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(54) **PROGRAMMABLE SWITCH AND SYSTEM**

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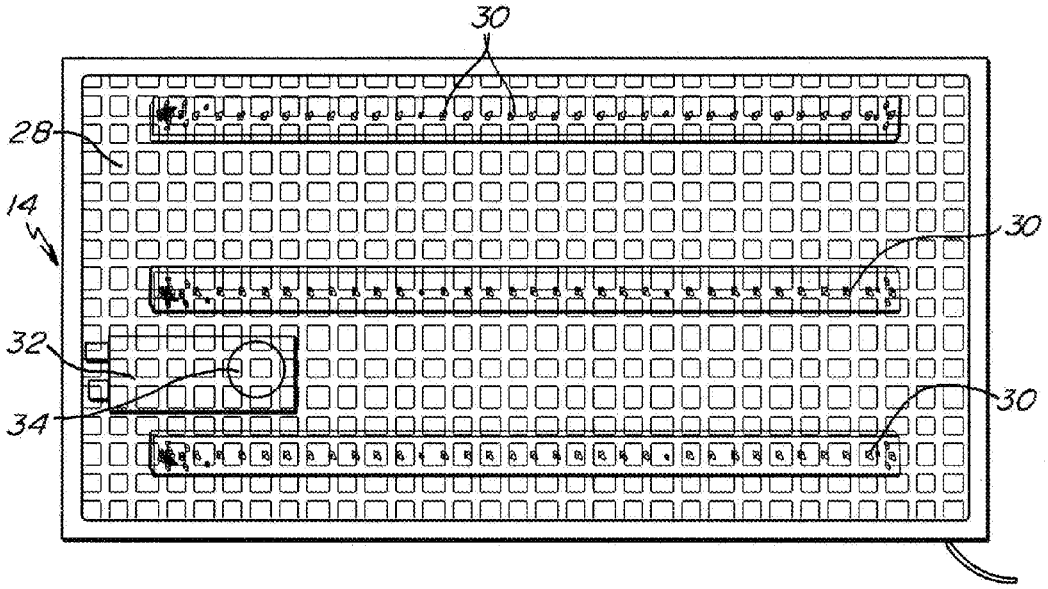
(57) **ABSTRACT**

A lighting system includes a light fixture emitting illumination and a light switch in communication with the light fixture. The light switch has an actuator member. A controller is in communication with the light switch. A website is in communication with the controller where an individual may use the website to communicate to the controller a plurality of illumination settings including but not limited to an initial illumination level, a pre-set illumination level, an incremental increase illumination level, an incremental decrease illumination level, and a termination of illumination. Manipulation of the actuator changes the illumination setting for illumination emitted from the light fixture.



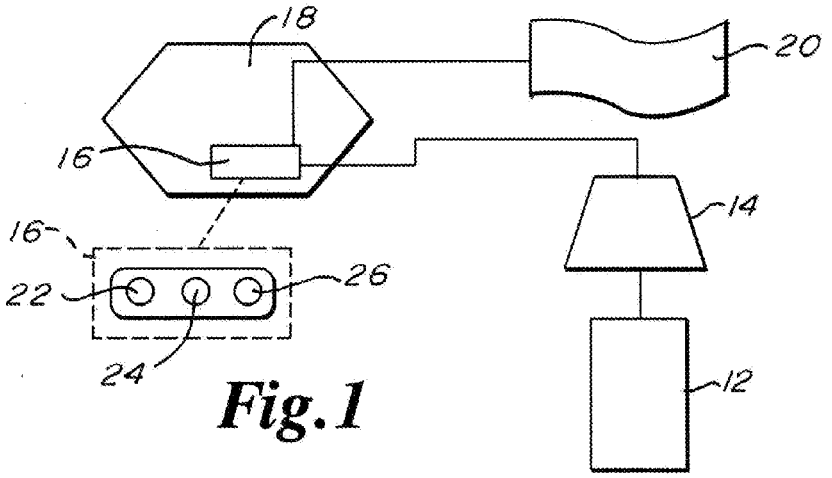


Fig.1

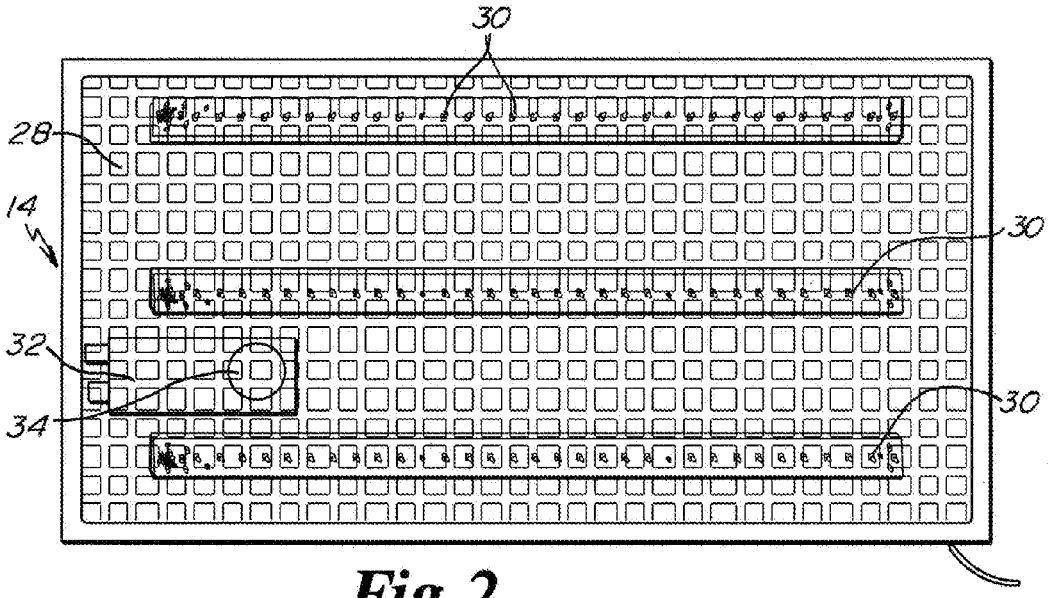


Fig.2

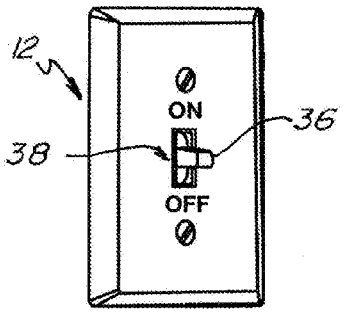


Fig.3

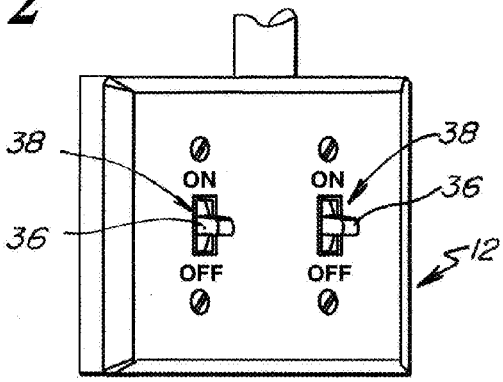


Fig.4

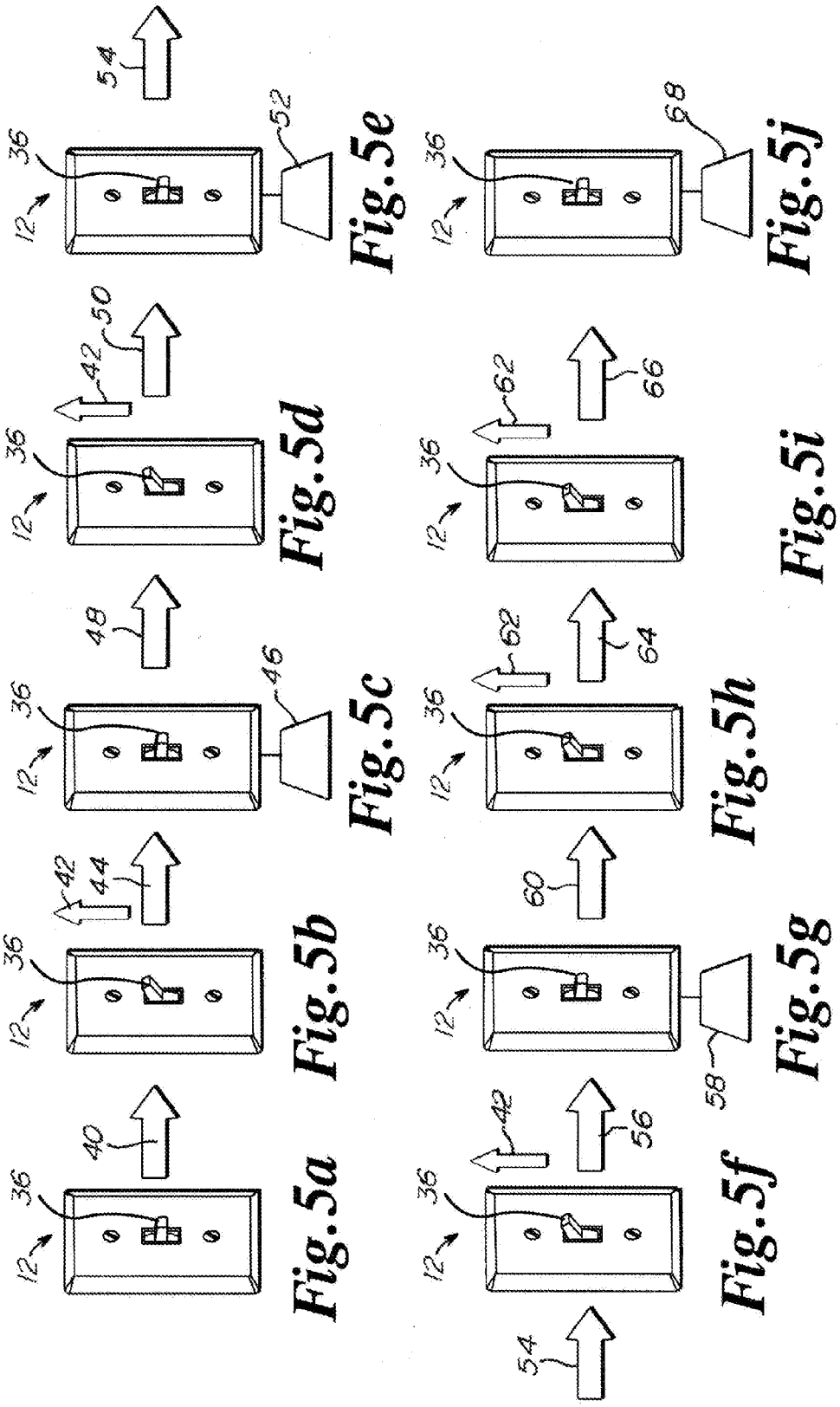


Fig.5a Fig.5b Fig.5c Fig.5d Fig.5e Fig.5f Fig.5g Fig.5h Fig.5i Fig.5j

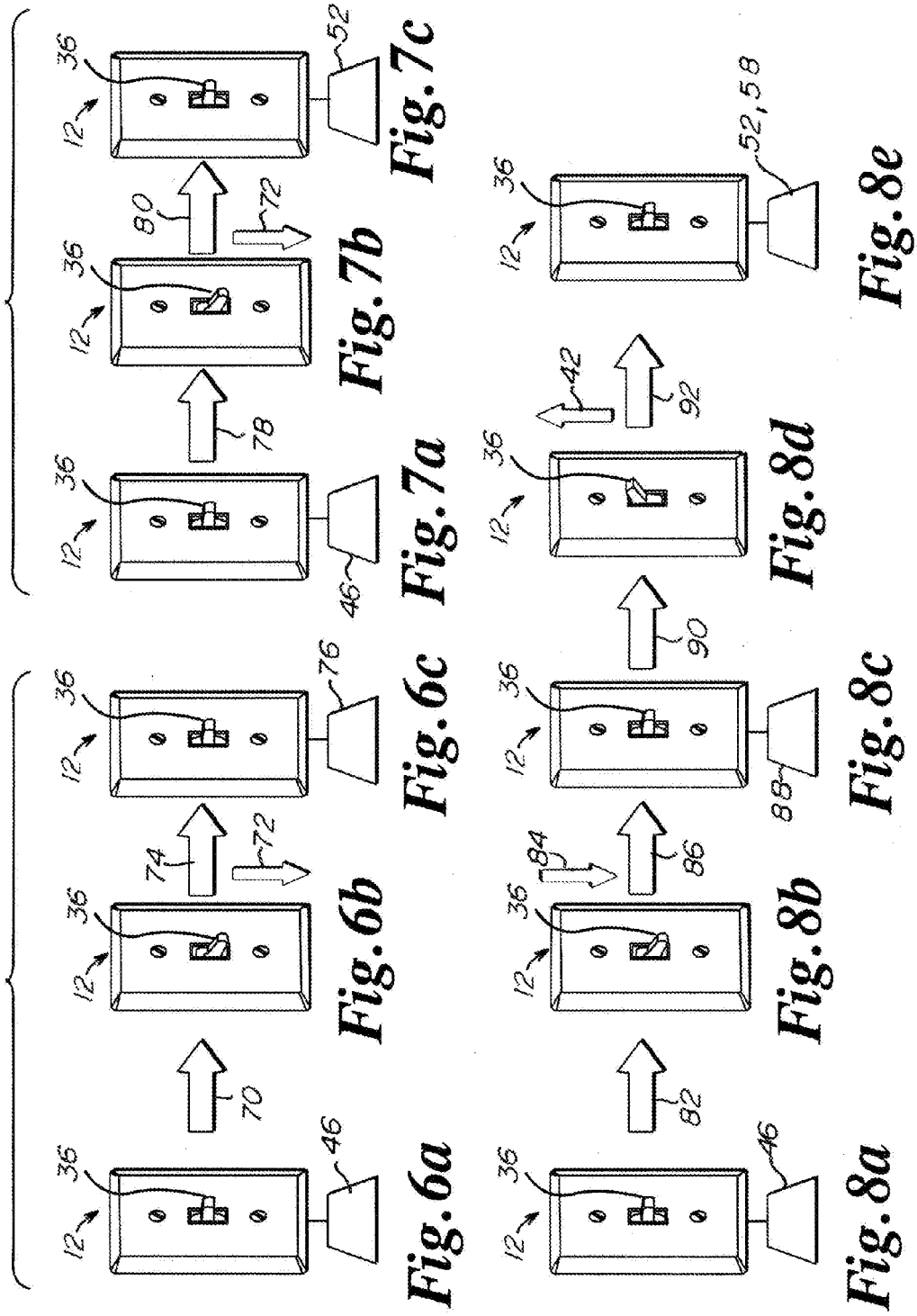


Fig. 6a Fig. 6b Fig. 6c Fig. 7a Fig. 7b Fig. 7c Fig. 8a Fig. 8b Fig. 8c Fig. 8d Fig. 8e

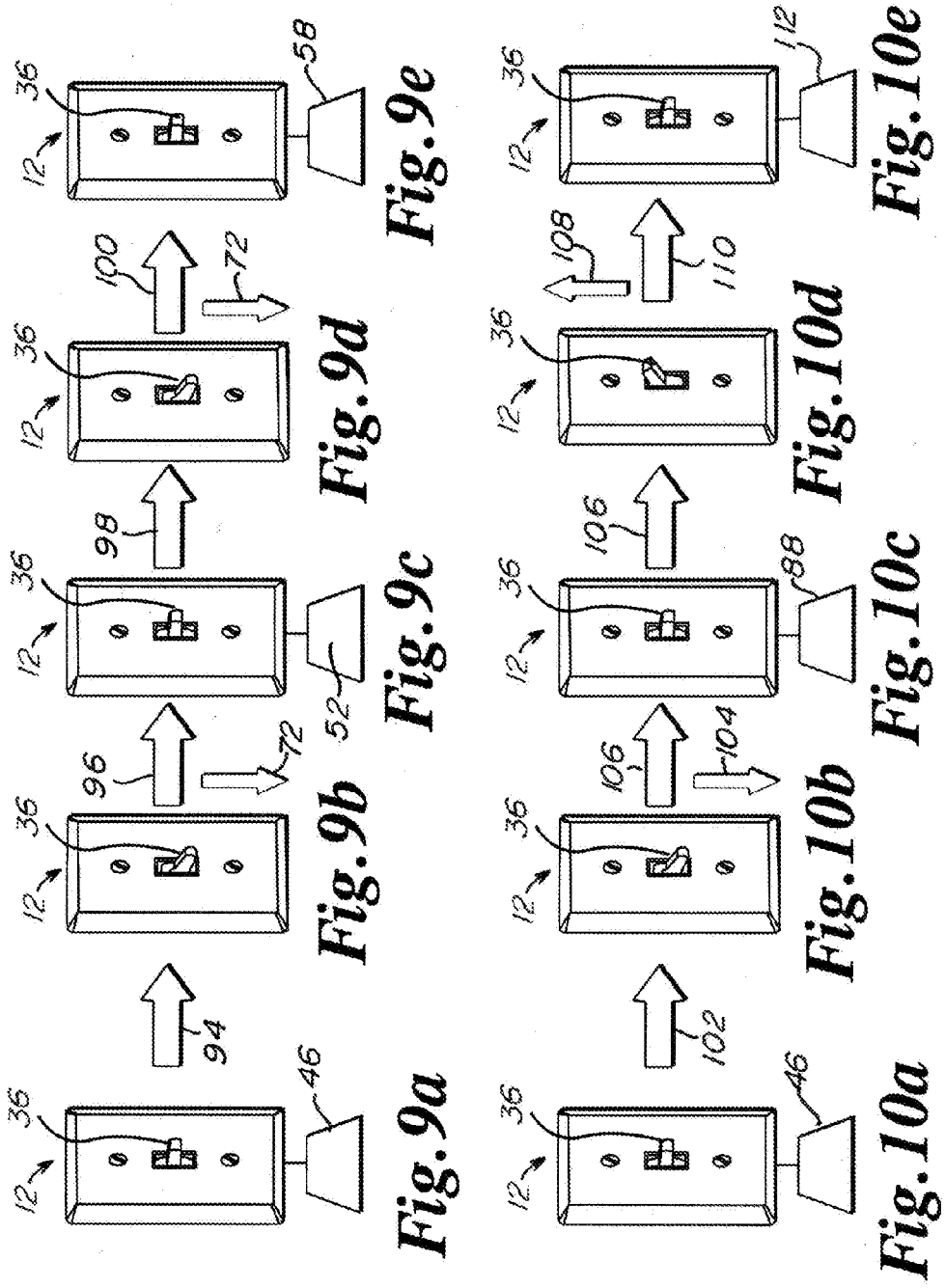


Fig. 9a Fig. 9b Fig. 9c Fig. 9d Fig. 9e

Fig. 10a Fig. 10b Fig. 10c Fig. 10d Fig. 10e

PROGRAMMABLE SWITCH AND SYSTEM

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Patent Application Ser. No. 62/203697 filed Aug. 11, 2015, which is incorporated by reference herein in its entirety.

FIELD OF THE INVENTION

[0002] The present invention in general relates to electrical switches used in lighting environments.

BACKGROUND OF THE INVENTION

[0003] In the past, switches in lighting environments have been primarily limited to manipulation into either an on or off position. Alternatively, switches in lighting environments have incorporated a "dimmer" or dimming feature, which utilizes a rotational member or a vertically sliding adjustment tab.

[0004] It has not been known to provide a programmable lighting switch for a lighting environment which may include various alternative lighting settings or sequences which may be selected by an individual through the toggling of a switch having a standard appearance.

[0005] The art referred to and/or described above is not intended to constitute an admission that any patent, publication or other information referred to herein is "prior art" with respect to this invention. In addition, this section should not be construed to mean that a search has been made or that no other pertinent information as defined in 37 C.F.R. §1.56(a) exists.

[0006] All U.S. patents and applications and all other published documents mentioned anywhere in this application are incorporated herein by reference in their entirety.

[0007] Without limiting the scope of the invention, a brief description of some of the claimed embodiments of the invention is set forth below. Additional details of the summarized embodiments of the invention and/or additional embodiments of the invention may be found in the Detailed Description of the Invention below.

[0008] A brief abstract of the technical disclosure in the specification is provided for the purposes of complying with 37 C.F.R. §1.72.

GENERAL DESCRIPTION OF THE INVENTION

[0009] In some embodiments a light switch will be in communication with a programmable device to provide a user with a plurality of options for light settings or sequences within a lighting environment.

[0010] In some embodiments, the light switch is in communication with a light fixture having light emitting diode or other types of light sources.

[0011] In at least one embodiment, the light switch is in communication with a light emitting diode light fixture having light emitting diode light sources and at least one photodetector providing for the transmission and receipt of pulsed light communication signals.

[0012] In some embodiments the light fixture is in communication with a power control unit having a controller, processor, or microprocessor having memory for storage of a plurality of different illumination settings or sequences for a lighting environment.

[0013] In some embodiments, the power control unit and/or controller, processor or microprocessor is in communication with a remotely located computer having a website, where the website is utilized to establish customized illumination settings or sequences for a lighting environment for storage within the memory of the controller, processor, or microprocessor, which in turn is in communication with, or integral to, the power control unit.

[0014] In at least one embodiment the visible light or embedded pulsed light communications may be comprised of a plurality of rapid flashes of light having a frequency which is not observable or detectable by the unaided eyes of an individual, where the rapid flashes of light may be organized into data packets and/or communications. In addition, the wavelength of the visible light is not in the infrared spectrum which may cause physical damage to an individual's eyes.

[0015] In some embodiments a software application, which is used to create customized illumination settings or sequences, may be downloaded onto a computer or server. The server may be located within a desired environment or remotely located relative to the light fixtures providing illumination within an environment. In some embodiments, the software application may be downloaded onto an electronic device, computer or server over the global telecommunications network or Internet.

[0016] In some embodiments, a facility administrator or individual may access a website to create customized illumination settings or sequences for a designated location within a lighting environment. An individual located within an adjacent space to the lighting environment may also access the website to create customized illumination settings or sequences for an alternative designated location.

[0017] In some embodiments, the light fixtures within a designated space will each include a unique identifier which may be utilized to create customized illumination settings within a lighting environment. In some alternative embodiments the controller, processor, or microprocessor may include memory where the unique identifier will be stored in memory. The unique identifier may include information and/or data representative of the location of the individual light fixtures within a lighting environment.

[0018] In some embodiments, the facility administrator or individual may activate previously customized illumination settings or sequences which have been stored on the controller, processor, or microprocessor by toggling a light switch.

[0019] In some embodiments, a switch, such as a light switch, may be in communication with the controller, processor, or microprocessor of a power control unit to activate or deactivate various types of programs representative of illumination settings or sequences which may be identified for example as Program A, B, or C.

[0020] In some embodiments, Program A and Program B represent customized and preset illumination configurations for one or more LED light panels or individual LEDs within an LED light panel within a desired location within a lighting environment.

[0021] In some embodiments, an individual may access a webpage in order to control individual LEDs and/or one or more LED light panels within a select lighting environment.

[0022] In at least one embodiment, a webpage on a computer or a server may be manipulated to initiate the trans-

mission of control signals to activate or deactivate one or more of the customized illumination programs.

[0023] In at least one embodiment, illumination Program A may define a preset or pre-established customized illumination configuration for individual LEDs or LED light panels within a lighting environment.

[0024] In at least one embodiment, illumination Program A and/or illumination Program B may represent any setting, sequence, or configuration of illumination and/or color of illumination for a lighting environment.

[0025] In at least one embodiment, illumination Program A may represent a setting where the LEDs are providing illumination at a level which is decreased by 50% from a fully on, or a maximum illumination setting.

[0026] In some embodiments, a switch may be used to alternate between customized illumination programs. The switch may include actuating elements to return the switch to an initial or neutral position following manipulation or toggling of a switch to activate an illumination setting or sequence.

[0027] In some embodiments, the manipulation of the switch in an upward direction, and the subsequent release of the switch, when the LED light sources and/or LED light panels within a lighting environment are operating at 100% capacity, will toggle the LED light sources and/or LED light panels between illumination Program A and illumination Program B.

[0028] In some embodiments, the manipulation of the switch in a downward direction, and the subsequent release of the switch, when the LED light sources and/or LED light panels within a lighting environment are operating at 100% capacity, will turn all or a portion of the LEDs light sources and/or LED light panels off

[0029] In some embodiments, the manipulation of the light switch in an upward direction, and the subsequent release of the light switch, will turn all or a portion of the LED light sources and/or LED light panels on to a fully operable position, or alternatively, to one of the customized pre-set illumination programs such as illumination Program A and/or illumination Program B.

[0030] In some embodiments, an individual may manipulate and hold the switch upwardly, which in turn may incrementally increase the illumination from one or more of the LED light sources and/or LED light panels to increase illumination within a lighting environment.

[0031] In an alternative embodiment, an individual once the LED light sources or LED light panels have been illuminated, may manipulate and hold the switch in a downward direction, which in turn will incrementally decrease the illumination of the LED light sources and/or LED light panels within the lighting environment.

[0032] In an alternative embodiment, an individual may subsequently manipulate the switch in an upwardly direction, and release the switch, which will return the illumination level for the LED light sources and/or LED light panels to a customized preprogrammed illumination setting or sequence such as the illumination levels established for either illumination Program A and/or illumination Program B.

[0033] In some embodiments illumination Program B will provide a different level, setting, or sequence of illumination as compared to illumination Program A within a designated lighting environment.

[0034] In some embodiments if an LED light panel is used within a classroom environment, a teacher may communicate to students that a movie or video presentation will be shown, whereupon the teacher may toggle the light switch to alternate the LEDs and/or LED light panels within the classroom from a pre-set illumination Program A configuration of full illumination to a pre-set configuration of illumination Program B, where the LEDs and/or LED light panels are providing illumination at less than 50% of full illumination. In some embodiments illumination Program B will represent a preset illumination setting for presentation of videos and/or movies.

[0035] In some embodiments either illumination Program A or illumination Program B may represent full illumination, and the other program may represent an alternative illumination level for an environment.

[0036] In some embodiments illumination Program B may represent a three-quarter setting for illumination as compared to illumination Program A. In some embodiments the illumination setting for illumination Program A is an increment of the illumination as provided by illumination Program B.

[0037] In some embodiments the toggling of the switch in an upward direction will increase the illumination setting between illumination Program A and illumination Program B, providing an increased level of illumination for an area within a facility.

[0038] Alternatively, in some embodiments the toggling of the switch in a downward direction will decrease the illumination between illumination Program A and illumination Program B, providing a decreased level of illumination for an area within a facility.

[0039] Alternatively, in some embodiments the toggling of the switch in a downward direction and holding the switch in a downward direction will incrementally and continuously decrease illumination for an area within a facility.

[0040] Alternatively, in some embodiments the toggling of the switch in an upward direction and holding the switch in an upward direction will incrementally and continuously increase the illumination for an area within a facility.

[0041] In some embodiments the toggling of a switch in an upward direction will turn the LEDs and/or LED light panels on. In some alternative embodiments the toggling of the switch in a downward direction will turn the LEDs and/or the LED light panels off

[0042] In some embodiments a preset illumination Program A will establish an illumination level, weather dim or bright, and/or color of individual LEDs or LED light panels, in any configuration as desired. For example, illumination Program A may represent the illumination level of morning sunshine on a partially cloudy day. Illumination Program B may represent the illumination level of afternoon sunshine of a mostly cloudy day. In addition, the color of the LEDs within the LED light panels may be adjusted from warm to cool, or from yellow to blue, as desired for a particular environmental setting.

[0043] In some embodiments preset illumination Program A may only illuminate one LED light panel while preset illumination Program B may illuminate all LED light panels within a given area.

[0044] In some embodiments a mainframe computer is utilized to run one or more LED light panels. In some embodiments each power distribution unit may control up to 16 LED light panels. Each power distribution unit may

operate between 120 and 277 V. In some embodiments each LED light panel is operating on 48 V.

[0045] In some embodiments, each LED light system may include a power unit controller which may control power distribution units. The power unit controllers may also meter and record the electricity being used by the LED light system. In some embodiments the power unit controllers transmit the recorded and/or metered amount of electricity being used by the LED light system to another server.

[0046] In some embodiments each LED light fixture may include an optical transceiver which may be identified as a Charlie unit. Each Charlie unit may include a photodetector, microphone, speaker, and/or camera. In some embodiments each Charlie unit may be programmed to provide communications such as telephone communications without the use of a telephone, where the communications are transmitted via pulsed light embedded LED light signals. The light signal transmissions may pass through a PBX unit.

[0047] In some embodiments an individual may become a customer of pulsed light communication and data transfer services by downloading of software onto an electronic device or incorporation of LED light panels within a facility. Each controller for a Charlie unit may also include facial and/or other biometric recognition software to facilitate communication over an embedded pulsed LED light network and/or system.

[0048] In a first alternative embodiment, a lighting system comprises a light fixture emitting illumination and a light switch in communication with the light fixture, the light switch having an actuator member, a controller in communication with the light switch, and a website in communication with the controller, the website communicating to the controller a plurality of illumination settings, the illumination settings comprising an initial illumination level, a pre-set illumination level, an incremental increase illumination level, an incremental decrease illumination level, and a termination of illumination, where manipulation of the actuator changes an illumination setting for the illumination emitted from the light fixture.

[0049] In a second alternative embodiment according to the first embodiment, the illumination settings further comprise a second pre-set illumination level.

[0050] In a third alternative embodiment according to the second embodiment, the controller comprises memory, the memory comprising the plurality of illumination settings.

[0051] In a fourth alternative embodiment according to the third embodiment, the memory comprises a light fixture identifier.

[0052] In a fifth alternative embodiment according to the fourth embodiment, the actuator member has an initial operative position, an activation and release operative position, and an activation and hold operative position.

[0053] In a sixth alternative embodiment according to the fifth embodiment, the activation and release operative position changes the illumination setting.

[0054] In a seventh alternative embodiment according to the sixth embodiment, the activation and hold operative position changes the illumination setting.

[0055] In an eighth alternative embodiment according to the seventh embodiment, the light fixture comprises light emitting diodes and an optical transceiver comprising a photodetector.

[0056] In a ninth alternative embodiment according to the eighth embodiment, the optical transceiver is constructed and arranged to provide pulsed light communication embedded within light in the visible spectrum.

[0057] In a tenth alternative embodiment, a lighting system comprises a light fixture emitting illumination and a light switch in communication with the light fixture, the light switch having an actuator member, a controller in communication with the light switch and the light fixture, and a website in communication with the controller, the website communicating to the controller a plurality of illumination settings, the illumination settings comprising an initial illumination level, a first pre-set illumination level, a second pre-set illumination level, an incremental increase illumination level, an incremental decrease illumination level, and a termination of illumination, and combinations thereof, wherein manipulation of the actuator changes an illumination setting for the illumination emitted from the light fixture.

[0058] In an eleventh alternative embodiment according to the tenth alternative embodiment, the controller comprises memory, the memory comprising the plurality of illumination settings.

[0059] In a twelfth alternative embodiment according to the eleventh alternative embodiment the memory comprises a light fixture identifier.

[0060] In a thirteenth alternative embodiment according to the twelfth alternative embodiment, the actuator member has an initial operative position, an activation and release operative position, and an activation and hold operative position.

[0061] In a fourteenth alternative embodiment according to the thirteenth alternative embodiment activation and release operative position changes the illumination setting.

[0062] In a fifteenth alternative embodiment according to the fourteenth alternative embodiment the activation and hold operative position changes the illumination setting.

[0063] In a sixteenth alternative embodiment according to the fifteenth alternative embodiment the light fixture comprises light emitting diodes and an optical transceiver comprising a photodetector.

[0064] In a seventeenth alternative embodiment according to the sixteenth alternative embodiment the optical transceiver is constructed and arranged to provide pulsed light communication embedded within light in the visible spectrum.

BRIEF DESCRIPTION OF THE DRAWINGS

[0065] FIG. **1** depicts a block diagram of one alternative embodiment of the invention;

[0066] FIG. **2** depicts a bottom environmental view of one alternative embodiment of an LED light fixture as utilized with the invention;

[0067] FIG. **3** depicts an isometric view of one alternative embodiment of a light switch utilized in the practice of the invention;

[0068] FIG. **4** depicts an isometric view of one alternative embodiment of a light switch utilized in the practice of the invention;

[0069] FIG. **5***a* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0070] FIG. **5***b* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0071] FIG. **5***c* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0072] FIG. **5***d* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0073] FIG. **5***e* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0074] FIG. **5***f* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0075] FIG. **5***g* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0076] FIG. **5***h* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0077] FIG. **5***i* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0078] FIG. **5***j* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0079] FIG. **6***a* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0080] FIG. **6***b* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0081] FIG. **6***c* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0082] FIG. **7***a* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0083] FIG. **7***b* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0084] FIG. **7***c* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0085] FIG. **8***a* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0086] FIG. **8***b* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0087] FIG. **8***c* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0088] FIG. **8***d* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0089] FIG. **8***e* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0090] FIG. **9***a* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0091] FIG. **9***b* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0092] FIG. **9***c* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0093] FIG. **9***d* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0094] FIG. **9***e* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0095] FIG. **10***a* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0096] FIG. **10***b* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0097] FIG. **10***c* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention;

[0098] FIG. **10***d* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention; and

[0099] FIG. **10***e* depicts an isometric view of one alternative embodiment of a light switch being manipulated in the practice of the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0100] In at least one embodiment, the programmable switch and system is indicated by the numeral 10. In some embodiments as may be seen in FIG. **1**, the programmable switch and system **10** includes a switch **12** which is in communication with a light fixture **14**. Light fixture **14** is in communication with a controller, processor, or microprocessor **16** having memory. The controller **16** may be a portion of a power control unit **18**. In some embodiments, the power control unit **18** and/or controller, processor or microprocessor **16** is in communication with a remotely located computer having a website **20**, where the website **20** is utilized to establish customized illumination settings or sequences for a lighting environment for storage within the memory of the controller, processor, or microprocessor, **16**.

[0101] In some embodiments, controller **16** includes any number of customized, pre-set illumination settings or sequences. For convenience, customized, pre-set illumination settings or sequences will be identified as Program A reference numeral **22**, Program B reference numeral **24**, and/or Program C reference numeral **26**. It should be noted that any number of customized, pre-set illumination settings or sequences may be stored in memory on controller **16** as desired by an individual.

[0102] In some embodiments, as may be seen in FIG. **2**, the light fixture **14** includes a cover **28** having a transparent, translucent, and/or reflective surface. Light fixture **14** may also include a plurality of light emitting diodes for LEDs **30**. Further, light fixture **14** may include an optical transceiver **32**. Optical transceiver **32** may be referred to as a Charlie unit. Optical transceiver **32** preferably includes a photodetector **34** and an internal controller, microprocessor, and/or processor.

[0103] In some embodiments any number of light fixtures **14** may be utilized within a lighting environment. In some embodiments the controller **16** regulates the illumination from one or any number of light fixtures **14** and/or individual light emitting diodes **30** within individual or a plurality of

different light fixtures **14** to provide a customized pre-set illumination setting or sequence such as Programs A, B, and/or C.

[0104] In some embodiments, the LEDs **30** may be used to transmit both data or information, and illumination. In some embodiments the controller within the optical transceiver **32** is in electrical communication with the LEDs **30**. The controller within the optical transceiver **32** may also be in communication with the controller **16** through the use of a category six cable. In some embodiments, each of the power control units **18** may be in communication with up to sixteen or more light fixtures **14**. In some embodiments, each power control unit **18** meters the amount of electricity being utilized by the LEDs **30** within a particular light fixture **14**. The controller **16** of the power control unit **18** also functions to interpret the functions or settings of the switch **12** which is in communication with the light fixture **14**.

[0105] In some embodiments the power control unit **18** transmits the recorded and/or metered amount of electricity being used by the LED light fixtures **14** to another remote computer or server. The remote computer or server may control a plurality of power control units **18**.

[0106] In some embodiments each optical transceiver **32** may additionally include a microphone, speaker, and/or camera. In some embodiments each controller **16** for an optical transceiver **32** may also include facial and/or other biometric recognition software to facilitate communication over an embedded pulsed LED light communication network and/or system. In some embodiments each optical transceiver **32** may provide communications, such as telephone communications, without the use of a telephone, where the communication is transmitted via pulsed light embedded LED light communication signals. The light communication signal transmissions may also pass through a PBX unit.

[0107] In some embodiments, an individual may become a customer of pulsed light communication and data transfer services by downloading software onto an electronic device (which may be a cellular telephone for example) and carrying the electronic device into a transmission/reception area which incorporates the use of LED light fixtures **14** within or proximate to a facility. In some embodiments, a software application, which is used to create customized illumination settings or sequences, may be downloaded onto a computer or server. The server may be located within a desired environment or remotely located relative to the light fixtures **14** providing illumination within a lighting environment. In some embodiments, the software application may be downloaded onto an electronic device, computer or server over the global telecommunications network or Internet.

[0108] In some embodiments, a facility administrator or individual may access a website **20** to create customized illumination settings or sequences for a designated location within a lighting environment. An individual located within an adjacent space to the lighting environment may also access the website **20** to create customized illumination settings or sequences for an alternative designated location.

[0109] In at least one embodiment, the light switch **12** is in communication with a light emitting diode light fixture **14** having light emitting diode light sources **30** and at least one photodetector **34** providing for the transmission and receipt of pulsed light communication signals. In at least one embodiment the visible light or embedded pulsed light communications may be comprised of a plurality of rapid flashes of light having a frequency which is not observable or detectable by the unaided eyes of an individual, where the rapid flashes of light may be organized into data packets and/or communications. In addition, the wavelength of the visible light is not in the infrared spectrum, which may cause physical damage to an individual's eyes.

[0110] In some embodiments each controller **16** for an optical transceiver **32** may also include facial and/or other biometric recognition software to facilitate communication over an embedded pulsed LED light network and/or system.

[0111] In some embodiments the remote computer or server, which is in communication with one or more power control units **18**, may perform an accounting function.

[0112] In some embodiments, as may be seen in FIG. **3** and FIG. **4**, a switch **12** is shown. Switch **12** preferably includes an actuator **36** which may be toggled upwardly or downwardly in a vertical direction. Switch **12** preferably includes one or more positioning elements which return the actuator **36** to a central at rest position relative to the actuator slot **38**, after the actuator **36** has been toggled upwardly or downwardly within the actuator slot **38** and released by an individual.

[0113] In at least one alternative embodiment, the switch **12** is used to activate various types of customized pre-set illumination settings or sequences which have been previously identified as Program A reference numeral **22**, program B reference numeral **24** and/or Program C reference numeral **26**. Program A **22**, Program B **24**, and/or Program C **26** may be used to activate one or more of the customized pre-set illumination settings or sequences for one or more light fixtures **14** or individual light emitting diodes **30** within individual light fixtures **14**.

[0114] In some embodiments an individual may access a webpage **20** on a computer which controls individual LEDs **30** and/or one or more LED light fixtures **14** within a designated illumination environment. The computer via the webpage **20** may control the illumination from the LED light sources **30** and/or the LED light fixtures **14** for activation of a desired program such as Program A **22** within an illumination environment. In some embodiments, Program A **22** and/or Program B **24** may be configured to provide any desired type and/or color of illumination within a lighting environment.

[0115] In at least one embodiment, Program A **22** may be a pre-set illumination configuration where the LEDs **30** are providing illumination at a level which is decreased by 50% from a fully on, or the maximum illumination level within a lighting environment. In some embodiments, the manipulation of the actuator **36** in an upward direction after the lights are already on, will toggle the LED light sources **30** and/or LED light fixtures **14** between Program A **22** and Program B **24**.

[0116] In some embodiments the manipulation of the actuator **36** in a downward direction after the lights are already on, will turn all or a portion of the LEDs **30** and/or LED fixtures **14** off

[0117] In some embodiments the manipulation of the actuator **36** in an upward direction will turn all or a portion of the LEDs **30** and/or LED light fixtures **14** on to a fully operable position, or alternatively to one of the pre-set programs such as Program A **22** and/or Program B **24**.

[0118] In some embodiments an individual may hold the actuator **36**, which has been previously manipulated upwardly, which in turn will continuously and incrementally

increase the illumination from one or more of the LED light sources **30** and/or LED light fixtures **14** to increase illumination within a designated illumination environment. The incremental increase in illumination will continue until such time as the actuator **36** has been released, for return to its central at rest position.

[0119] In an alternative embodiment, an individual may hold the actuator **36** in a downward direction once the LEDs **30** or LED light fixtures **14** have been illuminated, which in turn, will incrementally decrease the illumination of the LEDs **30** and/or LED light fixtures **14**. The incremental decrease in illumination will continue until such time as the actuator **36** has been released, for return to its central at rest position.

[0120] In an alternative embodiment, subsequent to the reduction in illumination, an individual may toggle the actuator **36** in an upward direction which will return the illumination level for the LEDs **30** and/or LED light fixtures **14** to one of the pre-programmed settings such as Program A **22** and/or Program B **24**. In some embodiments Program B **24** activates the light fixtures **14** to provide a different illumination setting as compared to Program A **22**.

[0121] In some embodiments, if an LED light fixture **14** is used within a classroom environment, a teacher may communicate to students that a movie or video presentation will be shown, whereupon the teacher may toggle the actuator **36** to alternate the illumination from the LEDs **30** and/or LED light fixtures **14** within the classroom from a pre-set Program A **22** configuration of full illumination, to a pre-set configuration of Program B **24** where the LEDs **30** and/or LED light fixtures **14** are providing illumination at less than 50% of full illumination. In some embodiments Program B **24** will represent a pre-set illumination setting for presentation of videos and/or movies.

[0122] In some embodiments either Program A **22** or Program B **24** may represent full illumination, and the other program may represent an alternative illumination level for a lighting environment. In some embodiments Program B **24** may represent a 75% illumination setting as compared to Program A.

[0123] In some embodiments the illumination setting for Program A **22** is an increment of the illumination setting as provided by Program B **24**. In some embodiments, the toggling of the actuator **36** in an upward direction will increase the illumination setting between Program A **22** and Program B **24** providing an increased level of illumination for a lighting environment. Alternatively, in some embodiments the toggling of the actuator **36** in a downward direction will decrease the illumination between Program A **22** and Program B **24** providing a decreased level of illumination for a lighting environment.

[0124] Alternatively, in some embodiments the toggling of the actuator **36** in a downward direction, and holding the actuator **36** in a downward direction, will incrementally and continuously decrease illumination for a lighting environment. In some embodiments the toggling of the actuator **36** in an upward direction, and holding the actuator **36** in an upward direction, will incrementally and continuously increase the illumination for a lighting environment.

[0125] In some embodiments the toggling of the actuator **36** in an upward direction will turn the LEDs **30** and/or LED light fixtures **14** on. In some alternative embodiments the toggling of the actuator **36** in a downward direction will turn the LEDs **30** and/or the LED light fixtures **14** off In some alternative embodiments toggling the actuator **36** in an upward direction subsequent to the illumination of the LEDs **30** and/or LED light fixtures **14** will result in a change of illumination generated from the LEDs **30** and/or LED light fixtures **14** from pre-set Program A **22** to pre-set Program B **24**.

[0126] In some embodiments, pre-set Program A **22** may establish an illumination level, weather dim or bright, and/or color, for the individual LEDs **30** or LED light fixtures **14** in any configuration as desired by an individual.

[0127] In some embodiments, Program A **22** may represent the illumination level and color of morning sunshine on a partially cloudy day. Program B **24** may represent the illumination level and color of afternoon sunshine of a mostly cloudy day. In addition, the color of the LEDs **30** within the LED light fixtures **14** may be adjusted from warm colored light to cool colored light, or from yellow to blue, as desired for a particular lighting environmental.

[0128] In some embodiments Program A **22** may represent the illumination of one or more LED light fixtures **14** within a first area where Program B represents the illumination of more or less LED light fixtures **14** within the identical area. Therefore, pre-set Program A **22** may in some embodiments, only illuminate one LED light fixture **14** while pre-set Program B **24** may illuminate all LED light fixtures **14** within a given lighting environment.

[0129] In some embodiments a light switch **12** will be in communication with a programmable device to provide a user with a plurality of options for light settings or sequences within a lighting environment.

[0130] In some embodiments, the light switch **12** is in communication with a light fixture **14** having light emitting diode **30** or other types of light sources. An individual is not restricted to the use of LED's **30** herein.

[0131] In some embodiments, the light fixtures **14** within a designated space will each include a unique identifier which may be utilized to create customized illumination settings or sequences within a lighting environment. In some alternative embodiments the unique identifier will be stored in memory of the controller **16**. The unique identifier may include information and/or data representative of the location of the individual light fixtures **14** or light sources **30** within a lighting environment.

[0132] In some embodiments, the facility administrator or individual may activate previously customized illumination settings or sequences which have been stored on the controller, processor, or microprocessor **16** by toggling an actuator **36**.

[0133] In some embodiments as depicted in **5***a*, a switch **12** is shown with the actuator **36** in an initial central position relative to actuator slot **38**. In FIG. **5***a* no illumination is being generated by the light emitting diodes **30** or light fixtures **14**.

[0134] In some embodiments arrow **40** depicts a subsequent position of actuator **36** of FIG. **5***b*, in which the actuator **36** has been toggled in an upward direction within actuator slot **38**. The toggling and release of the actuator **36** in an upward direction is identified by arrow **42**. Following the toggling and immediate release of the actuator **36** in an upward direction, a return mechanism (not shown) will impart downward motion to the actuator **36**, returning the actuator **36** to a centralized position within the actuator slot **38**.

[0135] In some embodiments arrow **44** depicts a subsequent illumination level as shown in FIG. **5***c*. FIG. **5***c* shows the switch **12** in a central position following the toggling and release of the actuator **36** in an upward direction **42**. In FIG. **5***c* the light emitting diodes **30** or light fixtures **14** are fully illuminated to emit 100% illumination as identified by reference numeral **46**. The initial toggling and release of the actuator **36** in an upward direction **42** has altered the state of the light emitting diodes **30** and light fixtures **14** from being off, to 100% illumination level **46**.

[0136] In some embodiments arrow **48** depicts a subsequent manipulation of actuator **36** as shown in FIG. **5***d*. In FIG. **5***d*, once the light emitting diodes **30** or light fixtures **14** are emitting 100% illumination **46**, the actuator **36** may be manipulated upwardly and released as depicted by arrow **42**. The toggling and release of the actuator **36** in an upward direction **42**, following the full illumination **46** of the LEDs **30** or light fixtures **14**, will trigger the initiation of one of the pre-set illumination programs such as Program A **22**.

[0137] In some embodiments arrow **50** depicts a subsequent illumination level as shown in FIG. **5***e*, and a change in the amount of illumination generated by the light emitting diodes **30** and light fixtures **14**. In FIG. **5***e*, the return mechanism has manipulated the actuator **36** to a central position. The toggling and release **42** of the actuator **36** in an upward direction **42** once full illumination has been established, will initiate Program A **22**, which in one embodiment will trigger the controller **16** to reduce illumination emitted from the light emitting diodes **30** and light fixtures **14** to a 50% level as identified by reference numeral **52**.

[0138] In some embodiments arrow **54** depicts a subsequent manipulation of actuator **36** as shown in FIG. **5***f* and a change in the amount of illumination generated by the light emitting diodes **30** and light fixtures **14**. In FIG. **5***f*, the actuator **36** has been toggled in an upward direction and released **42**, returning the actuator **36** to a central position of FIG. **5***g*.

[0139] In some embodiments arrow **56** depicts the subsequent illumination level and transition from pre-set Program A **22** to pre-set Program B **24**. FIG. **5***g* depicts a decrease of illumination resulting from the initiation of Program B **24** in substitution for Program A **22**. In FIG. **5***g*, the actuator **36** has been toggled in an upward direction and released **42**, returning the actuator **36** to a central position. The toggling of the actuator **36** will implement the initiation of Program B **24**, which in one embodiment will trigger the controller **16** to reduce illumination emitted from the light emitting diodes **30** and light fixtures **14** to a level of 25% of full illumination as identified by reference numeral **58**.

[0140] In some embodiments arrow **60** depicts a subsequent elevation of actuator **36**. In FIG. **5***h* the actuator **36** has been toggled in an upward direction and maintained in an upward direction as depicted by arrow **62**.

[0141] In some embodiments arrow **64** depicts an incremental increase or gain in illumination from the pre-set illumination level **58** of Program B **24**. In FIG. **5***i*, the actuator **36** has been held **62** in an upward direction until a desired illumination level has been acquired, whereupon the actuator **36** will be released as depicted by arrow **66**. For example, the actuator **36** may be released when an illumination level of 65%, as identified by reference numeral **68**, has been obtained. The return of the actuator **36** to a central position is depicted in FIG. **5***j*.

[0142] In some embodiments as depicted in **6***a*, switch **12** is shown with the actuator **36** in an initial central position relative to actuator slot **38**. In FIG. **6***a*, 100% illumination, reference numeral **46**, is being generated by the light emitting diodes **30** or light fixtures **14**.

[0143] In some embodiments arrow **70** depicts a subsequent position of actuator **36** of FIG. **6***b*, in which the actuator **36** has been toggled in a downward direction **72** within actuator slot **38**. The toggling and release of the actuator **36** in a downward direction is identified by arrow **72**. Following the toggling and immediate release of the actuator **36** in a downward direction **72**, a return mechanism (not shown) will impart upward motion to the actuator **36**, returning the actuator **36** to a centralized position within the actuator slot **38**.

[0144] In some embodiments arrow **74** depicts a subsequent illumination level as shown in FIG. **6***c*. FIG. **6***c* shows the switch **12** in a central position following the toggling and release of the actuator **36** in a downward direction **72**. In FIG. **6***c* the light emitting diodes **30** or light fixtures **14** have been turned off to generate no illumination as identified by reference numeral **76**. The initial toggling and release of the actuator **36** in a downward direction **72** has altered the state of the light emitting diodes **30** and light fixtures **14** from being fully on **46** to off **76**.

[0145] In some embodiments as depicted in **7***a*, switch **12** is shown with the actuator **36** in an initial central position relative to actuator slot **38**. In FIG. **7***a*, 100% illumination, reference numeral **46**, is being generated by the light emitting diodes **30** or light fixtures **14**.

[0146] In some embodiments arrow **78** depicts a subsequent position of actuator **36** of FIG. **7***b*, in which the actuator **36** has been toggled in a downward direction within actuator slot **38**. The toggling and release of the actuator **36** in a downward direction is identified by arrow **72**. Following the toggling and immediate release of the actuator **36** in a downward direction **72**, a return mechanism (not shown) will impart upward motion to the actuator **36**, returning the actuator **36** to a centralized position within the actuator slot **38**.

[0147] In some embodiments arrow **80** depicts a subsequent illumination level as shown in FIG. **7***c*. FIG. **7***c* shows the switch **12** in a central position following the toggling and release of the actuator **36** in a downward direction **72**. In FIG. **7***c*, once the light emitting diodes **30** or light fixtures **14** are emitting 100% illumination **46**, the actuator **36** may be manipulated downwardly and released as depicted by arrow **72**. The toggling and release of the actuator **36** in a downward direction **72** will trigger the initiation of one of the pre-set illumination programs such as Program A **22**.

[0148] In some embodiments arrow **80** depicts a subsequent illumination level as shown in FIG. **7***c*, and a change in the amount of illumination generated by the light emitting diodes **30** and light fixtures **14**. In FIG. **7***c* the initiation of Program A **22**, will trigger the controller **16** to reduce illumination emitted from the light emitting diodes **30** and light fixtures **14** to a 50% level as identified by reference numeral **52**.

[0149] In some embodiments as depicted in **8***a*, switch **12** is shown with the actuator **36** in an initial central position relative to actuator slot **38**. In FIG. **7***a*, 100% illumination, reference numeral **46**, is being generated by the light emitting diodes **30** or light fixtures **14**.

[0150] In some embodiments arrow **82** depicts a subsequent position of actuator **36** of FIG. **8***b*, in which the actuator **36** has been toggled in a downward direction within actuator slot **38**. The toggling and holding of the actuator **36** in a downward direction is identified by arrow **84**.

[0151] In some embodiments arrow **84** also depicts an incremental decrease or dimming of illumination from the 100% illumination level **46**. In FIG. **8***b*, the actuator **36** has been toggled and held **84** in a downward direction until a desired illumination level has been acquired, whereupon the actuator **36** will be released. For example, the actuator **36** may be released when an illumination level of 15% has been obtained, as identified by reference numeral **88**. The return of the actuator **36** to a central position is depicted in FIG. **8***c*. The change in the illumination level emitted from the light emitting diodes **30** and light fixtures **14** between FIGS. **8***a* and **8***c* is depicted by arrow **86**.

[0152] In some embodiments arrow **90** depicts a subsequent manipulation of actuator **36** as shown in FIG. **8***d*. In FIG. **8***d*, once the light emitting diodes **30** or light fixtures **14** are emitting for example 15% illumination **88**, the actuator **36** may be manipulated upwardly and released as depicted by arrow **42**. The toggling and release of the actuator **36** in an upward direction **42** will trigger the initiation of one of the pre-set illumination programs such as Program A **22** or Program B **24**, and a corresponding illumination level of 50%, reference numeral **52**, or 25%, reference numeral **58**, respectively.

[0153] In some embodiments arrow **92** depicts a subsequent illumination level as shown in FIG. **8***e*, and a change in the amount of illumination generated by the light emitting diodes **30** and light fixtures **14**. In FIG. **8***e*, the actuator **36** has been toggled in an upward direction and released **42**, and the return mechanism has manipulated the actuator **36** to a central position. The toggling and release **42** of the actuator **36** in an upward direction, once any desired illumination level has been established, will initiate a pre-set program such as either Program A **22** or Program B **24**, which in one embodiment will trigger the controller **16** to increase illumination emitted from the light emitting diodes **30** and light fixtures **14**.

[0154] In some embodiments as depicted in **9***a*, switch **12** is shown with the actuator **36** in an initial central position relative to actuator slot **38**. In FIG. **9***a*, 100% illumination, reference numeral **46**, is being generated by the light emitting diodes **30** or light fixtures **14**.

[0155] In some embodiments arrow **94** depicts a subsequent position of actuator **36** of FIG. **9***b*, in which the actuator **36** has been toggled in a downward direction within actuator slot **38**. The toggling and release of the actuator **36** in a downward direction is identified by arrow **72**. Following the toggling and immediate release of the actuator **36** in a downward direction **72**, a return mechanism (not shown) will impart upward motion to the actuator **36**, returning the actuator **36** to a centralized position within the actuator slot **38**.

[0156] In some embodiments arrow **96** depicts a subsequent illumination level as shown in FIG. **9***c*. FIG. **9***c* shows the switch **12** in a central position following the toggling and release of the actuator **36** in a downward direction **72**. In FIG. **9***c*, the toggling and release of the actuator **36** in a downward direction **72** will trigger the initiation of one of the pre-set illumination programs such as Program A **22** and will signal the controller **16** to reduce illumination emitted from the light emitting diodes **30** and light fixtures **14** to a level of 50% identified by reference numeral **52**.

[0157] In some embodiments arrow **98** depicts a subsequent position of actuator **36** of FIG. **9***d*, in which the actuator **36** has been toggled in a downward direction. The toggling and release of the actuator **36** in a downward direction is identified by arrow **72**. Following the toggling and immediate release of the actuator **36** in a downward direction **72**, the actuator **36** will return to a centralized position within the actuator slot **38**.

[0158] In some embodiments arrow **100** depicts a subsequent illumination level as shown in FIG. **9***e*. FIG. **9***e* shows the switch **12** in a central position following the toggling and release of the actuator **36** in a downward direction **72**. In FIG. **9***e*, the toggling and release of the actuator **36** in a downward direction **72** will trigger the initiation of another of the pre-set illumination programs such as Program B **24**, and will signal the controller **16** to reduce illumination emitted from the light emitting diodes **30** and light fixtures **14** to a level of 25% identified by reference numeral **58**.

[0159] In some embodiments as depicted in **10***a*, switch **12** is shown with the actuator **36** in an initial central position relative to actuator slot **38**. In FIG. **10***a*, 100% illumination, reference numeral **46**, is being generated by the light emitting diodes **30** or light fixtures **14**.

[0160] In some embodiments arrow **102** depicts a subsequent position of actuator **36** of FIG. **10***b*, in which the actuator **36** has been toggled in a downward direction within actuator slot **38**. The toggling and holding of the actuator **36** in a downward direction is identified by arrow **104**.

[0161] In some embodiments arrow **106** depicts an incremental decrease or dimming of illumination from the 100% illumination level **46**. In FIG. **10***b*, the actuator **36** has been toggled and held **104** in a downward direction until a desired illumination level has been acquired, whereupon the actuator **36** will be released. For example, the actuator **36** may be released when an illumination level of 15%, reference numeral **88** has been obtained, as identified in FIG. **10***c*. The return of the actuator **36** to a central position is depicted in FIG. **10***c*.

[0162] In some embodiments arrow **106** depicts a subsequent elevation of actuator **36**. In FIG. **10***d* the actuator **36** has been toggled in an upward direction and maintained in an upward direction as depicted by arrow **108**.

[0163] In some embodiments arrow **110** depicts an incremental increase or gain in illumination from the illumination level **88** shown in FIG. **10***c*. In FIG. **10***d*, the actuator **36** has been toggled and held **108** in an upward direction until a desired illumination level has been acquired, whereupon the actuator **36** will be released as shown in FIG. **10***e*. For example, the actuator **36** may be released when an illumination level of 85%, as identified by reference numeral **112**, has been obtained.

[0164] It should be noted that in initial illumination level of 100% is not required, and the initial illumination level may be in the amount of light as desired by an individual.

[0165] In some embodiments, any upward toggling and release, upward toggling and holding, downward toggling and release, and downward toggling and holding may be applied to actuator **36** in any combination, in order to provide a desired pre-set illumination level, and that the examples identified herein have been provided for illustrative purposes only and are not restrictive of the number or

Programs or the values of illumination which may be selected at website **20** for storage into controller **16**.

[0166] In some alternative embodiments, an individual may utilize website **20** to establish a timed or sequenced illumination program on controller **16**. For example, a teacher in an elementary school setting may access website in order to create a sequenced pre-set program where the light emitting diodes **30** and/or light fixtures **14** will turn off for a period of time of 1 to 2 seconds, at five minutes before every new hour during a school day. The termination of illumination from the light emitting diodes **30** and/or light fixtures **14** will signal to students that the current projects are to be completed and educational items returned to storage in preparation for the next lesson which will begin on the next hour of the school day. A teacher will therefore not be required to be continuously marshaling time and may devote more attention to the student's educational needs.

[0167] In an alternative embodiment, each teacher within a school may access website **20** in order to individually customize a classroom setting with any desired number of pre-set illumination programs on controller **16**.

[0168] In an alternative embodiment, a school administrator may access website **20** in order to override any individual classroom pre-set illumination program on controller **16**, where the school administrator has selected a pre-set sequence of illumination flashes as a program on controller **16**, to signal a security situation for teachers to close and lock classroom doors until such time as the security situation has been resolved. Alternatively, a school administrator may access website **20** in order to override any individual classroom pre-set illumination programs on controller **16** to signal a schoolwide assembly.

[0169] In some embodiments, computer or server hosting websites **20** will include timing, date, calendar, and/or other features to assist in the establishment of pre-set illumination programs for any individual light emitting diode **30**, combination of light emitting diodes **30**, individual light fixture **14**, or combination of light fixtures **14** in any combination.

[0170] In a first alternative embodiment, a lighting system comprises a light fixture emitting illumination and a light switch in communication with the light fixture, the light switch having an actuator member, a controller in communication with the light switch, and a website in communication with the controller, the website communicating to the controller a plurality of illumination settings, the illumination settings comprising an initial illumination level, a pre-set illumination level, an incremental increase illumination level, an incremental decrease illumination level, and a termination of illumination, where manipulation of the actuator changes an illumination setting for the illumination emitted from the light fixture.

[0171] In a second alternative embodiment according to the first embodiment, the illumination settings further comprise a second pre-set illumination level.

[0172] In a third alternative embodiment according to the second embodiment, the controller comprises memory, the memory comprising the plurality of illumination settings.

[0173] In a fourth alternative embodiment according to the third embodiment, the memory comprises a light fixture identifier.

[0174] In a fifth alternative embodiment according to the fourth embodiment, the actuator member has an initial operative position, an activation and release operative position, and an activation and hold operative position.

[0175] In a sixth alternative embodiment according to the fifth embodiment, the activation and release operative position changes the illumination setting.

[0176] In a seventh alternative embodiment according to the sixth embodiment, the activation and hold operative position changes the illumination setting.

[0177] In an eighth alternative embodiment according to the seventh embodiment, the light fixture comprises light emitting diodes and an optical transceiver comprising a photodetector.

[0178] In a ninth alternative embodiment according to the eighth embodiment, the optical transceiver is constructed and arranged to provide pulsed light communication embedded within light in the visible spectrum.

[0179] In a tenth alternative embodiment, a lighting system comprises a light fixture emitting illumination and a light switch in communication with the light fixture, the light switch having an actuator member, a controller in communication with the light switch and the light fixture, and a website in communication with the controller, the website communicating to the controller a plurality of illumination settings, the illumination settings comprising an initial illumination level, a first pre-set illumination level, a second pre-set illumination level, an incremental increase illumination level, an incremental decrease illumination level, and a termination of illumination, and combinations thereof, wherein manipulation of the actuator changes an illumination setting for the illumination emitted from the light fixture.

[0180] In an eleventh alternative embodiment according to the tenth alternative embodiment, the controller comprises memory, the memory comprising the plurality of illumination settings.

[0181] In a twelfth alternative embodiment according to the eleventh alternative embodiment the memory comprises a light fixture identifier.

[0182] In a thirteenth alternative embodiment according to the twelfth alternative embodiment, the actuator member has an initial operative position, an activation and release operative position, and an activation and hold operative position.

[0183] In a fourteenth alternative embodiment according to the thirteenth alternative embodiment activation and release operative position changes the illumination setting.

[0184] In a fifteenth alternative embodiment according to the fourteenth alternative embodiment the activation and hold operative position changes the illumination setting.

[0185] In a sixteenth alternative embodiment according to the fifteenth alternative embodiment the light fixture comprises light emitting diodes and an optical transceiver comprising a photodetector.

[0186] In a seventeenth alternative embodiment according to the sixteenth alternative embodiment the optical transceiver is constructed and arranged to provide pulsed light communication embedded within light in the visible spectrum.

[0187] Applicant incorporates by reference herein U.S. patent application Ser. Nos. and U.S. Pat. Nos.: 15/168,939; 15/076,093; 15/042,830; 15/005,305; 15/013,131; 15/042,843; 14/817,411; 14/597,648; 14/597,518; 14/557,705; 14/546,218; 14/537,470; 14/288,917; 14/290,152; 14/270,670; 14/207,934; 12/126,469; 12/126,647; 12/126,342; 12/032,908; 11/433,979; 62/203,697; 61/927,663; 61/927,638; 61/867,731; 61/819,861; 61/778,672; 61/165,546; 61/432,949; 60/931,611; 60/322,166; 60/248,894; 9,265,

112; 9,258,864; 9,294,198; 9,100,124; 9,246,594; 9,252,883; 9,363,018; 8,886,045; 8,751,390; 8,902,076; 8,593,299; 8,571,411; 8,331,790; 8,744,267; 8,543,505; 8,890,773; 8,188,879; 8,687,965; 8,188,878; 7,046,160; and 6,879,263.

[0188] This completes the description of the preferred and alternate embodiments of the invention. Those skilled in the art may recognize other equivalents to the specific embodiment described herein which equivalents are intended to be encompassed by the claims attached hereto.

[0189] The above disclosure is intended to be illustrative and not exhaustive. This description will suggest many variations and alternatives to one of ordinary skill in this art. The various elements shown in the individual figures and described above may be combined or modified for combination as desired. All these alternatives and variations are intended to be included within the scope of the claims where the term "comprising" means "including, but not limited to".

[0190] These and other embodiments which characterize the invention are pointed out with particularity in the claims annexed hereto and forming a part hereof However, for further understanding of the invention, its advantages and objectives obtained by its use, reference should be made to the drawings which form a further part hereof and the accompanying descriptive matter, in which there is illustrated and described embodiments of the invention.

I claim:

1. A lighting system comprising:

a light fixture emitting illumination and a light switch in communication with said light fixture, said light switch having an actuator member;

a controller in communication with said light switch; and

a website in communication with said controller, said website communicating to said controller a plurality of illumination settings, said illumination settings comprising an initial illumination level; a pre-set illumination level, an incremental increase illumination level, an incremental decrease illumination level, and a termination of illumination, wherein manipulation of said actuator changes an illumination setting for said illumination emitted from said light fixture.

2. The lighting system according to claim **1**, said illumination settings further comprising a second pre-set illumination level.

3. The lighting system according to claim **2**, said controller comprising memory, said memory comprising said plurality of illumination settings.

4. The lighting system according to claim **3**, said memory comprising a light fixture identifier.

5. The lighting system according to claim **4**, wherein said actuator member has an initial operative position, an activation and release operative position, and an activation and hold operative position.

6. The lighting system according to claim **5**, wherein said activation and release operative position changes said illumination setting.

7. The lighting system according to claim **6**, wherein said activation and hold operative position changes said illumination setting.

8. The lighting system according to claim **7**, said light fixture comprising light emitting diodes and an optical transceiver comprising a photodetector.

9. The lighting system according to claim **8**, said optical transceiver being constructed and arranged to provide pulsed light communication embedded within light in the visible spectrum.

10. A lighting system comprising:

a light fixture emitting illumination and a light switch in communication with said light fixture, said light switch having an actuator member;

a controller in communication with said light switch and said light fixture; and

a website in communication with said controller, said website communicating to said controller a plurality of illumination settings, said illumination settings comprising an initial illumination level; a first pre-set illumination level, a second pre-set illumination level; an incremental increase illumination level, an incremental decrease illumination level, and a termination of illumination, and combinations thereof, wherein manipulation of said actuator changes an illumination setting for said illumination emitted from said light fixture.

11. The lighting system according to claim **10**, said controller comprising memory, said memory comprising said plurality of illumination settings.

12. The lighting system according to claim **11**, said memory comprising a light fixture identifier.

13. The lighting system according to claim **12**, wherein said actuator member has an initial operative position, an activation and release operative position, and an activation and hold operative position.

14. The lighting system according to claim **13**, wherein said activation and release operative position changes said illumination setting.

15. The lighting system according to claim **14**, wherein said activation and hold operative position changes said illumination setting.

16. The lighting system according to claim **15**, said light fixture comprising light emitting diodes and an optical transceiver comprising a photodetector.

17. The lighting system according to claim **16**, said optical transceiver being constructed and arranged to provide pulsed light communication embedded within light in the visible spectrum.

* * * * *