireless transmitter,
receiving said data representing said length of time,
wherein said receiving is performed by said wireless receiver,
wherein said wireless receiver communicates with said electrical lamp and a timer; and
emitting light from said electrical lamp in response to receiving said data representing said stored wavelength of light by said wireless receiver,
wherein said emitting is performed at said wavelength of light represented by said data representing said stored wavelength of light,
wherein said emitting is performed for said length of time represented by said data representing said length of time.

5.

A lighting system including:

a data communication device including:

a memory, wherein a plurality of data representing a preset wavelength of light is stored in said memory;

a user interface, wherein an option for a selection of said data is displayed, wherein said selection is one of said plurality of data representing a preset wavelength of light,

and

a transmitter, wherein said transmitter transmits said selection of said data;

a network transceiver, wherein said network transceiver receives said selection of said data and in response to said receipt of said selection of said data, said network transceiver transmits said selection of said data; and

a lighting device including:

an electrical lamp; and

a receiver, wherein said receiver receives said selection of said data from said network transceiver and in response to the receipt of said selection of said data, said electrical lamp emits light at a wavelength of light represented by said selection of said data.

6. The lighting system of claim 5, further including a server wherein said server contains a data representing a wavelength of light that had previously been selected; wherein said transmitter sends a data request to said network transceiver; wherein in response to receipt of said data request, said network transceiver transmits said data request to said server; wherein in response to receipt of said data request, said server retrieves data representing a wavelength of light that had previously been selected, wherein said server transmits said data representing a wavelength of light that had previously been selected to said network transceiver; wherein in response to the receipt of said data representing a wavelength of light that had previously been selected, said network transceiver transmits said data representing a wavelength of light that had previously been selected to said receiver of said lighting device; wherein in response to receipt of said data representing a wavelength of light that had previously been selected, said

electrical lamp emits light at a wavelength of light represented by said data representing a wavelength of light that had previously been selected.

7. The lighting system of claim 5, wherein said user interface of said data communication device allows a selection of a time; and wherein, in response, said transmitter of said data communication device transmits said data representing one of said plurality of preset wavelengths of light at said time represented in said selection of a time.

8. The lighting system of claim 5, wherein said user interface of said data communication device allows a selection of a time; wherein in response, said electric lamp of said lighting device transitions from emitting light at a wavelength said electric lamp was emitting before said selection of time to emitting light at a wavelength represented by said selection of said data by the end of said time represented in said selection of time.

9. The lighting system of claim 5, wherein said lighting device is a Wi-Fi enabled adjustable color LED light bulb.

10. A lighting system including:

a monitoring device including:

a sensor that monitors a physiological data parameter, wherein said sensor

collects a data representing said physiological data parameter; and

a transmitter, wherein said transmitter transmits said data representing a data parameter;

a server, wherein data representing a set of values for said physiological data parameter and data representing a wavelength of light is stored, wherein said

server receives said data representing a physiological data parameter from said transmitter, wherein said data representing a physiological data parameter is compared to said data representing a set of values for said physiological data parameter, wherein in response to said data representing a physiological data parameter differing from said values represented by said data representing a set of values for said physiological data parameter, said server transmits said data representing a wavelength of light; and
a lighting device including:

an electrical lamp; and

a receiver, wherein said receiver receives said data representing a wavelength of light transmitted by said server and in response, said electrical lamp emits light at a wavelength represented by said data representing a wavelength of light.

11. The lighting system of claim 11, wherein said physiological data parameter is blood pressure.

12. The lighting system of claim 11, further including a global positioning system, wherein said server transmits said light wavelength data only when said global positioning system is located in a predetermined area.

13. The lighting system of claim 11, wherein, in response to said data representing a physiological data parameter not matching one of said values represented by said data representing a set of values for said physiological data parameter, said server transmits data representing an audio file to said network transceiver; wherein in response to receiving said data representing an audio file,

said network transceiver transmits said data representing an audio file; and

wherein said data communication device further includes:

a receiver, wherein said data representing said audio file is received from said network transceiver; and

a speaker, wherein in response to receiving said data representing said audio file at the receiver, said speaker plays said audio file represented by said data representing said audio file.

14. The lighting system of claim 11, wherein said physiological data parameter is a physiological measurement for depression.

15. The lighting system of claim 11, wherein said monitoring device is an iHealth wireless blood pressure wrist monitor.

ABSTRACT

A lighting system is provided including a portable communication device, including a memory and a transmitter, and a network transceiver, and a lighting device including a receiver and an electrical lamp. The memory stores a plurality of data representing a preset wavelength of light. The transmitter transmits a selection of one of said plurality of data representing a preset wavelength of light to the network transceiver. The network transceiver transmits the selection of one of said plurality of data representing a preset wavelength of light to the receiver. The receiver receives the selection of one of said plurality of data representing a preset wavelength of light and in response, the electrical lamp emits light at a wavelength represented by the selection of one of said plurality of data representing a preset wavelength of light.

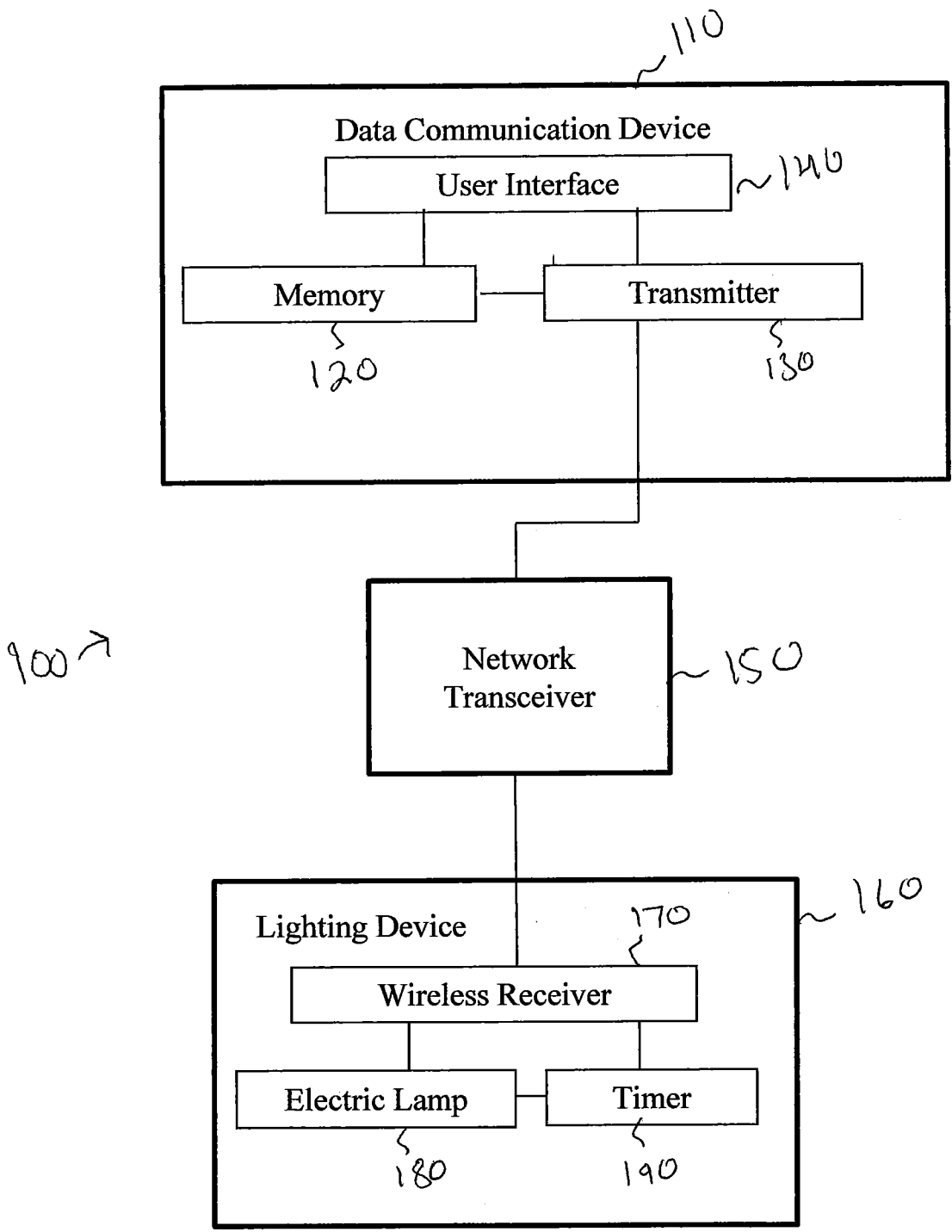


Figure 1

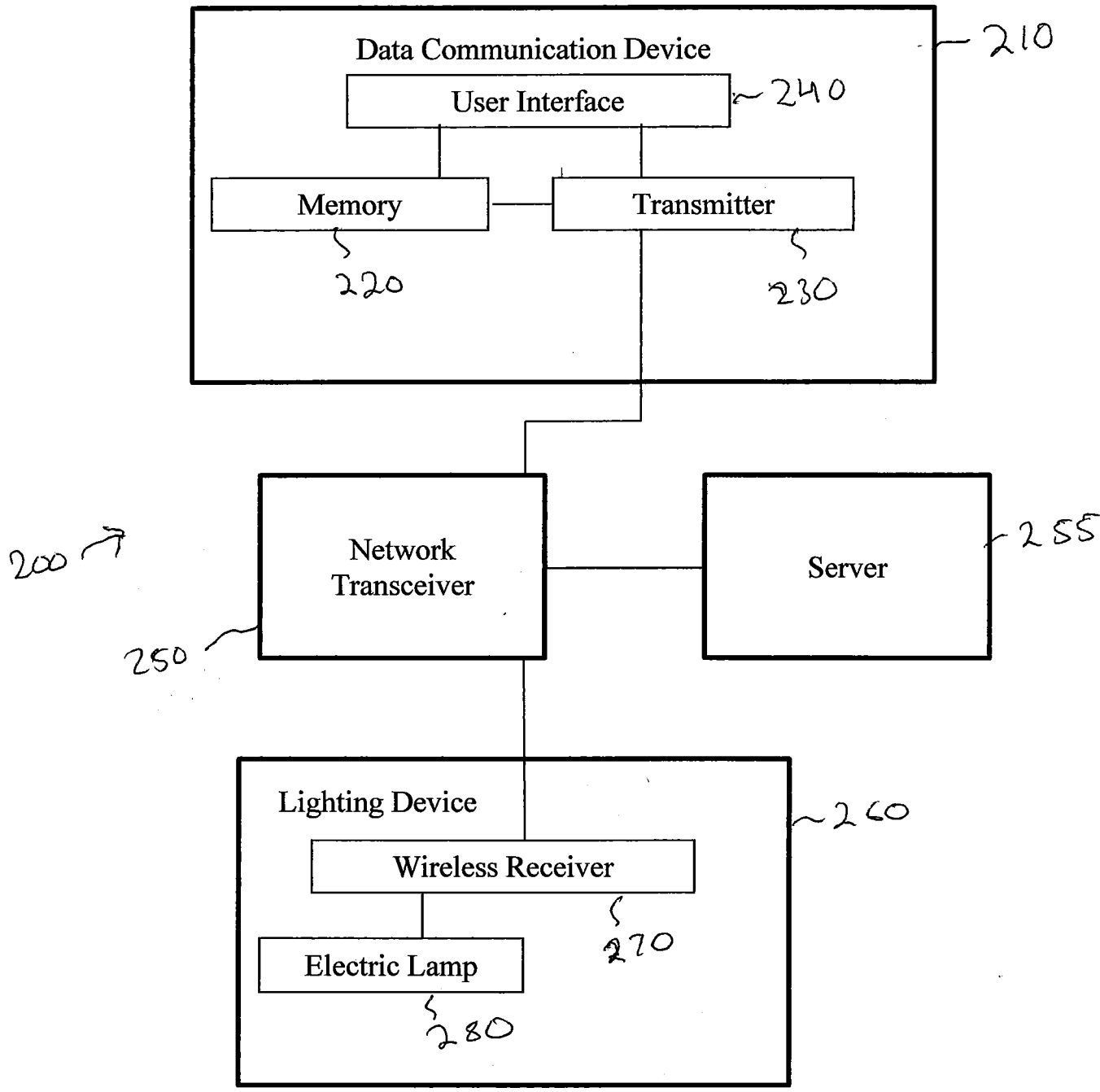


Figure 2

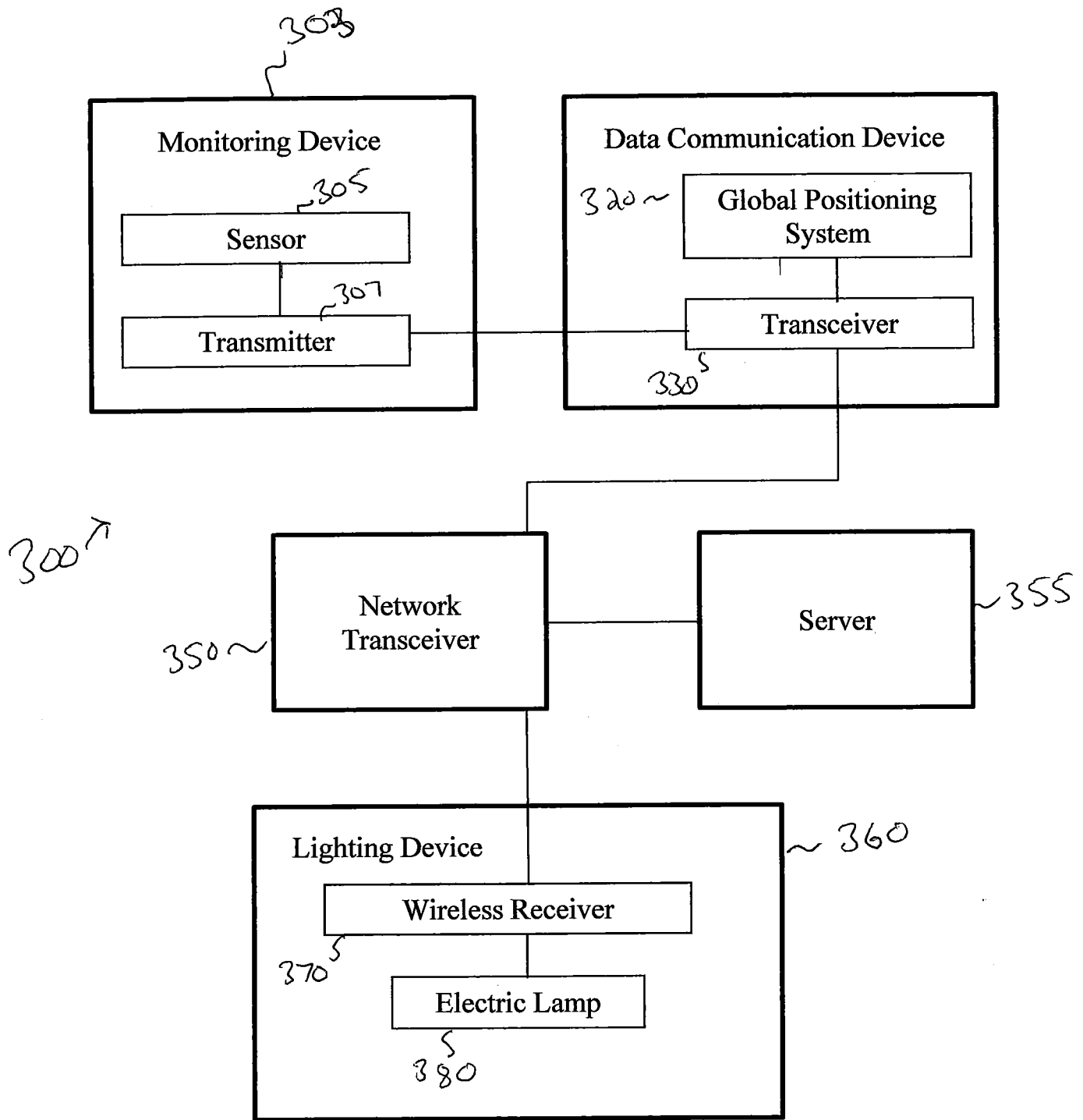


Figure 3

400 ↘

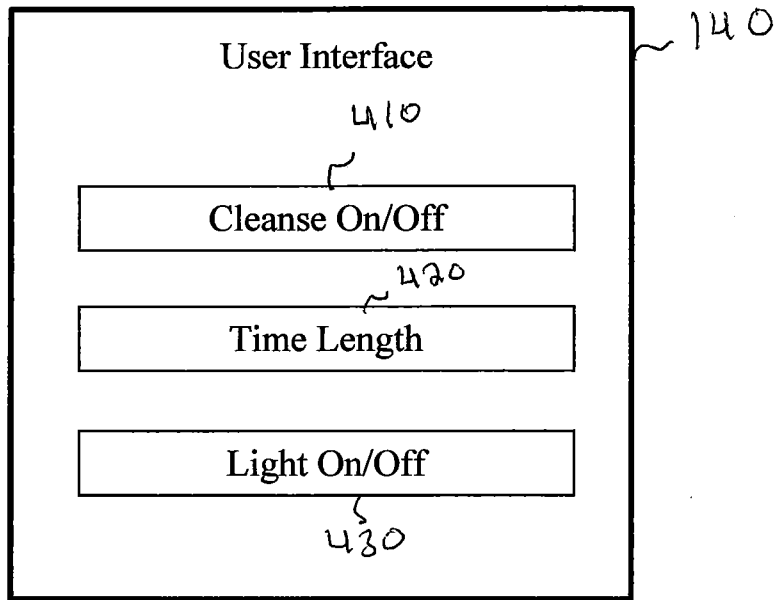


Figure 4

500 ~

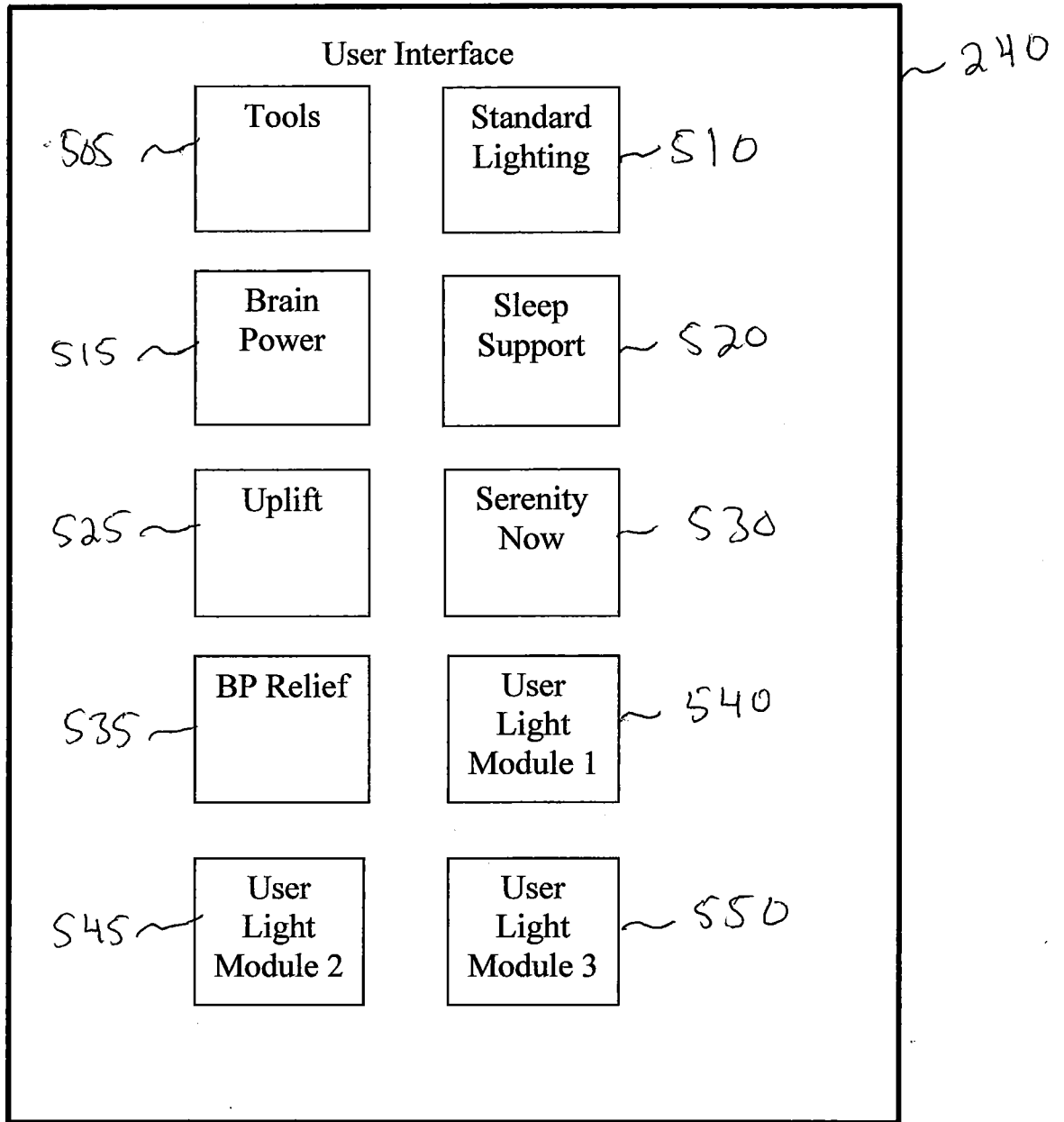


Figure 5

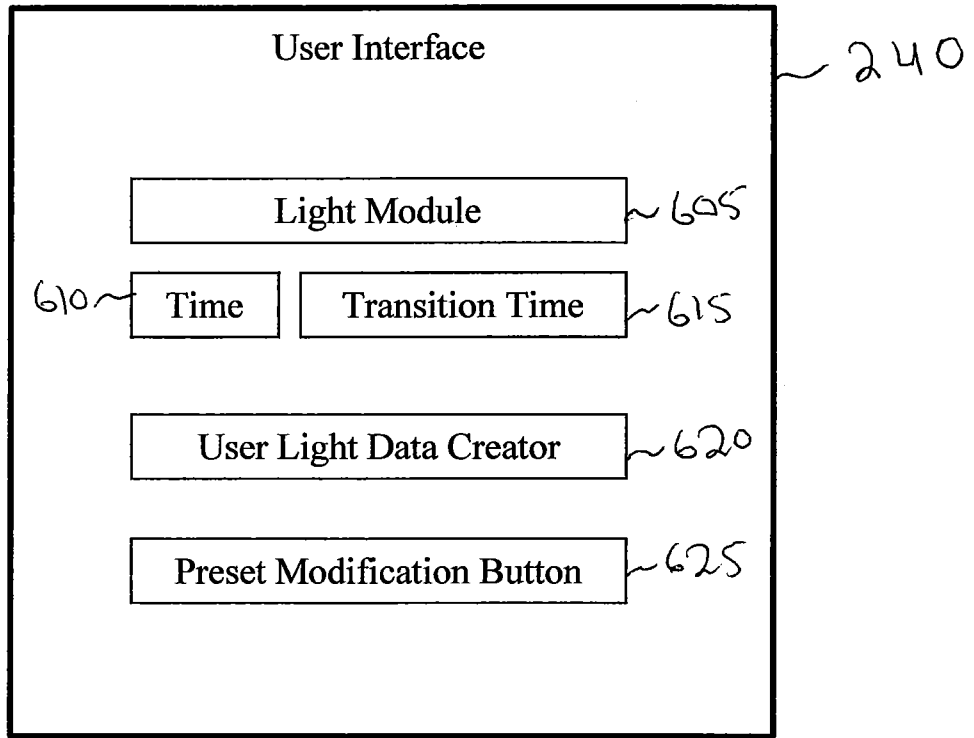


Figure 6

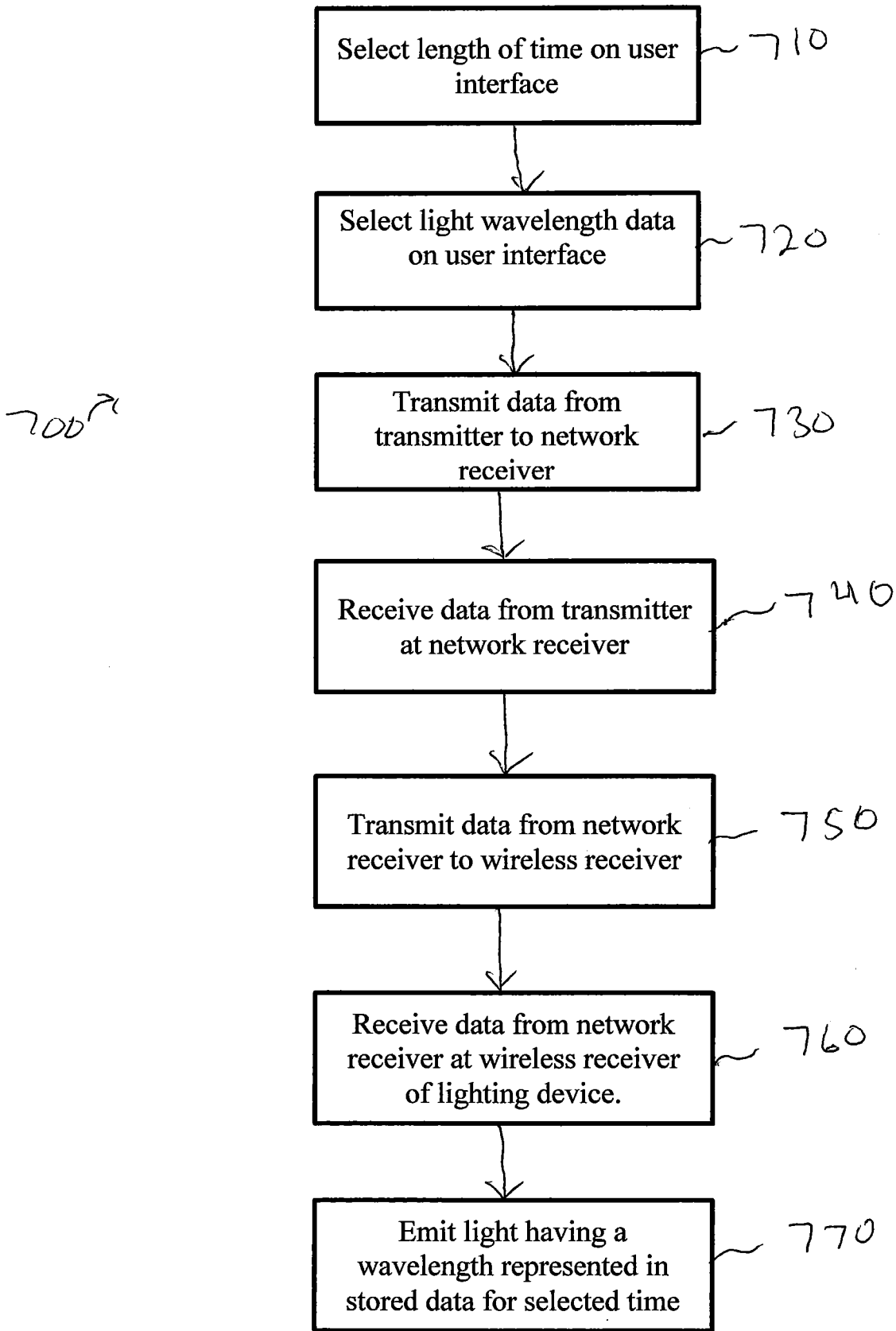


Figure 7

800 ↴

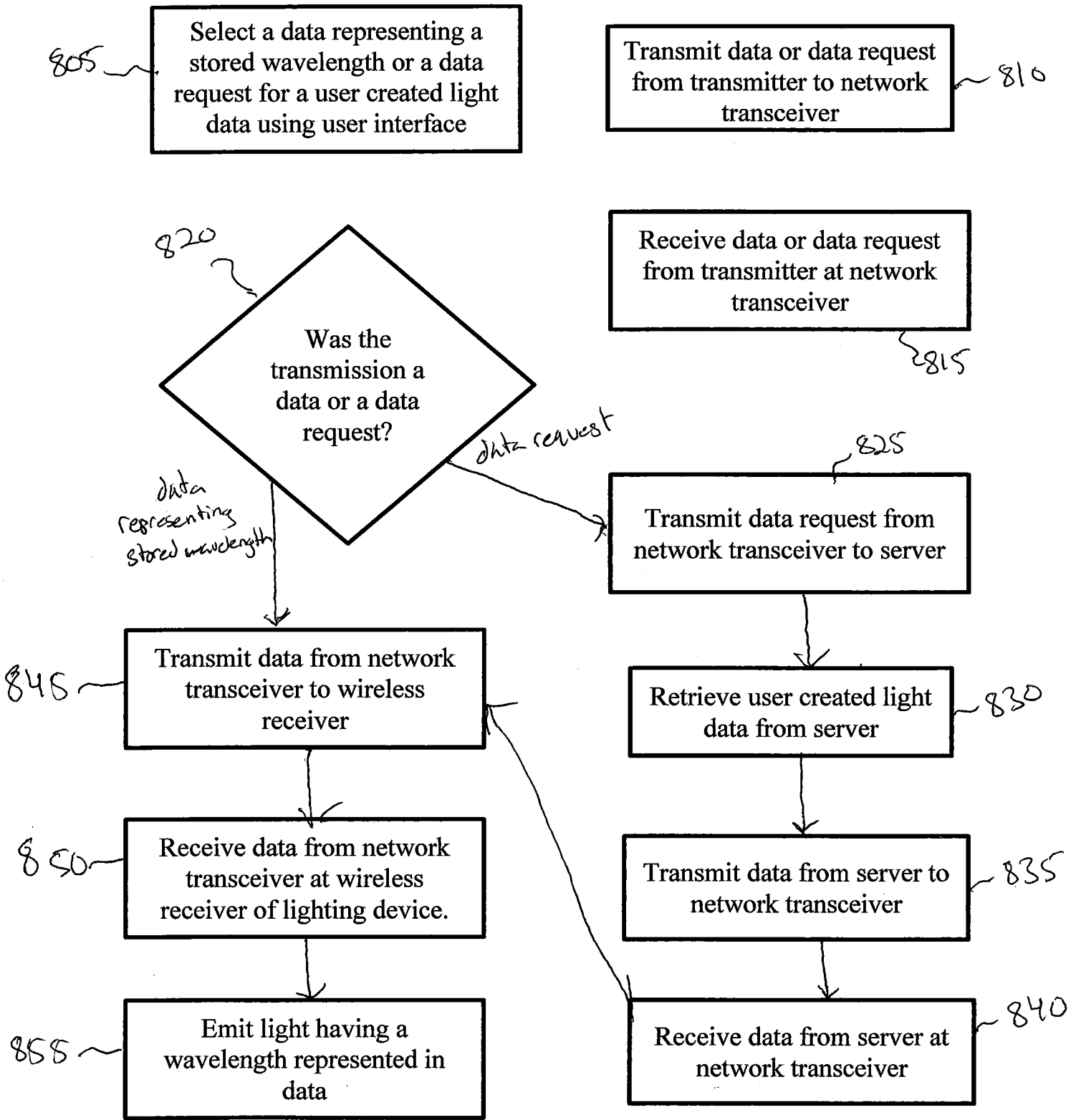
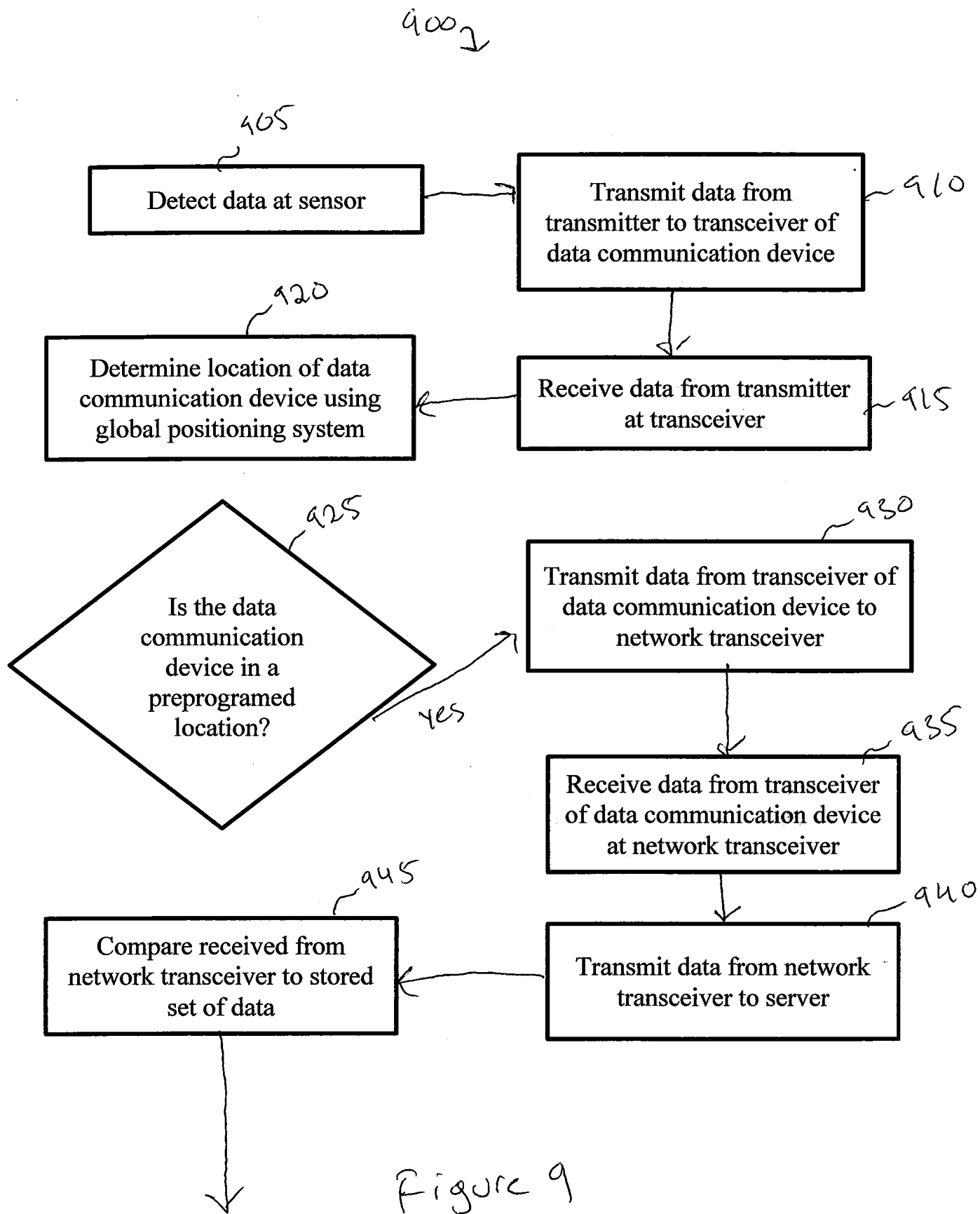


Figure 8



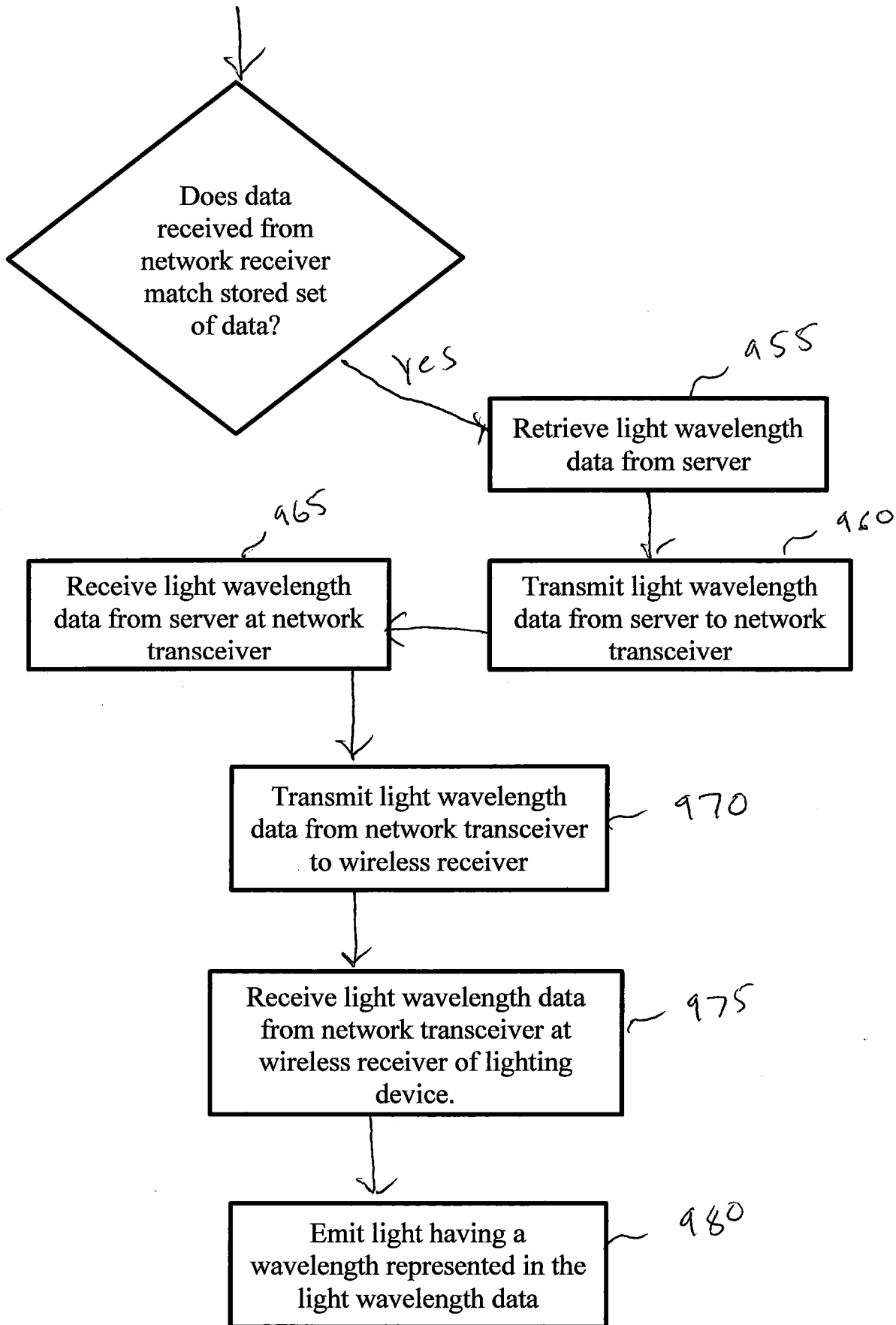


Figure 9