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**ABSTRACT**

[21] Invention No: 17

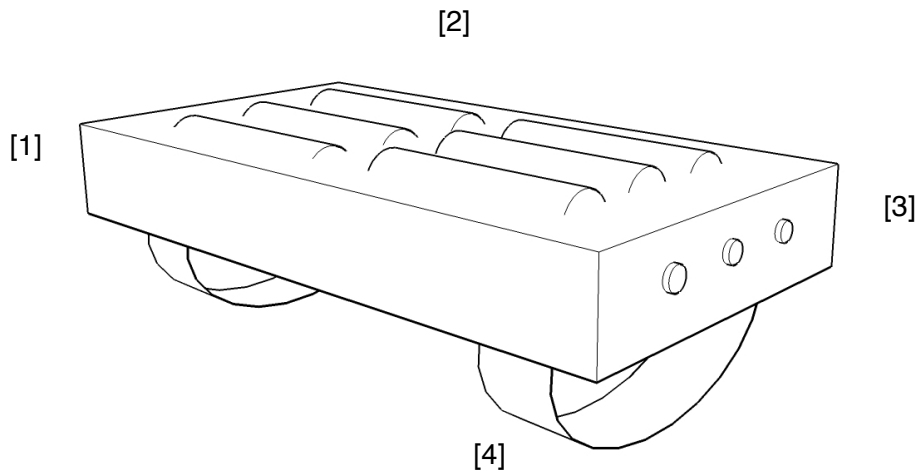
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10/10/2011  
22/03/2013

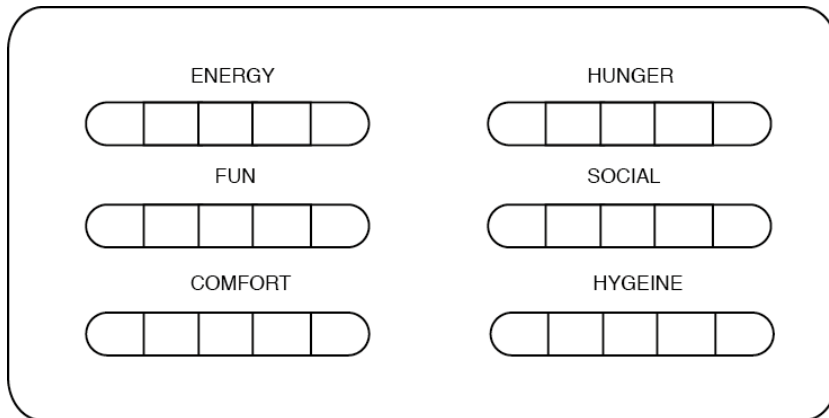
A method of maintaining human needs is disclosed, in which the artist or other user logs specific actions using an electronic device worn on the lower arm. The device provides a tangible interface to log specified needs and a coloured led display reflects the corresponding need status. The device and method is intended to be utilised over a pre-specified period, where the artist or user follows strict adherence to the embodiment of the invention. The invention directly references the aesthetics and function of the health bars within the Sims 3 (2009) computer game.

**3 drawings**

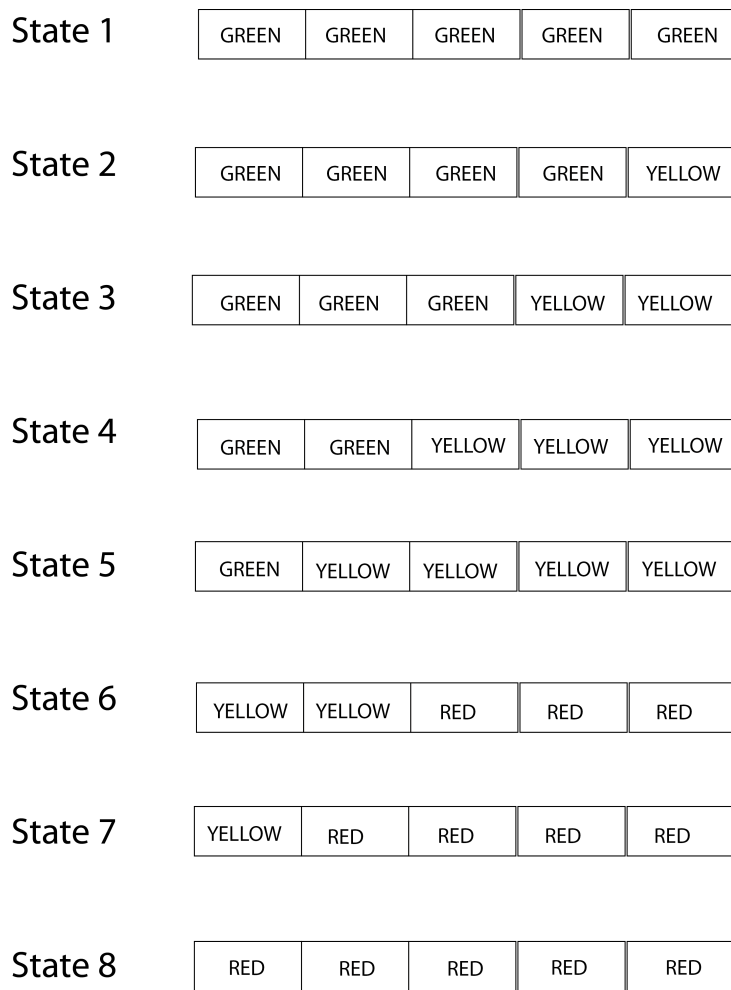
**FIGURE 1**



**FIGURE 2**



**FIGURE 3**



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**DEVICE AND METHOD FOR MAINTAINING HUMAN NEEDS****BACKGROUND INFORMATION**

[001] The present invention is related to the current practice of individuals using technology to collect and analyse their own personal data in an attempt to quantify the self.

[002] Quantifying the self through self-surveillance technologies is intended to give the individual 'power of knowledge'; enabling the person to increase their physical and mental health by making more informed life choices through researching their own behaviours and actions, rather than relying on institutions and professionals for information.

[003] Life loggers record and archive extensive amounts of information about their own lives. The information collected ranges from health related data (heart rate, weight, calorie intake, sleep patterns etc) to location tracking, time based records (time spent at work, home, travelling, showering etc) or any quantifiable activity the person wishes to record.

[004] Life-logging technologies present themselves as having the potential for self-improvement through greater understanding of the self. Life-logging devices do not in themselves modify behaviour rather they present the user with information in an attempt to promote self-initiated behaviour modifications techniques.

[005] Importantly however the function of this invention is not to 'improve' the self, rather it has been developed in a method to question the idea of the quantified self as a means of reflecting on the human condition.

**TECHNICAL FIELD**

[006] The present invention relates generally to digital methods artists and life-loggers have used to track data of personal life experiences.

**SUMMARY OF INVENTION**

[007] The present invention relates to a method and a means to obtaining personal data about human needs. The invention more particularly relates to an electronic device for logging and analysing needs and displaying the corresponding need status back to the user in real time. The invention directly references the aesthetics and function of the health bars within the Sims 3 (2009) computer game.

**BRIEF DESCRIPTION OF DRAWINGS**

[008] **FIG. 1** Depicts the physical device for wearing on the lower arm.

[1] Rectangle ABS enclosure to hold electronic components.

[2] 6 Led bars comprised of 5 RG rectangle leds behind a glue stick mounted within [1].

[3] 6 push buttons on each side of [1] which can be used to change the state of adjacent bars within [2]

[4] Canvas or plastic straps to hold [1] to the lower arm of the user.

[009] **FIG. 2** Depicts the front view of the device incorporating the preferred needs labels.

[010] **FIG 3** Refers to the 8 possible states of led colours in FIG. 1 [2].

**DETAILED DESCRIPTION OF INVENTION**

[011] The present invention appropriates the aesthetics and function of the 'health meter' in the computer game Sims 3 (2009) and pairs it with life-logging technologies for the user to track their own 'needs'.

[012] Within the computer game Sims, players utilise a needs meter that functions like multiple standard health bars (FIG. 2). The needs energy, social, fun, hunger, comfort and hygiene are tracked and the status is displayed via the health bars ranging from green (optimum) to red (neglected) (FIG. 3) Keeping these needs at optimum levels will avoid the Sim displaying erratic behaviour.

[013] The present invention is a wearable electronic device for 'non-simulated' users to track their needs in real life. It is an electronic version of its digital counterpart, which allows the user to input data based on what they are doing through a simple button interface (FIG. 1 [1]). This data is collected and compared against preset units, in order to determine the status of the needs bar.

**[014]** The six needs have preset statuses that have been optimised to suit the current user. The need energy is based upon sleep and caffeine. One hour of sleep or one coffee is equal to one unit or one button press. Eight units of energy will equal the optimum energy need level (State 1 as per FIG 3). These units will incrementally decrease over waking hours, as per one unit for every two hours (From State 1 to State 8 as per FIG. 3).

**[015]** Hunger is based on food intake. One meal (400 calories) is equal to two units and a snack or beverage (150 calories) equal to one unit. Optimum hunger needs state will be reached after two units, however the units will be depleted every five hours.

**[016]** The Fun need is based on activities the user deems to be 'fun'. This may vary from user to user, though could include activities like playing sport, dancing, playing video games etc. The Fun need is based on a weekly cycle of eight units to equal optimum level depleting at one unit per day. One hour of 'fun' is equal to one unit, or one button press.

**[017]** The Social need is also based on a weekly cycle of eight units, one hour per unit, depleting one unit per day. Social need requires the user to interact with other human beings through communication. This may be face to face or mediated through digital technologies. The user may determine that their social activities are also 'fun' therefore one hour of socialising will equal one unit of Social and one unit of Fun.

**[018]** The Comfort need is based on activities and environments the users determine to be

comforting. It is based on a daily cycle of two units equaling two hours, depleting over waking hours. Comfort need may also co-exist with other needs.

**[019]** The Hygiene need is based on a daily cycle of sixteen units per day. A shower or bath is equal to six units, hand washing, brushing teeth and all other grooming methods count for one unit each. Units are depleted at one unit per hour during waking hours.

**[020]** The units are collected through button input from the user. The buttons are connected to a microcontroller that calculates the current need status based on the predetermined units. The need status is updated onto a visible display (FIG. 1 [2]). The display is made up of six bars that resemble 'health bars' with five rectangle RGB light emitting diodes placed under a shaped glue stick which diffuses the light. These 30 RGB LEDs are multiplexed through two daisy-chained eight-bit shift registers connected via SPI to the microcontroller.

**[021]** The present invention through data logging techniques creates a reduction method in which to question the human condition. It preferred method of embodiment proposes an absurd position; that humans, like their virtual counterparts can be quantified into categories to maintain wellbeing. While six categories can safely be assumed is not enough to maintain complete wellbeing. The invention invites the question of just how many categories would we need? 12? 42? 1000? 1000000? Are the categories required infinitely long or with the right computer power is quantifying the self a possibility?