

# CAB310 Assessment Task 3

## Designing for Sleep Procrastination

Cane Neilson  
n11013435

## ACADEMIC HONESTY STATEMENT

I declare that all parts of this report are prepared by myself and no uncited material from any external sources is included. I declare that this report genuinely reflects my activities and tasks performed as a part of assessments within the unit CAB310. The work contained in this report has not been previously submitted to any other units offered by QUT or any other universities around the world.

Furthermore, I declare that (place a cross in each box):

- ☒ I did not cut-and-paste information from others without appropriate use of quotation marks and direct reference to their work;
- ☒ I did not re-word the ideas of others without proper and clear acknowledgement;
- ☒ I did not write ideas or suggestions that originated from other students and claim these as my own;
- ☒ I did not include words from other students' work unless this was explicitly permitted in the description of this assignment.

**I understand that any violation of the above will result in a possible:**

- ZERO mark for this assignment, and/or
- My names will be recorded and will be forwarded to the faculty to handle.

For assessment purposes, we give the assessor of this assignment the permission to: reproduce this assignment and provide a copy to another member of staff; and take steps to authenticate the assignment, including communicating a copy of this assignment to a checking service (which may retain a copy of the assignment on its database for future plagiarism checking).

**Student Name & Number**

Cane Neilson n11013435

---

**Signature**



---

## Table of Contents

ACADEMIC HONESTY STATEMENT .....	2
Introduction .....	5
Methods.....	6
Aims .....	6
Target Audience .....	6
Participant recruitment.....	6
Research Process .....	6
Data Analysis .....	7
Work as a group .....	7
Limitations .....	7
Findings .....	8
Summary of thematic Analysis.....	8
Reminder to go to sleep.....	8
Distractions .....	9
Getting into a sleep state .....	9
Customizable.....	9
Privacy.....	10
Expanding the field theory.....	10
Revised Field Theory .....	11
Field Theory Diagram .....	11
Field Theory Description .....	12
Personal Reflection on Designing with a Field Theory .....	13
References .....	14
Appendix .....	14
Appendix A: Previous Works.....	14
Appendix B: Ethics Templates.....	16
1. An audio recorded <b>interview</b> at home/zoom or another location of your choice that will take approximately 40 minutes of your time. Questions will include: your thoughts about a prototype and personal reactions and habits to sleep procrastination. ....	17
2. A video recorded <b>observation</b> at home/zoom or another location of your choice that will take approximately 10 minutes of your time. The focus of the observation will on be understanding how a target user may interacting with a prototype. Notes will be taken to record observations.....	17

• You will have the opportunity to verify your comments and responses prior to final inclusion. ....	18
• The recording will be destroyed 5 years after the last publication. ....	18
• The recording may be used as teaching material. ....	18
• Only the named researchers will have access to the recording. ....	18
• It is not possible to participate in the research project without being recorded...18	
• Have read and understood the information document regarding this research project. ....	19
• Have had any questions answered to your satisfaction. ....	19
• Understand that if you have any additional questions you can contact the research team. ....	19
• Understand that you are free to withdraw without comment or penalty. ....	19
• Understand that if you have concerns about the ethical conduct of the research project you can contact the Research Ethics Advisory Team on 07 3138 5123 or email <a href="mailto:humanethics@qut.edu.au">humanethics@qut.edu.au</a> . ....	19
• Understand that non-identifiable data from this project may be used as teaching material and as comparative data in future research projects. ....	19
• Agree to participate in the research project. ....	19
Appendix C: Methods Used. ....	19
Appendix D: Anonymized Study Data .....	21
Coded transcript 1. ....	21
Transcript 2 .....	30
Transcript 3 .....	44
Appendix E: Video Evidence. ....	59

## Introduction

The chosen theme of this topic was procrastination, in particular sleep procrastination. This was covered in the previous assignments and looked at what exactly caused university students to procrastinate their sleep, where it was found that students would stay up late because either they had to complete some tasks they didn't do during the day, became immersed in an activity and forgot about sleeping, or was on their phone during bed. Using this information, a prototype was created to help aid in countering these sleep procrastination habits. The main purpose and aim of this project were to use the prototype and previous information to better understand the problems students face with sleep procrastination, as well as to refine the design of the prototype.

Expanding upon the findings of the students sleep procrastination a field theory diagram was created (see appendix 1). This field theory described how the persons daily duties wore down their psychological energy, and in an attempt to satisfy their psychological needs, looked to engage in activities during sleep time. As a result, this would mean that they would sacrifice time for sleeping to do activities they enjoyed, such as playing video games, hanging out with friends, or using social medias. In order to address these issues a prototype designed to enhance their experience of sleeping by helping the user combat their sleep procrastination, see appendix 2. By focusing on the field theory's 2 touch points, procrastination due to partaking in an immersive activity and procrastination due to using the phone in bed, the design opportunity of creating a robot IOT device that calms and subtly reminds the user to sleep was prevalent and realised.

The prototype creates reminders to the user through lighting, where it acts as the main light source in the room, it slowly dims down as it approaches the users sleep time, then filling the room with a soft red light. It also features a friend connection feature to encourage going to sleep through community connection. Once in bed the prototype attempts to lull to user to sleep and get them off their phone. Done by emitting a projected image on the ceiling of the roof above the user's bed and playing calming ambient sounds in an attempt to get the user off of their phone and into a relaxed state ready for sleep. See Appendix 2 for more information.

## Methods

### Aims

To gain further information on the prototypes design and the proposed data behind the field theory, the aim of the evaluation was to critically analyse the prototypes features and how they would/could be used. It would also be used to evaluate the prototypes connection to the field theory and its touch points to further understand sleep procrastination and how it can be solved with the prototype.

### Target Audience

The participants used for this research were university students, this is because the field theory was predominantly designed around them. However, the target group is mainly young people, as they struggle the most with sleep procrastination as seen in the research below,

*“millennials find themselves interacting with work matters after hours, chatting with friends digitally and scrolling through social media. And oftentimes, this interaction with smartphones replaces sleep or happens right before bedtime”*

(2022, <https://sleepcenterinfo.com/blog/millennials-sleep-deprived/#:~:text=Millennials%20have%20been%20facing%20a,contribute%20to%20their%20sleep%20deprivation.>)

*“study by Van den Bulck [65] using a Belgian sample reported that 62% of adolescents used their phone in bed, with the lights off, and consequently, reported more tiredness during the following day”*

(Magalhães, P., et al., <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7460337/>)

### Participant recruitment

The relation to the participants was either friends or colleagues that were recruited through a private message to enquire whether they were available for an interview. Afterwards they were shown an information sheet and consent forms, see appendix. These participants were mainly chosen as they fit the demographic described before as well as in the research, these participants were technology reliant people that sometimes stayed up late due to being on their phone or playing games at night.

### Research Process

The research was conducted over a 40-minute interview that asked the participant a range of questions about the design and sleep procrastination. The interview began with the participant watching a video of the prototype, see appendix 2 for the video, giving them a naïve look at what the device was without any context. Afterwards they were asked what they thought the prototype did. Next the participant was prompted to roleplay scenario that involved the prototype and its features, and their reactions and thoughts were recorded. Finally, the participant was asked to answer a series of questions that asked about their thoughts on the prototypes features and how effective they would be, and what their sleep procrastination habits were and how they combated it. The interview took place online with webcams turned on, the software used to collect the data was zoom.

## Data Analysis

The analysis process of the research data went through three stages, firstly the transcripts of the interviews were coded to find possible themes and similarities. Using these codes, a thematic analysis was done with a diagram being created to clearly illustrate the participants thoughts of the design and field theory. Finally, a summary of the key points was written to convey the most interesting thoughts and opinions.

## Work as a group

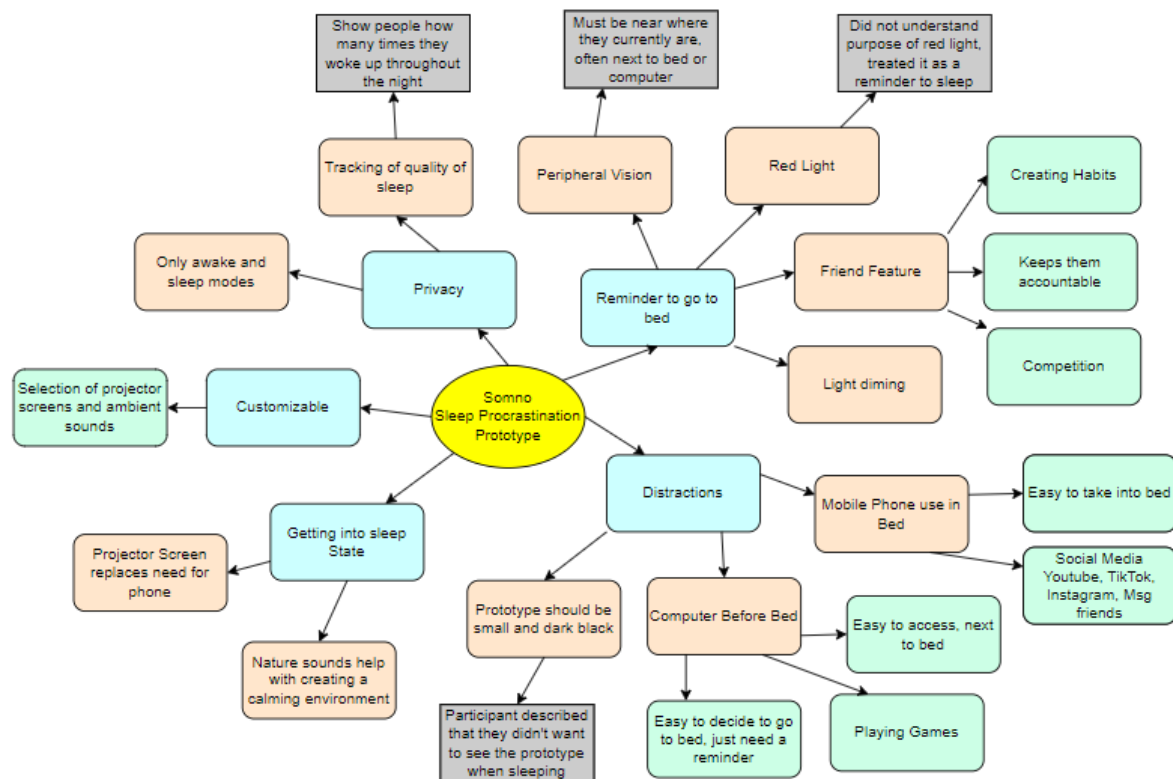
As a team of three, this research process consisted of two phases, the interview/data collection phase, and the analysis phase. During the data collection phase, each member selected a student to interview that fit the criteria, then an interview was conducted using the interview guide, see appendix, and the interview was transcribed and shared with the other members. The analysis phase was then done individually, with each person having three transcripts to use for a better-informed view on the opinions of the prototype.

## Limitations

The main limitation of this research process was the lack of face-to-face interaction. Conducting an online interview loses some of the intimate moments the participant would have when interacting with the prototype and limits the scenarios that can be created by the interviewee.

## Findings

### Thematic Analysis Diagram



### Summary of thematic Analysis

The thematic analysis diagram displays the thoughts the participants had about the prototype. Participants commonly described how the prototype's features are effective in creating an unintrusive method to overcome their sleep procrastination, while also stating some possible changes that can be made to enhance the prototypes effectiveness by changing the devices size, privacy settings and personalisation settings.

### Reminder to go to sleep

The participants stated that the lighting systems of the prototype Somno, acted mainly as a reminder and that it was something that caught their attention. This was expressed during the roleplay where the participant would look to their side when the lights dimmed down while they were on their computer, saying that this action caused them to begin thinking about going to bed. Then once again when the light turned red. However, an unexpected finding was that the users did not understand the use of the red light and just thought of it as another way they were being reminded to sleep. In addition to this it was also learnt that for this lighting feature to work, the user needed to have it in an area where their computer is in the same room as the bed or have it small enough that it can be carried around, but this would be more encumbering and annoying.

The friend link feature was also described as another method to remind the user of going to bed. Participant 1 described it as a way that he could be held accountable, similar to having



a gym partner. This fits in one of the three pillars of self-determinations, relatedness, where the feeling of having someone else watching their sleep motivated them to set a time for sleep and begin getting ready, almost treating it like a competition against the other person. This feeling of competition revolving around the friend feature was an unexpected finding but opens more possible design opportunities which could include a sleep tracking system that compares your sleep to your friends.

## Distractions

The distractions the participants described were the use of phones when in bed, playing on the computer before bed and possible issues with the prototypes look. Using their phone while in bed was found to be the number one distraction and issue that caused sleep procrastination. The main factor for this was the ease of use and addictive nature of the phone, this was because of its size where it could be brought into bed a lot easier than say a computer. The use of addictive social medias such as Tik Tok and YouTube also gave more reasons to the use of phones in bed. The secondary distraction was found to be using a computer, this was partly because of the proximity it had to the bed, it was found that participants could easily access the computer when they decided to go to bed as it was often beside it.

An unexpected addition to the list of distractions that participant 1 brought up was with the design of the prototype, stating that they would not want to see the device when sleeping as they preferred to sleep in complete darkness. This was an interesting comment as well because the prototype featured an alarm clock style setup which showed the time and an interface. This comment reaffirmed the choice to colour the prototype black but designs on the devices ability to show the time will have to be reviewed.

## Getting into a sleep state

An expected finding was that the prototype excelled at putting the participants to a sleep state. The use of the projector acted as a replacement for the phone for the participants when in bed, resulting in them putting it away and watching the moving image instead. An important note to this, was that the type of image being displayed had an effect as well, as participant 1 stated that having a moving image on the ceiling would be distracting and prolong their sleep procrastination compared to having a still like image, (e.g. rain drops on a window, forest). The ambient sounds were also effective in lulling the user to sleep, finding it relaxing and calming. It was expressed that the sounds of nature gave them something to focus about and took their attention away from their phone and what could be on it. However, this relation with ambient noise could be a minority opinion as the participant said that they grew up with these sounds and found fondness with them.

## Customizable

The customizability of the device Somno was another finding that was suggested by the participants to create a more personalised way to battle sleep procrastination. The participant described how they would like to have an option to select what the projector screen displayed as well as to select what sounds were being played. They explained this by

saying that some people may not react that same way other people might with what is being shown and also that seeing the same thing every night would begin to get boring.

## Privacy

The design around the friend connection feature was also received well by the participant, where they saw it as a competition between friends. However, with regards to their privacy, when asked about the stages that were being shown to the other person the participant preferred simply having the stages be awake and asleep. They only saw the use of the feature to see if the other person had gone to bed or not, and less getting ready or see if they were sleeping well. In addition to this they also expressed the option to be able to opt in and out of the connection feature “otherwise it would be a breach of privacy”.

## Expanding the field theory

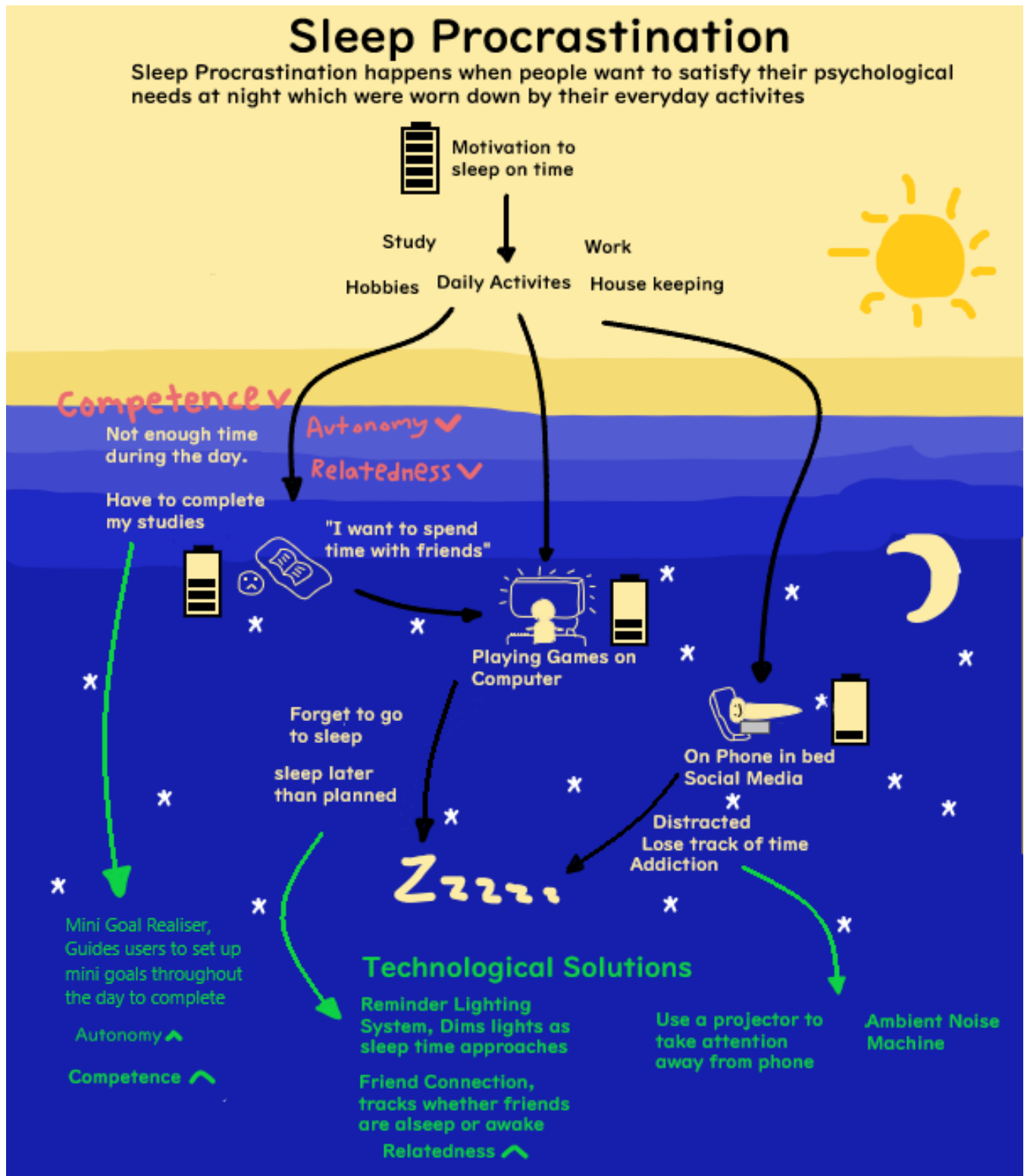
From the insights given by the participants, information about the field theory was further expanded upon. Firstly, the sleep procrastination mainly occurred in bed, where deciding a time and getting into bed was much easier to overcome when compared to being on the phone in bed. Social medias and the connection with friends were the main reasons for this.

Secondly, it was noticed that the friend feature could be an effective way to get the user in bed, this could be due to the community aspect of having someone else to do an activity together with, similarly shown in the original field theory, appendix 1, where the person would play games with friends on the computer before bed. This sense of togetherness can also be used to combat sleep procrastination where the people feel accountable for their actions, not wanting to let the other down.

Finally, the repetitive strategies of countering sleep procrastination losses its effectiveness. Having something new to remind them or get them to sleep makes it harder to ignore, whereas having something that has been occurring for a while causes the user to get bored and comfortable with it. Like mentioned before with the projector settings, showing the same image would lose its ability to take the persons attention away from their phone as they would get bored of seeing the same image simply becoming a lost in the background.

# Revised Field Theory

## Field Theory Diagram



## Field Theory Description

The field looks at the person's motivation to go to sleep and how it can be affected throughout the day. The target audience, students/young people, sacrifice their time to sleep by immersing themselves in other activities to recharge their psyche. This is usually done by doing things they enjoy, often with friends, where they get immersed in the activity and lose track of time. Or in other cases, choose not to sleep and do something else instead. The theory also shows the connection between sleep motivation and the three pillars of self-determination theory, where it shows the person losing autonomy due to having a lot of things they have to do instead of what they want to do. Relatedness, where they are alone doing their activities longing for their connection with friends, and competence, going up and down depending on how long it takes for them to complete their tasks.

For example, the field theory shows how a person will choose to be on their computer after they have done their daily activities or when they are tired and want to connect with their friends through games. In doing so, they begin to become engaged with that activity and forget about deciding when to sleep. This happens until they notice the time and forcibly go to bed, often being later than they would like. The diagram then shows how this can be fixed by having a technological reminder through a lighting system that dims the lights in their room to act as a visual reminder that the scheduled time to sleep is approaching. Or through a social aspect through the friend feature. It also shows the use of phones in bed, being used due to people's addiction to their phone, it distracts them from sleeping keeping them awake making them less tired and creating a habit of using the phone while in bed. The technological solution to fix this looks at the distraction element and attempt to create a different distraction that instead makes the person relaxed and sleepier.

The changes made to this field theory when compared to the original field theory show more of the relationships between the different forms of sleep procrastination. Showing how playing games on the computer can happen because of working at night. The new field theory also displays the reasons for their sleep procrastination, such as losing track of time, trading sleep for time with friends and addiction.

The technological solutions were also added to the field theory as the original theories solutions mainly looked at the solving the problem where the person had too many activities that they didn't complete during the day. Solutions that focused on the sleep procrastination of being on the computer and phone was also added to give a broader understanding of the procrastination itself and how it can be fixed. The solutions added were from the prototype that had positive responses.

From the research conducted, the evaluation of the field theory changed slightly, where the original field theory showed the forms of sleep procrastination built off one another. However, from the information given by the participants, this isn't always the case, each procrastination form could happen individually, and some could be skipped without any problem. For example, participant 1 said that sometimes they could sleep immediately and not need to use their phone at all, or that while on their computer they would actively keep track of time and get off when it was time to sleep.

## Personal Reflection on Designing with a Field Theory

From designing technology with a field theory, I learnt how it can be used to find touch points which could then be translated into problems that can be designed too. For example, in the original field theory, it lists technological solutions however, these don't really address the issues the other forms of procrastination have. This was because these were made before any touch points were made. In the future, drawing up a diagram of the problem like a field theory will be something I will be doing in the future, it makes it easier to understand and identify the possible problems and design opportunities to fix them. Compared to having a document full of text this form of displaying information makes it simpler to read and show to others.

The field theories impact on the design of the prototype led to the device being something that had to be around the user's bed or something that was easily portable. This was because of the multiple locations the user could be according to the field theory. Ultimately the design of the prototype was decided to focus on being in the user's bedroom as it was where the most sleep procrastination occurred, as it had the user usually had their computer in the same room as their bed, as seen by the participants.

The design also required something that was less interactive as the field theory showed that when the person was procrastinating their sleep, they were often interacting with something. From this, having a design that activated automatically would prove to be the most effective in grabbing the user's attention compared to them interacting with an object to stop their sleep procrastination, which they probably wouldn't do.

Having a IOT device that fit the field theory was a challenging part of the assignment. Designing something that wasn't annoying but instead creative and productive in helping the user overcome their sleep procrastination.

Another challenge was the testing of the prototype, as it was a cardboard model, displaying its features to the participants proved to be difficult. As a result some information on how the lighting system would work is still left with some questions, those being whether or not the person would turn off their room light or not so that the device acted as their light source, or if they would find that the lights turning off be annoying.

## References

Sleep Center of Middle Tennessee. (2022). Millennials: The Tired Generation. Sleep Centers of MiddleTennessee.

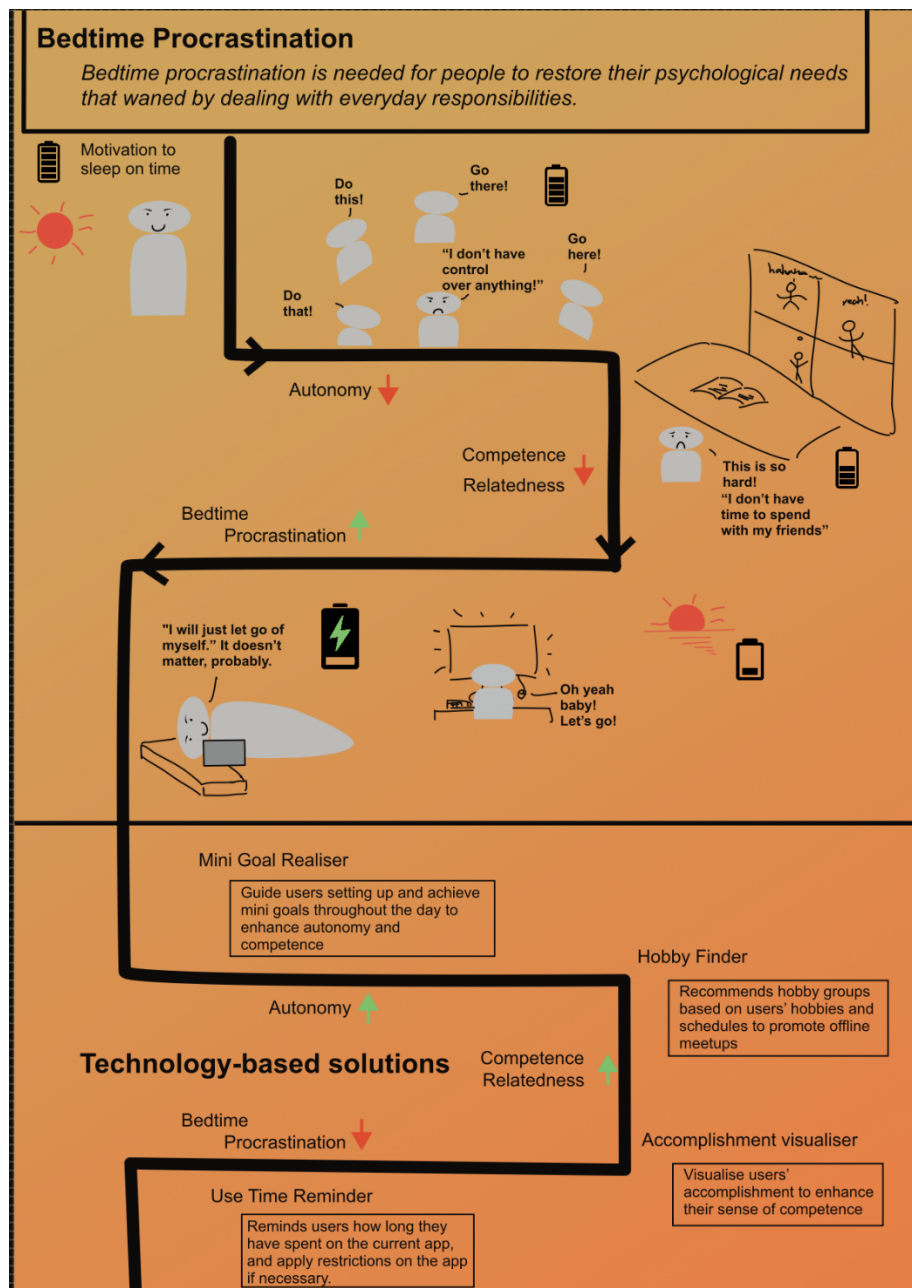
<https://sleepcenterinfo.com/blog/millennials-sleep-deprived/#:~:text=Millennials%20have%20been%20facing%20a,contribute%20to%20their%20sleep%20deprivation.>

Magalhães, P., Cruz, V., Teixeira, S., Fuentes, S., Rosário, P. (2020). An Exploratory Study on Sleep Procrastination: Bedtime vs. While-in-Bed Procrastination. National Library of Medicine. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7460337/> .

## Appendix

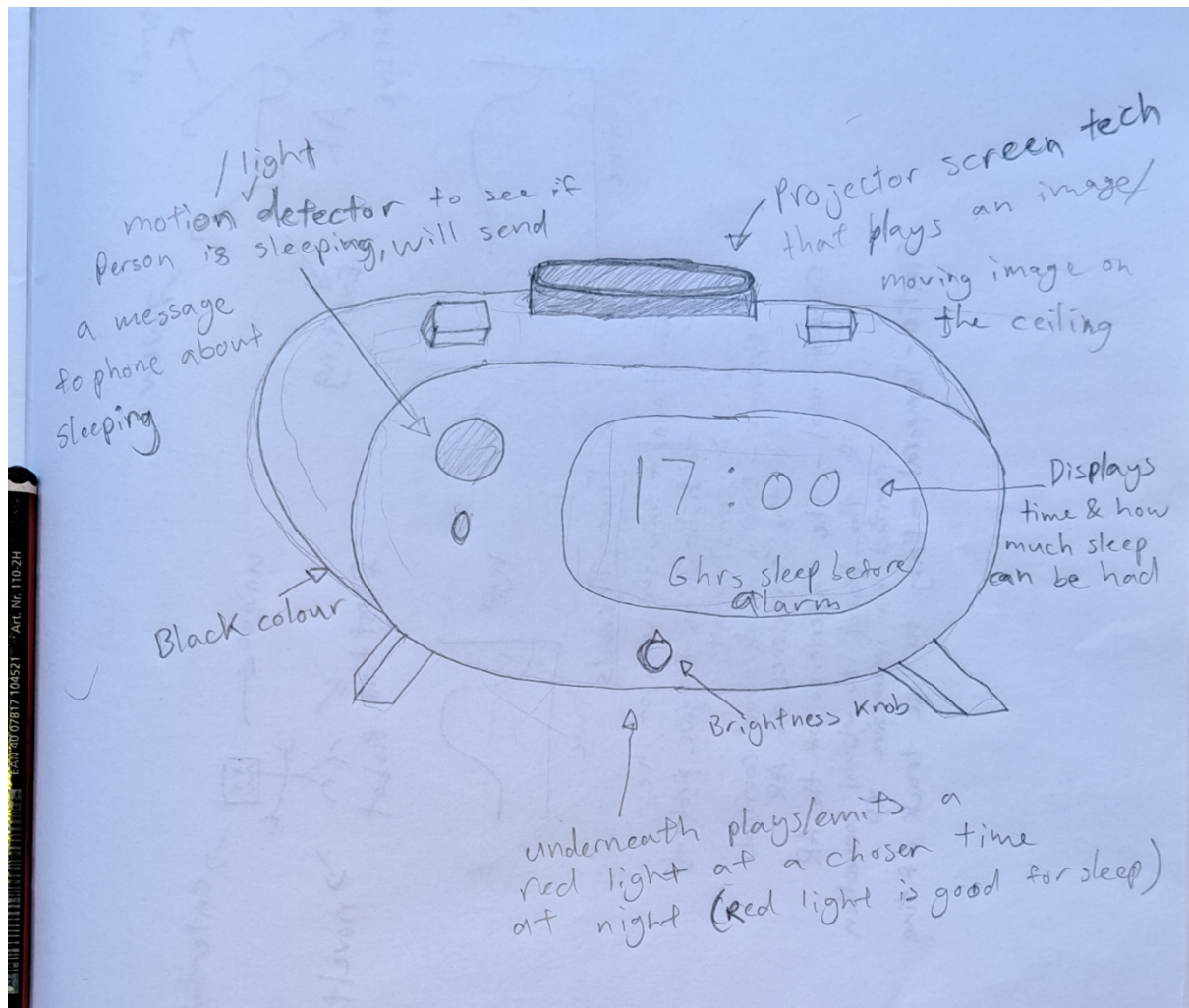
### Appendix A: Previous Works

Appendix 1 – field Theory



Appendix 2 – Early drawing of prototype





Video of the prototype

<https://www.youtube.com/watch?v=FeLLTDjusOA>

## Appendix B: Ethics Templates





## PARTICIPANT INFORMATION FOR QUT RESEARCH PROJECT – Interview–

### CAB310 Interaction and Experience Design

QUT Ethics Approval Number 1900000131

#### Research team

Student: Cane Neilson N11013435  
Unit Coordinator: Dr Bernd Ploderer [b.ploderer@qut.edu.au](mailto:b.ploderer@qut.edu.au) 07 3138 4927  
Faculty of Science, Queensland University of Technology (QUT)

#### Why is the study being conducted?

This research project is being undertaken as part of an undergraduate project for Cane Neilson's unit CAB310 Interaction and Experience Design.

The purpose of this research project is to evaluate the design of the prototype and gain a deeper understanding on sleep procrastination and the experiences around it.

The research team requests your assistance because you are a young university student.

#### What does participation involve?

Your participation will involve the following activities:

1. An audio recorded **interview** at home/zoom or another location of your choice that will take approximately 40 minutes of your time. Questions will include: your thoughts about a prototype and personal reactions and habits to sleep procrastination.
2. A video recorded **observation** at home/zoom or another location of your choice that will take approximately 10 minutes of your time. The focus of the observation will be on understanding how a target user may be interacting with a prototype. Notes will be taken to record observations.

Your participation in this research project is entirely voluntary. If you do agree to participate you can withdraw from the research project without comment or penalty. You can withdraw anytime during the interview. If you withdraw with 2 weeks after your interview, on request any information already obtained that can be linked to you will be destroyed. Your decision to participate or not participate will in no way impact upon your current or future relationship with QUT (for example your grades).

#### What are the possible benefits for me if I take part?

It is expected that this research project will not benefit you directly. However, it might benefit CAB310 students to see how the technologies they develop are used by other people, and to learn interaction design methods which will enhance their employability.

#### What are the possible risks for me if I take part?

There are no risks beyond normal day-to-day living associated with your participation in this research project.

#### What about privacy and confidentiality?

All comments and responses are coded i.e. it will be possible to re-identify you. A re-identifying code stored separately to personal information (e.g. name, address), will only be

accessible to the research team, and the code plus identifying information will be destroyed at the end of the semester.

Any personal information that could potentially identify you will be removed or changed before files are shared with other researchers or results are made public. The information that will be removed includes names, place of work/study, occupation, education,

Any data collected as part of this research project will be stored securely as per QUT's Management of research data policy. Data will be stored for a minimum of 5 years, and can be disclosed if it is to protect you or others from harm, if specifically required by law, or if a regulatory or monitoring body such as the ethics committee requests it.

As the research project involves an video recording:

- You will have the opportunity to verify your comments and responses prior to final inclusion.
- The recording will be destroyed 5 years after the last publication.
- The recording may be used as teaching material.
- Only the named researchers will have access to the recording.
- It is not possible to participate in the research project without being recorded.

Every effort will be made to ensure that the data you provide cannot be traced back to you in reports, publications and other forms of presentation. For example, we will only include the relevant part of a quote, we will not use any names, or names will be changed, and/or details such as dates and specific circumstances will be excluded. Nevertheless, while unlikely, it is possible that if you are quoted directly your identity may become known.

#### **How do I give my consent to participate?**

We would like to ask you to sign a written consent form (enclosed) to confirm your agreement to participate.

#### **What if I have questions about the research project?**

Please contact the researchers (details above) to have any questions answered or if you require further information about the project.

#### **What if I have a concern or complaint regarding the conduct of the research project?**

QUT is committed to research integrity and the ethical conduct of research projects. If you wish to discuss the study with someone not directly involved, particularly in relation to matters concerning policies, information or complaints about the conduct of the study or your rights as a participant, you may contact the QUT Research Ethics Advisory Team on 07 3138 5123 or email [humanethics@qut.edu.au](mailto:humanethics@qut.edu.au).

**Thank you for helping with this research project.  
Please keep this sheet for your information.**



#### **CONSENT FORM FOR QUT RESEARCH PROJECT – Interview –**

**CAB310 Interaction and Experience Design**

**QUT Ethics Approval Number 1900000131**

## RESEARCH TEAM CONTACTS

Student: Cane Neilson N11013435@qut.edu.au  
Unit Coordinator: Dr Bernd Ploderer [b.ploderer@qut.edu.au](mailto:b.ploderer@qut.edu.au) 07 3138 4927  
Faculty of Science, Queensland University of Technology (QUT)

## STATEMENT OF CONSENT

By signing below, you are indicating that you:

- Have read and understood the information document regarding this research project.
- Have had any questions answered to your satisfaction.
- Understand that if you have any additional questions you can contact the research team.
- Understand that you are free to withdraw without comment or penalty.
- Understand that if you have concerns about the ethical conduct of the research project you can contact the Research Ethics Advisory Team on 07 3138 5123 or email [humanethics@qut.edu.au](mailto:humanethics@qut.edu.au).
- Understand that non-identifiable data from this project may be used as teaching material and as comparative data in future research projects.
- Agree to participate in the research project.

Please tick the relevant box below:

- ☐ I **agree** for the interview to be video recorded.
- ☐ I **do not agree** for the interview to be video recorded.

Name \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

**PLEASE RETURN THIS SIGNED**

## Appendix C: Methods Used

Interview Guide:

### Intro

Before the interview, play the prototype video and let the interviewee guess what the prototype is supposed to do.

1. What do you think the purpose of the device was?
2. What does the device do?

3. Then explain the purpose of the prototype and this assignment. And explain the field theory.

### **Roleplay/Interaction**

Role play a scenario where they are using the prototype

1. They are on the computer playing games, get them to turn the lights off and put a red light on, ( ask if they would notice this change)
2. Get them to go to bed. Get them to enact what they do when in bed. Explain friend feature connection, friend is in bed.
3. Get them to use their phone to turn on ambient sound and have them play nature scenes on their phone. See if these help them sleep.

### **Interview**

1. After being exposed to the prototype:
  - What do you think it does?
  - Do you find this device can become annoying or enhance your sleep?
  - Do you like the colour?
    - Do you think different colour variations will encourage people to own one?
  - Do you think the size is ok?
    - Is it too big?
    - Too small?
    - What other form of the prototype do you think would be suitable?
      - Integrated into other furniture besides a clock?
      - A watch?
  - Where would you prefer to place it?
  - Are you okay with your status being constantly monitored?
  - Any other opinions?
2. Is there any feature whose purpose you don't understand?
  - Setting up?
    - How do you imagine the initial set-up would work? (because we didn't design a set-up)
  - Ambient sound?
    - How do you feel about sound when you sleep?
    - Do you find sounds from nature calming?
    - Would you see yourself using this feature?
  - Sleep status?
    - How do you think the prototype will determine your status?
    - Do you understand how the prototype will measure your sleep?
  - Red light?
    - Have you heard about the effects of red light?
    - Do you prefer to sleep in the dark or with dim lights on?
    - Would you give it a try?
  - Projector?
    - What would you like to see when getting to sleep?
    - Would you find this distracting?
    - Do you think seeing a moving image on your ceiling would cause you to use your phone less? Would you put it away more?
  - Online Friend feature?
    - Are you aware this feature is included?

- How to add friends?
  - How to remove friends?
3. Would they like to share their privacy with friends they connect with?
    - Should there be a feature to turn this setting off?
    - Is there a limit to how much friends can know and share?
    - Should this prototype be specifically designed for you? No need for friends.
    - What are your overall opinions on this feature?
      - Like it?
      - Hate it, remove it
  4. Is there anything they would like to add?
    - Why? What issues does it address?
  5. Do you think the prototype addresses the two touch points?
    - What is their sleep routine?
      - Before-bed and in-bed
    - What does their sleep procrastination look like?
      - Before-bed and in-bed
      - Have you devised any tactic to combat sleep procrastination?

## Appendix D: Anonymized Study Data

### Coded transcript 1

Device got them to think about bed	Taking attention away from pc/mobile	Competition/expectations with friend	Relaxed, sleepy state	Enjoy the feature
Distractions		Phone and social media in bed	Easy to use/carry around	
Creating habits	Peripheral attention	Privacy	Customizable	

Cane  
 Hey, hello.  
 Good afternoon.  
 That's right.  
 Thank you for joining me. Thank you. Firstly, I'm gonna show you a video.  
 Hi. Please explain to me what you think the purpose of the device was.

interviewee

So the device is made to help. People. That can't fall asleep or Sort of. Do other things.  
 at bedtime, which basically makes them not fall asleep. Or fall asleep too late, And then, They can't get up in time.  
 So this it will project something onto the roof with matching sounds.  
 It will. [Link with another device.](#)

Which like your friend would have. So it lets you know what time they are going to sleep. So you can sort of like. I guess it's friendly competitions in a sense. And also. Changes the lighting for circadian rhythm.

Cane

Okay, so yeah, you're pretty slot on the The reason I got you here was to ask you some questions about a prototype My group is in developing. And pretty much the The focus around was to enhance the experience of. People that go to sleep and procrastinate their sleep. Yeah. Before entering. And this, device was created to handle that. So. Unfortunately, since they're online. I cannot have you use device in person but if you could use the imagination in role play, I have some scenarios I'd like to go through.

Interviewee

Yeah, sounds good.

Cane

So

I guess we start from

Hmm.

Say it's like late at night Whatever you do late at night and So say it's late and you're on your computer. Right now as you are. And let's say the lights are off. So maybe you could turn them off.

Interviewee

Oh, give me 1 s.

Not perfect, but is that better?

Cane

Oh yeah, it's just, yeah, just Just a scenario. So. So let's say you on the computer.

So just enact you being on computer and then Let's say.

Could you also pull out some bright light behind you

Yeah, I'm just trying to create a scenario where Pretty much where you're on the computer and I want to see If like, say the prototype is behind you and it's a meeting, the light, would you notice it?

Interviewee

Yeah, I'd see it in my peripherals if it's behind me

Cane

so what would you do if that was to happen? And you were on the computer.

Interviewee

I think it would. Signal to me, that i should start thinking about going to bed and start the process of getting off my computer Assuming But staying up on my computer is a problem. Sort of a signal that now I should get off.

Cane

Yeah, okay.

Okay, so let's say You're off your computer now and you are starting to go to bed

And and you're like in bed right now. Let's imagine that

Can you just like enact what you would what you would do normally? Like on a normal day when you're in bed?  
Do you just go to sleep?

Interviewee

Participant enacts them on their phone lying down

No, I will sit on my phone like this.

Cane

And then To your right, you hear this noise, bading, and then you see a friend feature.

And a little person moving. Towards them in sleep mode.

How would you react to that?

Hmm.

If you could act out like your reaction?

Interviewee

\*looks to the side and thinks about it.

Oh, he's going to bed. Hmm. Maybe I should put my phone away.

Cane

And then would you continue using your phone?

Interviewee

I think, it would convince me to. Put my phone down and  
Actually try and sleep. As my friend has or whoever is on the other  
side has.

Cane

Yeah.OkayHmm.

And now as last scenario, after that. As the product in the video shows it will project an image and play some music so Maybe you could like play some ambient sounds in your phone or just imagine it.  
And like have a have a image on the ceiling.

Interviewee

Okay. Ill get some ambient sounds up

Cane

So if that was happening, would this how you, this how you react? Like you'd be Give your eyes close in the in the sleeping seat.

Interviewee

Yeah, I'd feel more relaxed and have that like I feel like my eyes  
would get heavier and I'd start sleeping.  
It's very relaxing, very calming. Assuming like You're ambient sounds  
would be calming sounds.  
That help me sleep.

Cane

Yeah. Can we go go through scenario where let's say you're in bed on your phone and this is happening?

And you see like the image on the ceiling. As you're looking at your phone and like sounds like what would you do?

Interviewee

\* notices projection, puts phone away and watches projection before closing eyes

Hmm.

Hmm, okay.

Personally, I get sleepy when I like watch. A show or something. So let's say on my phone I've got a show up.

I'm watching it just before I sleep. So If that started playing I think it would make me fall asleep.

Cane

Okay, so you fall asleep on your phone.

Interviewee

Yeah, pretty much sometimes I've fallen asleep before with iPhone playing something.

But I just, yeah.

Cane

Yeah. But does it take like a while to sleep on your phone?

Interviewee

Hmm. It really depends. Like if I'm Super tired that they are all sleeping like 2 s, but if I'm really invested in the thing then it might be harder But at the end of the day, pretty much always. fall sleep with my phone, in my hands.

Cane

so I guess with that product, would you say you'd have the same reactions as the person in the video.

Interviewee

Yeah, for the most part. I would.

Cane

So what other reactions that you have?

Interviewee

So like in the video when the light turned on. They started brushing a teeth to like start going to bed.

I'd probably do the same. But if. I saw my friend. Go into bed.

I might not get off my phone just yet. For me, it would be more when the projector comes on.

Cane

Yeah, okay. So the friend is more The friend thing is more to help you start thinking about bed.

Interviewee

Yeah, personally, because I'm not I think it's more of like a friendly competition sort of thing.



Cane

Yeah, okay

That's right.

Okay Well, thank you for your imagination. Oh, I think now I'm gonna ask more specific questions about the features.

So overall, would you say? This device would be. could be become annoying or could it really enhance her sleep?

Interviewee

I think if I bought the device specifically to help me sleep. It wouldn't be annoying.

Like. I guess to break my habits at the start it could be annoying just sort of like I'm fighting my phone addiction before bed.

Hmm. It's sort of that kind of ripping me away from that, but. Overall I think it would be positive. And wouldn't be annoying.

Cane

Okay. What do you think about the color of the prototype, the dark black?

Interviewee

The design itself, I think it should be black. So it's blends in. And promote some more like dark sleeping environment because if it was like bright yellow or something you'd see it.

Even if there's only like a little bit of a Moonlight coming through Windows or something But if it's dark, then it's.

Sort of out of the way and it will help you sleep instead.

Cane

So you don't want to be able to see it.

Interviewee

No, I don't want to see it.

Cane

What do you think about the size? Is it too big or too small?

Interviewee

It might be too big if it's big. I'm imagining it as sort of.

Microwave size. Might be a bit smaller but That's sort of, I don't know where I would put that, like my bedside table might be able to fit it on but.

Then I wouldn't be able to put anything else on.

Cane

Well, let's say it could be like any size you'd want, what size would it be?

Interviewee

I'd want it sort of like

Not really my phone, but maybe, you know, like portable speakers. Maybe that sort of size.

Cane

So you said you prefer to place on the bedside table.

Interviewee

Yeah, I think that would be the best spot because if I'm Trying to sleep like that's the best projected image.  
If it's too far away, then I'm sort of like looking diagonally, unless it can project. Like above where I am.

Cane

Is that because of your room setup where your computer is next to or near your bed?

Interviewee

Yeah, for me I have my computer near my bed and then the bedside table on the otherside.

Cane

So with the friend feature. How do you feel about your about that and your status being like displayed to others?

Interviewee

I think it can promote a good If you have close bonds with the people that also have it.  
Promote a good sort of supportive system. It's sort of like going to the gym with a friend that they sort of Make you go even if you might not want to.  
Because you don't want to dissapoint them. You want to meet their expectations, I guess.

Cane

Is any feeling of breach of privacy you'd see with that.

Interviewee

If there wasn't a way to turn it off, then yes.  
But if you could just turn it off like opt in opt out sort of thing, then I don't see any problem with it.

Cane

Okay.do you just have any other Overall opinions on the prototype, anything that's sticking out your head.

Interviewee

Maybe. like you can select a type of ambient sound and image. So it's not really.  
Cause some people might not respond to some types, but you also don't want just like the same image every night.  
So maybe like. A genre, I guess, like relaxing at the beach or something. And that will play that sort of.  
Waves coming in and then like a bomb tree image or something like that.

Cane

Is that something you'd want to select yourself or? lets say you select the theme and it has like an album of different things/images.

Interviewee

Maybe I'm not sure if this is possible, but for the first like week. It'll Try each  
Theme that's recorded on it or however You get the sounds and then. Since you're monitoring monitoring when we sleep through the friend system, you can monitor.

How fast we sleep with certain. Genres or themes, I guess, if that makes sense.

And then it will pick it for you.

Cane

moving on. So. Was there any feature? That you don't understand.

Interviewee

No, I, I think I got it all.

Cane

Okay, so how would you imagine the initial setup to work?

Interviewee

Initially.

So like when the when the light would come on. Is that what you're saying? When the

Cane

I guess when you first get the product. How would you imagine like the setup be?

So I imagine id unpackage it, and I'd have to connect, Somehow, to it so it knows when I fall asleep for the friend system.

And then I might need to input sort of. Roughly when I'd get sleepy. So it can do the carcadian rhythm lighting.

Cause everyone's different. It wouldn't know. my cycle.

Cane

How would you connect with it with a phone or computer? Or, on the device itself.

Interviewee

Probably a phone

If there's like an app on my on a watch or something or to my phone.

Cane

So how do you feel about sound when you sleep?

Interviewee

Personally, I enjoy ambient noises to fall sleep like white noise and Ambient noise.

Not sure why. Maybe it's because I grew up like that. But it helps me. Only think about that and then I'll fall asleep rather than thinking about what could be on my phone right now or other stuff.

Cane

Okay. So do you find sound some nature the most calling or what sounds did you find the voice calling?

Interviewee

Yes. I like like rain, sounds.

Cane

Okay. So with the sleep status. How would you think the prototype would determine what status you are in and what's status other people in?

Interviewee

Well, I've seen other apps that have sort of a sleep tracker. Maybe it's measured through heart rate. I'm not really sure how they do it, but I'm thinking that's a similar system.

Cane

So, you were talking about circadian rhythm. So I'm guessing you know about the effects of red light.

Interviewee

I don't know the effects of redlight. But I'm assuming it's something to do with like the sun. And it's like a yellowish slide, so it's like. Signals to our brain went to sleep by how much Right, or yellowy light there is. That's how it's.

Cane

Hmm. Well, let's say that you said it started emitting the red light. as seen in the prototype. would you like be confused about it or would you? Like be indifferent, not care.

Interviewee

Maybe the first time I got it I'd be a bit confused. Because Sort of like bedtime, you want it to be dark, but it's emitting. A light source. I think. Personally, I'd use it as sort of a signal. To go to bed.

Cane

Okay. So. So you prefer to sleep in the complete dark or with some light on?

Interviewee

Yeah, like completely black out curtained

Cane

Yeah, okay. So on the projector What would you imagine you like to see when you go to sleep?

Interviewee

Does something like calming like calming Nature or even like raindrops falling on a windowsill. Or like a car window. Is something that's relaxing and you're not too much thought to it. So it's like not a lot of moving. Things across the screen, otherwise they might distract you from sleeping.

Cane

Hmm, okay. So like a lot of movement is distracting. So, so about sharing. Sharing you're sleep with the your friends. You'll sleep status. What's the limit to how much you'd share and how much you'd want your friends to know

Interviewee

I think. Personally, I don't mind the knowing. Like how many times I wake up in the middle of night or like [redacted] If my sleep is disrupted. And I stopped sleeping, I guess. But think it's best for just when I go to bed. [redacted] For that moment to be captured because That's. If the effect of the machine is to help people sleep. [redacted] Recording my full sleep. I don't see how that helps. Just the actual time of sleep. [redacted] Would influence the others to sleep as well. I would say.

Cane

So you don't think too highly of like before? Like, like, in the prototype, it shows. The status of like them awake. And then the next phase is them getting ready and after that it's them asleep. you rather have like awake and then asleep?

Interviewee

I could see how it could be beneficial. for some users, but for me. I would prefer if it's just. [redacted] sleep. [redacted]

But either way works. I think both ways are good.

Cane

Just the final part. So I guess the 2 touch points we try and address. Was this, was the sleep routine before and in bed. Would you say this addresses both or does it on one more than the other?

Interviewee

I think. It definitely addresses both through the light for the getting ready to sleep. And if you keep the [redacted] your friends are getting ready to sleep. [redacted] Cut on, then that would also help with your getting ready to sleep. And then finally when they've fallen asleep, that's your first signal and then you're projector is your second. [redacted] So it's sort of 2 in the getting ready to sleep into. In the it's time to sleep. [redacted] So I think it's fair and works well.

Cane

Okay, finally some like personal questions so What does your sleep procrastination look like.

Interviewee

I try and Go to bed and be asleep 30 min after I've entered my bed. But try to is the main thing I've pretty much always gone on my phone over that time. There are some days if I'm really dead where it will work but I think the phone is the enemy. Just cause it's so easy to carry around with you. [redacted] Like I couldn't bring my computer with me into bed, but I can with my phone. [redacted]

Cane

Okay, so mostly your procrastination is When you're in bed, not before.

Interviewee

Hmm. Yeah, I, I can. Easily get myself into the bed.

Cane

Okay. So do you have any tactics to combat that?

Interviewee

Not really. So just the time if I look. I try and get at least 7 h every night.

And I have to get up at 7 am. That means that at least have to go to sleep at 12.

So. For me it's like if it hits 12 and I'm still on my phone then.

That sort of sequence myself that I really have to put it down and go to bed.

## Transcript 2

Speaker 1

Started alright so. Here's the prototype we made. Do you remember the? The the the first interview with it.

Speaker 2

The the one about.

Speaker 1

When were you? The diary and then your sleep. So yeah, this is what we made. To help people. To help with to to help people's procrastination.

Speaker 2

How does it work?

Speaker 1

You know, playing. I'll explain that later, but now I need to. I need you to watch a video, so I will kind of explain what the prototype does.

Speaker 2

OK.

Speaker

OK.

Speaker 2

So do I just wash it by myself?

Speaker 1

Yeah, just watching. Just watching, yeah. Where is it done? OK.

Speaker 2

OK, it's done. Well, so no. So what was sold? No.

Speaker 1

So no domino, yeah. Ohh no, that's the. That's the product name.

Speaker 2

OK. Is that how you pronounce it?

Speaker 1

Yeah, some though, yeah. It's a Latin Latin word for sleep. OK. Yeah, alright. So. Are you watch the video prototype video, do you? What do you think the purpose of the devices?

Speaker 2

I guess the purpose of the device is to, uh, create an environment that will. UM, make it easier to go to sleep while also linking it to other people to to try to make it. Make you connect with the community and like learn from the I guess the. Good examples I guess.

Speaker 1

So you do recognize that there's the, the the sleep status feature, right?

Speaker 2

Yeah, I do.

Speaker 1

Yeah, alright. Yeah, so. Yeah, I think what you describe is pretty pretty precise.

Speaker 2

But but while I'm watching it, I I was thinking about like if I am the person that's using the device. Is it gonna help me to go to sleep? Or is that gonna? Motivate me to sleep earlier or in time, or stop me from looking at my phone. And my answer. Is probably not.

Speaker 1

Yeah, I guess, yeah, it's not meant to solve your problem like it's not meant to. It's not designed to. Like you know, just completely stopped.

Speaker 2

And then stop people. Like I I think the main problem is it's true. Soft on on what it does like it doesn't.

Speaker 1

Yeah, yeah, yeah.

Speaker 2

Force hard enough if you get what I mean.

Speaker 1

Yeah, yeah, I guess, I mean, yeah. You are a special special special one. You you do rely on a lot of external motivations.

Speaker

To do so.

Speaker 1

Just like gardening.

Speaker 2

OK, sure, which is.

Speaker 1

Would you say, wouldn't you say that's fair?

Speaker 2

I I I guess so.

Speaker 1

You only sleep early if there's something early to do next morning, right? Like if there's nothing.

Speaker 2

Or or if I'm tired like I'll just sleep whenever.

Speaker 1

To do next morning. If you're tired. I mean, that's the. Same for everyone, but. But if you're not tired, and then you can. It's bedtime, you know? Ten o'clock 11:00. Would you go sleep?

Speaker 2

If I'm bored, yeah.

Speaker 1

Yeah, well, yeah. OK, let's move on. Ohh, so you've watched the. Video and then now let's. Like try to interact with this prototype so. You're in Sydney from June. Uh, we'll just do a role play. So you tell me you what you wanna do? Like where you wanna click on or press on and then it will. Like play it out for you.

Speaker 2

Sorry, what was the top 2 button again?

Speaker 1

These two are, yeah, they are not mentioned in video, but they are meant to. So when the alarm rings next morning, you just press. It's just normal clock buttons.

Speaker 2

OK. And the and the bottom one, that is like the the flat thing? That's more in the front. The two button no, no the on the top but the other.

Speaker 1

Those things coupon. Ohh those two. These are supposed to be speakers.

Speaker 2

Ohh, the speakers. OK, OK yeah. Because I think in the video I saw something like a Wi-Fi icon on the left one.

Speaker 1

Yeah, yeah, yeah. That's like meant to show that it's playing the sound, but it doesn't.

Speaker 2

Ohh OK fair enough.

Speaker 1

It's not that clear.

Speaker 2

And I guess, I guess it's intractable on the right side, right? Well, just a. Quick question, how do you track your friend if they are asleep or not?

Speaker 1

OK, so these two buttons right? My idea was. Uh, so one is for stopping the alarm. The other is 1. Updating your sleep status. The the the the device. Has no means to. Learn you if you're asleep or not, so. What you can do? It will know you're going to to your sleep routine like you set it up, and then by the time you start your sleep routine, the automatic update. But you have you have to press the button to let it know that you're you're gonna sleep. You're in bed.

Speaker

And the next morning, when you, yeah.

Speaker 2

So, wait, let, let's say, let's say I'm about to sleep. So I press the right button. And then I have.

Speaker 1

When you are about to. Sleep. Oh, OK.

Speaker 2

And then and then when I get onto. The bed I had to press. The right button again.

Speaker 1

When you're about to sleep. It automatically does that cause you set it up like to to remind you to when to start your sleep. Routine will be.

Speaker 2

Ohh so so.

Speaker 1

Yeah. So at the beginning it will be there. There's nothing here. So imagine this, some someone else's device. Right. And then yeah. When let's say you start your routine at 7:00 and then 7:00 o'clock, it will ultimately show up here. And then after you brush your teeth and wash your face and you press it again, you press it and then goes here.



Speaker 2

Ah, OK, so the about sleeping is the time you schedule and in bed it's up.

Speaker 1

That's that's when you are in bed.

Speaker 2

You click it. How about sleep? I mean, you can't press it while you're asleep. So how does it go to sleep?

Speaker 1

I mean, once you're. In bed, you probably want to read a. Book or something and then you could. Look at your phone and then you can also. I mean there's projection, right? Did you see that one? And then you could do that. And you press it again. That sounds stupid, but. I mean, ideally it will have a sensor or something detect your movement and detect the. Your heartbeat sensor or whatever heartbeat you know ultimately does that.

Speaker 2

Just just a random thought are are you open for like recommendation or like just random thoughts?

Speaker 1

Sure, but this unit is not really about designing stuff. It's about the rationale.

Speaker 2

OK, OK. Yeah.

Speaker 1

So it doesn't matter. Like you can say whatever you want to say, but.

Speaker 2

I just never thought I was. Thinking why? Why can't you? Just link a phone a device to to this.

Speaker 1

So, yeah, that was the original idea, was to have a wristband or whatever. Then you wear it and then.

Speaker 2

It's more like when you use a phone and then you know, there's a lot of apps right now in the phone. That's like, ohh, what time does the phone closes you record it? If a person closed their phone so, so, so put it on screen save. You automatic you will automatically change the status from. In bed to asleep. But if you turn on your phone again, you jump back to to to in back.

Speaker 1

Yeah. Yes, that's valid.

Speaker 2

Yeah. OK. So. And the front is to show a the the the the time right?

Speaker 1

So here would be. Time and then I guess it it's not showing in the video, it's not mentioned anywhere but yeah, yeah, but it's and also supposed to have some sensors here and then. Detect the noise level the light. The brightness in the room. It will be displayed here.

Speaker 2

OK.

Speaker 1

Yeah, it may. It might have movement sensor as well. So it will know if you're moving like.

Speaker 2

OK, then how am I going to set the schedule to sleep?

Speaker 1

That would be. Either on your phone or on here, but it's it's not finished.

Speaker 2

Oh, so your phone is linked here. OK.

Speaker 1

Yeah, it it could be, it could be.

Speaker 2

It could be OK and the I'll assume the projector is projecting what is on your phone.

Speaker 1

No, no the. Projection is more. Did you see the the the the image?

Speaker 2

Yeah, night sky and things.

Speaker 1

So that image will be. Like synced up with the music playing. It's not linked to a phone.

Speaker 2

OK.

Speaker 1

The production is is stored on the device I guess.

Speaker 2

OK. Yeah, fair enough. Fair enough, yeah. So there's nothing much I can. Due on the divided stuff, so there's not not much I can. Push. It's more like. Oh, I say a time on my phone. And then when I when I when I need to. When I'm go. Get on bed after I finish my routine, I press the right button tap like this. And then you jump to in bed and then I'll probably. Watch some random video and then after I'm oh, I'm tired, I'll go to sleep and I put down my phone.

Speaker 1

Yeah, yeah, I guess.

Speaker 2

Tap the red button again, go to sleep and then the next morning when I wake up, I'll type the right button again to reset it. Our Sir, yeah.

Speaker 1

When you when you wake up it will it will. It will just automatically move you remove you from here cause you're awake.

Speaker 2

How do you know that I am awake?

Speaker 1

It's just like when when the alarm rings, it will. Just remove you.

Speaker 2

OK. OK, so when the alarm ring I just tap the. Left button, yeah.

Speaker 1

You don't even do anything, it just promotes.

Speaker 2

You, but then you see the last button is. To stop the alarm.

Speaker 1

Ohh yeah, I guess, yeah, you you, you. Stopped the alarm.

Speaker 2

Yeah, yeah, exactly. OK. Sounds good and ohh by the way, in the video I do saw some. Light function that like I think it's like when it gets to the about to sleep time you change the brightness of the light, you just smooth and.

Speaker 1

Somewhere at the bottom or whatever, or at the top it will have a red light in meter. And then there are scientific studies that shows, yeah, I'm explaining.

Speaker 2

Why is it red but?

Speaker 1

So there are scientific studies that shows that the red light helps. That's your brain to emit more like. Sleep. Sleep. Deducing.

Speaker 2

And the yeah, and the music is chosen. By default, so you touch with it, right?

Speaker 1

It will do a shuffle. Through a list.

Speaker 2

OK.

Speaker 1

Or you can set it up on your phone.

Speaker 2

OK, fair enough. Yeah, but but there's nothing. Is there any setting I can config on the device?

Speaker 1

I guess you could. I mean this is a touch touch screen the touch screen but we don't want to make it more.

Speaker 2

Like what? What if? What if I'm? I'm oh, OK.

Speaker 1

Complicated because essentially this is just a. Clock right with some additional like. You know the lights.

Speaker 2

Yeah, well, what if I'm, like, all the lightness? The light is really annoying. I want to turn off. What can I do? To turn it off. Just touch screen.

Speaker 1

Well, in the OR original prototype, there were two dials here. And this thing was not here. And then the dials were meant to like, you know, dial down the dialing, the buttons and the sound, the volume of the music. And I guess you could. It could be here. Right. You think if you think it's too bright, you don't know. The bike that's the the back of the.

Speaker 2

OK. Yeah, fair enough. Nice, nice thought.

Speaker 1

So that's the. Interaction with the prototype. You can explore what you can do or cannot do with the prototype, and now let's move on to some questions.

Speaker 2

OK.

Speaker 1

So after you learn about this prototype. Just generally what? Ohh guess you already answered that one. OK do you find this? Do you do find this device annoying? Or does it enhance your sleep, enhance your sleep routine?

Speaker 2

I'm sorry to say it, but I am really good at making myself fall asleep. When I need to so all of these, instead of helping me go to sleep. Will be an obstacle for me to go to sleep.

Speaker 1

OK, that's a that's a good rationale.

Speaker 2

I'm sorry to say that, but it's just for me.

Speaker 1

No, no, no, it's it's, it's totally fine. But so in the first interview, though you said. I mean, there are times that you. Could go to sleep early, but you decided to wait. Stay up and you know, write your novels or whatever. So would this help in those scenarios? Wouldn't remind you like there's Someone Like You linked up with your friends. Jeffrey friend once tea and then you see, they're all about to sleep or sleeping already. And then you are still reading novel. Does that would that make motivate you to sleep?

Speaker 2

Maybe there's there's a possibility that, but all the light, the music.

Speaker 1

So, like, yeah, yeah, I guess.

Speaker 2

And all the other things other than that part might do the opposite is what I'm saying.

Speaker 1

And what do you think about the color?

Speaker 2

Oh, I think the color is perfect. I I I like black, but I just think it's too huge for how how much it does. I think it can be smaller.

Speaker 1

Yeah. Yeah. OK.

Speaker 2

Yeah, I I think it can.

Speaker 1

Yeah, that's that's, yeah.

Speaker 2

Be like maybe 1. 4th or half of the size, I think it's perfectly.

Speaker 1

Yeah, because this is this is. This was a shoe box.

Speaker 2

I mean, if there's waste more.

Speaker 1

Do you like the black color right?

Speaker 2

Yeah, I like the black color. And I think if you can make it way smaller, then you can just. Or maybe like carry it around almost or or. Or put it next to you while you're going to sleep. And that's actually pretty pretty comfy and nice, while while playing some like delightful music with some dimming light like ohh. Like by the way like. In my home back in Hong

Kong, we actually make a make our light. That you can like just turn it into different color at different time. You can set the timer to it turn. To different color and.

Speaker 1

Like smart home lights.

Speaker 2

Yes, smartphone and surprisingly. My mom loves to turn it to like a combination of purple. And red not purple, like pink and red.

Speaker 1

OK.

Speaker 2

When she's going to sleep. And apparently that helps her. And I'm just like, I guess I I I guess so one might get help from that.

Speaker 1

Yeah, that's why in the video you see. The the The there's bright lights.

Speaker 2

Yeah, but like, not everyone loves rat.

Speaker 1

Then everything starts.

Speaker 2

Like you know, I mean, according to your research, the rat line, it helps you go to sleep, but maybe people don't like it.

Speaker

Yeah. No, no.

Speaker 2

So I was I was just thinking, can you like change the color and you deem it or can you turn it off or you don't like? It something like that.

Speaker 1

Also in different cultural. Like in different cultures violates me. I mean some negative stuff.

Speaker 2

I'm not sure about that, but yeah.

Speaker 1

I mean in Chinese you should know like. That the red light zone.

Speaker 2

Yeah, they're like.

Speaker 1

Right. So I guess if if you want to sell this in China? You wouldn't mark it as.

Speaker

The trench is green light.

Speaker 1

Right, like I mean. It will look weird as well, like if your neighbors. See your room is red. It's kind of weird, right?

Speaker 2

Yeah, it's like, what the hell is that ghost in there? And, you know, us is still work to customize it. And you I think you're saying something like customize it on your phone or something like that.

Speaker 1

So you already touched on the size it's. For for you, it's definitely too big, right? So what other form of the prototype do you think would be suitable like? Right now this is, you know, bigger. Than I have. Would you say? Something like a a mouse like this phone.

Speaker 2

I think something like the phone will be quite nice. Because of it too small. You can't really see who is asleep or not, you know. And I think if it's like something like the phone, it's it's quite good. If it's too small. You can't even put a projector in it, OK? I'm not sure.

Speaker 1

So with this one. Where would you?

Speaker 2

Ohh this one. Probably on the floor. Next to my bed.

Speaker 1

OK.

Speaker

Right.

Speaker 2

But like if it's way smaller, I'll I'll rather it to be put right next to me when I'm asleep, like on my bed, you know. But but this side is way too way too big that that I I can't possibly do that.

Speaker 1

Next to the pillow so you can look at.

Speaker 2

So I'll just put on the floor.

Speaker 1

Are you OK with your sleep status being constantly monitored for those talking about this function, are you OK with stuff?

Speaker 2

Yeah, of absolutely. Because if I don't want other people, no, I would just not tap the. Button, you know? So if I tap the button it means that I'm OK to show it.

Speaker

OK.

Speaker 1

Yeah, but are you OK with peoples being able to see? Where where you at right now, like which state you're at?

Speaker 2

Yeah, if I tap it, I'm acknowledging that I want other people to see it. But if I don't want other people to see it, maybe I'm just like, I'm busy doing my own stuff.

Speaker 1

So you like you like that you like a. Yeah. So you like it.

Speaker 2

Then I'll I'll just simply not have it.

Speaker 1

Do you like? It gives you options, right?

Speaker 2

Yeah, I guess for yeah.

Speaker 1

Any other? Any other opinions?

Speaker 2

I just feel like I'll. I'll forgot to tap it most of the time like. Like like when you're falling asleep.

Speaker 1

Yeah, I guess that's.

Speaker 2

You're like you. You just, like, drop your phone and fall asleep. Drop your phone but. Like Ohh tap it and then tap and it.

Speaker 1

And then you're away card.

Speaker 2

So I I'm just a bit doubtful on how often am I going. To like, remember to tap it every time I change the status.

Speaker 1

You know, OK, yeah.

Speaker 2

That that's what I do recommend. Like when I when I turn off my phone it will just automatically jump to sleep then then like that won't be a problem, you know.

Speaker 1

OK. So is there any?

Speaker 2

Or or make it a sensor or the bed so you can put it in the bed and when when the bed have weight on it, you'll also we jump to on bed.

Speaker 1

That was one of the idea. That was one of the idea.

Speaker 2

Smart. Is this what the?

Speaker 1

So is there any feature that you don't understand?

Speaker 2

It's quite straightforward and it's quite straightforward I think.

Speaker 1

The purpose and the future that you understand? I mean, there's not much of. You can you can have with the. Let's see what I'm to what's next? About it, about setting up the device, can you kind of imagine what the initial setup would be like?

Speaker 2

Yeah, I can.

Speaker 1

Yeah. So yeah.

Speaker 2

Yeah, I guess. You you set it up like the setting. The customization will be on the on your phone doing it, but the original setting I guess will be just. Red light with a projector of dark sky and with soothing music of a ocean. With no one on the on the board because you haven't set it up yet, how do you even link it to other people? Maybe on the? Phone just come at compare other people.

Speaker 1

Yeah, maybe on the phone there's a friend code and then you enter that.

Speaker 2

Something like that. How to delete a friend I? Guess on the phone.

Speaker 1

You kind of mentioned that the the music that. You don't want to hear the music when you like.

Speaker 2

Yeah, like I'm.

Speaker 1

Kind of stops you from falling asleep.

Speaker 2

Yeah, like sometimes like it, it really depends on the day for me and yeah.

Speaker 1

Do you find like nature sound calming?

Speaker 2

Yes, I do, but. It really depends on the day, like if I I'm having exams tomorrow and I'm trying to fall asleep the the sound of waves and ocean. I don't think it will help me to calm myself though. On the other hand, I'll. Just want to sleep in peace, you know.

Speaker 1

Do you listen to music?

Speaker 2

Yes, I do. Sometimes not all the time, sometimes.

Speaker 1

Uh, how about SMR?

Speaker 2

Yes, I do a lot. But but I highly doubt. Yeah, yes, I do. But not all the time. Like it it like in different scenario. I will want music want SNR or I don't want at all. I want to sleep in peace. Different scenario will have different. Different things I want is not one thing that I always want, you know.

Speaker 1

So let's say if there was a dial here for controlling music. Uh, the volume. But you can also press the dial and that will turn on and off. Would that be better? So you have a control over that, like if you want today you're in the mode of listening to your.

Speaker 2

Yeah, yeah, I I think I think that would be way better because I guess more customization would just means better. Like you, you just ends up better because I want it. I'll open it. I don't want it up. It's it's really good. But I do think you want to keep the keep the design small and simple.

Speaker 1

Yeah, definitely, definitely.

Speaker 2

So if you add too much like dial and like oh you want to change the projector image, you want to change the color. Like if there's too much thing, you'll just be too complicated and too annoying to do, you know, so. There's one down.

Speaker 1

Maybe size like this?

Speaker 2



Yeah, yeah, I'll, I'll say this maybe size like this, yes. Yeah, maybe it sounds like. This or even one box.

Speaker

OK.

Speaker 1

But I mean alcohol probably too small. But yeah, I get the idea.

Speaker 2

I mean, I mean, you got you got six side you you're going to Chuck everything into one side, you know, yeah. Oh oh, imagine if you. Can put a radio on it.

Speaker 1

Well, OK, let's move on. What would you like? To see when you're getting to sleep.

Speaker 2

Sorry but like. I I'm a.

Speaker 1

That would make sense, yeah. So yeah, I guess. Imagine the the other tile is also pressable right you. Can just turn it on and off.

Speaker 2

OK.

Speaker 1

OK.

Speaker 2

Like I I'm not like complete dark sleeper but I am. A dark slipper. So like I I know other people that that that can't sleep if there's no light. But I'm the opposite. I'm like, I will turn off my light when I go to sleep. The more light it is. The harder is it for me to get. To sleep, it's. Not like I can't, but it's just harder.

Speaker 1

Yeah, you kind of answered all the questions regarding the features of the device. So let's move on. So one of the most important feature. Of this device is the sleep status.

Speaker 2

Right.

Speaker 1

It's meant to show. It's meant to motivate people to sleep early when they see their friendship because because being able to relate to people is really important for a lot of people to.

Speaker 2

Yeah, and and and all this thing I can picture it being really nice function and I'm I can picture it being really helpful.

Speaker 1

I'm going to sleep.

Speaker 2

The only problem for me, as I said before, is the automation of changing the status is that.

Speaker 1

Yeah, I mean that could, that's that's.

Speaker 2

Of you know.

Speaker 1

That's easily solvable. So I mean.

Speaker 2

Isn't that the hard part? Like how are you gonna optimize to make people when when they're get on their bed?

Speaker 1

No, that's that's easy.

Speaker 2

To change the status to on mass.

Speaker 1

It might be hard. It doesn't matter. Move on so. I mean, you said you, you, you could imagine yourself using it, you say? It's it's could be useful.

Speaker 2

In fact, our rather device just to show that yes, sorry for this more over than like having lights and sounds and love and all this \*\*\*\*\* because I can just do all this on my phone.

Speaker

Would just be.

Speaker 1

It's only for this, yeah, yes. That's that's what our yeah, that's our.

Speaker 2

Instead of the small by app of that thing, yeah, that would be nice.

Speaker 1

Maybe instead of death, it's it could be a. It could be a like a electronic calendar instead of dates, it's. You know, status of your friends. And then I guess you could expand on this feature and then make it into a mini game where? If you stick to your, if you stick to.

Speaker 2

I'd rather keep it simple.

Speaker 1

Your sleep schedule.

Speaker 2

Yeah, just just so like I I.

Speaker

Do you want?

Speaker 2

Think it's been really simple? It's already good enough.

Speaker 1

OK.

Speaker 2

OK. All right.

Speaker 1

I guess you cannot answer this, but do you think there should be a a feature to turn this? Thing on and off. Like some people may be uncomfortable with this during their sleep status with other people.

Speaker 2

I think sure, yeah, more customization would be better. But on the other hand, if.

Speaker 1

I guess you don't. Want to share your data? You could just not link with people at the beginning. That's first place.

Speaker 2

Or just don't have it. Like I yeah it's it's contradicting because. If you allow that to happen. People, it's just gonna turn it off and forget about it. Like then then like. There's one day that you just turn on the device. Hey, you just look at the device and you'll see everyone is on silence mode. Like, that's what I call when you turn it on. And then and then you'll just be like. Like this, you know like.

Speaker 1

Uh, is there any feature you would? You would like to add to this thing. What feature would you think would be helpful to? What feature will make you to want? To use this. Assuming that you don't want to use it.

Speaker 2

Let me think. The first thing is, uh, it needs to be more customizable. As I said before, and also need to be smaller. At least these are the baseline and and then I think something that you can add on to it is. I guess you get involved to other people. Sleeping status like, I don't know.

Speaker 1

OK.

Speaker 2

Maybe maybe that. Maybe that's fun, right? Like someone go from. About to sleep too, in bed. And then you can just spam thumbs up and then and then you see tons of thumbs up. Just fly across the street like maybe that's fun. I'm not sure is. Is that going to make you don't want to sleep? Not sure as well but.

Speaker 1

I think a little bit, a little bit like. Social interaction with. It could be very satisfying, satisfying. And then people were like. To you know, I'm that's a lot of.

Speaker 2

Yeah, I I. Mean nowadays it's a social world like everyone wants. Social like are they go to Instagram, they go Facebook, they they go over it over like when? When they're on the bed for like. Two to three hours like. I think it's. I think it's normal for people to wants to. To share their sleeping status, like people legit would go to Instagram to post. I'm gonna sleep now. Have a good night, people will. Let you do. That like so, I can assume like people will just wanna share the status and people emote on it. Comment on it and they'll be feeling really happy and they're just, ah, that feels nights and they go to sleep. I I I think I can. Imagine that happening.

Speaker 1

OK. Yeah, so.

Speaker 2

I got that I think. You can set the alarm into like just say to the weather report alarm. So the alarm with and then telling you how cold is it, what time is it something?

Speaker 1

Hmm, I think a lot.

Speaker 2

Like that, I don't know.

Speaker 1

Of slot smart alarms do that.

Speaker 2

Yeah, smart alarm. Like, yeah, that that'll be fun. I don't know, but yeah. That's not what I can say because I I want to keep it simple and.

Speaker 1

All right, so. Alright, so back to the study I did. So the interview, the conducted 2 interviews. The meta field theory. Uh, which is? A theory about. And in the field theory. There are two three touch points. So basic Touch phone, a touch phone is something. You can think of it as as a summary of. Activities that people go through. During the day. But forget about it so.

Speaker 2

Wait, I'm listening.

Speaker 1

And this OK, I mean this prototype is meant to address 2 of the touch points. So first one is. First one was activities throughout the day. Like helping people to. Casual their activities and stuff so that this will be so this will be.

Speaker 2

How does that help that?

Speaker 1

Your sleep routine. Like it helps you, it helps you. Helps you correct your sleep routine like make sure you go to bed on time. And the other one is people need. Because social interactions like enough social interactions to.

Speaker 2

I can get the second part, but the first part I'm I mean sure. OK.

Speaker 1

Yeah, I guess that's everything. OK, let me finish. Let me start recording.

### Transcript 3

00:00:04 Interviewer

Alright, all good to start.

00:00:06 Participant

Starting it now.

00:02:45 Interviewer

Is the video finished?

00:02:47 Participant

Almost for like 10 seconds.

00:03:06 Interviewer

Uh, let's just start with the questions then.

00:03:08 Interviewer

So what do you think the purpose of the device was?

00:03:14 Participant

Is it to help with like phone addiction and like to fix peoples like sleeping patterns?

00:03:19 Participant

And stuff like that.

00:03:20 Participant

That's what I felt like it was about.

00:03:27 Interviewer

So based on that video, what do you think this device do?

00:03:32 Participant

Uh, I think it'll allow you to connect up with your friends.

00:03:38 Participant

And like it'll show you when they're like in bed, getting ready and like falling asleep.

00:03:44 Participant  
It'll help, like, calm you down and relax.

00:03:46 Participant  
You're right before you're about to go to sleep, stuff like that.

00:03:49 Participant  
I think it'll probably help you.

00:03:52 Participant  
Stay off your phone a little bit?

00:03:56 Participant  
Yeah, stuff like that.

00:03:59 Interviewer  
So basically what you're saying is kind of what we are aiming for.

00:04:03 Interviewer  
So that's actually kind of what the device is actually designed to do.

00:04:08 Interviewer  
So I'll just explain to you further as well, so.

00:04:12 Interviewer  
This prototype was designed based on a few theory that we had.

00:04:15 Interviewer  
Came up with.

00:04:17 Interviewer  
We decided it was called bedtime procrastination, so this device is supposed to help users get to bed and getting the process to bed and to help them sleep better.

00:04:30 Interviewer  
And it should also help them mentally and physically as.

00:04:34 Interviewer  
So on to the next section.

00:04:38 Interviewer  
So this part here will require you to interact with the prototype yourself, but since we are online, we can't do that, so I will send over some pictures.

00:04:52 Interviewer  
Have a quick look through them.

00:04:55 Interviewer  
It's just like.

00:04:57 Interviewer  
Two pictures and one...

00:05:00 Interviewer  
10 seconds video.

00:05:01 Interviewer  
Not very long.

00:05:04 Interviewer  
And there you go.

00:05:10 Interviewer  
And I'll just ask you some questions or actually not ask your questions.

00:05:13 Interviewer  
I'll just uh, give you a scenario and uh, I'll just ask for you.

00:05:18 Interviewer

Uh, your personal experience, whether you think this will work or whether it will.

00:05:22 Interviewer  
Help you or not so.

00:05:36 Participant  
Have you sent over the pictures and video?

00:05:41 Participant  
Have you sent over the pictures and video.

00:05:45 Interviewer  
I sent it over.

00:05:52 Participant  
It hasn't come through yet.

00:05:59 Interviewer  
Let me try uploading it.

00:06:01 Interviewer  
One more time.

00:06:09 Interviewer  
There we go.

00:06:26 Participant  
OK.

00:06:28 Interviewer  
Yep, yeah, ohh done.

00:06:29 Interviewer  
Looking through them.

00:06:31 Interviewer  
OK, so here's your first scenario.

00:06:34 Interviewer  
So you are on your computer playing video games.

00:06:40 Interviewer  
Prototype will automatically turn the lights off in your room and it will turn on a red light.

00:06:48 Interviewer  
Would you notice this change?

00:06:50 Interviewer  
If you were.

00:06:50 Interviewer  
Playing your games.

00:06:52 Participant  
Yeah, I think I would for sure.

00:06:54 Participant  
I think it would be super evident...

00:06:57 Participant  
That everything has changed here.

00:07:00 Interviewer  
So the in the second scenario, you are getting ready for bed.

00:07:05 Interviewer  
And you obviously go brush your teeth, do whatever you need to do.

00:07:11 Interviewer  
So you were already noticed before that there was a friend feature.

00:07:16 Interviewer

Would you somehow look at that thing before you go to bed?

00:07:19 Interviewer

Or do you think it's something you will most likely overlook because like?

00:07:24 Interviewer

Uh, you know, my friend's off to bed. It's not that important. Or would you look at this feature to see what your friend is currently doing?

00:07:32 Participant

Uh, I think me personally, I'm a bit of a Snoop, so I'll definitely look at it and see if my friends have gone to bed, I think.

00:07:40 Participant

What they're doing would probably influence what I'm doing.

00:07:44 Participant

But I also think overtime I would probably get like climatized to this and get too used to seeing it and I just wouldn't think about it anymore.

00:07:53 Participant

But I think in the short run I would I think it would definitely.

00:07:57 Interviewer

OK, short term.

00:08:00 Interviewer

And then in the last scenario is that you just using your phone and then the prototype will ideally be placed right next to you on like a night stand.

00:08:12 Interviewer

So when you are getting to bed, you're obviously on your phone.

00:08:18 Interviewer

This feature or the prototype also feature an ambient sound feature, so it will play music that will calm you and help you sleep.

00:08:27 Interviewer

So it's designed to also assist you in sleeping.

00:08:29 Interviewer

So in this step here this scenario here you have a.

00:08:34 Interviewer

A phone, an app that also can control the kind of ambient sound that you like to the the prototype to play.

00:08:42 Interviewer

So do you think that this feature will assist you in sleeping?

00:08:52 Participant

I think it would.

00:08:54 Participant

I don't. I'm not.

00:08:56 Participant

I think, yeah, I think it would assist me in like calming me down a bit.

00:08:59 Participant

I think it would more work as like a trigger to say it's like oh, it's like hit this time.

00:09:05 Participant

Now I should probably start thinking about going to then I don't know if it would be like.

00:09:09 Participant

The music helping me.

00:09:11 Participant

At the rejector.

00:09:13 Participant

Helping me so much more than it's just like a like a signal to say that I should probably go to sleep.

00:09:19 Interviewer

So when it when I was referring to ambient sound, I also mean like a lot of things.

00:09:25 Interviewer

So not just like music that you listen in general, it could be like the sound of waterfalls or water running or the crickets in the forest or anything like that, that besides anything that can help you.

00:09:39 Interviewer

Like, do you think this feature would help if you were to listen to these other sounds?

00:09:44 Interviewer

That was not music.

00:09:46 Participant

If it's like a white noise machine, that would definitely help.

00:09:49 Participant

You're going to have like some sort.

00:09:51 Participant

Of sound going.

00:09:51 Participant

On around me to sleep.

00:09:57 Interviewer

Anything else you would like to add into those things?

00:10:00 Participant

No, I don't think I need to add anything more.

00:10:05 Interviewer

OK, so let's just move on to the interview part now.

00:10:09 Interviewer

So you have been exposed to the prototype, so you've already told me what you think it does.

00:10:15 Interviewer

You're already in that spot, pointing out the front feature, the lighting part I already told.

00:10:21 Interviewer

You that part as.

00:10:21 Interviewer

Well, do you think any other features that it also feature?

00:10:30 Participant

No, I can't even think of anything more.

00:10:35 Interviewer

So let's just move on to the next one.

00:10:38 Interviewer

So do you think this device can become annoying or do you think it can enhance your sleeping experience?

00:10:50 Participant



I think over like a period of time when I when I get used to it, I could find it annoying.

00:10:55 Participant  
I probably might find myself like turning it off.

00:10:58 Participant  
So keeping it on, I think in the short run for me it would be interesting to see what it would do, see if it would like help, but yeah.

00:11:10 Interviewer  
OK.

00:11:12 Interviewer  
So do you like the color?

00:11:14 Interviewer  
Of the prototype.

00:11:15 Participant  
The the color, the the the cardboard color.

00:11:18 Interviewer  
Yeah, the cardboard color.

00:11:20 Participant  
I I think it could probably be improved a little bit, yeah, yeah.

00:11:23 Interviewer  
Could be improved, OK.

00:11:26 Participant  
Maybe like a like a solid white or like a solid black.

00:11:29 Participant  
Or something like.

00:11:33 Interviewer  
Do you think that with different colour variations, will encourage people to own one?

00:11:38 Participant  
Yes, I think.

00:11:40 Participant  
That would definitely encourage more people to buy it, you know it.

00:11:44 Interviewer  
Yeah, better than the cardboard color.

00:11:47 Interviewer  
And do you think the size is OK even though you can't physically hold it by the images and video?

00:11:53 Interviewer  
Do you think the size is appropriate?

00:11:55 Participant  
By the images and video.

00:11:56 Participant  
I think it's a bit big.

00:11:58 Interviewer  
It's a bit big?

00:11:59 Participant  
I think in the photos it kind of looks like it's taking up most of the like a side desk.

00:12:05 Participant  
I I don't know about everyone.

00:12:06 Participant  
Else but I got.

00:12:07 Participant  
Couple things on.

00:12:07 Participant  
Like lambs and like little bowls and things I think just would be too big for me.

00:12:12 Participant  
I would need a smaller.

00:12:12 Participant  
It's too big.

00:12:15 Interviewer  
OK.

00:12:17 Interviewer  
So what other form of the product do you think it can be suitable in?

00:12:20 Interviewer  
And so it said so the whole point of that one there was to be like a clock that sits on your night stand.

00:12:28 Interviewer  
Do you think this thing can be fit into a different form of object?

00:12:33 Participant  
Whole month I think you could fit into like a like a lamp or something like that.

00:12:33 Participant  
Oh my God. I think it could fit into more like, uh. Like a lamp. Or something like that.

00:12:38 Participant  
Yeah. So yeah.

00:12:43 Participant  
Yeah, lamp would work.

00:12:44 Participant  
Not so it doesn't.

00:12:44 Participant  
Necessarily have to be.

00:12:45 Participant  
A clock or.

00:12:48 Participant  
I don't know what else it could fit into.

00:12:52 Participant  
Is saying like a plant a crazy thing.

00:12:55 Participant  
Like a plant plant.

00:12:57 Participant  
A plant making like a fake plant that like lights up and changes color like based on when people fall asleep and stuff like that.

00:13:05 Participant  
Projector in it, but yeah.

00:13:09 Interviewer  
Any other forms you think the prototype can?

00:13:13 Interviewer

Be in no.

00:13:14 Participant  
Not really, I think, yeah.

00:13:15 Participant  
The clock in my lamp would be.

00:13:20 Interviewer  
So where would you prefer to place this prototype?

00:13:24 Participant  
Probably on my bedside table.

00:13:26 Interviewer  
Bedside table?

00:13:26 Participant  
Yeah, yeah, yeah.

00:13:28 Participant  
So I can, like access it easily when I'm in bed.

00:13:32 Interviewer  
OK.

00:13:34 Interviewer  
So obviously you know there would be a friend feature.

00:13:37 Interviewer  
So are you OK with your status being constantly monitored?

00:13:42 Participant  
I think if it's only going to.

00:13:46 Participant  
Like people, if it's only going to like friends and people I authorize, I think it would be OK.

00:13:53 Interviewer  
What about the people who manage this?

00:13:56 Interviewer  
Whole Internet thing.

00:13:58 Interviewer  
They're constantly monitoring you.

00:14:02 Participant  
I personally have no issue with it.

00:14:04 Participant  
I think for other people it could be an issue like monitoring when people go to sleep and things like that.

00:14:11 Participant  
I don't think it would be too much of a problem like sleep apps exist that like track people sleep.

00:14:16 Participant  
I'm sure they store all their data.

00:14:18 Participant  
People are fine with that.

00:14:20 Participant  
I don't think it would be too much of an issue for me.

00:14:23 Interviewer  
OK, Yep. Any other opinions?

00:14:27 Participant  
I don't have any, no.

00:14:32 Interviewer  
OK.

00:14:32 Interviewer  
So we just move on to the next topic.

00:14:35 Interviewer  
OK.

00:14:35 Interviewer  
So is there any feature that you don't understand?

00:14:41 Participant  
I think I understand everything, yeah.

00:14:45 Interviewer  
So I'll just go through some of the features here as well, just to make sure that you understand what they are, so.

00:14:51 Interviewer  
Do you understand the setting up process?

00:14:54 Participant  
The setting ohh the setting up process.

00:14:57 Participant  
No, I don't.

00:14:59 Interviewer  
So in the video there is this, there was like a quick few seconds of the person setting it up.

00:15:06 Interviewer  
I'm not sure if you.

00:15:08 Interviewer  
Saw that part or like know what that part meant.

00:15:10 Interviewer  
So there was a quick part we would we didn't really exactly go into detail of the setting up process, but yeah.

00:15:18 Interviewer  
So let's just move on to the next one.

00:15:20 Interviewer  
So ambient sound I've already explained to you quite a bit.

00:15:23 Interviewer  
So how do you feel about the sound when you sleep?

00:15:26 Interviewer  
Or do you find the sound calming because you also again you have that option to pick the the thing and you already said.

00:15:34 Interviewer  
You would sleep a bit better with white.

00:15:37 Interviewer  
Yep, and would.

00:15:38 Interviewer  
You actually see yourself using this feature.

00:15:42 Participant  
Yeah, I think I would.

00:15:43 Participant  
The the ambient sound, if I'm in like a quiet room where.

00:15:46 Participant  
I can't like generate white noise for like a fan or anything like that.

00:15:50 Participant  
I would definitely see myself using.

00:15:53 Participant  
Using the box instead.

00:15:56 Interviewer  
So the sleep status that you've already seen.

00:16:00 Interviewer  
Do you understand how

00:16:01 Interviewer  
The prototype would measures your sleep?

00:16:04 Participant  
No, I don't. Not sure.

00:16:08 Interviewer  
OK.

00:16:09 Interviewer  
Do you also, how do you think the prototype would determine your sleeping status?

00:16:17 Participant  
I'm actually not sure.

00:16:18 Participant  
I guess you would have to take in sounds or.

00:16:23 Participant  
Something like that.

00:16:24 Participant  
Or when you when you're like in bed or you're about to go to sleep, you'd have to press a button or signal it somehow to say that you're in bed.

00:16:31 Participant  
And I'm preparing to go to sleep.

00:16:34 Participant  
But other than that, I'm not too sure.

00:16:38 Interviewer  
So you also saw the red light.

00:16:41 Interviewer  
So have you heard about the effects of red light?

00:16:44 Participant  
No, I'm actually kind of interested.

00:16:45 Interviewer  
That I would have no clue myself.

00:16:50 Interviewer  
Do you prefer to sleep in the dark or with dim lights on?

00:16:54 Interviewer  
Dark in the dark.

00:16:56 Interviewer  
Would you give dim lights a try?

00:16:58 Participant  
Yeah, I would give dim lights.

00:16:59 Participant  
A try. See what?

00:17:02 Interviewer  
OK.

00:17:02 Interviewer  
Well, you sounds like you have to buy yourself a product this product just to see.

00:17:09 Interviewer  
OK.

00:17:09 Interviewer  
So are you aware that there was a projector on the prototype?

00:17:14 Interviewer  
So what would you?

00:17:15 Interviewer  
What would you like to see when you get into bed?

00:17:20 Participant  
I'm not sure really.

00:17:22 Participant  
Like, yeah, nature scenes would be cool.

00:17:24 Participant  
Something like that or just like.

00:17:28 Participant  
Different things kind of like static things like a night sky or cool little visuals and stuff like that.

00:17:35 Participant  
I don't know.

00:17:35 Participant  
I think it would distract me more than anything.

00:17:39 Participant  
It would be.

00:17:40 Participant  
It would be a cool feature, yeah.

00:17:42 Interviewer  
OK.

00:17:43 Interviewer  
And so obviously the whole point is to encourage you to stop looking at your phone before bedtime.

00:17:50 Interviewer  
So do you think that seeing a moving image on your ceiling would cause you to look at that more and put your phone away more often?

00:18:05 Participant  
I think you would.

00:18:08 Participant  
I think I think the.

00:18:11 Participant  
I would need like different videos to be playing like pretty often though.

00:18:17 Participant  
Because I can imagine if I I've seen one video I kind of know what's going to happen and I can expect it and I get bored of it.

00:18:23 Participant  
So kind of make me want to use my phone more then.

00:18:27 Participant  
But if there's like a range of videos that are playing throughout the week, I'm using it.

00:18:33 Participant  
I think that would be helpful, yeah.

00:18:37 Interviewer  
So we're moving on to the next feature.

00:18:40 Interviewer  
So you are aware of the friend feature.

00:18:43 Interviewer  
So do you know how to add friends based on that video?

00:18:46 Participant  
No, no, I don't. Yeah.

00:18:50 Interviewer  
And obviously you wouldn't know how to remove friends, either.

00:18:54 Interviewer  
OK.

00:18:55 Interviewer  
So we'll just move on to the next topic now.

00:18:58 Interviewer  
So this is regarding the friend feature, so.

00:19:02 Interviewer  
Would you like to share your your status with your friends all the time?

00:19:12 Participant  
I don't think I would mind it.

00:19:15 Participant  
No, I think.

00:19:15 Participant  
I could do that.

00:19:16 Interviewer  
Yeah. No. OK. Yeah, so.

00:19:20 Interviewer  
Do you think that there should be a feature to turn this setting off?

00:19:24 Participant  
Yes, for sure.

00:19:26 Participant  
Definitely a feature to do that.

00:19:26 Participant  
OK.

00:19:28 Interviewer  
Oh, so do you also want to limit on how much your friends can know about you?

00:19:34 Interviewer  
And how much can they share?

00:19:38 Participant  
Yeah, I think that'd probably be a good idea.

00:19:41 Participant  
To limit what they can see.

00:19:45 Interviewer  
So there's another one here is just to, uh, asking for your opinions over or whether should this friend feature be removed entirely.

00:19:54 Interviewer  
It's so that this product is just designed specifically for you.

00:20:01 Participant  
I think it.

00:20:02 Participant  
Could definitely be an option to remove it.

00:20:05 Participant  
I see no problem with it if I can.

00:20:06 Participant  
Just turn it off.

00:20:08 Participant  
Then it it's not really an issue for me.

00:20:12 Participant  
If you want to have like a sleeker looking design, removing it would be cool.

00:20:18 Participant  
But I don't if you can turn it off and stuff.

00:20:21 Participant  
I don't really see a point of removing the feature entirely.

00:20:25 Interviewer  
OK.

00:20:26 Interviewer  
Is there anything else you would like to add?

00:20:34 Interviewer  
So this prototype here addresses two of the main two touch points that we have determined in our field theory.

00:20:41 Interviewer  
So I will explain those two touch points for you.

00:20:48 Interviewer  
Right.

00:20:48 Interviewer  
So the two touch points that this product aims to address is scheduling or in bedtime is and building up to it.

00:20:56 Interviewer  
And the other touch point is the activity of sleeping.

00:20:59 Interviewer  
So I'm I will explain a little bit into detail for these two touch points.

00:21:03 Interviewer  
So the first touch point is when you are being immersed in an activity like playing your video games or you are going out.

00:21:12 Interviewer



You obviously forget to think or plan ahead of your sleeping schedule.

00:21:16 Interviewer

You might as well disrupt that sleeping schedule just so you can do this thing.

00:21:22 Interviewer

And they're actually the third touch point is the activity of sleeping, getting into bed, etc.

00:21:28 Interviewer

So while you're in bed, are you staying up longer than you have expected because you are distracted because you are on your phone and stuff?

00:21:39 Interviewer

So I just hop over to the questions now so.

00:21:43 Interviewer

Do you think that this prototype addressed some of those issues?

00:21:50 Participant

I think it made an attempt.

00:21:52 Participant

Yeah, by like.

00:21:54 Participant

The signaling when it's like time to go to the bed and stuff like that.

00:21:57 Participant

Having the Airbnb music to calm you down in the projector.

00:22:01 Participant

And to distract you from your phone.

00:22:03 Participant

So I think I addressed that, yeah.

00:22:06 Interviewer

So based on.

00:22:08 Interviewer

Your personal sleeping experiences.

00:22:11 Interviewer

What is your sleeping and sleeping schedule and stuff?

00:22:14 Interviewer

Do you actually have some sort of plan?

00:22:17 Interviewer

Do you think you?

00:22:17 Interviewer

Need this product to support you.

00:22:21 Participant

Recently, no, I haven't had a schedule so much. I tried to sleep before 11 and I try not to sleep in like past 9:30.

00:22:32 Participant

Would 10, but I I definitely think this product would help me currently yeah.

00:22:37 Interviewer

So there there will be.

00:22:39 Interviewer

You have to be in the right circumstance for you to consider this product.

00:22:44 Interviewer

OK.

00:22:46 Interviewer  
If you give me another quick second.

00:22:50 Interviewer  
So again, you already listed earlier about.

00:22:55 Interviewer  
That the product.

00:22:56 Interviewer  
Give an attempt to try and sway and that's way attempt to bring you on the right track during sleep time.

00:23:05 Interviewer  
Get you less distracted on your phone.

00:23:07 Interviewer  
Do you think of any other ways that you could?

00:23:11 Interviewer  
You know, in your own experience as well that you have come up with plans and stuff to help you go to bed less distracted.

00:23:23 Participant  
A way to get my phone off me would probably be good.

00:23:27 Participant  
If that's what you're after.

00:23:27 Interviewer  
A way to get off your phone?

00:23:30 Participant  
Yeah, I find myself browsing on my phone, kind of like doom scrolling.

00:23:35 Participant  
Before I go to bed sometimes, and I know that messes up my sleep pretty bad.

00:23:38 Participant  
And that's like the main.

00:23:41 Participant  
The thing affecting it, yeah.

00:23:45 Participant  
No, that's it. Yeah, yeah.

00:23:48 Interviewer  
Uh, do you have any plan in place to stop yourself from doing that?

00:23:53 Participant  
I currently don't right now no.

00:23:56 Interviewer  
OK.

00:23:57 Interviewer  
Do you also think that because you are also towards the end of semester, you are forced to do a bunch of assignments preparing for exams?

00:24:05 Interviewer  
This is also a contributing factor to yours mess up sleeping schedule?

00:24:11 Participant  
Yes, yes, yes.

00:24:15 Interviewer  
Is there anything else you would like?

00:24:17 Interviewer  
To add for all of those.  
00:24:19 Participant  
No, no, I don't have any.  
00:24:23 Interviewer  
Well, that concludes the interview.  
00:24:25 Interviewer  
Thank you for your time.  
00:24:25 Participant  
Cool, no worries.

## Appendix E: Video Evidence

Transcript 1 Video (Interviewer Cane)  
<https://youtu.be/cFy4aAyk2Gw>