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Women Safety Ring

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***Abstract* - In our Country, even though it has super power and an economic development, but still there are many crimes against women. One of the major crimes is drink spiking. Drink spiking is the act of adding date rape drugs or alcohol to someone's beverage without their permission. The date rape drug is colourless, odourless and tasteless and thus easy to hide in any drinks. Young women are the most common targets of this illegal crime. Dizziness, blackouts, poor coordination and decreased inhibitions are just a few of the effects of drink spiking. The atrocities against the women can be brought to an end with the help of our product "RING". This is a security ring, specially designed for women in distress. The prime objective of the project is to send an immediate alert to women in danger. GPS tracking feature tracks the user lively when you are the move after triggering the emergency button. It records audio, which can be used for further investigations. When the battery is running low, it automatically sends the location the pre-stored contacts.**

Keywords :-
Drink spiking,Dizziness,Blackouts,Global positioning system(GPS)

I. Introduction

A survey conducted by the Thomson Reuters Foundation has ranked India as the world's most dangerous country for women, ahead of
Afghanistan, Syria and Saudi Arabia.so it is in need of many securities and safety devices. If the device is wearable kind of thing then it will be more convenient and easy for a women to find out the things around them. The Types of sensors we are using are,

Fluorescent sensor which is used to identify the presence of a drug known as GHB that is commonly used to spike beverages has been developed and also alcohol. When the sensor is mixed with a sample of a beverage containing GHB, the mixture changes colour in less than 30 seconds, making detection of the drug fast and easy.



Fig 1. Fluorescent sensor

Colour Sensor is a complete colour detector. The filters of each colour are distributed evenly throughout the array to eliminate location bias among the colours. Internal to the device is an oscillator which produces a square-wave output whose frequency is proportional to the intensity of the chosen colour.

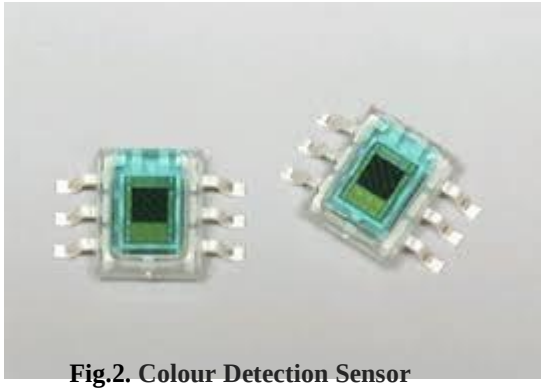


Fig.2. Colour Detection Sensor

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GSM is a cellular network, which means that cell phones connect to it by searching for cells in the immediate vicinity. The coverage area of each cell varies according to the implementation environment. Macro cells can be regarded as cells where the base station antenna is installed on a mast or a building above average rooftop level. Micro cells are cells whose antenna height is under average rooftop level; they are typically used in urban areas. Pico-cells are small cells whose coverage diameter is a few dozen meters; they are mainly used indoors. Femtocells are cells designed for use in residential or small business environments and connect to the service provider's network via a broadband internet connection. Umbrella cells are used to cover shadowed regions of smaller cells and fill in gaps in coverage between those cells.

The Global Positioning System (GPS), is a space based radio navigation system owned by the United States government and operated by the United States Air Force. It is a global navigation satellite system that provides geolocation and time information to a GPS receiver anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites. The GPS does not require the user to transmit any data, and it operates independently of any telephonic or internet reception, though these technologies can enhance the usefulness of the GPS positioning information. The GPS provides critical positioning capabilities to military, civil, and commercial users around the world. The United States government created the system, maintains it, and makes it freely accessible to anyone with a GPS receiver.

II. Existing Model

A smart ring is a wearable electronics device with advanced mobile components that combine features of mobile devices with features useful for mobile. Smart rings, which are typically the size of traditional rings or larger, combine the features of a mobile device, such as the ability to make payments and mitigate access control, with popular innovative uses such as gesture control and activity tracking.

Smart rings can communicate directly with smart phones through a variety of applications and websites. Some smart rings can operate without the need of a mobile phone, such as when interacting with back-end systems on the cloud through or performing standalone functions such as activity tracking. They typically do not have a display and operate by contextual relevance, such as by making a payment when near a payment terminal, unlocking an electronic lock when near the lock, or controlling home appliances when making gestures in the home. Some smart rings have physical or capacitive buttons to use as an activation mechanism, such as to initiate a gesture.

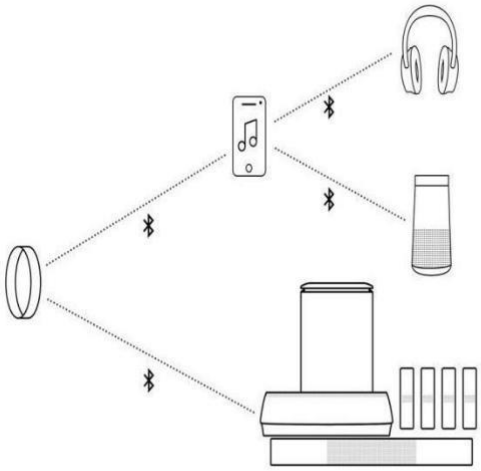


Fig.3.Exsisting Model

III. Proposed Model

A. Detection

When the drink contains any date rape drug or alcohol. It is detected using the Fluorescent sensor which is placed inside the sandstone of the ring. The sandstone is placed in the upper region of the ring. It is placed to absorb the drink when it brought near to the Ring. The absorbed drink is tested with fluorescent sensor. If the drink contains any drug, the colour of the stone is changed within 30 seconds.

B. Notification

As soon the colour of the drink is changed , the colour detecting sensor sense the colour change. The SOS message is send directly from Ring to predefined contacts. No need of smart phones. Direct call is also made using Ring with an emergency voice note. The location of the person could be tracked for every 2 minutes.

C. Camera Features

There are many chances that the person who are trying to abuse or kidnap the user may escape from that place, if any help found by the user. In that case, we can send a special notifications to the parents by a special button in the Ring. Camera is added to the

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ring so it could be easy to identify the person who is troubling the user.

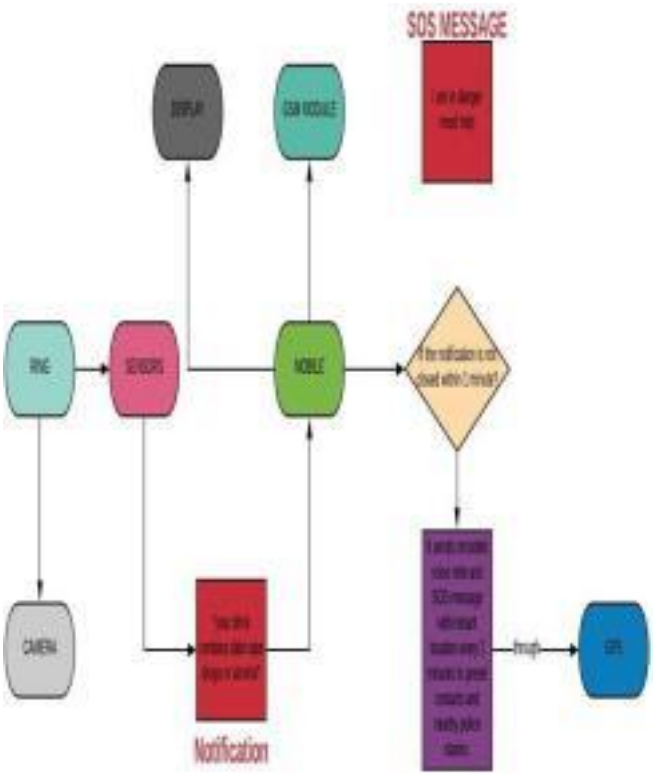


Fig.4.Architecture Diagram

IV. ADVANTAGES

- Easily accessible anywhere anytime.
- Efficient.
- Very fast SOS message transmission.
- It has multiple inbuilt facilities. So, it can act as smart phone.
- No additional devices needed.
- We can use this ring as a phone as well as the drug detector. So two in one technology.
- We can able to remove the drug droplets from the paladin once it has been detected. Therefore no possibilities of wastage of the sandstone.

V. CONCLUSION

Thus we are giving the First solution to detect date rape drugs and alcohol using a wearable device.This Ring will detect, analyse and notify the people without anyone's help.Women will be greatly attracted to buy this ring and even their family members too. This will be a great advantage to safeguard themselves.

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