Development of Anti Sleep Alarm Spectacle

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***Abstract*- Feeling sleepy while driving could cause hazardous traffic accident. However, when driving alone on highway or driving over a long period of time. Drivers are inclined to feel bored and Sleeply or even fall asleep. Nowadays most of the products of driver anti sleep detection sold in the market are simply earphone making intermittent noises, which is quite annoying and inefficient. As such, there Is a high demand for cheap and efficient driver sleep detection. Therefore, we came up with an idea andsuccessfully developed a sleep detection and alarming system, which could effectively meet this demand. We use the IR sensor to detect dozing. Then the buzzer will notify the driver. Rechargeable batteries are used in this prototype. This glass will protect from the dust as well**

I.INTRODUCTION

Sleep or drowsiness was a contributing factor in 3.9% of all accidents, as reported by drivers who were at fault for the accident. This factor was strongly over-represented in night-time accidents (18.6%), in running off the road accidents (8.3%), accidents after driving more than 150 km on one trip (8.1%), and personal injury accidents (7.3%). Accidents in the machinery occur due to negligence of employees who work at night shift in companiesTesla has introduced auto pilot system for accident due to sleeping in car but we need a solution for accident due sleeping in all areas. A device needs to be developed to avoid accident in the roads as well as in the companies. So we produced a spectacle with sensor to detect sleeping when working or driving. This spectacle is low cost and it protects our eyes from dust and Rechargeable

II.COMPONENTS AND DESCRIPTION

The major components involved in the design and fabrication of anti sleep alarm spectacle are

1.IR SENSOR

An infrared (IR) sensor is an electronic device that measures and detects infrared radiation in its surrounding environment. Infrared radiation was accidentally discovered by an astronomer named William Herchel in 1800. While measuring the temperature of each color of light (separated by a prism), he noticed that the temperature just beyond the red light was highest. IR is invisible to the human eye,as its wavelength is longer than that of visible light (though it is still on the same electromagnetic spectrum). Anything that emits heat (everything that has a temperature above around five degrees Kelvin) gives off infrared radiation.

2.LED LIGHT

An LED light is a flexible circuit board populated by surface mounted light emitting diodes (SMD LEDs) and other components that usually comes with an adhesive backing. Traditionally, strip lights had been used solely in accent lighting, backlighting, task lighting, and decorative lighting applications. Increased luminous efficacy and higher-power SMDs have allowed LED lights to be used in applications such as high brightness task lighting, fluorescent and halogen lighting fixture replacements, indirect lightingapplications, and ultraviolet (UV) inspection during manufacturing processes, set and costume design, andeven growing plants.

3.SAFETY GLASS

Standard safety glasses are designed to protect against light to moderate impact and flying particles and are constructed of metal or plastic with impact-resistant glass or plastic lenses. Safety glasses must have shatter-proof lenses, impact resistant frames and provide side protection

Fig. Front View of the Anti-sleep alarm spectacle

III.CONCLUSION

As for the hardware part, we fulfilled our goal successfully.The detection device can work effectively and accurately atdaytime, but also at night. The Eye portion extraction is smooth and in real time with no delays. In addition, there isa bonus function in the hardware part – detection with glasses.

IV.ADVANTAGES

1. Multiple Use
2. Low Power Consumption.
3. Easy To Carry
4. Rechargeable battery
5. low cost

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