Murderer Algorithm Based Automatic Waking up System

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   Abstract- As the world runs fast, its our duty to run with the world compensating its speed. There is an urge to prove everyone unique. Hence time management play a worthless role in the daily work of a person. At morning it is a herculean task to wake up from the bed. "Let me sleep for some more time" is the first slogan of everyone every morning. But feeling guilty for not waking up in the morning is also encountered in several cases. In this paper we propose a novel "Murderer Algorithm" based automatic waking up system that helps to wake up every morning. The uniqueness of the system is to make the person in the bed to wakeup and get away from the bed. The device employs simple capacitive touch sensor to sense the presence of a person and also a brig

   Index Terms- Murderer Algorithm, AutomaticWake up system,

I. Introduction

Time and Tide Waits for none, is meaningful slogan and its realised slowly in this era. Hence the available time must be utilized in a efficient manner. The entire day depends upon how active we wake up every morning. Hence wakeup in every morning makes the day. The problem encountered in today's young men : As the sun rises, laziness dominate their work loads and hence being in the bed for hours and delays the whole day's process. But feeling guilty for not waking up affects the entire day's process. From the above scenario it is very clear that the problem in today's generation is to make them wake up with strong force. The usage of alarm is useless at this instance as it is capable for making the alarm to be quiet. Hence this work would be helpful in waking up a person as a new "Murderer Algorithm" is used.

II. Problem Identification

The major problem concerned with young people is waking up from bed every morning. The young men who are working in companies would be tired and might sleep for more hours regretting the next day's work. This results in the condition that they never get up from the bed which results in lagging of the current day's work chart. The important problem that is surveyed is that the young men who regret to get up in the morning needs some stimulus that could awake them. And once if they wake up, they feel active and proceed with their work else they wake up so late and feel guilty for not waking up in the morning. The conventional alarm system works only for a limited extent i.e., when a person is so tired he has the option to switch it off and retain his sleep. Thus the problem identified is that we need a continuous stimulus to wake the person in the bed.

III. Murderer Algorithm

The proposed Murderer Algorithm (MA) is based on the analogy with the character of a typical murder. This algorithm can be classified under the Decision Algorithms (DA)[3]. The algorithm can be explained as: Let A_i be the area under survey and the (x_0,x_1) are the possible outcomes. The outcome x_0 indicates the agreement of the condition and can be given as positive decision where as x_1 does not agree with the given condition and can be given as negative decision. The constrain C_i is the decision factor.

Hence mathematically,

$$Y= \begin{cases} X_0 \text{, if } A_i \in C_i \\ X_1 \text{, if } A_i \notin C_i \end{cases}$$

The algorithm of the Murderer Algorithm (MA) is given below

Wait for $T_i \rightarrow P_i$

When $T_i = P_i$

Check person if available in A_i

Kill the person

Check for the person to be dead

If he is dead, leave the A_i

Else if he is not dead, continuously Attack him till death

Leave A_i and wait for next P_i
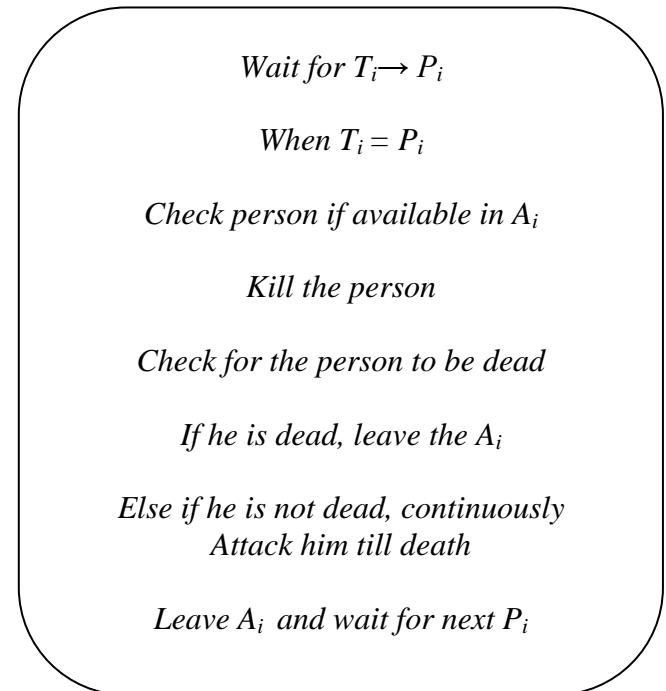
Fig 1 : Murderer Algorithm

The variable T_i used in the algorithm denotes the current timing and the variable P_i defines the perfect timing. A_i is the available area under survey. The flow chart for MA up on the proposed device is given as below
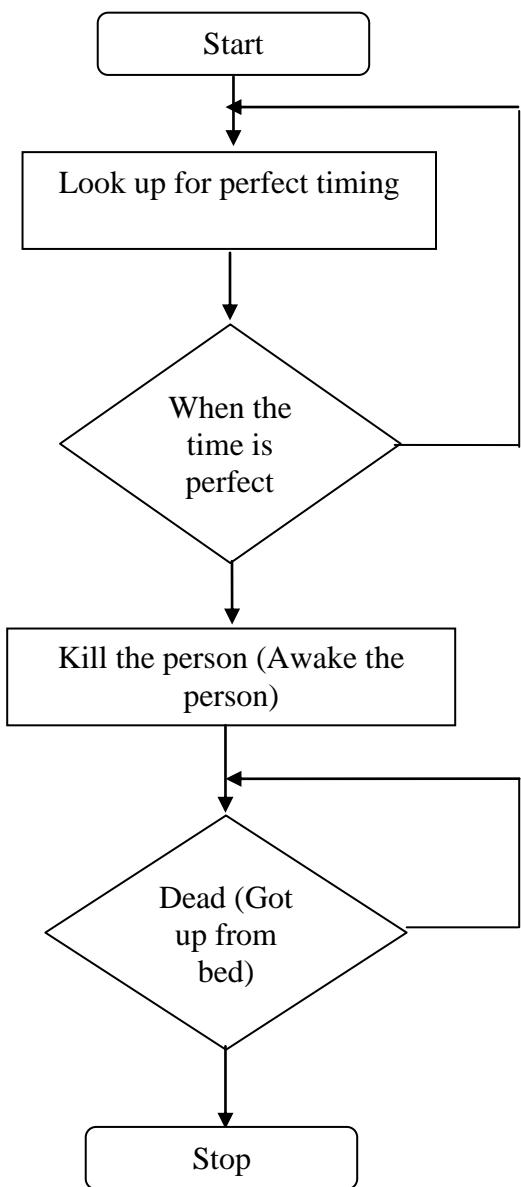

Fig 2 : Flow Chart for Murderer Algorithm

IV. EXPERIMENTAL BACKGROUND

The proposed equipment works purely on Murderer Algorithm The man to be waked up goes to bed by switching on the equipment. The timer starts and the clock proceed. When the prescribed time is met, the timer initiates the sensor. The sensor checks the availability of man in the bed and when there is a man in the bed, it stimulates the vibrator which is set under the bed.

As soon as the vibrator is switched on, the sensor continuously checks for availability.

The various components to be used in the proposed equipment are as follows :

A. Timer

The timer used must be capable of initiating the sensor attached and activate the sensor. The timer send the activation signal to the sensor. The timer is attached with a clock.

B. Sensor

The best sensor suited for this application is found to be capacitive touch sensor. In electrical engineering, capacitive sensing [1] is a technology, based on capacitive coupling, that takes human body capacitance as input. Capacitive sensors detect anything that is conductive or has a dielectric different from that of air. Many types of sensors use capacitive sensing, including sensors to detect and measure proximity, position or displacement, humidity, fluid level, and acceleration. Human interface devices based on capacitive sensing, such as trackpads can replace the computer mouse. Digital audio players, mobile phones, and tablet computers use capacitive sensing touchscreens as input devices. Capacitive sensors can also replace mechanical buttons. There is also a musical instrument, the theremin, that uses capacitive sensing to allow a human player to control volume and pitch without physically touching the instrument. A simple circuit is taken from [4]
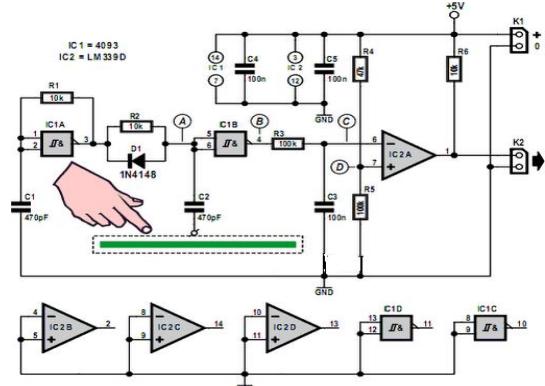

Fig 3 : A Simple Capacitive Touch Sensor

C. Vibration Scheme : A vibration scheme is set up at the top and bottom of the cot so that it, when the sensor gives the input to the vibrator, the vibrator turns on and unless the output is zero from the sensor the vibration continues to vibrator. The vibration scheme should be such that it does not affect the human and at the same time it must be capable of waking up a person. The proposed design can be implemented using H- Bridged driving circuit driven motor[2]. The actual direction that the motor goes will depend on its polarity connection in the middle. But for this example, let us consider that 'forward' drive occurs when signal A is set high, and reverse drive occurs when signal B is high.Note that for the H-bridge to work we will also need A' and B' which are the A and B drive signals Noted , i.e. when A is high, A' has to be low. The driving circuit for the vibrator is given in fig 4
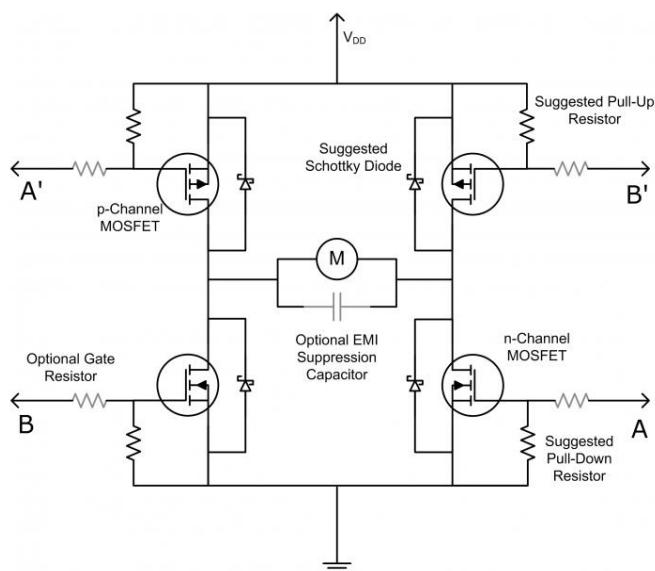
Fig 4: H- Bridged driving circuit

V. PROPOSED WORKING

The entire circuit is activated as the person goes to bed. The timer is activated and the timer is preset with the alarm time. When the preset time is met the timer alerts the sensor. The sensor in turn alerts the sensor to check weather the person is available in the bed. The simple capacitive sensor is used for this purpose. When the person is in the bed, the sensor send the activation signal to the vibrator and if not then the system waits for next preset time. Once when the vibration is switched on, it continues to work until the stop signal is sent from the sensor. The sensor sends this signal only when the person gets away from the bed.

Fig 3 : Proposed waking up system

 As given in fig 3, the vibration produced by the circuit disturbs the person in the bed continuously until the person comes out of his bed.

The proposed become distinct from the conventional systems, as the circuit once switched on cannot be switched off until the person is away from the bed. Hence it is assumed that once when the person is away from the bed even to switch off the circuit he becomes active and does not go to bed there after, rather he would proceed to his further work.

VI. FUTURE ENHANCEMENT AND CONCLUSION

The proposed work can be improved by specially designed integrated circuits as the circuit in the proposed design has more complexity. When implemented using integrated circuits the power consumptions will also become less to an extent. Also the proposed MA also has to analyzed theoretically and mathematically and the authors are working in the same direction. Several decision problems whose assistance is needed to solve real life problems can be solved using MA after its complete mathematical analysis

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