EXPLORING GENTLE WAYS TO WAKEUP

MOHAMMAD AZIZUL HUQ

RUC

MAHUQ@RUC.DK

ABSTRACT

The present study aimed to determine the ways to wake up according to a 24-hour cycle. I used two prototypes to understand what strategy is adequate to explore gentle ways to wake up. Based on my research, there have some benefits and drawback also. I focused on the prototypes to artificial light and the melody song to ensure that it works all seasons. The artificial light can aid to wake up the user is light asleep, and the melody song will help to wake up from REM or non-REM sleep.

INTRODUCTION

We know the Philips waked up light 1st launch in 2006, and it is using more people, but at the same time maybe it is not useful to all kinds of people.

I want to introduce a new idea If I add melody song with the light then how a person wakeup through this system. So, after developed the prototype it needs to examine.

Explore the gentle way to wake up without feeling any disturbances or high volume alarm.

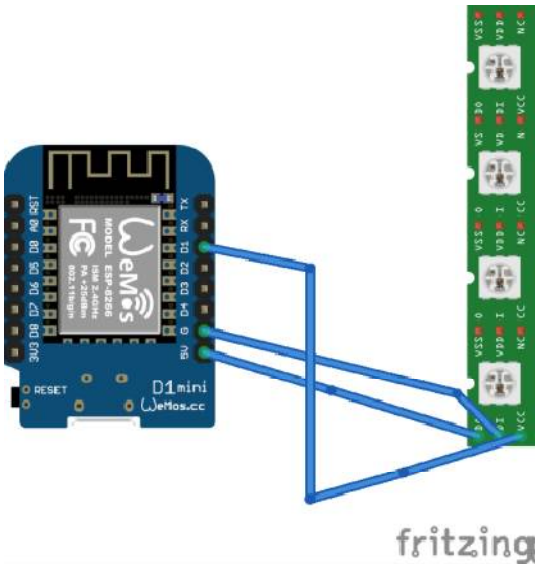
DESCRIPTION PROTOTYPES AND CONCEPTS

This paper based on concepts and those prototypes already exist in the real words. The proposed idea to make a prototype of lighting and melody tone. It can be individual or join Prototype. The prototype wakeup light is developed by the author of this paper with group effort Nicolai Elhøj Nielsen and Ahmad Kamal. The wakeup melody prototype, I designed and later on, it re-construct into a single prototype with two different functionality.

Wakeup Lamp

This prototype forcing a user to wake up when there is no natural light and the room is dark. The wakeup lamp will start twenty minutes before to wake-up from the bed.

Arduino takes input from the



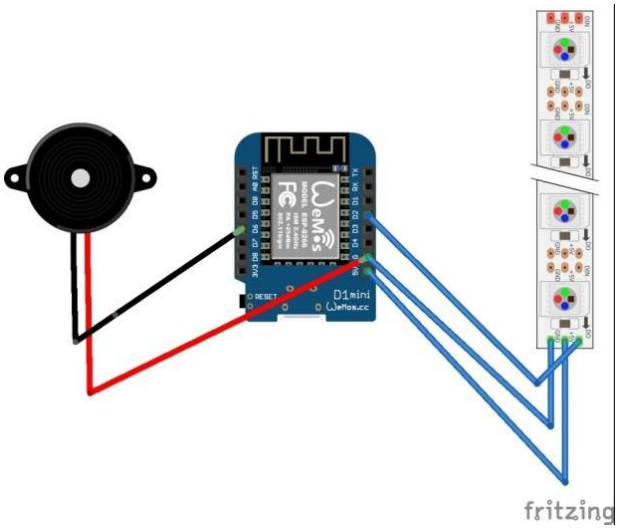
external timer which will power on this system.

Observations:

If a user sleeps in a deep stage, it probably does not work. But it may help to change the phase. If a user sleeps in a light stage than this light may provoke to waking up.

The author tested it to himself, but the light effect did not work to him.

Wakeup Melody



This prototype will trigger after 20 minutes of lighting when the sleep mode either REM or NON-REM mode. Music has a robust and diverse effect on both the body and mind. It is related to our emotional health. So this prototype can help stress-free and relaxing method of wake up by using soft music after the brightness of the light.

Observations:

When a user sleeps in a deep stage or light stage, it may affect him. If a user sleeps in a non-REM phase, the melody song may help to wake up gently.

The author tested it to himself but the melody song help to him to wake up.

PROS AND CONS

The limitations of proposed prototypes functionality may not affect in every scenario. When outside have sunlight and room is also lighter than it won't help to wake up, but the melody song mostly helps to change the stage of sleep, but everything depends on a user's habit.

It is a great idea to wake up with a gentle, calming melody song than an aggressive tune. It will set your brain into an awakened state. It will help a user feeling refreshed not rushed.

REFLECTION

After a long period of the educational gap, the present technology is challenging for me to integrate with this system. It is my first writing research documents. I hope to develop further.

Working on this project, I gained knowledge the prototype design and action in real life. I learned the integration process with hardware and software.

However, I want to extend this project in future with add Mp3 Module where I will be able to keep wakeup melody song in SD card.

CONCLUSION

The two prototypes are a jointly single prototype. These prototypes will provide the different functions to wake up at early morning or 24 hours cycle. So now the prototype is combined to give a better possibility of waking up gently.

Wake-up lights and melody song feel like a user refreshed after a good night of rest. When properly used, these alarm clocks can give a user natural boost it needs to get moving in the morning.

ACKNOWLEDGEMENTS

The idea was supervised and supported by Mads Hobye during the Programming Interactive Experience at Roskilde University.

REFERENCES

GitHub link:

https://github.com/asumon/WakingUp

1. Löwgren, J., Larsen, H., & Hobye, M. (2014).Towards programmatic design research. Designs For Learning
2. Gaver, B., Bowers, J. (2012). Annotated portfolios. Interactions 19(4):40–49.

3. Lamp and alarm clock with gradually increasing light or sounds --Stephen E. Blackman

4. The Authors Journal of Sleep Research ª 2016 European Sleep Research Society

5. The relation between physical exercise and sleep physiology in non-clinical individuals